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THE EFFECTS OF COVID 19-RELATED SOCIAL MEDIA HATE CRIME ON ASIAN AND ASIAN AMERICANS' SELF-ESTEEM

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**THE EFFECTS OF COVID 19-RELATED SOCIAL MEDIA
HATE CRIME ON
ASIAN AND ASIAN AMERICANS' SELF-ESTEEM**

A Thesis

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Master of Science

in

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by
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ABSTRACT

The COVID-19 pandemic has changed the way people communicate, live, socialize and perhaps the way they feel about the Asian population. The United States has seen a rise in the Asian hate crimes on online and offline platforms since the beginning of the pandemic which has affected the overall well-being of the Asian population. To our knowledge, the present study is one of the first studies to address the effects of COVID 19-related online perceived racial discrimination on the self-esteem of Asians. Additional objectives were to reveal the different coping mechanisms being used by the Asian population to cope with self-esteem issues and to tease apart any differences in the coping mechanisms used by the low self-esteem and high self-esteem groups. Out of the 510 participants who were sent the survey via Lucid, 506 participants answered questions about their social media use, online perceived racial discrimination, self-esteem, and coping mechanisms. Using correlations, qualitative content analysis and chi-square test, the findings revealed that increased use of social media led to increase in online perceived racial discrimination. The study also identified 9 categories of coping mechanisms used to cope with self-esteem issues and identified that people in low self-esteem group were not as motivated as the high self-esteem group people to use coping strategies. This study aimed to make a positive contribution to the scant literature on COVID 19-related online racial discrimination and its effects on self-esteem. We believe my findings can make educators and policy makers aware of the situation and formulate policies and solutions that address online racial discrimination and self-esteem issues, especially among Asian population.

Key words: Asians, COVID-19, self-esteem, coping, hate speech, social media

1. INTRODUCTION

1.1. Background

The COVID-19 pandemic has impacted people in more ways than one, as people around the world have experienced issues such as, an economic shutdown, social distancing, medical professional overload, and travel ban to state a few. Making the situation worse, the onset of COVID-19 saw hate crimes and Asian-focused racism, particularly in United States. People of Asian descent have been targets of COVID 19- related hate-speech and derogatory language in media reports, on social media platforms and in statements by politicians. The United States President Donald Trump's use of the term 'Chinese Virus/ Wuhan Virus' for coronavirus, may have encouraged the use of hate crime and hate speech in the United States (Gover, 2020). Comments such as "the pandemic was a part of the Chinese government's plan for world domination" from other political figures also exacerbated anti-Asian hate crimes in different countries around the world (Hariharan, 2021). The AAPI (Asian American and Pacific Islander) advocacy organization reported nearly 10,000 Asian hate crimes by March 2020 (Azhar, 2021) and an overall increase of 169% in Anti-Asian hate crimes in the form of racial slurs, wrongful workplace termination, physical violence, extreme physical distancing, and online harassment (Huang, 2020).

Thus, anti-Asian hate crime is not confined to physical spaces but has been prevalent on different social media platforms. There has been a 900% rise in anti-Asian hate tweets related to COVID-19 (Vishwamitra, 2020). Other platforms such as Facebook, YouTube and google also saw roughly a 75% surge in the anti-Asian hate remarks (Statista, 2021). Studies have shown that such situations can affect self-esteem and have an overall negative psychological impact on the

victims (Henderson, 2003). A recent study that looked at the effects of COVID-19 related cyberbullying on students from East and Southeast Asia at the University of Jordan, concluded that COVID 19-associated cyberbullying could be a catalyst for a decrease in the mental health among university students affecting their self-esteem (Alsawalqa, 2021). Therefore, we cannot ignore but acknowledge COVID 19-related anti-Asian hate on social media and its effects on the self-esteem of the targeted population. Considering the grim situation of the pandemic, it is imperative to see how anti-Asian hate on social media due to Covid-19 is affecting the self-esteem of Asians and Asian-Americans in United States. Along with the situation's effect on self-esteem, it is also important to understand and discuss the coping mechanisms for the same. Therefore, in this study we explore the relationship between COVID 19-related perceived racial discrimination on social media and self-esteem, the different coping mechanisms, along with differences in coping mechanisms of low self-esteem vs high self-esteem groups of the Asian population.

This study involves a quantitative analysis to investigate the relationship between COVID 19-related perceived racial discrimination on social media and self-esteem. We sent a survey to 510 Asian and Asian American adults, asking questions about their social media use, online perceived racial discrimination, and self-esteem. The questionnaire also involved an open-ended question asking participants about their coping mechanisms towards self-esteem issues, which could have stemmed from online hate due to COVID-19. We used qualitative content analysis to analyze the results of the coping mechanisms.

1.2. Problem Statement

Online anti-Asian hate crime has increased in the United State since the onset of the COVID-19 pandemic. Media outlets are being considered as one of the main contributors to

discrimination and xenophobia against Asians (Aten, 2020). “Chinese virus phenomenon” and “China kids stay home” are some of the headlines across different social media platforms against Asians (Croucher, 2021). As of April 2020, there have been around 72,000 posts with hashtag #wuhanvirus and 10,000 others with the hashtag #Kungflu on Instagram (Macguire, 2020). Posts like these have negatively impacting the Asian community and are unlikely to stop (Aten, 2020).

Studies are attempting to understand the negative impacts of online anti-Asian hate speech on the Asian population (Chiang, 2020). Considering that COVID 19-related online anti-Asian hate speech is unique, there are limited studies that capture its psychological impact on the targeted population. Since previous studies have shown that self-esteem, defined as “the awareness of the absolute value of one’s own personality or dignity” is an important determinant of emotional well-being and mental health (Mann, 2004), studying the effect of online COVID 19-related anti-Asian hate on self-esteem could provide us with insights on this situation’s overall psychological impact on Asians in the United States.

Moreover, there are several studies that capture people’s coping mechanisms against COVID 19-related stress, for example, Laughter and humor, meditation, reading, exercise, and alcohol are some ways people are using to cope with COVID 19- related stress (Finlay, 2021). Further, there are separate studies that have looked at coping strategies against low self-esteem issues and online hate independently, but there are no studies so far that have explored the coping strategies that combine the two in the light of the COVID-19 pandemic. Subsequently, there is limited literature on self-esteem issues or coping mechanism that focuses on the Asian population. Hence, this study focuses on Asians in United States to understand the impact of COVID-19 related online hate on their self-esteem and their use of different coping strategies.

1.3. Rationale and Significance

The overall goals of this study are the following:

1. To find if there is any significant relationship between COVID 19-related online perceived racial discrimination against Asians and Asian Americans and self-esteem.
2. To evaluate the different types of coping strategies used by Asian and Asian-Americans against self-esteem issues that may have stemmed from the COVID 19-related online Asian hate.
3. To find if there are any differences in the coping strategies used by low self-esteem group vs high self-esteem group.

The findings from this study could provide insights and future research directions for studies related to targeted hate-speech on social media including acknowledgements of the potential risks of depression, anxiety, and suicidal behaviors on the victims. This study is timely as the coronavirus pandemic is likely going to continue for years to come, and we are seeing the relatively short-term psychological, economic, social, physical, spiritual, and environmental effects people are currently having to weather. This research is aimed at raising awareness among educators and the public, on the online hate crimes targeted at people of Asian descent due to COVID-19, its effects on their overall well-being, and to understand the different coping strategies the targeted population is using to combat the situation.

2. LITERATURE REVIEW

2.1. Asian Hate Crime and Its History in United States

The FBI defines hate crimes as “criminal offense(s) against a person or property motivated in whole or part by an offender’s bias against race, religion, disability, sexual orientation, ethnicity, gender or gender identity (National Institute of Justice, 2021). However, hate speech is defined as referring to the expressions of hatred against (groups of) people in particular contexts (Howard, 2019). Asian hate crime is hate-crime against Asians due to their ethnicity/ race, and in United States, it dates to mid-1800s, when Chinese immigrants started coming in large numbers to California and Western States seeking to strike gold (Gover, 2020). The Chinese were forced to compete for their livelihood against white migrants from the Eastern U.S. Since there was a high demand for dangerous, low-wage jobs, and Chinese immigrants were willing to fill them, the racist trope of ‘Asians coming to steal White jobs’ was born (Foner, 2006). In 1854, the California Supreme Court reinforced racism against Asian immigrants in *People v Hall*, ruling that people of Asian descent could not testify against a White person in court, virtually guaranteeing that Whites could easily escape punishment for anti-Asian violence. When George Hall shot and killed a Chinese immigrant Ling Sing, the testimony against Hall was rejected because the witnesses were Asians (Dionee, 2021). This incident was followed by the Chinese massacre of 1871, where at least 17 Chinese men and boys were lynched and hanged across several downtown sites in Los Angeles. Then came the Chinese Exclusion Act of 1882, which banned Chinese immigration for 20 years (Kil, 2012). Vetoed by President Chester A. Arthur, another version of the Act was signed that banned immigration for 10-more years. However, it has been extended for more than 60 years before it was repealed in 1943 (Zhao, 2013).

While the immigration of Chinese was banned, people in the United States of Chinese descent also experienced multiple attacks. In 1885, a long-standing aggression against Chinese miners exploded in Wyoming, when 100-150 vigilantes attacked Chinese workers, killing 28 people and burning 79 homes. In 1900, a situation similar to coronavirus pandemic occurred where a Chinese immigrant was infected by the bubonic plague. The outbreak began with a ship from Australia, but because the first victim was a Chinese immigrant, San Francisco's Chinatown was surrounded by police overnight. The Chinese residents' properties were destroyed, and they were forced to relocate (Gover, 2020).

During 1890s, the U.S. saw a large influx of immigrants from Asian countries, primarily out of Japan, to work in agriculture as well as logging, fishing, mining, and service professions (Aoki, 2010). After Japan bombed Pearl Harbor in 1941, Japanese immigrants were forced by the United States government to stay in internment camps for the duration of World War II over suspicions that they might aid the enemy. After the Vietnam war, many Vietnamese started fleeing to the United States, and the trope of Asians coming to take White jobs returned. On April 29, 1992, police officers in Los Angeles were caught on camera beating a Korean immigrant, which led to an eruption of riots targeting Korean American businesses. Like the Chinese before them, Japanese and Korean newcomers faced legislative barriers to land ownership, citizenship, and education inspired by racism (Lee, 2002).

The terrorist attacks of Sept 11, 2001, led to an increase in hate crimes against Muslims and people of South Asian descent. Only four days after the attacks, an aircraft mechanic murdered a Sikh American originally from India, whom the mechanic mistook for a Muslim (The Washington Post, 2021). Hence, Asians and Asian-Americans have been a quarry

of hate crime since time immemorial, and unfortunately with the COVID-19 pandemic, history is repeating itself.

2.2. Incidents of Asian Hate Crime Due to Covid-19

In March 2020, the FBI issued a warning that due to COVID-19, there may be increased hate crimes against Asian Americans, because “a portion of the US public will associate COVID-19 with China and Asian American populations” (Tessler, 2020, pg. 638). Apparently, this warning turned into a reality as instances of anti-Asian bias were reported in New York and California (42% and 17% respectively) along with 45 other states in between March 23rd and April 23rd, 2020 (CNBC, 2021). Studies have shown that anti-Asian sentiment depicted in the tweets containing the term 'Chinese Virus' likely perpetuated racist attitudes and parallels the anti-Asian hate crimes that have occurred since (Hswen, 2021).

As stated above, since the beginning of the pandemic, there have been many physical and verbal assaults against Asian Americans and ethnically Asian individuals in United States. With 80% of the American population staying at home during this time, these assaults happened outside people’s private residences(Tessler, 2020). On a Saturday evening in March, when COVID-19 panic shopping gripped the nation, Cung, Burmese- American, and his two sons, a 3-year and a 6-year-old were stabbed at Sam’s Club in Midland, Texas. The assailant slashed Cung’s face with a knife and wounded the 3-year-old in the back and slashed the 6-year-old from his right eye to a couple of inches past his right ear. Although Cung and his kids survived, he says he is terrified to walk through any store, and his 6-year-old son, who cannot move one eyebrow says he is afraid to sleep alone (Yam, 2020).

These incidents kept getting worse as, on March 16th,2020, a 21-year-old white male killed eight people at Georgia massage parlors, and six out of these eight women were of Asian

descent, and the killings were reported to be an intersection of gender-based violence, misogyny, and xenophobia (Tessler, 2020). This shooting was one of the deadliest since August 2019 Dayton, Ohio, shooting that left nine people dead, according to a database compiled by The Associated Press, USA Today and Northeastern University. Apart from these incidents, there have been more than 110 episodes with clear evidence of race-based hate since March 2020, some of which are listed below (BBC News, 2021, pg. 3).

A 60-year-old Chinese American man in Chicago was spit at by two women who threw a log at him, accused him of being sick and told him to ‘go back to China’.

A 34-year-old woman was attacked on the street by another woman in Manhattan who spit on her, pulled her hair, and told her, “You are the reason we have coronavirus.”

A 30-year-old man riding the subway in Manhattan was accosted by a man who shouted, “China boy” and “You’re infected,” and tried to shove him off the train.

A 27-year-old Korean American Air Force veteran in Los Angeles was struck in the face, called slurs, and told, “You have the Chinese virus, go back to China.”

In Washington D.C. a tea shop owner of Chinese descent was pepper-sprayed by a customer who also shouted “Chinese” and “Covid-19”.

These incidents reflect the picture in the United States. However, the situation in other countries is also dismal. For example, former Italian Deputy Prime Minister, Giuseppe Conte, wrongly linked Covid-19 to African asylum seekers, calling for border closures (Gržinić, 2021). In Lebanon, people avoided talking to and coming close to a Chinese student and called him “Corona.” In Saudi Arabia, an actress suggested that Covid-19 vaccines be tried on prisoners (Al-Jarf, 2021). Due to the crisis in Kuwaiti hospitals, a Kuwaiti actress called for throwing foreign laborers infected with Covid-19 in the desert. Bahrain refused the return of its Shiite

citizens from Iran (Al-Jarf, 2021). These reported incidents, along with many that have gone unreported, apprise us of the dismal situation of Anti-Asian hate due to COVID-19. Further, it has been seen that anti-Asian hate due to COVID-19 is not just confined to physical spaces but has been prevalent in several online spaces as well.

2.3. Anti-Asian hate Crime on Social Media

In recent years, social media platforms are being used as a tool to express one's reactions, thoughts, and opinions on current events (Chavez-Duenas, 2018). Not only do people express their positive emotions about a situation, but also the anger and hate they might feel towards an event/ situation. The persisting negativity on social media could stem from an indifference of opinion or be specifically targeted towards a population. According to recent research, 41% of Americans are facing some type of online harassment, out of which 30% is influenced by race and ethnicity (League, 2020). Hence, social media platforms have become a breeding ground for racism and targeted hate crime. For instance, President Trump's 2016 presidential campaign used Twitter to tweet about Islam-related topics that have been correlated with hate crimes towards Muslims (Muller, 2021). The situation of COVID-19 pandemic and the fact that the first COVID-19 case was reported in China, is no different. On March 16, 2020, President Trump used "Chinese Virus" in his tweet for the first time, and the following week saw an increase in anti-Asian hashtags and a rise in hate crimes (Gover, 2020). The COVID-19 pandemic has developed to be a bio-crisis with a worldwide sharp rise in xenophobia (United Nations, 2020) and hate-crime/speech on online and offline platforms (Devakumar, 2020).

Since social media has a very strong influence on people these days, prior research has shown that real-world crimes can be motivated by discussions on online social media

platforms (Relia, 2019). A report by the Network Contagion Research Institute, a New Jersey-based nonprofit group, mentioned an Instagram post that called for a mass shooting on Asians in Chinatown to end COVID-19 pandemic in New York City (Zannettou, 2020). In this case, we did not witness a mass shooting, however, in another case we have seen that hate speech due to COVID-19 did not stay confined to social media but led to violence in Quetta. A study conducted in the city of Quetta showed that viral Facebook posts on Asian hate crime led to violence in the city (Zakir, 2021).

The aforementioned examples and studies reinforce the fact that we cannot ignore the damage being caused to people's lives due to the ongoing hate-crime/hate-speech in physical spaces as well as on different social media platforms (Saha, 2019).

2.4. Self-Esteem and Its Importance

Researchers have argued conventionally from a philosophical and ethical standpoint that self-esteem is “the awareness of the absolute value of one's own personality or dignity (Hasogi, 2021, pg. 1)” In 1890s, a professor of psychology, James Holt, stated that self-esteem is “the satisfaction or dissatisfaction with oneself” (James, 1890, pg.30). Several psychologists have developed and debated the definition of self-esteem and examined methods of objectively evaluating self-esteem. In 2004, Heine and Lehman reviewed several studies investigating self-esteem that have been published over the past 35 years and emphasized the importance of self-esteem studies (Heine, 2004). This shows the increasing interest of researchers in self-esteem and its implications in our day-to-day life. Studies over the past decade have also shown that self-esteem is a central construct in several clinical, personality, and social psychology studies (Greenier, 1995)

Rosenberg, one of the pioneers in the study of self-esteem, stated that self-esteem refers to an individual overall positive evaluation of self. He added that high self-esteem consists of an individual respecting himself and considering himself worthy (Rosenberg, 1965). Further, Rosenberg developed a 10-item scale to measure the self-esteem of high school students. Since its development, the scale has been used with a variety of groups including adults, with norms available for many of those groups. The measure's relatively high internal consistency and test-retest reliability undoubtedly contribute to its popularity (Blascovich, 1991).

Other studies have determined self-esteem as an important determinant of emotional well-being (Mann, 2004). Self-esteem has also been considered an important aspect of mental health. It has been shown that people with high self-esteem experience more happiness, optimism, and motivation than those with low self-esteem, as well as less depression, anxiety, and negative mood (Baumeister, 2003). Using Rosenberg's and Fleming and Courtney's self-esteem scale, Baumeister's research also found that people with high self-esteem are more likely to persist in the face of difficult tasks than are low self-esteem persons. Hence, self-esteem has important implications for various life outcomes, such as health (Sowislo, 2013), relationship satisfaction (Shackelford, 2001), and job performance (Judge, 2001).

Over the last few decades, the need for high self-esteem is not only an individual but a societal concern. The North American society in particular embraces the idea of high self-esteem as a central psychological source from which all manner of positive behaviors and outcomes spring (Baumeister, 2003). The reverse, however, is also true. Nathaniel Braden, a leading figure in the self-esteem movement has stated categorically that he "cannot think of a single psychological problem—from anxiety and depression, to fear of intimacy or of success, to spouse battery or child molestation—that is not traceable to the problem of low self-esteem

(Braden, 1995, pg.12). Hence an understanding of peoples' self-esteem can be a predictor of their behavior towards themselves and the society.

2.5. Self-Esteem and Social Media Use

In the digital era, we know that social networking sites such as Facebook, Instagram, Twitter, and YouTube have billions of users around the world (Wilson, 2012). With a variety of affordances provided by these social media platforms, such as maintaining relationships and expressing beliefs, we cannot deny that they are also used as a basis for social comparative functions, such as self-evaluation or self enhancement/ self-esteem. The opinions of other people, either friends or public, can have a strong and long-lasting impact on people's self-esteems. While negative feedback lowers the self-esteem of individuals, positive feedback increases the self-esteem to a high degree (Valkenburg, 2006).

Previous research has revealed that high-frequency Facebook use is associated with increased depression and decreased well-being (Vogel, 2014). According to Pantic (2014) low self-esteem, anxiety, depression, and other psychotic disorders are likely caused by increased use of social networking sites. High Facebook use is directly related to psychological distress in individuals, which results in reducing the self-esteem of people (Chen, 2013). Research conducted on university students via an online survey questionnaire using Social Media Addiction questionnaire and Rosenberg's self-esteem scale concluded that addictive use of social media had a negative association with self-esteem (Hawi, 2017). Indeed, these studies suggest that social media use is associated with negative alterations in self-esteem. According to the study conducted in 2017, we know that one hour spent on Facebook daily results in a 5.574 decrease in the self-esteem score of an individual (Jan, 2017). In contrast, some other studies

have reported a positive relationship between social media use and self-esteem (Gonzales, 2011), while others found an insignificant relationship (Muench, 2015). A positive relationship has been found in cases where people used social media sites for an upward social comparison. People who used social media sites to post their day-to-day activities and talk about things that motivate them, showed a higher self-esteem score on the Self-esteem scale (Gonzales, 2011). Because of numerous ambiguities in the studies of social media use and self-esteem, we need to conduct more research and fill gaps to understand the overall impact of excessive social media use on self-esteem.

Although research has been done independently to investigate self-esteem issues in minority populations such as African- Americans, Hispanics, and Asian subgroups (Porter, 1993), there are limited or no studies that explore the effect of excessive social media use on the self-esteem of minority populations, especially in the light of the COVID 19 pandemic. Hence, this study will contribute to the existing literature by exploring the relationship between social media use and self-esteem of Asian and Asian Americans.

2.6. Hate Crime/Hate-Speech on Social Media and Self-Esteem

Self-esteem refers to a person's positive or negative evaluation of the self; that is, the extent to which an individual views the self as worthwhile and competent (Battle, 1978). Self-esteem is the evaluative emotional component of the broader self-concept (Heatherton, 2003) and serves various social and existential functions (e.g., acceptance in groups, meaning in life) (Greenberg, 1997). Notably, self-esteem can be conceptualized as both a mostly stable trait that develops over time and a fluid state that is responsive to daily events and contexts (Heatherton, 2003)

In today's era, billions of people use social networking sites to maintain relationships and express their beliefs (Wilson, 2012). There is no doubt that these platforms are being used for self-evaluation as well. As mentioned before, positive, and negative interactions on these sites affect the overall well-being of people using these platforms. Since social media platforms have also transformed into breeding grounds for hate-speech and racism, previous research has shown that hate-speech has a detrimental impact on the target groups, ranging from causing psychological harm to inciting violence (Stefania, 2021). A central part of harm of hate speech is that it assaults one's self-respect/ self-esteem (Seglow, 2016). For example, In the case of the LGBT community, online violence causes a multitude of undesirable psychological effects from feelings of anger, sadness, anxiety, depression, stress, shame, self-blame, and social isolation (Stefania, 2021). Victims of online abuse tend to feel guilty for being part of the LGBT community, and they isolate themselves to reduce the occurrence of hate speech. Moreover, online maltreatment also influences suicidal thoughts in the minds of the victims (Stefanipa, 2021).

Another study focusing on children and young people concluded a negative association between cyberbullying/ online hate and mental health. People exposed to cyberbullying showed signs of depression, suicidality, anxiety, aggression, substance abuse, low self-esteem, peer problems and loneliness (Kwan, 2020). Studies also pointed out that increase in cybervictimization scores caused a decrease in self-esteem scores in high school students (Chang, 2013). A study looking at African American college students also found out that students exposed to racism and online hate reported low levels of self-esteem (Johnson, 2020). Interestingly, a recent study looked at the effects of COVID 19-related cyberbullying on the self-esteem of students from East and Southeast Asia at the University of Jordan. This study

concluded that COVID-19 associated cyberbullying could be a catalyst for a decrease in the mental health among university students, affecting their self-esteem (Alsawalqa, 2021).

In the light of the COVID-19 pandemic, a study specifically explored the relationship between social media discrimination and mental health among adolescents of color. This study used the Online Victimization Scale (Tynes, 2010, 2020) due to the reliability of the scale among Asian, black and Latinx people. The results of the study also concluded social media discrimination as a contributor to mental health risk among youth of color (Tao, 2021).

Since self-esteem plays a very important role in our ability to take risks, learn new skills, be creative, take feedback, deal with others fairly and benevolently, and be productive and assertive, we need to understand how hate speech can affect our self-esteem (Braden, 2021). Further, given the effect social media use and hate speech/hate crime has on the targeted groups, it will be particularly insightful to see the effect COVID 19-related online hate speech has on self-esteem of Asian and Asian-American community. Our research will not only help understand the current effects of hate speech due to COVID-19 on the Asian and Asian-American community in the United States, but also discern its impact on the community's future.

2.7.Coping Mechanism

The coronavirus disease has affected peoples' physical and mental health. Since the challenges brought by COVID-19 were some that had never been experienced before, people had to devise strategies to tackle the issues at hand. Studies show that beyond physical illness, people have faced boredom, frustration, separation from family, irregular access to supplies, and financial strain because of the pandemic (Finlay, 2021). The loss of jobs and family members has also affected the overall physical, emotional, and mental health of people (Finlay, 2021). As

mentioned before, we have seen COVID 19-related hate against the Asian community in United States, and studies have shown its detrimental effects on the mental health of the targeted population. Since people have been under a lot of duress, scholars and medical health practitioners have emphasized the importance to understand effective ways of coping with living through the pandemic (Cunningham, 2022).

Based on the research on coping, cognitive and behavioral strategies are the two broad categories of coping that individuals employ to deal with stressful situations (Scheier, 1986). Active coping, a behavioral strategy involves using behaviors to address, modify or overcome a situation. Regulatory coping a cognitive strategy, however, is the use of reflection, change in attitude, expectation, or perception towards the situation. An individual can consciously or subconsciously use both types of strategies simultaneously (Tilburg, 2020). Coping strategies could also be positive or negative. For example, where exercising, eating healthy and meditating are some of the positive coping strategies, denial, and drinking too much alcohol are negative. Based on the different biological and psychosocial factors, including physical health, mental health, personality, spirituality, financial stability, and social support, people may choose different coping mechanisms (Kobayashi, 2021).

Since self-esteem has been an indicator of an individual's overall mental health, and mental health is a factor in how people choose to cope with situations, studies have shown that people who have higher self-esteem cope differently from stressors than people with lower self-esteem. Research done by Eisenbarth on college students suggested that students with low self-esteem may turn to avoidance behaviors to cope with the negative feelings associated with low self-worth (2012). Further, high levels of self-esteem may lessen perceived stress and facilitate adaptive coping, whereas low self-esteem may induce one to see only the negativity of the

situation and have a poor perception of his or her abilities to cope with stressful demands (Dumont,1999). Overall, self-esteem can lead to differential choices of coping strategies, which in turn can affect the overall well-being of an individual (Aspinwall,1992).

In summary, when we consider the ill effects of the COVID-19 pandemic and its impact on peoples' lives, we need to study the coping mechanisms people are using to keep themselves healthy and sane: critically, the issue of anti-Asian hate on social media due to COVID-19. As established above, the relationship between online hate and self-esteem as well as the differences in the coping mechanisms of people with high self-esteem and low self-esteem, establishes a greater need to understand the coping mechanisms associated with the issue of COVID 19-related online hate and self-esteem of Asian and Asian Americans.

3. THEORETICAL FRAMEWORK

Social Identity Theory

Tajfel and Turner's social identity theory argues that there are two distinct aspects of the self-concept: personal identity and social identity (Tajfel, 1981). Personal identity includes specific attributes of the individual such as competence, talent, and sociability. Social identity on the other hand is "that part of an individual's self-concept which derives from his knowledge of his membership in a social group together with the value and emotional significance attached to that membership" (Tajfel, 1981, p. 255). Hence, the social group in which individuals hold a membership provide them with a set of behaviors and attitudes aligned with the group (Mastro, 2003). Research suggests that the more salient a social identity, the more that their social group will shape their sense of self (Tajfel, 1979). Based on the theory, individuals with similar attributes belong to the ingroup category and those who are different are considered as the outgroup category. This differentiation and stereotyping among people, creates intergroup competition, such that individuals favor the in-group members and if needed, disparage the outgroup (Tajfel, 1986). Stereotyping and categorizing people based on a variety of stigmas affects the social identity of the group and aids the identification of negative outgroup traits (Jones, 1984). This process can occur automatically once certain negative information is established about the target group (Derous, 2016). The stronger the negative stereotype, the stronger will be the judgement of the outgroup members.

Considering that COVID-19's first case was reported in China, people started developing certain negative feelings towards the Chinese population. The situation escalated after President Trump referred to coronavirus as the 'Chinese Virus'. This negative stereotype that established against the Asian population has caused people to differentiate themselves and consider Asian

population as an outgroup. Thus, according to the social identity theory, Asians' personal and social identity is being threatened due to COVID 19-related negative stigmatization. We know that a threat to social identity can lead to self-esteem issues, depression, and anxiety (Lee, 1998), and therefore, it is important to study the impact of COVID-19 related online perceived racial discrimination on the self-esteem of Asian population.

4. RESEARCH QUESTIONS AND HYPOTHESIS

Since social media platforms have transformed into breeding grounds for hate-speech and racism, previous research has shown that hate-speech has a detrimental impact on the target groups, ranging from causing psychological harm to inciting violence (Stefania, 2021). A central part of harm of hate speech is that it assaults one's self-respect/ self-esteem (Seglow, 2016).

Therefore, based on this information, I have the following hypothesis in this study:

H1: There is a significant relationship between Anti-Asian hate crime/perceived racial discrimination due to Covid-19 on social media and low self-esteem.

While current research does exist that addresses the relationship between social media use and self-esteem, online racial discrimination and self-esteem, and the use of different coping mechanisms for the same, there is limited scholarship that currently exists addressing how they all connect with one another, especially in association with COVID-19 and Asian and Asian-American population. Therefore, my study addresses the following research questions:

RQ1: Is there a relationship between perceived racial discrimination due to COVID-19 and self-esteem of Asian and Asian- Americans?

RQ2: How are Asians and Asian- Americans coping with the self-esteem issues due to the targeted hate speech on social media due to the COVID-19 pandemic?

RQ3: Is there a difference in the coping mechanisms of people with higher self-esteem vs lower self-esteem due to the targeted hate speech on social media due to the COVID-19 pandemic?

5. METHODS

I used a combination of quantitative methods and qualitative content analysis might prove most effective in proving understanding of the relationship between COVID-19 related online perceived racial discrimination and self-esteem and the coping mechanisms used by the affected population. While the quantitative methods are used to confirm or deny the existence of a certain relationship or phenomena, qualitative research examines the lived experiences of people to understand how the situation/phenomena affects them and how they cope with the conditions at hand (Cresswell, 2009).

I sent a survey to 510 participants via Lucid and used correlations to analyze the relationship between ‘COVID-19 related perceived racial discrimination on social media’ and self-esteem of Asian and Asian Americans. Correlation will help us understand the relationship existing between the variables and reduce the range of uncertainty as predictions based on correlations are likely to be more reliable and near to reality. To study the use of different coping mechanisms I identified the themes that emerged through the responses, all participant answers were content analyzed through qualitative content analysis (Denzin & Lincoln, 1998; Holsti, 1969; Strauss & Corbin, 1990; Taylor & Bogdan, 1998). I used qualitative content analysis for the open-ended question because it provides valuable cultural and historic insights of the coping mechanisms used against self-esteem issues by people over time. It also gives us an insight into complex models of human thoughts and language use for actions which potentially have the same meaning. Thus, our content analysis for coping mechanisms against self-esteem issues due to COVID 19-related online hate would help us understand and document trends over time. To study any differences in coping mechanisms between the low self-esteem and high self-esteem

groups, I used a Chi-square test. Chi-square test helps us analyze data when we have to test the relationship between two categorical variables.

5.1. Participation and Recruitment

To study how Asians and Asian-Americans experience self-esteem issues due to the targeted hate speech on social media due to COVID-19 pandemic, I surveyed 510 Asians and Asian-Americans via Lucid. The inclusion criteria were that participants must: (1) identify as an Asian currently living in the United States (2) be 18 years or older and (3) use social media. The criteria were developed to focus only on the Asian and Asian- American population across the United States particularly using social media, thus creating a diverse participant pool.

The independent variable (IV) was *targeted hate-speech on social media* and *social media use*, and the dependent variable (DV) is the *effect on self-esteem* of Asians and Asian Americans. The survey included a series of demographic questions, a measure of social media use, scales assessing perceived racial discrimination on social media due to COVID-19, self-esteem, and an open-ended question about coping mechanisms for self-esteem issues. Cronbach's alpha was calculated to ensure the reliability and internal consistency of the study constructs. IRB approval was received before the survey was sent to the participants as the study included human subjects. The different measures that examine these constructs are described below in detail. The entire questionnaire for each of the study measures is in Appendix 1.

5.2. Social Media Use

To assess social media use, I asked the following questions related to the participants' frequency of use of the different social media platforms derived from Auxier, 2021. "How often do you visit these different social media pages: Facebook, Twitter, Instagram, Tiktok,

Snapchat?” (1= Never, 6= Multiple times a day); “How often do you post to your social media pages: Facebook, Twitter, Instagram, Tiktok, Snapchat?” (1= Never, 6= Multiple times a day); “How often do you respond (like, comment, retweet) to others’ social media pages: Facebook, Twitter, Instagram, Tiktok, Snapchat?” (1= Never, 6= Multiple times a day). People scoring higher on this scale used more social media. The responses were standardized to these measures and a reliability analysis was conducted. The Cronbach’s alpha value revealed that the items were highly related ($\alpha = .83$).

5.3. Rosenberg Self- Esteem Scale

To assess the self-esteem, I used the Rosenberg Self-Esteem scale. For this section of the questionnaire, participants indicated their agreement with 10 statements on 5-point Likert scale. Sample items include “At times I think I am no good at all.” and “I feel that I have a number of good qualities.” I reworded the items relevant to the study (Rosenberg, 1965). Items that were positive statements such as, “I am able to do things as well as most other people (1=strongly agree, 5= strongly disagree)” were coded differently than the negative statements such as “All in all, I am inclined to feel that I am a failure (1=strongly disagree, 5= strongly agree).” People who scored higher on the self-esteem scale had high self-esteem. The Cronbach’s alpha value revealed that the items were highly related ($\alpha = .745$).

5.4. Perceived Racial Discrimination

The COVID-19 related social media hate experienced by the participants were assessed using the Online Victimization Scale (Tynes et al., 2010). In the current study, “online” was substituted with “social media” for the items in the questionnaire. The scale included four items

on perceived social media racial discrimination due to COVID-19 (e.g., “People have said mean or rude things about me related to COVID-19 because of my race or ethnic group on social media;” “People have said things that were untrue about people in my race or ethnic group related to COVID-19 on social media.” Responses ranged from (1 = never to 5 = always) based on a 5-point Likert scale. People who scored higher on the perceived racial discrimination scale experienced more online racial discrimination. The scale was found to be reliable among the Asians and Asian Americans with Cronbach’s alpha ranging from 0.66 to 0.92, with the current study’s value being ($\alpha = .778$).

5.5. Coping Mechanisms

To understand the ways in which people are coping with issues related to self-esteem anticipated to be affected by the COVID-19 related social media hate, I included an open-ended question: “Since the beginning of COVID-19, what strategies are you using to cope with self-esteem issues?” I used qualitative content analysis to interpret the text data through a systematic process of open coding. Content analysis allows answers to be categorized based on words and phrases that share the same meaning. I developed categories from the raw data into a framework that captured key themes and processes through multiple interpretations. These themes were taken from the previous studies that specifically analyzed COVID-19 related coping mechanisms. Since the themes were mostly defined, I analyzed all our participant answers and categorized them into different themes based on ‘key words’ or ‘similar meanings.’ During the process, however, I kept an open mind to any new categories that may emerge.

The entire process involved five steps: first, gaining sense of the data, in which the authors independently read all data repeatedly to gain a sense of the whole. Participant responses

on coping strategies ranged from one word to a few sentences, with the majority succinct in length. Second, each coder wrote notes and headings while reading the data and checked if the answers related to any of the categories that had previously been used in different studies related to COVID-19 coping. Third, all authors developed individual coding schemes and discussed the procedural rules before coding the data. To check consistency and intercoder reliability, the authors manually coded the data independently in Excel. Fourth, the authors discussed their findings after coding the entire data and reviewed the coding for consistency and completeness. Fifth, the authors prepared to report the findings by finalizing definitions of each category, counting frequencies of categories, and selecting exemplar quotes. The authors categorized the data broadly into 9 final themes. Participant answers belonged to the following 9 themes: attitude and outlook, daily life, food, alcohol and substance, exercise, faith-based practice, precaution, nothing, I don't have issues, and others. I have described each theme in detail in the results section.

5.6. Data Analysis

To perform the statistical analysis, I used Excel, and SPSS. We calculated Cronbach's alpha coefficient to assess the reliability of our different scales: Social media use, Perceived racial discrimination scale and Rosenberg's self-esteem scale. I used Pearson's correlations to test the relationship between 'social media use', 'perceived racial discrimination' and 'self-esteem' at 0.01 level of significance. For coping mechanisms, I used qualitative content analysis to find appropriate themes and categories. These themes have been taken from studies done on coping mechanisms specifically related to COVID-19 (Finlay, 2021). To see the differences in

the coping mechanisms of people with high vs low scores on the self-esteem scale, I used a Chi-square test.

6. RESULTS

6.1. Participants

We had a total of 506 participants out of 510. We removed the answers of four participants as their survey was incomplete. Of the participants who completed the survey, we had 31.39% South-Asians (Indian, Pakistani, Indo-Aryans, Dravidians, Munda people), 67.41% East- Asians (Chinese, Mongols, Koreans, Japanese, Tibetan people) and 6% Central-Asians (Turkic and Iranian People). Out of the 506 participants, 287 identified as females, 215 as males, 3 non-binary and 1 other.

H1: There is a significant relationship between Anti-Asian hate crime/perceived racial discrimination due to Covid-19 on social media and self-esteem.

Anti-Asian hate crime/perceived racial discrimination due to Covid-19 on social media and self-esteem are not significantly correlated (Table 1). The relationships between social media use and self-esteem, as well as perceived racial discrimination and self-esteem have been explored separately in the study and reported under research question 1.

RQ1: Is there a relationship between online perceived racial discrimination due to COVID-19 and self-esteem of Asian and Asian- Americans?

Table1 shows the relationship between social media use and self-esteem along with online perceived racial discrimination due to COVID-19 and self-esteem. Social media use and COVID 19-related online perceived racial discrimination were positively correlated, $r(506) = 0.308$, $p < 0.001$. Thus, people who scored higher on the social media use scale also scored higher on the perceived racial discrimination scale. However, between COVID-19 related online perceived

racial discrimination and self-esteem the relationship was not significant. In case of the relationship between social media use and self-esteem, the relationship was also not significant.

Table 1. Pearson’s correlation between ‘social media use’, ‘online perceived racial discrimination due to COVID-19’ and ‘self-esteem.’

		Self esteem	Social media use	Perceived Racial Disc
Self-esteem	Pearson	1	-.127**	-.082
	Correlation			
	Sig. (2-tailed)		.004	.064
	N	506	506	506
Social media use	Pearson	-.127**	1	.342**
	Correlation			
	Sig. (2-tailed)	.004		<.001
	N	506	506	506
Perceived racial discrimination	Pearson	-.082	.342**	1
	Correlation			
	Sig. (2-tailed)	.064	<.001	
	N	506	506	506

** . Correlation is significant at the 0.01 level (2-tailed).

RQ2: How are Asians and Asian- Americans coping with the self-esteem issues due to the targeted hate speech on social media due to the COVID-19 pandemic?

Of the 510 total participants in the study, 506 wrote a response to the open-ended question, “Since the beginning of COVID-19, what strategies are you using to cope with self-esteem issues?” These respondents were nearly 56.8% females and 43.2% males.

The analysis generated 9 categories of coping strategies as listed in Table 2. The most common coping categories were related to attitude and outlook (reported by 25.69% of respondents), daily-life (22.33%), food, alcohol, and substance (5.13%), precaution (8.3%) followed by

exercise (5.33%). Over 22% of respondents explicitly reported not using any coping strategies or not knowing what to do. About 4.5 % of respondents also answered that they did not have any self-esteem issues. Below we describe each category with illustrative quotes from participants (Figure 2).

6.2. Attitude and Outlook

Meditation, breathing exercises, positive affirmations, helping others, and humor were strategies to stay calm and positive. A 45-year-old female wrote, “I tell myself to be positive and be who I am.” Another 32-year-old male described “practicing meditation everyday helps.”

Participants described focusing more on themselves, trying to build self-confidence by meditating and saying positive affirmations also helped.

Some respondents also found being grateful for what they have in life helped them get through the issues of self-esteem.

A 45-year-old male quoted “I have coped by being grateful and seeing how others have misfortune.”

Some respondents also suggested what others should do. A 32-year-old female suggested “Surround yourself with loving family and don’t think of the negatives.” However, a respondent also said, “I try to do things I enjoy, or do things that make me feel productive or useful. But I am still struggling.”

6.3. Daily-Life

Cooking, getting a pet, talking to the therapist, listening to podcasts, learning new skills, and spending time with family helped people cope with self-esteem issues related to COVID-19.

Participants reported strategically adapting their lives to cope with the self-esteem issues. They described incorporating certain activities into their routine to keep them occupied helped them through the crisis. Many attempted to learn a new skill, get off-of social media, watch motivational videos, and listen to podcasts/music. A 21-year-old male answered, “I have stopped using social media a lot.”

Other changes include practicing hobbies and playing with pets as a coping mechanism. A 27-year-old female said, “I have started doing a lot of make-up.” A 37-year-old female reported, “I got myself a pet.” Many also reported that they started going to a therapist for the first time and it has helped with their self-esteem issues.

6.4. Food, alcohol, and substances

Some respondents described eating a lot, consuming alcohol, marijuana, nicotine and distracting themselves as a coping mechanism. A 27-year-old male wrote, “I use drugs.” Another 45-year-old male reported, “Nicotine, self-love and eating a lot”

Other respondents, however resorted to playing video games, watching television/ Netflix, and using more social media to cope. When asked about coping strategies, a 32 female responded, “CBT and distracting myself with TV shows.” Another participant answered “consuming alcohol and drugs” as a coping strategy.

6.5. Exercise

Exercise, particularly doing yoga and working out in the gym were described as coping strategies to improve physical and mental well-being. A 45-year-old female shared, “I try to keep fit by regular exercise and meditation.”

Some participants also used different forms of exercise such as dancing, to keep themselves fit and healthy. Overall, respondents tried to exercise more often and tried to look their best. A 32-year-old female shared she “started losing weight and look her best.” A few male respondents answered that they have started playing more sports and getting extra sleep on the weekends.

6.6. Faith-based practice

Only 0.9 % of the population used faith-based practices, out of which majority were females. Most respondents just wrote ‘prayer’ as their answer to the question. A 45-year-old male shared, “I like to hand my faith to God.” This percentage of respondents is consistent with the previous studies done on coping mechanisms. In a study looking at coping during the COVID-19 pandemic reported that only 7% of the population out of 5,180 respondents used faith-based practices as a coping mechanism (Finlay, 2021).

6.7. Precaution

Reducing going outdoors to protect oneself was another coping strategy used by respondents. A 27-year-old male shared, “Keeping a distance from other people places and things.” Some participants also suggested staying alert and avoiding people as a coping mechanism. A 32-year-old-females shared “I am keeping a low profile.” Other respondents said they are keeping social distance, wearing a mask, and not going out.

6.8. Nothing / I don't know

About 22% of the respondents reported not using any coping strategies. Some participants expressed they use nothing, and some did not know what to do or where to start. A 21-year-old

male shared, “Nothing. My issues are worsening, ” while many other participants gave a simple one-word answer saying “nothing/none.”

A 27-year-old female answered, “Don’t know.” It is possible that many people don’t realize that they can cope with the issue of self-esteem and hence are not using any strategies. Whereas, for many others they simply don’t know what to do or who to go to for support.

6.9. I don’t have issues

About 4.5% (23 out of the 506) of the population responded that they did not need any coping mechanisms as they did not have any self-esteem issues. A 45-year-old male quoted, “I do not need to cope. I have a lot of self-esteem.”

Another 32-year-old male answered, “No self-esteem issues for me. I haven’t had any since covid nor do I think I have had any.” Interestingly, out of the 23 respondents who said they did not have any self-esteem issues, 16 of them had very high scores on the self-esteem scale. Hence, we could say that they were aware of their ‘high self-esteem.’

6.10. Others

A few respondents gave one-word answers which we could not place in any of the categories. Many of these answers did not make much sense to be put into any categories. For example, a respondent answered, “myself”, whereas another said, “yes.”

Table 2. Frequency of respondents' answers in the different coded categories for coping mechanisms

Categories and Subcategories	Frequency	Percentage
Attitude and Outlook	130	25.6916996
Meditation/ relaxing		
Humor		
Staying positive/ grateful		
Helping Others		
Standing up for myself		
Daily Life	113	22.3320158
Cooking/baking		
Getting a pet		
Hobbies		
keeping a routine		
Listening to podcasts/ motivational videos		
Reading		
keeping busy/ working		
Spending time with family		
Therapy		
Exercise	29	5.73596838
Yoga		
Gym/ dancing		
Outdoor activities (hiking/ biking)		
Food, Alcohol/ Addiction	26	5.13833992
Alcohol use/ drinking		
Eating more		
Marijuana/ nicotine		
More TV		
more Netflix/ social media sites		
Faith based practice	5	0.98577075
Pray		
Reading scriptures		
Nothing/ I don't know	112	22.1343874
(table cont'd)		

Categories and Subcategories	Frequency	Percentage
I don't use any strategies I don't have issues I don't need anything. I don't have issues	23	4.54545455
Precautions Test Stay away from people Don't go out Keep a low profile	41	8.10239526
Other	27	5.33596838

RQ3: Is there a difference in the coping mechanisms of people with higher self-esteem vs lower self-esteem due to the targeted hate speech on social media due to the COVID-19 pandemic?

To look for differences in the coping mechanisms of people with high self-esteem (HSE) vs low self-esteem (LSE), we filtered the answers to the open-ended question (Figure 1). All the participants who scored between 0-20 on the self-esteem scale, were placed in the group of 'low self-esteem' and others who scored between 21-40 were put in the 'high self-esteem' group. A chi-square test of was performed to determine whether the different coping mechanisms were equally preferred by the respondents belonging to the high self-esteem and low self-esteem groups. Preference for the different coping mechanisms was not equally distributed in the population, $X^2(8, N = 506) = 20.73$, $p = 0.008$ (8 = degrees of freedom, 506 = number of cases, 0.008 (p) = probability value) (Table 3). Table 4 and Figure 1 show the different coping mechanisms used by the low self-esteem group vs high self-esteem group. The number of people who answered 'nothing' for the open ended question of coping mechanisms is significantly higher in the low self-esteem group (*adjusted residual value* = 2.4) compared to the high self-

esteem group (Table 4). Similarly, peoples’ answers from the low self-esteem group (*adjusted residual value = 2.7*) were significantly higher for the ‘other’ category compared to the high self-esteem group (Table 4). There we no significant differences in other coping categories between the low self-esteem and high self-esteem groups.

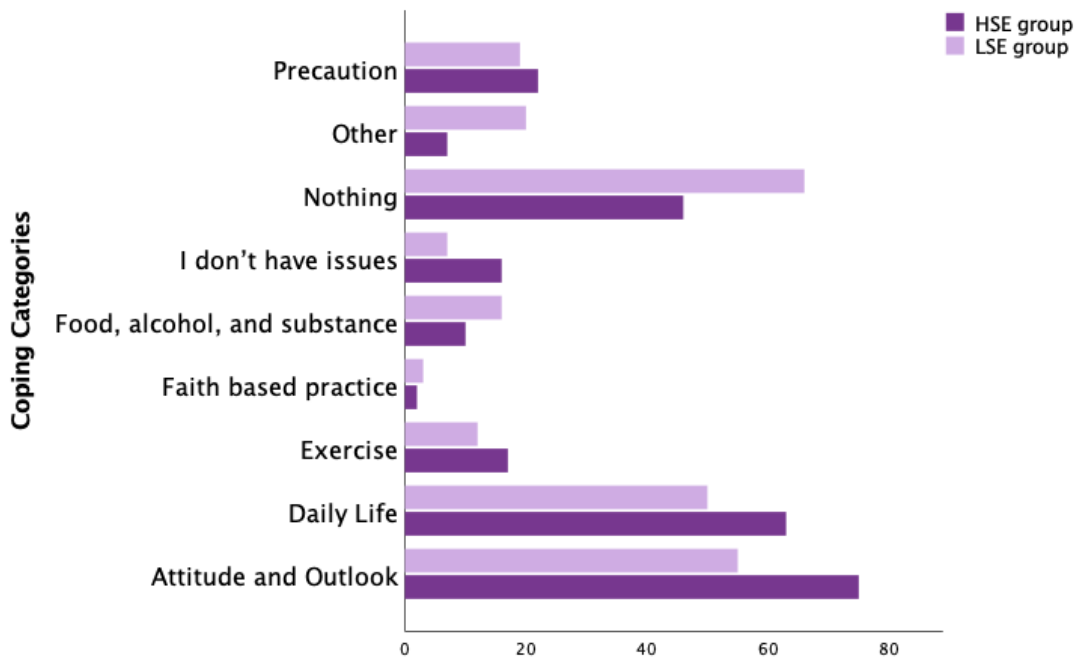


Figure 1. Frequency distribution of different coping mechanisms used by people in the low self-esteem group and the high self-esteem group.

Table 3. Chi-square test for coping mechanisms preferred by low self-esteem vs high self-esteem group.

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	20.703 ^a	8	.008
Likelihood Ratio	21.113	8	.007
N of Valid Cases	506		

a. 2 cells (11.1%) have expected count less than 5. The minimum expected count is 2.45.

Table 4. Frequency distribution and adjusted residual values of different coping mechanisms used by people in the high self-esteem and low self-esteem groups.

		High self esteem	Low self esteem	Total
Attitude and Outlook	Count	75	55	130
	Expected Count	66.3	63.7	130
	% within @1	57.70%	42.30%	100.00%
	Adjusted Residual	1.8	-1.8	
Nothing	Count	46	66	112
	Expected Count	57.1	54.9	112
	% within @1	41.10%	58.90%	100.00%
	Adjusted Residual	-2.4	2.4	
Daily life	Count	63	50	113
	Expected Count	57.6	55.4	113
	% within @1	55.80%	44.20%	100.00%
	Adjusted Residual	1.1	-1.1	
Exercise	Count	17	12	29
	Expected Count	14.8	14.2	29
	% within @1	58.60%	41.40%	100.00%
	Adjusted Residual	0.8	-0.8	
	Count	2	3	5
	Expected Count	2.5	2.5	5

(table cont'd)

		High self esteem	Low self esteem	Total
Faith based practice	% within @1	40.00%	60.00%	100.00%
	Adjusted Residual	-0.5	0.5	
	Count	22	19	41
Food, alcohol, and substances	Expected Count	20.9	20.1	41
	% within @1	53.70%	46.30%	100.00%
	Adjusted Residual	0.4	-0.4	
I don't have issues	Count	10	16	26
	Expected Count	13.3	12.7	26
	% within @1	38.50%	61.50%	100.00%
Precautions	Adjusted Residual	-1.3	1.3	
	Count	16	7	23
	Expected Count	11.7	11.3	23
Other	% within @1	69.60%	30.40%	100.00%
	Adjusted Residual	1.8	-1.8	
	Count	7	20	27
Other	Expected Count	13.8	13.2	27
	% within @1	25.90%	74.10%	100.00%
	Adjusted Residual	-2.7	2.7	
Total	Count	258	248	506
	Expected Count	258	248	506
	% within @1	51.00%	49.00%	100.00%

7. DISCUSSION

COVID-19 has transformed the way people work, socialize, and live their day-to-day lives. We have had a plethora of emotions such as frustration, boredom, anger, fear, and a sense of loss since the beginning of the pandemic. On one hand where we saw the world coming together to fight against COVID-19, on the other we saw people hating on each other because of race and ethnicity. Needless to say, hate crimes against Asians as a result of the pandemic have caused a negative impact on the overall well-being of the targeted population. To our knowledge, this is one of the first studies to address online perceived racial discrimination and its effect on self-esteem of Asian and Asian Americans and the different coping mechanisms being used during the COVID-19 pandemic. The intention of this research was to make a positive contribution to the literature on social media related discrimination due to COVID-19 and its effects on peoples' lives. Using correlations, qualitative content analysis, and chi-square test, our results provided an understanding of the relationship between social media use, online perceived racial discrimination, self-esteem, and the different coping strategies used by people in the low self-esteem vs high self-esteem groups.

In this study, we reported a significant positive relationship between online perceived racial discrimination and social media use. The more social media the Asian population used, the higher they scored on the perceived racial discrimination scale. Since, the association between frequency of social media use and perceived racial discrimination depends on the active interaction between social media users (Yang, 2020), it is imperative that those who spent more time on social media had higher chances of interaction with other users, exposing them to higher levels of racial discrimination. Higher scores on the perceived racial discrimination scale due to content exposure on social media also reflects a resentment towards the Asians and Asian

Americans on different social media platforms, which is in line with the social identity theory, which indicates discrimination by maximization of the negative aspects of the outgroup (Asians and Asian Americans) (Tajfel, 1979). Hence, consistent with the previous literature, we can say that increase in social media use leads to an increase in the online perceived racial discrimination related to COVID-19, and can cause mental health problems such as depression, anxiety, alcohol use disorder, and substance use in the target population (Tynes, 2020).

According to the results, COVID-19 related racial discrimination on social media and self-esteem, had no significant relationship. This finding was surprising because in previous studies, perceived racial discrimination has been strongly linked to low self-esteem (Harris, 2007). There are a few studies, however, that did not find any significant relationship between the two. A study conducted to understand the relationship between perceived racial discrimination in Chinese people and subjective well-being concluded that there was no evidence that perceived racial discrimination was related to subjective well-being (Ji, 2019).

There are several possible reasons as to why we did not find any significant relationship between perceived racial discrimination and self-esteem in our study (Ji, 2019). First, perceived racial discrimination could play a role as a mediator (explains the process through which the two variables are related) rather than the moderator (affects the strength and direction of the relationship) variable. Second, an increased insensitivity among the targeted population towards perceived racial discrimination, such that it has stopped affecting the population after a certain threshold. Third, perceived racial discrimination and self-esteem can be mediated by a sense of control. Individuals who had a stronger self-control, did not let discrimination on social media affect their self-esteem. Fourth, the participants could have had some previous self-esteem issues that have not been accounted for. Therefore, to account for our results, we assume that there

seem to exist some mediators and moderators between perceived racial discrimination and self-esteem, thus weakening the degree of the direct impact on self-esteem.

In the study, we also highlighted wide-ranging methods of coping used by the Asian and Asian American population. Our results are consistent with previous studies, where people have used cognitive and behavioral strategies to cope with issues that cause distress (Finlay,2021). The strategies used by people included emotion-focused coping (for example, staying positive), social support coping (for example, spending time with family and friends), religious coping (for example, praying and believing in the higher power), cognitive reframing (for example, believing in oneself and using positive affirmations), action-focused coping (for example, exercising regularly and eating healthy). Many participants often reported to use more than one strategy to cope with the self-esteem issues. Further our results also indicated not all coping strategies were health promoting. People also used denial, distraction, alcohol, and substance abuse as a coping strategy which could have an additional negative impact on their mental and physical health.

The results for open ended question on coping mechanisms showed a significant difference in the coping mechanism preference by the individuals of the low self-esteem vs high self-esteem groups. Consistent with the previous studies, people in the LSE group answered ‘Nothing/ I don’t know’ more than the people in the HSE group (Heimpel, 2002). LSE people fail to use coping/ self-enhancement strategies compared to HSE people because they appear to be less motivated than the HSE people to improve their well-being. However, people with high self-esteem generally are more self-aware and because they believe in their ability to cope with stressors, they tend to find ways to deal with the problems. Studies also show that high self-esteem is a strong predictor of successful active coping and improves the overall wellbeing of an

individual (Aspinwall, 1992). Since avoidance behaviors and helplessness can further lead to depressive symptoms in the people with low self-esteem, it is excessively important to understand these patterns and ploy inductive strategies to deal with self-esteem issues.

Overall, this study captured the ill effects of COVID-19 related online hate on the self-esteem of Asian and Asian Americans which can have long term effects on their physical and mental health. Considering the importance of self-esteem and self-esteem studies, this research adds a piece to the existing literature on the impacts of social media use and online racial discrimination on self-esteem, especially in a minority population of Asian and Asian Americans. Furthermore, this study highlights the differences in the coping strategies of low self-esteem vs high self-esteem people and potentially explains the detrimental effects of not using any coping strategies to deal with the self-esteem issues.

There is a need to conduct more research on minority populations in United states in the context of online racial discrimination and coping mechanisms as the literature for such studies is clearly lacking. We also suggest designing prevention and intervention programs for minority populations to increase awareness of both online racial discrimination, and coping strategies to deal self-esteem issues.

8. LIMITATIONS

Although the study explores a relationship between self-esteem, perceived racial discrimination due to COVID-19 and social media use, it is difficult to conclude if the self-esteem issues people had developed after the onset of COVID-19 and perceived racial discrimination or were prevalent before as well. Another limitation is the lack of knowledge about the social-economic conditions of the participants. It has been seen that people cope differently from stressors based on their socio-economic background.

Apart from the above stated limitations, how the variables were operationalized across the study, especially in terms of social media use could be counted as a limitation. Although frequency of use is the most common way to assess social media use and is theoretically consistent with our research question, other dimensions of social media use such as intensity and number of friends may also be important (Anderson,2012). The study also does not account for the perceived racial discrimination experienced by participants outside of the social media platform. Further research which could combine online, and offline perceived racial discrimination would help provide a holistic picture when connected with self-esteem issues, especially in the Asian and Asian American group. However, future research could be conducted to better understand the relationship among the different variables explored in this study.

9. CONCLUSION AND IMPLICATIONS

Social media has dramatically impacted our social world. This research represents a step forward towards understanding the long-term implications of negatively using social media and its consequences on a minority population of Asians and Asian Americans. Critically, our research suggests that online hate due to COVID-19 can have a detrimental impact on an individual's self-esteem. Asians being a minority already suffer through discrimination regardless of COVID-19, and online-hate due to COVID-19 can have a negative impact on the mental, physical, and social wellbeing of Asians which could become irreparable for generations to come. This study is particularly important to create awareness about the impact of COVID-19 related online hate on the Asian population and the measures that can be taken to cope with the situation. Also, through the findings this study lays emphasis on the need to develop better resources for minorities and people of color to cope with mental-health issues. Health professionals and policy makers need to be informed about the implications of COVID-19 related online hate and the coping strategies that should be developed to help the minority populations in the world. This study could be extended to other minority populations to understand deeper implications of online perceived racial discrimination due to COVID-19 and self-esteem.

APPENDIX. QUESTIONNAIRE

Study : "The effects of COVID-19 related social media hate crime on Asian and Asian Americans' self-esteem"

Social Media use

Adopted from article, *Social Media Use in 2021*, the overall social media consumption using three items is measured. (As taken from PEW Research Center)

1. Do you ever use social media sites like Facebook, Twitter, Snapchat, Tik tok or Instagram? (Should this be a pre- screening question? / exclusion question?)
 - a. Yes
 - b. No
 - c. Don't Know
 - d. Refuse to answer

2. Thinking about the social media sites you use... About how often do you visit or use
 - a. Several times a day
 - b. About once a day
 - c. A few times a week
 - d. Every few weeks
 - e. Less Often
 - f. Don't know
 - g. Refuse to answer

Adopted from Stamps, D. (2020). Media literacy as liberator: Black audiences' adoption of media literacy, news media consumption, and perceptions of self and group members. *Journal of International and Intercultural Communication*, 1-18)

1. How often do you visit the following social media pages?

Facebook	Never	Once a week	2-3 times/week	4-5 times/week	Daily	Multiple Times a day
Twitter	Never	Once a week	2-3 times/week	4-5 times/week	Daily	Multiple Times a day
Instagram	Never	Once a week	2-3 times/week	4-5 times/week	Daily	Multiple Times a day
Tiktok	Never	Once a week	2-3 times/week	4-5 times/week	Daily	Multiple Times a day
Snapchat	Never	Once a week	2-3 times/week	4-5 times/week	Daily	Multiple Times a day

2. How often do you post to your social media pages?

Facebook	Never	Once a week	2-3 times/week	4-5 times/week	Daily	Multiple Times a day
Twitter	Never	Once a week	2-3 times/week	4-5 times/week	Daily	Multiple Times a day
Instagram	Never	Once a week	2-3 times/week	4-5 times/week	Daily	Multiple Times a day
Tiktok	Never	Once a week	2-3 times/week	4-5 times/week	Daily	Multiple Times a day
Snapchat	Never	Once a week	2-3 times/week	4-5 times/week	Daily	Multiple Times a day

1. How often do you respond (like, comment, retweet) to others' social media pages?

Facebook	Never	Once a week	2-3 times/week	4-5 times/week	Daily	Multiple Times a day
Twitter	Never	Once a week	2-3 times/week	4-5 times/week	Daily	Multiple Times a day
Instagram	Never	Once a week	2-3 times/week	4-5 times/week	Daily	Multiple Times a day
Tiktok	Never	Once a week	2-3 times/week	4-5 times/week	Daily	Multiple Times a day
Snapchat	Never	Once a week	2-3 times/week	4-5 times/week	Daily	Multiple Times a day

Perceived Racial Discrimination on Social Media

The experiences with individual and vicarious social media racial discrimination are assessed using the Online Victimization Scale (Tynes et al., 2010). A few changes are made based on the specifics of this study to capture the impact on perceived racial discrimination due to COVID-19.

The scale includes four items on perceived individual social media racial discrimination and on perceived vicarious social media racial discrimination. The answers are based on a 5- point Likert scale.

- 1- Never
- 2- Rarely
- 3- Sometimes
- 4- Often
- 5- Always

Perceived individual social media racial discrimination

1. "People have said mean or rude things about me related to COVID-19 because of my race or ethnic group on social media."
2. "People have posted racist images related to COVID-19 on social media."

Perceived vicarious social media racial discrimination

1. "People have cracked jokes about people of my race or ethnic group related to COVID-19 on social media."
2. "People have said things that were untrue about people in my race or ethnic group related to COVID-19 on social media."

Self- Esteem

This part is adopted from the Rosenberg Self-Esteem scale.

1. On the whole, I am satisfied with myself.

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

2. At times I think I am no good at all.

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

3. I feel that I have a number of good qualities.

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

4. I can do things as well as most other people irrespective of the online hate.

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

5. I feel I do not have much to be proud of.

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

6. I certainly feel useless at times.

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

7. I feel that I'm a person of worth, at least on an equal plane with others.

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

8. I wish I could have more respect for myself.

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

9. All in all, I am inclined to feel that I am a failure.

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

10. I take a positive attitude toward myself.

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

Coping mechanisms (Open-ended) Answers can vary and will be categorized later.

Since the beginning of COVID-19, what strategies are you using to cope with self-esteem issues?

Demographics

1. Age:

- 18-24
- 25-29
- 30-34
- 35-40
- over 41

2. Gender:

- Male
- Female
- Non-binary
- Transgender

3. Race

- East-Asian (Chinese, Mongols, Koreans, Japanese, Tibetan people)
- South-Asian (Indian, Pakistani, Indo-Aryans, Dravidians, Munda people)
- Central-Asian (Turkic and Iranian People)
- Don't prefer to answer

4. Type of social media used (Check all that apply):

- Facebook
- Twitter
- Instagram
- YouTube
- SnapChat
- TikTok

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