

Understanding Asian Americans' Resilience to COVID-19 Online Hate through Latent Profiles

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Abstract

Combining the stress and coping framework with the Communication Theory of Resilience, this study explores how Asian Americans' ethnic identity is associated with their (a) perceptions of and (b) response to the threat of rising anti-Asian racial hate speech seen on social media during COVID-19. Using a person-centered approach, a latent profile analysis performed on data from a sample of 269 Asian Americans revealed a 4-profile structure. Covariate analyses showed that individuals with a stronger ethnic identity (defined as positive affiliation with their ethnic group and greater exploration) viewed the problem of COVID-19 online hate as more severe and reported greater enactment of resilience communication during the pandemic. These results suggest that there is greater variation in the ways that racially-targeted minorities vicariously experience online racial hate than has been considered previously. Results also indicate that individuals' ethnic identities relate to how they perceive and respond to others' online behaviors.

Keywords: Online hate, Asian Americans, COVID-19, resilience, ethnic identity

Although the contemporary use of social media has allowed people to openly express their identities, it has also allowed for greater circulation of *online hate*, or messages that "direct anger and contempt toward groups of people and their characteristics" (Walther, 2022, p. 5). Online hate is often described as "bursty" in which a social or political event will produce a sharp rise in hateful content online before leveling off (Saleem et al., 2017). Following this pattern, a surge in the frequency of online hate was seen in early 2020, when reports of the coronavirus that originated in Wuhan, China resulted in many Americans blaming Chinese Americans (and all Asian Americans by extension) for the pandemic. The rise in anti-Asian online hate speech across mainstream social media sites resulted in Asian Americans experiencing the largest single year-over-year increase in online harassment compared to any other ethnic-racial minority group during the 2020-2021 period (Anti-Defamation League, 2021).

While research has clearly demonstrated the harm of overt racial hate and discrimination on minoritized individuals' mental health, less consensus exists around whether their *ethnic-racial identity* exacerbates or protects against these harms. *Ethnic-racial identity*—defined as the "frame" through which individuals

view their self-concept as being linked with others who hold similar racial, ethnic, or cultural behaviors, beliefs, or values (Chavez & Guido-DiBrito, 1999, p. 41; Phinney & Ong 2007)—is often reflected in the sense of (dis)connection that individuals hold to certain ethnic and racial groups. Because ethnic-racial identity is associated with how Asian Americans (and all minoritized individuals) interpret their social world and their place within it, many researchers have posited and investigated its association with people's understanding and experiences of ethnic-racial discrimination.

Across this body of work, most researchers have relied on a *variable-centered approach* to aggregate individuals' composite scores on a singular assessment of ethnic-racial identity and examine correlations among mental health outcomes such as depression or anxiety (Yip et al., 2019). The popularity of the variable-centered approach may be partially responsible for discrepant patterns of observed relationships between ethnic-racial identity and the negative effects of discrimination among minoritized individuals. For example, in their meta-analytic review of studies involving Asian Americans, Gee et al. (2009) report on six studies that cite the buffering effect of ethnic-racial identity on the negative impacts of racial discrimination, another four that claim it exacerbates negative effects, and another four that report positive and negative relationships simultaneously. They conclude that "a possible reason for this inconsistency may be related to the operationalization of racial identity" (Gee et al., 2009, p.144), and go on to suggest that there is much variation within minoritized individuals' ethnic-racial identity that current scholarship has not captured conceptually or methodologically (see also Yip et al., 2019).

The current study uses an *integrated, person-centered approach* to address the issues identified in past meta-analyses. First, this study reviews the two most popular approaches to ethnic-racial identity [i.e., developmental model of ethnic identity (Phinney, 1990) and the Multidimensional Model of Racial Identity (Sellars et al., 1998)] and then incorporates these into an integrated model of ethnic-racial identity. Secondly, to address methodological limitations, a *person-centered approach* is used to identify diverse patterns of variation across Asian Americans' ethnic-racial identity. Rather than treat ethnic-racial identity as a single composite variable, the person-centered approach examines within-group variation by first parsing out the number of *latent profiles* of ethnic-racial identity within the study's sample and then estimating each individual participant's probability of belonging to a certain profile of identity. In focusing more on the individual as opposed to the variable, a major advantage of the person-centered approach is its ability to examine the presence of within-group heterogeneity within an observed sample (McLarnon & O' Neill, 2018).

Using this integrated, person-centered approach, the current study explores if Asian Americans' ethnic-racial identity is related to their (a) perceived *frequency of pandemic-related online hate* as well as (b) their *self-reported resilience communication* in response to that problem. As noted above, though most past work has treated Asian Americans' ethnic-racial identity as a form of resilience in and of itself, the current study adopts the Communication Theory of Resilience (CTR; Buzzanell, 2010; Wilson et al., 2021), which argues for a process-driven understanding of resilience that is created and realized through communication behavior. In this study, ethnic-racial identity is treated as a facet of Asian Americans' larger self-identity

that is separate from, but related to the ways they enact resilience communication in response to perceived stress of pandemic-related online hate. Because ethnic-racial identity is a product of one's "racialized experiences in a given sociohistorical context" (Umaña-Taylor, 2018, p. 1907), it should be a critical factor in the ways that Asian Americans come to understand and communicatively respond to online racial hate embedded within and motivated by the specific sociohistorical context of the COVID-19 pandemic.

Ethnic-Racial Identity and Pandemic-Related Online Hate

At the start of the COVID-19 pandemic, escalating racism was troubling for many Asian Americans: "58 percent of Asian Americans said that, from March 2020 to March 2021, reports about increasing discrimination and violence against Asian people affected their own mental health" (Findling et al., 2022, para 12; see also, Ho & Çabuk, 2023). This quote highlights how minoritized individuals can experience the negative effects of racial hate vicariously when simply hearing or reading reports of increasing frequency of discrimination and harassment against members of their own ethnic-racial groups. This is also true of online forms of racial hate seen on social media, which have been shown to be just as damaging to minoritized individuals' mental health (see Brown, 2018).

Researchers have long posited that individuals' ethnic-racial identity serves as an innate form of resilience that protects against the negative effects of ethnic-racial discrimination; yet despite the consistency of this claim, in their meta-analyses both Gee et al. (2009) and Yip et al. (2019) conclude that there is a more nuanced relationship between ethnic-racial identity and resilience that is seen in the empirical evidence. Following these conclusions, the current study explores ethnic-racial identity and resilience as distinct constructs, with the goal of uncovering the complex relationship that exists between them. Broadly, it is predicted that ethnic-racial identity is correlated with the extent to which Asian Americans perceive the increasing frequency of COVID-19-related online hate and their self-reported enactment of resilience communication processes.

Definitions, Theoretical Approaches, and Measurement of Ethnic-Racial Identity

Although "there is no widely agreed-on definition of ethnic identity" (Phinney, 1990, p. 500), one thing that scholars can agree on is its multidimensional nature. Within the literature, two popular theoretical models of ethnic-racial identity emerge: The *developmental approach* (Phinney, 1990) explores how ethnic identity changes over an individual's life course and contrasts against the *multidimensional model*, which offers a more innate, personality-driven focus. The review below summarizes insights provided by the researchers who pioneered each model as well as the conceptual and methodological issues that have arisen from subsequent studies.

The developmental model. Based on Erickson's work on developmental stages, Phinney's (1990) model defines ethnic-racial identity as individual variation in *exploration* (a desire to learn more about, engage in, actively seek out knowledge regarding one's ethnic-racial origins) and *commitment* (affirmation of one's ethnic-racial identity as a core element of self-concept). Because exploration is thought to reflect an individual's uncertainty about the role that ethnicity/race

plays in self-concept, it is predicted to exacerbate the negative effects of discrimination. In contrast, commitment indicates clarity about the importance of ethnicity/race within self-concept and so is expected to offer protection from the harms of discrimination (Yip et al., 2022). Levels of each dimension are expected to fluctuate as individuals gain life experience—hence the focus on identity development and change over time.

As Yip et al. (2019) pointed out, researchers adopting the developmental approach have not always done so in a manner consistent with its original foundations. Much of this work is cross-sectional, precluding examination of identity over time (Syed & Azmitia, 2009). More problematic, however, is that although exploration and commitment were originally defined as distinct dimensions, many researchers have not treated them separately; instead, most have used a variable-centered approach, distilling both dimensions down into a single composite score of ethnic-racial identity through use of Phinney's (1990) Multigroup Ethnic Identity Measure (MEIM). Among the fewer studies that offer examination of each subdimension, evidence indicates that exploration heightens harms of racial discrimination while commitment guards against them as the model predicts (Yip et al., 2019).

Multidimensional Model of Racial Identity. The personality-based Multidimensional Model of Racial Identity (MMRI) introduced by Sellars and colleagues defines ethnic-racial identity as consisting of *identity salience* (personal relevance), *ideology* (beliefs about how members of their ethnicity/race should associate/act with respect to the rest of (American) society), *centrality* (“the extent to which a person normatively defines herself or himself with regard to race”), and *regard* (racial self-esteem) (Rowley et al., 1998, p. 717). Most MMRI work has focused on centrality and regard dimensions, which can be further differentiated into *private regard*—or personal positive attitudes about belonging to ethnic-racial groups—and *public regard*—or beliefs about others' views of one's own ethnic-racial groups.

Measurement involves Sellars et al.'s (1998) Multidimensional Inventory of Black Identity (MIBI), which researchers often modify for use among various ethnic-racial groups. Meta-analyses (Yip et al., 2019) note the general protective nature of centrality and private regard, whereby the importance of ethnicity/race within individuals' self-concept motivates them to maintain positive feelings of self-esteem associated with that part of their identity by defending against the negative effects of racial discrimination (see, Yip et al., 2022). However, differential effects of public regard on discrimination responses have been documented across minority groups, with public regard offering protection against the harms of discrimination for Asian Americans but not African Americans (Yip et al., 2019). Overall, this suggests that private and public attitudes are each important, if separate, dimensions within the MMRI model.

An Integrated, Person-Centered Approach

Theoretical integration. This review points to why the contradictory roles of ethnic-racial identity as both a protective form of resilience and as a factor that aggravates the negative effects of ethnic-racial discrimination exist simultaneously in the literature. Associations depend on which theoretical model (developmental or MMRI) and which corresponding measures (MEIM or MIBI) are employed in each study, with some (commitment, centrality, regard) seeming to offer resilience

against the negative effects of discrimination and others (exploration) appearing to worsen them. This is further complicated by the fact that relationships between identity dimensions and discrimination response can vary across ethnic-racial groups (Yip et al., 2019). To address this issue, the current study uses an *integrated approach to ethnic-racial identity* that attempts to capture conceptual overlap across the two popular theoretical models reviewed above with the integrated factors of *importance*, *involvement*, and *evaluative attitudes*.

Importance. The first integrated factor of *importance* reflects conceptual ideas in both the developmental and MMRI models. *Self-categorization* or *self-labeling* is the denotation of the ethnic/racial group highlighted in the label used for oneself, and so becomes an “essential starting point” in examining ethnic-racial identity (Phinney, 1990, p. 504). Similarly, within the MMRI, the component of *centrality* underscores ethnicity/race as a key component of identity that is directly correlated with individuals' perceptions of themselves and discrimination. This association has been demonstrated among African Americans (Sellers & Shelton, 2003), Hispanic Americans (Baldwin-White et al., 2017), and Asian Americans (Concepcion et al., 2013; Yip et al., 2008). Major et al. (2002) suggested that stronger centrality of ethnic-racial identity within self-concept may prime individuals' to be more aware of acts of discrimination that occur in their everyday lives, which may be especially true for Asian Americans who observed or experienced online hate at the onset of the pandemic.

Involvement. The second integrated factor is *ethnic involvement*, which reflects conceptual overlap between exploration and ideology (i.e., nationalist/uniqueness vs. assimilation tendencies) in the developmental and MMRI approaches, respectively. *Ethnic involvement* reflects belief and participation in cultural activities and values, as well as interaction with friends and family within a shared ethnic group (Phinney & Ong, 2007). Among Asian Americans, Concepcion et al. (2013) noted that compared to individuals characterized by low ethnic involvement, highly enculturated or ethnically-involved individuals may have more insular ethnic-racial networks, which may then protect them from vicarious or direct experience of racist hate stemming from members of other groups. Extending this logic to the context of COVID-19 online racial hate, it may be that those Asian Americans reporting more ethnic involvement have online social networks more densely comprised of other Asian American ties. As a result their social media feeds might not be populated with hate speech messages posted by others, making them less aware of the severity or frequency of the problem (see also Frey & Roysircar, 2006; Liu et al., 1999).

Evaluative attitudes—private. Ethnic-racial identity involves some differentiation of one's own ethnic-racial group from others, but the valence of an individual's personal *evaluative attitudes* can vary. For example, positive attitudes towards one's ethnic-racial group can signal underlying acceptance and are often associated with higher levels of self-esteem (Umaña-Taylor, 2018). Contrastingly, negative attitudes might suggest shame or stigma from belonging to a particular ethnic-racial group (Kiang et al., 2019). In this way, personal or private evaluative attitudes overlap Sellars et al.'s (1998) notion of *private regard*—or the individual evaluations people hold about their own ethnic groups—as well as Phinney and Ong's (2007) *commitment* subdimension in the MEIM that assesses “positive affirmation of one's group” (p. 275). Notably, the private group evaluation component is “conceptual-

ly independent” of centrality, in that individuals can simultaneously acknowledge ethnic-racial groups as a key component of their self-concept but may not necessarily evaluate them positively (Ashmore et al., 2004, p. 86).

Evaluative attitudes—public. Minoritized individuals must negotiate between their own and others’ evaluative attitudes of their ethnic-racial groups. In doing so, they often confront unflattering or painful elements, such as others’ stereotyped views of their ethnicity or relative position of their ethnic-racial groups in broader social hierarchies (Kim, 1999). Since the 1960s, Asian Americans have been portrayed as the *model minority*—a group that has achieved quiet, consistent success through their hard work, perseverance, and intelligence (Yi & Muses, 2015). In considering the model minority myth, the current study follows up on Yip et al.’s (2019) findings that reported how *public regard* (i.e., personal attitudes about outsiders’ views of one’s own ethnic-racial group) served as a stronger buffer against the negative effects of discrimination for Asian Americans as compared to African Americans. Although forms of stereotyping like the model minority myth are problematic in many respects, as a form of public regard within ethnic-racial identity formation, Yip et al. (2019) suggested that “its positive undertones may confer protection against overtly negative ethnic-racial discrimination” (p. 1291). The current study explores this contention by examining whether Asian Americans’ attitudes toward ascribed model minority stereotypes is a factor in their sense of ethnic-racial identity and whether they are subsequently related to their perceptions of and responses to pandemic-related online hate.

In summary, a theoretically integrated approach allows exploration of various levels and combinations of dimensions that span two popular models of ethnic-racial identity. Indeed, in Yip et al.’s (2019) meta-analysis of 53 studies, only two included items from both the MEIM and the MIBI scales. In line with Umaña-Taylor’s (2011) assertion that such integration “makes the measurement of individual ethnic identity components most compelling” (p. 801), this study offers an exploratory step in examining a fuller model of ethnic-racial identity.

Person-centered approach with latent profile analysis. Although the much-favored variable-centered approach of combining participants together, collecting composite scores, and then analyzing linear relationships seen in past studies is parsimonious statistically, such monolithic treatment obscures within-group variation in ethnic-racial identity. Doing so has led to an incomplete understanding of the complexity of ethnic-racial identity, as well as inconsistent findings—particularly with respect to Asian Americans’ treatment as an “assumed homogenous pan-ethnic population” by researchers (Umaña -Taylor, 2011, p. 799). To remedy this, the current study uses a *person-centered approach with latent profile analysis* to examine Asian Americans’ ethnic-racial identity.

Person-centered approaches have been described as “particularly useful for researchers in social sciences as patterns of shared behavior between and within samples may be missed when researchers conduct interindividual, variable-centered analyses” (Ferguson et al., 2020, p. 459). A form of mixture modeling called *latent profile analysis* identifies the probability with which people belong to different profiles or groups. In the current study, that means examining the probability that different individuals in the observed sample of Asian Americans belong to different ethnic-racial identity profiles comprised of the integrated dimensions of importance, involvement, and attitudes.

Table 1. Integrated approach to ethnic-racial identity dimensions

Dimension	Definition	Related Developmental Model Constructs	Related MMRI Model Constructs	Item Formation	Sample Item Wordings	Sample Response Options
Importance						
Self-categorization/ Self-labeling	Individuals' identification with and use of labels that refer to the specific ethnic or racial group	Commitment	Centrality	Original items adapted from MEIM prompt for respondent to offer their own "ethnic self-label" (Phinney, 1992)	How do you rate yourself? I would use the term "Asian American" to describe myself	1 = Very Asian to 7 = Very Western 1 = strongly disagree to 7 = strongly agree
Centrality	Degree to which race or ethnicity is key to overall self-concept	Commitment	Centrality	Adapted from MIBI (Sellars et al., 1998)	In general, being Asian American is an important part of my self-image	1 = strongly disagree to 7 = strongly agree
Involvement						
Ethnic Involvement	Individuals' engagement in and knowledge of various cultural/ethnic practices, values, behaviors, networks	Exploration	Ideology	Suinn-Lew Asian Self Identity and Acculturation Scale (Suinn et al., 1992)	What is the ethnic origin of friends/peers you currently associate with?	1 = Almost exclusively non-Asian groups to 7= Almost exclusively Asian/Asian Americans
Evaluative Attitudes						
Private evaluations towards ethnic-racial group	Individuals' attitudes toward their ethnic group, which can be positive (acceptance) or negative (inferiority)	Commitment	Private regard	Adapted from MEIM-Revised (Phinney & Ong, 2007); MIBI (Sellars et al., 1998)	I have a strong sense of belonging to my ethnic group	1 = strongly disagree to 7 = strongly agree
Public evaluations of others' beliefs/attitudes towards the minoritized experiences	Individuals' belief in others' attitudes towards "model minority" stereotype		Public regard	Thompson & Kiang (2010)	How often do you feel your ethnicity leads people to assume you are... ...intelligent, ...hardworking ...quiet/reserved	1 = never to 7 = all the time

Of the handful of studies that have used a person-centered approach to explore ethnic-racial identity with Asian samples, Zong et al. (2021) examined correlations between Chinese American adolescents' ethnic-racial identity and their experiences with both direct and vicarious COVID-19-related discrimination. They derived three latent profiles of identity using Sellers et al.'s (1998) MIBI, the bicultural identity integration scale (Huynh et al., 2018), and Chen and Lee's (1996) Cultural and Social Acculturation Scale from their sample of Chinese Americans, which they labeled *bicultural* (integrated in both "mainstream" and "heritage" cultures, but with the weakest sense of ethnic identity), *marginalized* ("low levels of participation in both mainstream and heritage cultures" and moderate sense of ethnic identity), and *separated* ("highest levels of participation in Chinese culture and lowest levels of participation in American culture" with the strongest "commitment to their ethnic minority group") (pp. 462-463). Their results indicated that though separated adolescents reported the highest levels of direct racial discrimination, their strong sense of ethnic identity provided an "important buffer against racial discrimination" resulting in relatively lower levels of anxiety (p. 464). Marginalized adolescents reported the most negative experiences with vicarious COVID-19 discrimination, which led the authors to conclude that their struggle with "compartmentalized" ethnic identity led to "lower levels of behavioral participation in either the mainstream or heritage cultures that may have also limited their access to resources (e.g., social support networks) for coping with the discrimination that they witnessed" (p. 463).

Zong et al.'s (2021) study speaks directly to the utility of person-centered approaches as a way to parse out unique patterns of ethnic-racial identity within minoritized groups, but it also highlights an existing gap in studies that assume a trait-based relationship between identity and resilience. Although they found intriguing correlations between identity, discrimination, and anxiety outcomes, they did not measure individuals' enactment of specific resilience or coping behaviors that may (or may not) have protected them from the negative impacts of racism. That is, without direct empirical evidence that marginalized adolescents' weaker sense of ethnic identity was in fact associated with reduced coping ability and resources for resilience (such as social support), we are left wondering if this is the case. This points to the need to test for associations between Asian Americans' ethnic-racial identity and their enactment of specific resilience behaviors. As such, the current study proposes that to fully understand how ethnic-racial identity impacts minoritized individuals' (in)ability to respond to racial discrimination requires identifying and measuring the specific resilience behaviors that they enact when facing the stress of discrimination.

Communication Theory of Resilience

In the Communication Theory of Resilience (CTR), resilience is thought to be the product of individuals' personality, their surrounding environment, and the various resources (e.g., financial social, and physical) that are accessible and available to them—all of these elements combined affect their capacity to perform resilience communication in response to stressful circumstances. To assess resilience communication more specifically, Wilson et al. (2021) developed the communication resilience processes scale (CRPS), which consists of seven measurable be-

aviors: (a) maintaining routines (b) creating new routines, (c) affirming identity anchors, (d) maintaining and leveraging communication networks, (e) reframing the stressful situation, (f) using humor, and (g) foregrounding productive actions while backgrounding negative emotions. Within the CTR, some of these behaviors (i.e., maintaining routines, affirming identity) focus on *continuity* behaviors that promote a sense of regularity during times of stress, whereas others reflect new opportunities for *change* (i.e., creating new routines) that arise from trauma; both forms of resilience are conceptualized as being critical to people's ability to both face adversity and positively adapt to it. Thus in CTR, resilience is conceptualized and measured not as a static trait but as a process through which people engage their resources to facilitate adaptive coping behaviors when under stress.

Cross-Cultural Applications of CRPS

Building from Wilson et al. (2021), Kuang et al. (2022) conducted a three-stage study to examine the cross-cultural application of the CRPS among Chinese participants. Interestingly, some of the CRPS's core constructs required adaptation. First, the notion of "identity anchors" was expanded to consider identity through individualistic and collectivistic self-construal lenses, and thus included in new item wordings that contained individual, family-level, and national-level identities that resonate within Chinese culture. Secondly, Kuang et al. noted that "maintaining routines" and "creating new routines" dimensions exhibited low reliability scores, which were attributed in part to Chinese cultural understandings of time as more flexible compared to more Western ideals of "regularity and absoluteness" (p. 85). They suggested that Chinese cultural contexts may place differential emphasis on daily routines or behavior patterns as a form of adaptive resilience.

Interestingly, though Kuang et al.'s (2022) results indicate the sensitivity of cultural context for the CRPS, they also show the remarkable consistency of process-driven resilience across U.S. and Chinese cultures. Their study largely demonstrated "findings were consistent with those from U.S. studies" (p. 85) with respect to the reliability and validity (single-factor solution) of the CRPS among three samples of Chinese respondents. Though this suggests that CTR's underlying conceptualizations of resilience as a set of communication behaviors is applicable cross-culturally, an open question remains as to whether one's ethnic-racial identity may affect resilience communication behaviors during stressful times.

The Current Study

As the above review points out, critical gaps remain in ethnic-racial identity research. First, an over reliance on trait-based approaches that equate ethnic-racial identity as an innate form of protective resilience has resulted in few researchers trying to identify or measure the specific resilience behaviors that vulnerable minoritized individuals report enacting when facing discrimination. A second issue lies in the widespread use of the variable-centered approach in prior work, which has obscured the heterogeneity involved in ethnic-racial identity. To address these issues, the current study offers the *integrated, person-centered approach* as a way to both synthesize concepts from multiple models of ethnic-racial identity and capture the within-group complexity in identity among Asian Americans. Additionally, utilizing CTR's framework provides a behavioral focus that helps parse out

how resilience communication may be related to (but distinct from) ethnic-racial identity. This approach ultimately contributes better understanding of how ethnic-racial identity and resilience constructs are related.

In sum, the current study begins by empirically deriving latent profiles of Asian Americans' ethnic-racial identity based on the aforementioned integrated dimensions of *importance*, *involvement*, and *evaluative attitudes* (RQ1). Latent profile analysis offers a way to not only model within-group differences through ethnic group profile membership, but it also allows examination of relationships between the identified profiles and outcomes of interest. Thus the results of that analysis are used to examine associations between Asian Americans' ethnic-racial identity and their perceptions of the frequency of COVID-19 related online racial hate speech (RQ2) as well as their self-reported enactment of resilience communication behaviors (RQ3).

Method

A sample of 269 Asian American respondents who were over 18 years old and living in the United States (U.S.) was recruited via Dynata Research Panels in May 2020. Data collection was timely, and coincided with two surges in anti-Asian pandemic-related online hate—Hohl et al. (2022) mapped anti-Asian online hate trends in the U.S. using geolocation data from Twitter tweets and found two surges in online hate, with the first in January 2020 when COVID-19 first came to the U.S. and a second in March 2020 after President Trump tweeted about the “China virus.” The current sample was recruited after these flashpoints to determine participants' awareness of the increased frequency in online hate on social media as well as their own subsequent resilience response.

After indicating their informed consent, respondents were routed to an online survey that contained items pertaining to key demographics including: verification of self-reported ethnic nationality (Chinese = 50.9%, Filipino = 11.4%, Vietnamese = 7.0%, Korean = 7.7%, Japanese = 21.2%, Taiwanese = 4.3%, and Other = 2.6%), age ($M = 51.42$, $SD = 14.71$), sex (53.5% female), education level (completed grade school = 0.4%, completed high school = 5.5%, completed technical school = 3.7%, some university = 14.14%, completed university = 46.9%, completed graduate school = 29.2%), and basic social media use measured on a 0 = “never,” 3 = “a few times per week,” to 6 = “multiple times per day” most indicated weekly usage ($M = 2.72$, $SD = 1.02$). They then answered questions about their ethnic-racial identity, perceptions of online racial hate speech, and resilience communication.

Measures

For an integrated approach to the assessment of ethnic-racial identity, it was important to use self-report items that captured complementary conceptual overlap in the developmental and MMRI models defined above and that were also tailored to focus on the Asian American experience. With this in mind, the final measures of ethnic-racial identity included a mix of originally-worded items and items adapted from existing, validated scales: (a) for *self-categorization/self-labeling*, original items were used based on prompts from the MEIM; (b) for *centrality*, items from the Multidimensional Inventory of Black Identity (MIBI; Sellars et al., 1998) were adapted to the Asian American context; (c) for *ethnic involvement*, items from the Suinn-Lew Asian Self Identity and Acculturation Scale (Suinn et al., 1992) were

Table 2. Correlations among Study Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Self Categorization																
2. Centrality	.226 [^]															
3. Ethnic Involvement	.670 [^]	.219 [^]														
4. Group Evaluation	.340 [^]	.612 [^]	.338 [^]													
5. Model Minority Stereotyping	.083	.066	.119	.189 [^]												
6. Perception of Online Racial Hate Speech	-.068	.179 [^]	-.136 [*]	.133 [*]	-.04											
7. Maintaining Routines	.009	.042	-.006	.104	.319 [^]	-.048										
8. New Routines	.004	.082	-.061	.107	.273 [^]	.079	.406 [^]									
9. Affirming Identity	-.092	.210 [^]	-.126 [*]	.188 [^]	.308 [^]	.122 [*]	.490 [^]	.544 [^]								
10. Using Social Networks	.143 [*]	.190 [^]	.115	.269 [^]	.211 [^]	.032	.184 [^]	.345 [^]	.252 [^]							
11. Reframing the Situation	.117	.267 [^]	.093	.273 [^]	.310 [^]	-.046	.308 [^]	.532 [^]	.483 [^]	.485 [^]						
12. Using Humor	.053	.131 [*]	.016	.157 [^]	.186 [^]	.025	.328 [^]	.381 [^]	.315 [^]	.524 [^]	.602 [^]					
13. Foregrounding Productive Actions	-.051	.139 [*]	-.05	.171 [^]	.314 [^]	.03	.392 [^]	.529 [^]	.727 [^]	.384 [^]	.710 [^]	.472 [^]				
14. Age	-.232 [^]	-.002	-.064	.002	.075	-.10	.123 [*]	-.045	.160 [^]	-.166 [^]	.027	-.02	.032			
15. Sex	.095	-.014	.008	.025	-.10	-.047	.055	.135 [*]	.058	.071	.117	.155 [*]	.106	-.128 [*]		
16. Education	-.026	.084	.092	.01	.001	.01	-.021	.169 [^]	.062	.146 [*]	.064	.097	.023	-.042	-.05	
17. Social Media Use	.188 [^]	.037	.139 [*]	.105	.069	.043	-.009	.111	-.018	.218 [^]	.14 [*]	.162 [^]	.147 [*]	-.471 [^]	.03	-.031

Notes. *n* = 269. [^] Correlation is significant at the 0.01 level (2-tailed). ^{*} Correlation is significant at the 0.05 level (2-tailed).

used; (d) for *private group attitudes*, items from the MEIM commitment dimension (Phinney & Ong, 2007) and the MIBI private regard dimension were used (higher scores indicate more positive attitudes towards Asian Americans); (e) for *public group attitudes of model minority myth*, items from Thompson & Kiang (2010) that measure the extent to which respondents agree with ascribed notions of ethnically-stereotyped characteristics (higher scores indicating greater belief in outsiders' adoption of the model minority myth).

Participants were also asked about their assessment regarding the frequency of online racial hate speech targeting Asian Americans seen recently on their social media feeds versus prior to the pandemic: "As a result of COVID-19, have you seen acts of race-based harassment or discrimination toward Asians and Asian Americans on social media increase, decrease, or stay about the same?" with responses ranging from 1 = "Decreased a lot" to 5 = "Increased a lot". Finally, resilience was measured using the CRPS (Wilson et al., 2021) that contains seven subscales with 39 items (see Table 2 for study correlations).

Results

Research Question 1: Latent Profiles of Ethnic Identity

Analysis for RQ1 involved latent profile analysis using the BCH approach (Bolck et al., 2004), which allows for individual profile membership probabilities to be saved into the data file and used in the analyses for RQ2 and RQ3. In addition to its greater analytical flexibility, the BCH approach has been shown to outperform other approaches like the VAM (McLarnon & O'Neill, 2018). As described in Ferguson et al. (2020), the BCH method involves three steps: (1) determining the number of latent profiles or groups before (2) estimating participants' individual class probabilities, which are (3) then used to assess participants' overall probability of belonging to one specific profile. Within the BCH method, in the second step the individual class probabilities (rather than aggregated or average uncertainty) are used to classify participants' profile membership, which—while more "computationally complex"—has been demonstrated to be a "relatively robust" method in comparison to other VAM approaches (Ferguson et al., 2020, p. 461; see also McLarnon & O'Neill, 2018, pp. 958-960).

Using Mplus version 8, LPA was conducted in a stepwise fashion that involved evaluating a set of proposed profile models that began with two and proceeded up to five profiles. Each hypothetical model was then examined for fit using a variety of different selection criteria including the Bayesian Information Criterion (BIC), Sample-Adjusted BIC (SABIC), and Akaike's Information Criterion (AIC). Likelihood ratio tests that compare the fit of each model to one containing fewer profiles and model entropy were also included. In assessing each profile model, an additional step requires being able to theoretically interpret the profiles in the retained solution. For example, in LPA solutions where one or more profiles contains less than 5% of the sample, although various indices may reflect optimal fit, profiles containing such a small amount of the sample might be spurious or theoretically meaningless. Model determination requires "balancing empirical fit, parsimony, and perhaps most importantly, consistency with theory" (McLarnon & O'Neill, 2018, p. 964).

As seen in Table 2, analysis was stopped at the 5-profile model because the fit statistics stopped improving significantly. For RQ1, the 4-profile model was

Table 3.
LPA Model Fit Summary for RQ1.

Profiles	Log Likelihood	AIC	BIC	SABIC	Model Entropy	LMR <i>p</i> -value	LMR Meaning	BLRT <i>p</i> -value	BLRT Meaning
1	-1819.01	3658.02	3693.96	3662.26					
2	-1729.04	3500.09	3575.58	3508.95	0.67	0.001	2>1	<0.0001	2>1
3	-1674.64	3413.27	3528.30	3426.84	0.80	0.001	3>2	<0.0001	3>2
4	-1628.72	3343.47	3498.05	3361.70	0.80	0.07	3>4	<0.0001	4>3
5	-1605.08	3318.69	3512.35	3341.35	0.82	0.05	4>5	0.0128	5>4

Notes. $n = 269$. LMR and BLRT compare the current model to a model with $k - 1$ profiles. AIC = Akaike information criteria; BIC = Bayesian information criteria; SABIC = Sample-adjusted BIC; LMR = Lo-Mendell Ruben; BLRT = bootstrap likelihood ratio test.

the optimal solution as inferred from the low log likelihood value, AIC, BIC, and SABIC values, entropy value and LMR test value. The smallest class contained 12.3% of the sample. Though the 5-profile model did show some slight improvement among fit statistics, it contained a group with only 3.8% of the data. It was concluded that the 4-profile model should be retained.

Examination of the profiles indicated differences across dimensions and were labeled as follows: Moderate, Limited, Engaged, and Eclectic (Table 4). Labels were derived from examining overall scores along each integrated dimension, as well as examining each profile in relation to the others to obtain a fuller picture of the within-group variation in identity. The *limited* profile (24.9%) had the lowest levels of all the measured identity dimensions, including low levels of self-categorization and centrality, ethnic involvement, and the most negative private and public attitude scores. Those in the *moderate* profile group (23%) indicated stronger importance and ethnic involvement compared to the limited group, and more positive private attitudes toward their ethnic ingroups. The *eclectic* profile was the largest group (39.7%) and similar to the moderate profile group, it was characterized by

Table 4.
Profile Typologies.

	Profile 1: Moderate $n = 62, 23.0\%$	Profile 2: Limited $n = 67, 24.9\%$	Profile 3: Engaged $n = 33, 12.3\%$	Profile 4: Eclectic $n = 107, 39.7\%$
Self-Categorization	3.80	2.45	4.32	3.00
Centrality	4.04	3.42	5.15	4.85
Ethnic Involvement	3.60	2.21	3.76	2.76
Private Evaluation	3.71	2.85	5.28	4.46
Public Model Minority	4.79	4.74	5.67	4.70

average levels of importance and lower levels of involvement overall—however a key difference between these two groups was the comparatively stronger positive private attitudes in the eclectic profile. Finally, the *engaged* profile (12.3%) reflected highest levels of importance, involvement, and positive public and private attitudes among all of the profile groups.

RQ2: Ethnic-Racial Identity Profiles and Perceptions of Online Racial Hate Speech

For RQ2, the differences in perceptions of online racial hate speech across the four profiles were estimated after controlling for the effects of age, education, and social media use. Table 5 presents all possible pairwise comparisons between profiles, along with the overall Wald X^2 test, which tests for significant differences across the four profiles. Examination of Table 5 shows the largest differences in perceptions occurred between individuals in the Eclectic group, who noted the greatest increase in the frequency of anti-Asian online racial hate speech at the onset of the pandemic, compared to those in Moderate and Limited profile groups.

Table 5.

Means Across Ethnic Identity Profiles for RQ2 and RQ3

	Profile 1	Profile 2	Profile 3	Profile 4	Overall X^2 (3)
Perception of Online Hate Speech against Asians during COVID-19	3.62 _a	3.78 _a	3.88 _{ab}	4.26 _b	19.08 $p = .0002$
Resilience Dimensions					
Maintaining Routines	3.64 _a	3.75 _{ab}	4.34 _c	4.04 _{bc}	8.07, $p = .04$
New Routines	2.90 _a	3.37 _b	3.90 _b	3.38 _b	14.95, $p = .002$
Affirming Identity	3.23 _a	3.76 _b	4.48 _c	4.05 _{bc}	32.58, $p < .0001$
Leveraging Social Networks	2.43 _a	2.22 _{ab}	3.18 _c	2.74 _{ac}	12.43, $p = .006$
Reframing the Situation	3.00 _a	2.82 _a	4.03 _b	3.36 _{ab}	29.18, $p < .001$
Humor	3.23 _a	3.13 _a	3.80 _a	3.56 _a	7.26, $p = .06$
Foregrounding Productive Actions	3.12 _a	3.32 _{ab}	4.65 _c	3.60 _{abc}	9.39, $p = .024$

RQ 3: Ethnic-Racial Identity Profiles and Resilience Communication

The differences in self-reported resilience communication behaviors during the pandemic across the four profiles were also examined. Results indicated that generally, individuals in the Engaged and Eclectic profiles, who had higher scores on importance and more positive private evaluative attitudes, were more likely to report enacting most resilience processes overall (Table 5). The exception to this was the use of humor as a strategy, which showed no significant differences across profile groups. We return to this in the discussion section.

Discussion

The current study examined associations between Asian Americans' ethnic-racial identity and their perceptions of pandemic-related online racial hate speech. Deviating from prior work that conceptualizes ethnic-racial identity as a form of trait-based resilience, this study adopted CTR's process-based approach to hypothesize that Asian Americans' ethnic-racial identity would be correlated with

their performance of resilience communication. Using an integrated, person-centered approach to ethnic-racial identity, four latent profiles were uncovered within this sample of Asian Americans. The profiles were characterized by differences in the importance of ethnicity/race in their self-concept, ethnic group involvement, and more positive attitudes towards to their ethnic-racial group. Covariate analyses indicated that generally, those who held greater importance and more positive evaluative attitudes in the Engaged and Eclectic profiles were more aware of the increasing frequency of anti-Asian hate speech on social media early on in the pandemic and were more likely to report engaging in resilience communication compared to those in the Limited or Moderate profile groups.

Interpreting these results alongside prior work examining Asian Americans' ethnic-racial identity and COVID-based racial discrimination helps paint a more complete picture of resilience. As noted above, Zong et al.'s (2021) study of Chinese American adolescents revealed that generally, a weaker sense of ethnic identity was associated with greater feelings of anxiety after directly or vicariously experiencing pandemic-related racism. Though they speculated that the relationship between identity and anxiety was due to a reduced ability to cope with racism (such as leaning on networks for social support), they did not have direct empirical data to support that claim. The current results, however, support their interpretation. In this sample, individuals in the Limited profile had the weakest sense of ethnic-racial identity and also reported being less likely to leverage their networks for social support as a form of resilience communication. Furthermore, compared to those in the Engaged profile (who held the strongest, most positive sense of ethnic-racial identity) those in the Limited group reported significantly lower levels of many other resilience strategies including maintaining routines, affirming identity, reframing the situation, and foregrounding productive actions. In all, the current results provide correlational evidence between ethnic-racial identity and specific resilience behaviors that coincide with interpretations made in prior person-centered identity research.

As a whole, the within-group variation seen across the respondents in this study's sample suggests that Asian Americans perceived the rise in COVID-19-related online racial hate speech differently. Note, however, that these findings do not necessarily run counter to prior work consistent with the vigilance perspective that documents *between-group perceptual differences* in minority groups' judgments of pandemic-related Sinophobia, more generally (i.e., Asians' greater perceived severity of anti-Asian rhetoric compared to Blacks, Whites, or Hispanics; Ruiz et al., 2020). Instead, the current findings reflect heterogeneity in how members of targeted minority groups perceive the problem of racial hate speech on social media than previously thought and further demonstrate the advantages of a person-centered approach. Given that interpretations of online hate are often in the "eye of the beholder," documenting differences in how members of targeted groups view the issue of racial hate is significant. The age-old adage, "I know it when I see it" seems less applicable to the chimera-like nature of online racial hate, even among members of targeted groups.

Examination of the general patterns displayed in Table 5 suggests that each resilience behavior exhibited differential frequencies. The resilience behavior enacted the most consistently across the entire sample was *affirming identity anchors*

($3.23 \leq M \leq 4.48$), defined by Wilson et al. (2021) as “performing salient identities and values (e.g., answers to questions such as ‘who am I/we? who do we aspire to be?’) that may be challenged by, provide meaning during, and help guide responses to disruption” (p. 34). Though it makes sense that Asian Americans who see and feel the stress of online racial harassment might lean into aspects of their identity as a form of resilience, cultural notions of individual and collective (i.e., friends, family, or national) identity are known to be more nuanced among Asian Americans (Kuang et al., 2022). Future research will require deeper cultural contextualization to understand whether and how this might affect Asian Americans’ understandings and enactment of this particular resilience strategy.

Another way to interpret these data would be to examine which resilience strategies were enacted equally among all respondents (i.e., no significant differences across profile groups). All reported relying somewhat on humor as a resilience strategy. This is significant as most Asian American groups are often (stereo) typically thought of as “emotionally reserved” or “withdrawn” (Shen et al., 2011, p. 286). These results may force us to reframe stereotyped notions of how certain ethnic groups are thought to behave. Examination of these individual resilience strategies is only possible when resilience is conceptualized as a communication process rather than an innate trait.

Finally, it is worth noting some trends within this particular sample: First, all profile groups had relatively high scores on public evaluative attitudes, signifying their strong opinions about outsiders’ belief in the model minority myth. Yip et al. (2019) noted that public regard in this sense could bolster ethnic-racial identity among Asian Americans, protecting them from the harms of discrimination. Secondly, participants in this sample exhibited low-to-moderate levels of overall ethnic involvement. The significant correlation between ethnic involvement and perceptions of online hate speech ($r = -.136$) resonates with prior work suggesting that the relatively homogenous social networks of more ethnically-involved minoritized individuals might insulate them from racial hate and discrimination perpetrated by outsiders (Concepcion et al., 2013). Both of these claims remain speculative, and future work might examine these associations in more depth.

Limitations in this study include the single-item measure of perceptions of online racial hate speech, which was a deliberate decision made to reduce participant fatigue for the online survey. Cross-sectional data provide no insights into longer-term changes in ethnic-racial identity, which can transform over time (Kiang et al., 2019; Umaña-Taylor, 2018). Given its malleable nature, the relationships between ethnic-racial identity and the psychological perceptions and communicative processes seen here may look different if examined longitudinally.

Additionally, past work has also identified the moderating nature of generational differences with respect to minorities’ ethnic-racial identity development and acculturation. The majority of this sample was comprised of mostly of first ($n = 131$) and second generation ($n = 88$) individuals, with the remainder of the sample identifying as either third, fourth, or fifth generation Asian American ($n = 33$, $n = 10$, $n = 7$, respectively). Generational differences between American-born vs. foreign-born Asian Americans were not tested as this was not a focus of this study, but future work might address its moderating influence directly. The current sample was comprised primarily of East and South East Asian origin groups;

however, as the most direct online attacks have been aimed at China because the coronavirus emerged in Wuhan (i.e., “China Virus” “WuFlu”), future work might examine how members of East Asian, South Asian, and South East Asian origin groups react by sampling them more deliberately.

Conclusion

With regard to the rise in anti-Asian attitudes during the COVID-19 pandemic, we see that an individual's ethnic-racial identity is associated with the ways they perceive and interpret vicarious online hate speech in social media and how they respond to it through resilience. The within group variance found in these data underscores that members of vulnerable minority groups do not experience, process, or cope with the threat of racial discrimination and harassment in the same way. Instead, it appears that targeted individuals are likely to see acts of online hate differently, depending on how they see themselves.

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