




Anti-Asian Attitudes in the Context of the COVID-19 Pandemic: an Exploratory Study

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Received: 5 April 2022 / Revised: 17 July 2022 / Accepted: 19 July 2022
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Abstract

Objective The purpose of this paper was to measure if people with greater “structural literacy,” as indicated by greater awareness of racial and socioeconomic disparities in COVID-19 impact, would hold fewer negative attitudes against those perceived to be Asian in the context of the COVID-19 pandemic.

Methods A survey was administered between April and August 2020 to participants from two longitudinal cohorts in New York State. The survey assessed anti-Asian attitudes relating to COVID-19, awareness of racial and socioeconomic disparities in COVID-19, residential location, socioeconomic status, and other demographic information. The sample included 233 Black, Latinx, and White midlife adults from urban, suburban, and rural New York neighborhoods. Multivariable regression modeling was used to assess associations between COVID-19 disparities awareness, an indicator of structural literacy, and anti-Asian attitudes, adjusting for gender, race/ethnicity, residential location, and socioeconomic disadvantage.

Results Greater awareness of disparities in COVID-19 was associated with lower levels of anti-Asian attitudes after adjustment (adj-slope = -0.358 , $p < 0.001$).

Conclusion Greater structural literacy, as measured by awareness of socioeconomic and racial disparities in COVID-19 impact, was associated with fewer anti-Asian attitudes among Black, Latinx, and White adults.

Implications Increasing structural literacy may reduce anti-Asian attitudes that motivate harmful acts against oppressed groups.

Keywords Race · Health disparities · COVID-19 · Xenophobia · Public health

Introduction

The association of immigrant groups with infectious diseases has been a recurring pattern throughout US history [1]. In the nineteenth century, Asian immigrants to the USA were cast as the “yellow peril,” a pervasive stigmatizing stereotype involving distorted notions of uncleanness [2]. Immigrants from Asian countries were perceived as an economic threat to white American laborers [2], which prompted racist discrimination (structural and interpersonal)

and an epidemic of violence against Asian, particularly Chinese Americans [3]. Immigration from China to the USA was shut down with the passing of the Chinese Exclusion Act of 1882; this was extended to immigration from other Asian countries in 1924 and was only overturned with the Immigration and Nationality Act of 1965, which eliminated the national origins quota system [2, 4]. However, negative stereotypes against Chinese and other Asian Americans have persisted, and the COVID-19 pandemic has provided a public health-related excuse for expressing these stereotypes and enacting violence against these populations.

Since the beginning of the COVID-19 pandemic, people who present as Asian, including Asian Americans and Pacific Islanders (henceforth AAPI), have experienced an increased amount of overt racism and discrimination, including violent assaults, in the USA [5]. Notably, a survey among Bhutanese and Burmese refugees across 23 states found that one-third had experienced racism relating to the COVID-19 pandemic, showing that this increased hate affects not only

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those of Chinese heritage, but also other Asian populations and ethnic minority groups who are already disproportionately affected by health disparities [6]. Racial discrimination against AAPI grew exponentially after the former US President Donald Trump referred to the Sars-Cov-19 virus as the “Chinese virus” [7]. An analysis of Twitter posts mentioning the terms “Chinese virus” or “China virus” found that usage of both these phrases increased tenfold immediately following a highly publicized tweet by Trump [8]. Thus, a false narrative explicitly blaming AAPI for the origin and spread of the COVID-19 virus was generated and propagated through social media. This stigmatizing discourse supported the racist scapegoating of AAPI as being “diseased” and, supposedly, a public health threat to society [2] and has given rise to a wave of violence directed at AAPI across the USA [5].

Racial discrimination and stigmatization have been associated with a host of adverse mental health outcomes, including anxiety, depression, and posttraumatic stress [9, 10]. Race-based traumatic stress reactions and other psychological consequences of racism are known to result in significant mental and functional impairment [11, 12]. In addition, the vicarious exposure to traumatic events fueled by anti-Asian attitudes (e.g., through news and social media), such as the shooting of six Asian American women in Atlanta, GA in March of 2021, is a form of collective trauma burdening AAPI communities regardless of personal experiences of racism [13].

We expect that COVID-19-related anti-Asian attitudes will continue to cause psychological distress and negative health outcomes for those who are targeted [14]. A recent survey of Asian Americans indicated that those who have experienced racism during the COVID-19 pandemic are more stressed by anti-Asian hate-based stigma than they are about the pandemic [15]. Another large survey of Asian immigrants and Asian Americans found that higher rates of COVID-19-related discrimination contributed to high rates of mental disorders in these groups [16]. It is thus important for mental health practitioners to be aware of race-based stressors, and research into their prevention has become a public health priority.

To understand, reduce, and possibly prevent anti-Asian attitudes and other forms of racism and xenophobia, we must therefore identify what contributes to scapegoating AAPI populations (i.e., a set of racially and ethnically minoritized communities) for a global pandemic. Misinformation, spread by multiple types of media (news, social media), has proven to be a particularly potent vehicle for causing and amplifying blame and anti-Asian attitudes [17, 18], for example, by falsely promoting the idea that “dirty eating habits” in China caused the COVID-19 pandemic [19]. A study by Dhanani and Franz on anti-Asian attitudes in US adults found that stigma against AAPI was associated

with less accurate knowledge about COVID-19 transmission and origins [20] suggesting the urgent need for greater knowledge about public health and understanding of how structural risk factors influence health outcomes and disease transmission.

American news media provide an incomplete and, at times, inaccurate perspective on public health, focusing almost exclusively on individual health behaviors rather than structural factors as determinants of health [21]. Medical education also mirrors this gap, as attention to individual rather than structural determinants of health are overemphasized in medical training and practice [22]. Moreover, both the fields of medicine and public health tend to assign to the individual the responsibility of managing one’s health, including preventing disease. This emphasis on individual factors was demonstrated at the beginning of the COVID-19 pandemic, with the public appearing to have little awareness of racial and socioeconomic disparities (both structural factors) in COVID-19 outcomes, instead of focussing on disparities by age and by medical comorbidities (both individual characteristics) [23].

Other factors that may contribute to higher levels of anti-Asian attitudes in the context of the COVID-19 pandemic include psychological distress and fear caused by threats of illness, death, and socioeconomic loss and disadvantage. Feeling threatened and frightened by larger societal issues that are out of an individual’s control, such as a pandemic, can give rise to scapegoating of already minoritized groups who lack the resources to generate and propagate a counter-narrative that can discredit the dominant narrative that blames them for a social and public health crisis [24–26]. Similarly, competition for limited resources within a capitalist labor market, especially in the context of an economic crisis worsened by a pandemic, promotes scapegoating of those who have been blamed for the pandemic by the dominant narrative. Locating blame for an overwhelming threat in a designated group of minoritized people is a frequently used coping mechanism to reduce anxiety by restoring a perceived sense of control over the threat [25, 27].

We propose that the scapegoating of AAPI for the pandemic and associated labor market and economic crisis reflects a misrecognition of the government’s responsibility for addressing the public health, economic, and social suffering associated with the COVID-19 pandemic [28]. However, the dominant narrative legitimizing and reproducing the existing distribution of power has been challenged in the USA by the unveiling of racial/ethnic and SES-related disparities in the health and socioeconomic impact of the COVID-19 pandemic. There are growing number of individuals and social groups who recognize the role of structural factors in determining health and socioeconomic outcomes and may, hence, be less likely to resort to blaming

minoritized social groups for public health events, such as the COVID-19 pandemic. Therefore, our study explored the hypothesis that having greater awareness of structural disparities related to COVID-19, an indicator of what we term “structural literacy,” is associated with challenging the dominant narrative and counteracting the misrecognition of the impact of social structures. Greater structural literacy, in turn, may be associated with lower levels of anti-Asian attitudes in the context of the COVID-19 pandemic. We build on the findings of Dhanani and Franz with the hope that for those who hold anti-Asian attitudes and/or engage in interpersonal acts of racial discrimination, dispelling their misrecognition through enhancing their structural literacy might be a means to reduce such attitudes and behaviors [20].

Methods

Participants for the current study were recruited from two longitudinal cohorts: the Children in Community (CIC) cohort and the Harlem Longitudinal Development Study (HLDS). The CIC cohort is majority White and was constituted in 1975 and comprised families that were representative of the socioeconomic diversity in Albany and Saratoga counties in New York at that time. The HLDS sample consists of Black and Latinx adults originally recruited in 1990 from 11 middle and high schools servicing the East Harlem area of New York City, which reflected the ethnic/racial and socioeconomic diversity of the district in 1990 when the study was constituted. The current study combined CIC participants, from the most recent data collection (2012–2015; $n=552$) when the mean age of participants was 43 years, and HLDS participants from the eighth round of HLDS data collection (2011–2013; $n=674$) when the mean age of participants was 36 years to create a racially and socioeconomically diverse sample, spanning rural and urban regions of New York State. To be eligible for inclusion in the COVID-19 study, participants had to have agreed to be contacted for future studies.

Between April and August 2020, $n=1060$ (488 and 572 from the CIC and HLDS studies, respectively) potential participants with email information were invited to take the web-based survey using REDCap (Research Electronic Data Capture) electronic data capture tools hosted at the New York University School of Medicine (NYUSoM). The initial email contact was followed up with email or phone call. The survey assessed participant experiences during the COVID-19 pandemic, including questions that measured attitudes about “Asians” in regard to the novel coronavirus, awareness of racial and socioeconomic disparities in the impact of COVID-19, psychological distress, socioeconomic disadvantage, as well as demographic characteristics. The survey was designed to take about 20 min, and participants

were compensated with a \$20 gift card upon completion. At the close of data collection, 291 participants completed the survey (27.3% response rate). Participants who did not complete the survey before the close of the cohort did not differ importantly with respect to age or race/ethnicity; however, participants identifying as female were more likely to respond to the survey than males. Study procedures were approved by the Institutional Review Boards at the Nathan Kline Institute for Psychiatric Research and the NYUSoM.

Variable Characterization

This study aimed to examine the association between participants’ structural literacy, that is, an awareness of socioeconomic and racial disparities in COVID-19 impact and anti-Asian attitudes. Anti-Asian attitudes, our outcome of interest, was operationalized as the average of scores on a 2-item scale (Cronbach’s $\alpha=0.62$) that assessed whether participants believed (1) that Asians should not be let into the USA during the pandemic and (2) that it is a good idea to avoid Asians because of the virus. Participants indicated their level of agreement with each item using a slide bar where the left-most position indicated “strongly disagree” (0) and the right-most position, “strongly agree” (100). The position of the slide dictated the value for each item from 0 to 100 with higher mean score indicating greater anti-Asian attitudes in the context of the COVID-19 pandemic.

The primary predictor, structural literacy, was defined as the mean score of a 5-item scale (Cronbach’s $\alpha=0.86$) that assessed whether participants thought that the adverse effects of COVID-19 disproportionately affected (1) certain ethnic or racial groups, (2) people who have fewer economic resources, and (3) people who have less education; also that (4) people with less money and (5) certain ethnic or racial groups are at higher risk of getting “very sick” from COVID-19. Each item was scored from 0 to 5 to represent responses that ranged from “strongly disagree” to “strongly agree,” such that a higher mean score represented greater structural literacy.

Adjustment variables included psychological distress, socioeconomic disadvantage, residential location, and demographic characteristics. Psychological distress was measured as the mean score of an 8-item scale that assessed how happy versus sad, relaxed versus anxious, lonely, restless, worried, fatigued, focused, and irritable an individual had felt in the previous 2 weeks. Each item was scored from 0 to 5—the “happy versus sad”, and “relaxed versus anxious” items were scored from “very happy/relaxed” to “very sad/anxious”, and the remaining items “not at all” to “extremely,”—such that a higher mean score was associated with more psychological distress. These items were adapted from the CoRonavirus Health and Impact Survey (CRISIS) instrument [29] and modeled on the Kessler Psychological Distress Scale

(K10) that measures non-specific psychological distress with similar items. Socioeconomic disadvantage (SED) was operationalized using a count of 4 indicator variables assessing whether the participant had no health insurance, was unemployed, lived in an overcrowded household, and lacked easy access to the internet or a computer. A higher summed score was indicative of greater SED. A residential location variable described whether participants either lived in a rural or non-rural area (non-rural, rural). Participant race/ethnicity (Latinx, Black, and White) and gender (female, male) were included as dummy codes in the analyses.

Statistical Analyses

As a first step, we describe the distribution of study measures in the sample. Two-sample *t* tests and one-way analysis of variance or ANOVA *F* tests were used to examine gender and racial differences in structural literacy and anti-Asian attitudes. Then, to examine our study hypothesis, we assessed the association between our primary predictor (structural literacy) and outcome of interest (anti-Asian attitudes) using linear regression. In the initial adjusted regression model, we included adjustment variables of psychological distress, SED, residential location, gender, and race/ethnicity. The final adjusted model retained predictors of anti-Asian attitudes at a 10% significance level.

Statistical significance was determined using a *p* value less than 0.05. All statistical analyses were conducted using SAS v9.4 (SAS Institute Inc., Cary, NC, USA).

Results

Study Sample

Table 1 provides distribution of study measures for *n* = 263 participants with data on measures of interest. Participants had a mean age of 48.2 years, 60.1% self-identified as White, 21.7% as Black, and 18.3% as Latinx. Study subjects were mostly female (66.9%) and living in non-rural areas (87.6%). The mean structural literacy score of the sample was 2.70 ± 0.95 . The mean SED score was 0.19; about 3% of respondents reported not having health insurance, 9.4% reported being unemployed, 5.6% lived in an overcrowded house, and 1.1% lacked easy access to the Internet or a computer. Figure 1 presents results from bivariate analyses assessing race/ethnicity and gender differences in mean structural literacy score. Results indicated significant differences in structural literacy by race/ethnicity ($p < 0.05$). Results of Bonferroni post-hoc testing indicated that Black/African American respondents had higher mean levels when compared to Latinx and White respondents; Latinx and White respondents did not differ

Table 1 Distribution of study measures

Participant characteristics	Distribution, <i>n</i> (%), or mean \pm SD
All	263 (100%)
Anti-Asian attitudes score	16.03 \pm 20.15
Structural literacy score	2.70 \pm 0.95
Psychological distress score	2.44 \pm 0.73
Socioeconomic disadvantage score	0.19 \pm 0.45
Residential location	
Rural	30 (11.3)
Non-rural	233 (87.6)
Age (years)	48.2 \pm 4.1
Gender	
Female	176 (66.9)
Male	87 (33.1)
Race/ethnicity	
Black/African American	57 (21.7)
Latinx	48 (18.3)
White	158 (60.1)

significantly. There were no significant gender differences in mean structural literacy scores.

Anti-Asian Attitudes

Anti-Asian attitudes mean and median scores in the sample were 16.03 and 7.00, respectively. Because anti-Asian attitude scores were right-skewed, we log-transformed values for inferential tests. Mean anti-Asian attitudes did not significantly differ between race/ethnicity or gender groups (see Fig. 2). Results from the initial and final adjusted regression models predicting anti-Asian attitudes are presented in Table 2. Initial model findings showed that greater structural literacy was associated with significantly lower mean anti-Asian attitude scores ($\beta = -0.34$, $p < 0.05$), after adjusting for psychological distress, SED, residential location, gender, and race/ethnicity. Greater psychological distress was also associated with lower mean anti-Asian attitude scores ($\beta = -0.31$, $p < 0.05$), after adjustment. Significant predictors of anti-Asian attitudes at a 10% significance level were residential location and SED. Participants living in a rural location compared to a non-rural area ($\beta = 0.48$, $p < 0.10$), and those with higher levels of SED ($\beta = 0.40$, $p < 0.10$), had higher mean anti-Asian attitudes scores. There were no significant associations between anti-Asian attitudes and the covariates of gender and race/ethnicity in the multivariable model. The covariates included in the initial model accounted for 11% of the variation in anti-Asian attitudes. Conclusions from the final model did not differ from the initial model. Of note, the impact of SED on anti-Asian

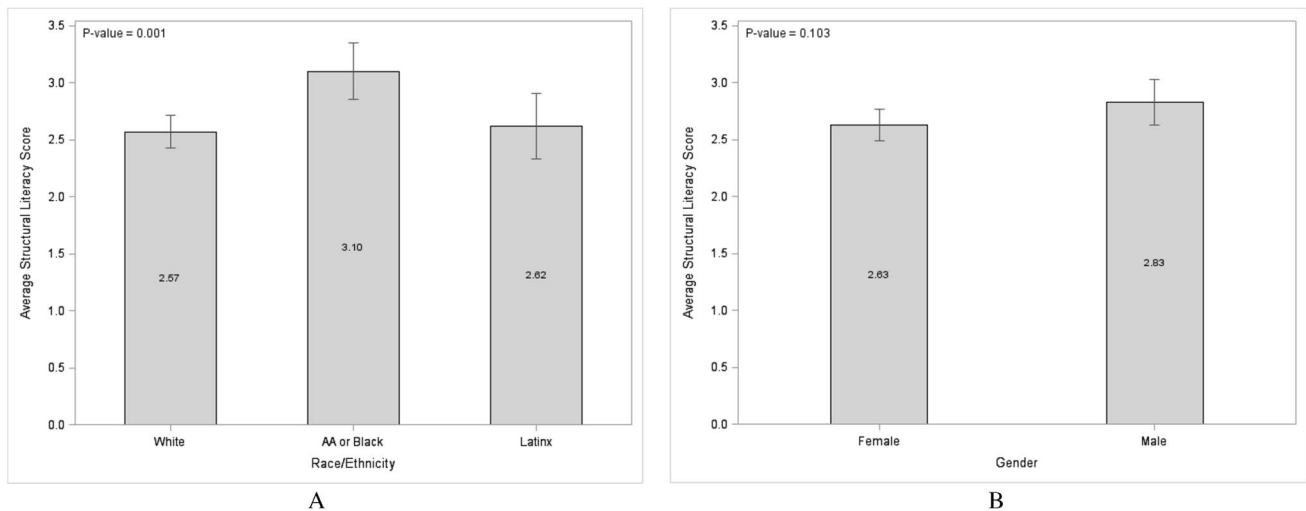


Fig. 1 Average structural literacy score by race/ethnicity and gender

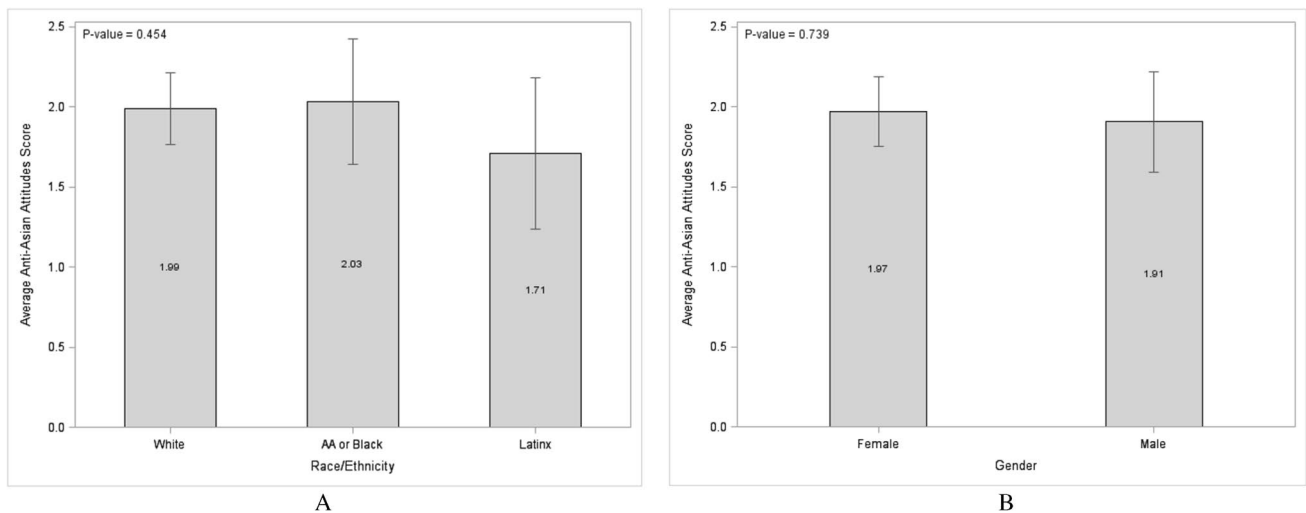


Fig. 2 Average anti-Asian attitudes score by race/ethnicity and gender. Anti-Asian attitudes score is log-transformed

attitudes was significant at the 5% level of significance in the final model ($\beta=0.44$, $p<0.05$; see Table 2). The final model accounted for 10% of the variation in anti-Asian attitudes.

Discussion

Our study found that greater structural literacy, as indicated by greater awareness of how racial and socioeconomic factors contribute to disparities in the impact of the COVID-19 pandemic, was associated with lower levels of anti-Asian attitudes. Awareness of structural factors and anti-Asian attitudes remained associated when controlling for SED, rurality, psychological distress, race/ethnicity, and gender. Our findings are novel and support

our hypothesis that greater structural literacy is associated with fewer anti-Asian attitudes.

Our data also showed geographic and socioeconomic differences related to anti-Asian attitudes. The sampled longitudinal cohorts were diverse, with one pool consisting of mostly White adults from Upstate New York, and another of Black and Latinx adults originally sampled from a school district in East Harlem. Participants experiencing greater SED and those living in more rural areas held more anti-Asian attitudes. Xenophobia has previously been attributed to perceived job competition and resulting economic threat that immigrants are deemed to pose to US citizens [30]. Especially when considering the effect of the pandemic on the labor market and the supply chain [31], competition and scarcity have been used to legitimize scapegoating and

Table 2 Results from linear regression models of anti-Asian attitudes on COVID-19 disparities awareness ($N=263$; anti-Asian attitudes score is log-transformed)

Participant characteristics	Adjusted beta (95% CI)	
	Model 1: initial	Model 2: final
Structural literacy score	-0.34 (-0.53, -0.15)**	-0.32 (-0.50, -0.14)**
Psychological distress score	-0.31 (-0.56, -0.06)**	-0.33 (-0.57, -0.09)**
Socioeconomic disadvantage score	0.40 (-0.01, 0.81)*	0.44 (0.05, 0.83)**
Residential location		
Non-rural	Ref	Ref
Rural	0.48 (-0.08, 1.05)*	0.48 (-0.07, 1.03)*
Gender		
Female	Ref	-
Male	-0.01 (-0.39, 0.36)	-
Race/ethnicity		
Black/African American	Ref	-
Latinx	-0.32 (-0.89, 0.24)	-
White	-0.19 (-0.66, 0.28)	-
Adjusted R -squared	0.11	0.10

* $p < 0.10$; ** $p < 0.05$

racism [25, 27, 32]. Participants in rural areas may have had less opportunity for contact with AAPI; as in the USA, most AAPI reside in urban areas [33]. Blaming individuals and groups with whom one has less contact and familiarity supports the us-versus-them dynamic that is part of scapegoating and provides a “justification” for further stigmatization and even violence [27]. Psychological distress, however, was not associated with greater anti-Asian attitudes in the current study. Together, these findings highlight the importance of structural (e.g., economic and geographic) factors in scapegoating, xenophobia, and discrimination.

One explanation for our findings may be that greater awareness of structural disparities in COVID-19 is indicative of the ability to recognize larger social factors and structures that affect people’s lives and health, i.e., structural literacy. Such awareness, in turn, may lessen the tendency to blame minoritized groups for the pandemic and, possibly, other macrosocial/environmental ills that are out of an individual’s control. In addition, structural literacy confers the ability to perceive the context of individuals’ lives and fosters the ability to interact critically with oversimplified decontextualized information. Structural literacy facilitates breaking through the misrecognition generated and reproduced by the dominant discourse that is designed to hide the ways in which structural processes, such as racism and classism, reproduce the existing power distribution. Structural literacy may, thus, afford some protection against misinformation and misrecognition, leading to less scapegoating.

Our findings also suggest that structural literacy may be an aspect of critical consciousness [34]. Critical consciousness has been defined as the recognition of the social and structural nature of oppression, especially by marginalized and minoritized groups. Critical consciousness enables

oppressed people to question the status quo, resist internalizing negative stereotypes, and take action against oppressive political and social forces [34, 35]. Structural literacy, i.e., knowledge of the social and structural origins of inequities in wealth, health, and other resources, is a core dimension of such a consciousness. Moreover, we conceptualize critical consciousness as the polar opposite of misrecognition and propose that structural literacy reduces misrecognition, thus obviating the need for scapegoating.

Dhanani and Franz previously found that a lack of accurate knowledge about COVID-19 was correlated with anti-Asian attitudes [20]. We build on their findings by identifying low levels of structural literacy as an additional risk factor for anti-Asian attitudes and perhaps racism in general. Structural literacy may thus be a potentially modifiable attribute that can be targeted in interventions and public health programs. Education on health disparities still over-emphasizes individual factors rather than structural ones, both with regard to medical education [22] and in American culture more broadly [21]. Furthermore, social groups that are impacted by structural health disparities are currently less likely to be represented in research; for example, several data on COVID-19 outcomes and vaccine administration are already known to be missing race/ethnicity identifiers, thus obscuring the extent of such disparities [36]. Education, media coverage, and research are all clear areas of improvement that might lead to greater structural literacy of the public, and thus a potential reduction in anti-Asian and racist attitudes.

Specifically, improvements to structural literacy can occur through several means. At the federal level, policymakers should prioritize goals such as those outlined in Healthy People 2030 [37] to provide plans of action to reduce health

disparities, achieve health equity, and attain health literacy. At a community level, local health departments and community-based organizations can develop informational campaigns to build awareness of social determinants of health and structural inequities. Those in academia can develop studies and interventions in which structural literacy is used to inform health equity, and develop resources that prioritize conversations around structural inequalities. On an individual level, education and work on cultural and structural humility [38], where one maintains an interpersonal stance, which is open to others' cultural identities and their experiences in the social structure, may bolster awareness of personal biases as well as structural inequities faced by marginalized groups. Another downstream benefit of education on structural factors is that it may increase critical consciousness and motivate community members to engage in social justice activism, which could support re-allocation of resources and improved service delivery in communities. This concept of structural literacy is aligned with current public health and social justice efforts in recognizing that adverse health outcomes are exacerbated by barriers to equitable resources.

There are some limitations to our findings. The majority of those sampled were between ages 40 and 60 years old, which restricts our ability to assess any relationship between age and anti-Asian attitudes. Additionally, our data were gathered through self-report, and we surmised that people would be unlikely to rate themselves highly on having anti-Asian attitudes due to social desirability bias [39]. Given that participants tend to underreport socially undesirable beliefs, it may be the case that true rates of anti-Asian attitudes were higher than those captured by our survey. Finally, the ordering of questions on surveys may constitute another limitation in data collection. In our case, because questions about anti-Asian attitudes were listed at the end of the survey, it would be possible for participants' responses to these questions to have been influenced by their responses to the preceding questions about psychological distress or awareness of health disparities, though it is unclear in which direction.

Conclusion

Greater structural literacy, as indicated by greater awareness of socioeconomic and racial disparities in COVID-19 impact, was associated with lower levels of anti-Asian attitudes among Black, Latinx, and White adults. Providing education on the structural and systemic causes of inequality, thereby increasing structural literacy, may reduce anti-Asian and racist attitudes that continue to motivate harmful acts against AAPI and other oppressed groups.

Author Contribution All authors contributed to the study conception and design. Material preparation, data collection, and analysis were performed by Kerstin Pahl, Navin Sanichar, Sharifa Williams, Gilbert Nick, and Lisa Wang. The first draft of the manuscript was written by Kerstin Pahl, John Wang, Navin Sanichar, Sharifa Williams, and Gilbert Nick, and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Funding This research study was funded by the Nathan S Kline Institute for Psychiatric Research.

Data Availability The data that support the findings of this study are available from the corresponding author upon request.

Code Availability The datasets generated and/or analyzed during this study are available from the corresponding author upon request.

Declarations

Ethics Approval Study procedures were approved by the Institutional Review Boards at the Nathan Kline Institute for Psychiatric Research and the NYU Grossman School of Medicine.

Consent to Participate Informed consent was obtained from all individual participants included in this study.

Consent for Publication The authors affirm that human research participants provided informed consent for publication of the data included in this manuscript.

Conflict of Interest The authors declare no competing interests.

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