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Citation: Martinelli, C. (2025). Ingroup conspiratorial beliefs: Re-thinking racial/ethnic minority group conspiracy in the UK and US. *Journal of Social and Political Psychology*, 13(2), pp. 223-238. doi: 10.5964/jspp.16835

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Link to published version: <https://doi.org/10.5964/jspp.16835>

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Ingroup conspiratorial beliefs: Re-thinking racial/ethnic minority group conspiracy in the UK and US

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Abstract

Research has consistently identified the tendency of minority ethnic groups to more strongly endorse *universal* conspiracy theories (where the general public is targeted) as well as *ingroup* conspiratorial beliefs (where one's ethnic group is specifically targeted), but the relationship between these two types of conspiratorial beliefs remains largely unexplored. Across two studies, we assessed the relationship between these beliefs and race/ethnicity in a sample from the United Kingdom ($n = 900$ across Black, South Asian, and white ethnic/racial groups) and United States ($n = 900$ across Black, Hispanic, and white ethnic/racial groups). Our cross-sectional results, which take in both COVID and non-COVID conspiratorial beliefs, indicate that ethnic minority groups' greater support for universal conspiratorial beliefs can be fully explained through their support for ingroup conspiracy theories. We also found that, across ethnicities and geographies, the socio-functional variable of lack of collective recognition most substantially mediated the relationship between ethnicity and ingroup conspiratorial belief, while the effect of institutional trust and discrimination varied. We conclude that interventions aimed at decreasing conspiratorial beliefs in ethnic communities should therefore focus on measures that address ingroup, rather than universal, conspiratorial belief and that acknowledging feelings of a lack of group recognition may be a profitable avenue to tackle inequalities associated with conspiratorial belief.

Keywords: conspiracy, misinformation, ethnic minority groups, ingroup, COVID

Non-Technical Summary

Background

Belief in conspiracy theories—in which a small group acts in secret for their own benefit against the common good—are associated with negative consequences for both the individual and for society as a whole. Research indicates that people who belong to minority ethnic groups are more likely to say they believe in both 1) conspiracy theories where the general public is targeted (*universal conspiracy theories*) and 2) conspiracy theories where their own ethnic group is specifically targeted (*ingroup conspiracy theories*).

Why was this study done?

For those interested in addressing the negative impact of conspiratorial beliefs, it is important to understand how belief in universal and ingroup conspiracy theories are related. Do people who belong to ethnic minority groups have a general tendency to believe in conspiracy that predicts that they will also believe in ingroup conspiracy? Or do people in these groups endorse ingroup conspiracy, which in turn explains their likelihood to believe in universal conspiracy theories? Understanding which type of conspiratorial belief explains the other will allow for more targeted interventions.

What did the researchers do and find?

We conducted two cross-sectional studies, one using a sample from the United Kingdom and the other from the United States. Our sample in the UK included participants who identified with one of the following groups: Black, South Asian, or white; our participants in the US belonged to Black, Hispanic, or white groups. Our results, which separately evaluate both COVID and non-COVID conspiratorial beliefs, indicate that ethnic minority groups' greater support for universal conspiratorial beliefs can be fully explained through their support for ingroup conspiracy theories. We further sought to understand what may explain belief in ingroup conspiracy theories by testing the role of institutional trust, lack of collective recognition, and discrimination. We found that, across ethnicities and geographies, participants' feeling of a lack of collective recognition for their group systematically explained the relationship between minority ethnic group membership and ingroup conspiratorial belief, while the effect of institutional trust and discrimination was less consistent.

What do these findings mean?

Based on our findings, interventions aimed at decreasing conspiratorial beliefs in ethnic communities should focus on measures that address ingroup, rather than universal, conspiratorial belief and that acknowledging feelings of a lack of group recognition may be a profitable avenue to tackle the inequalities associated with conspiratorial beliefs.

Research has consistently identified the tendency of people from minority racial/ethnic groups to more strongly endorse conspiracy theories (e.g., Goertzel, 1994; van Prooijen et al., 2018). The endorsement of conspiratorial explanations of events—in which a small group acts in secret for their own benefit against the common good (Keeley, 1999)—are associated with negative societal and personal consequences. These beliefs can undermine social cohesion (Bilewicz et al., 2019; van Prooijen et al., 2022); they are negatively associated with support for democratic norms (Papaioannou et al., 2023) and health-protective behaviours such as vaccination (Jennings et al., 2021; Jolley & Douglas, 2014), and are positively linked to prejudice (Jolley et al., 2020) and the willingness to commit violence (Armaly et al., 2022; Vegetti & Littvay, 2022). For those interested in addressing issues of social cohesion and inequality, understanding the predictors of conspiratorial belief in the general population has therefore become a research focus. Understanding the dynamics of these beliefs in racial/ethnic minority groups has, however, been more fragmented.

One of these fragmentations is that conspiracy belief in racial/ethnic minority groups has been studied at both a *universal* and an *ingroup* level. Studies that include the analysis of ethnic minority groups in the sample often assess belief in what we refer to in this study as universal conspiracy theories. This type of conspiracy theory, where the victim is a generic “us” or “the people”, has been referred to in the literature as race-neutral (Davis et al., 2018) or identity-irrelevant (van Prooijen et al., 2018). For example, large cross-sectional surveys found that non-white ethnicity was positively correlated with the tendency to endorse conspiracies related to COVID-19 in both the United Kingdom (such as “the real truth about coronavirus is being kept from the public”, Allington et al., 2021) and the United States (e.g. “The pharmaceutical industry created the coronavirus to increase sales of its drugs and vaccines”, Romer & Jamieson, 2020). In turn, these beliefs were related to lower health protective behaviours. Researchers have primarily sought to explain conspiratorial ideation in terms of individual psychological variables (see meta-analysis Bowes et al., 2023), aligning conspiratorial belief with psychopathology. In contrast, *ingroup* conspiracy is directed at a particular social (ethnic, racial, religious, gender, or national) ingroup. Race-related conspiracy theories have been identified as a barrier to health-protective behaviours in relation to AIDS (Ross et al., 2006), contraceptive use (Thorburn & Bogart, 2005), and COVID-19 (Vandrevala et al., 2022). In-group conspiratorial belief has begun to be addressed by some researchers as a socio-functional response to past and current devaluation (e.g. Bilewicz, 2022; van Prooijen & van Vugt, 2018). Like universal conspiracy theories, minority ethnic groups are more likely to endorse ingroup conspiracy theories (Crocker et al., 1999; van Prooijen et al., 2018).

While both universal and ingroup conspiracy theories have been found to be associated with undesirable outcomes and to be higher in racial/ethnic minority groups, how these two types of conspiratorial belief are related has not been clearly established. Understanding such nuance is important if interventions to decrease the level and spread of conspiracy in ethnic minority groups are to be effectively designed. In this study, we investigated the possibility that ingroup conspiracy beliefs account for the difference in universal conspiracy belief between white and racial/ethnic minority groups found in previous literature. In other words, our first hypothesis was that, once ingroup conspiratorial beliefs are accounted for, the levels of universal conspiratorial belief in racial/ethnic minority groups would not exceed those in the racial/ethnic majority (Hypothesis 1).

Because the white majority reports lower levels of ingroup conspiracy beliefs than minority groups, our second hypothesis is that the relationship between ethnic group membership and

ingroup conspiracy beliefs can be explained through variables that capture socio-functional explanations (Hypothesis 2). Reflecting the idea that the perception that one's social group has been historically and/or currently undervalued appears to drive ingroup conspiratorial beliefs (Douglas et al., 2019; Gundersen et al., 2023) we looked to intergroup variables of institutional trust, lack of collective recognition, and discrimination as predictive variables. The COVID-19 pandemic highlighted the strong negative relationship between trust in state institutions—including political, health, and media institutions—and the endorsement of conspiracy theories in the general population (e.g., Allington et al., 2021; Jennings et al., 2021). Hypothesised to stem from underrepresentation and past discrimination, ethnic minority groups, immigrants, and groups with minority status are more likely to have lower levels of institutional trust (de Vroome et al., 2013; Fareed et al., 2021; Kukafka et al., 2022; Uslaner & Conley, 2003; Wilkes & Wu, 2018). Our second predictor variable, which we are calling *lack of collective recognition*, is taken from, a measure that includes both lack of recognition and a belief in group superiority in its conceptualisation—*collective narcissism* (Golec de Zavala et al., 2009). While collective narcissism has been demonstrated to be robustly associated with conspiratorial belief (Bowes et al., 2023), questions have been raised about the applicability and interpretation of collective narcissism to disadvantaged groups (Golec de Zavala & Keenan, 2022). We have therefore parsed the measure to remove items that clearly relate to the “greatness” of the group, leaving what we have termed “lack of collective recognition”. Finally, and in contrast to the first two variables which reflect beliefs that include historical perceptions, we considered the role played by current discrimination experiences, a measure that has been associated with race-related ingroup conspiracy belief (Crocker et al., 1999).

With the aim of consolidating observations of conspiratorial beliefs in ethnic minority groups, our assessment of the relationship between universal and ingroup conspiratorial beliefs was conducted across two geographies (UK and USA) and two types of conspiracy (COVID and non-COVID related), as well as across several racial/ethnic groups. This broad scope reflects the observations that belief in conspiracy theories varies by country (Hornsey et al., 2020; YouGov, 2021) and by the nature of the theories (e.g., Oleksy et al., 2021). In addition, previous research that has focused on conspiratorial beliefs in ethnic minorities has often either studied single, often Black, ethnic minority samples (e.g., Davis et al., 2018), dichotomised non-white and white status (e.g., van Prooijen et al., 2018) or, in the case of landmark work, treated minority status as linear (where Hispanics were treated as being ‘between’ the white and Black participants in the US). We contrasted with this approach by comparatively assessing the conspiratorial endorsement of the two largest minority ethnic groups in the UK (Black and South Asian) and the US (Black and non-white Hispanic) as compared to white racial majority groups in these countries.

Study 1: UK sample

To test our hypotheses that:

1. The difference in universal conspiracy endorsement between white and non-white groups can be accounted for by ingroup conspiracy belief, and
2. Ingroup conspiracy belief can be substantially predicted from socio-functional variables of institutional trust, lack of collective recognition, and discrimination,

our first study assessed Black, South Asian and white participants in the UK using COVID-based conspiracy theories as the outcome variable. The data collected is available on the OSF database at https://osf.io/an8td/?view_only=bdfb9bd14791485388f88904fc738f3f. The studies in this paper have received approval from the xxx Ethics Committee.

Method

Participants

Nine hundred and eighty-three UK-based participants were recruited through online recruiting service Prolific.com in May 2023. Through the provided filters we aimed to recruit 300 each of participants that identified with each of the three largest racial/ethnic groups in the UK the groups: white (82% of the population in England and Wales, *Ethnic Group - Census Maps, ONS, 2022*), South Asian (Bangladeshi, Indian, or Pakistani, 9%), and Black (3%). We recruited 983 participants. Participants were asked to confirm their racial/ethnic identity as part of the study questionnaire. Those who failed the attention check and identified as Mixed or Other were not included in the final sample. The white group of participants were older and less educated than the other two groups. In the group of Black participants, the average age was 34.8 ($SD = 9.7$), 51% identified as female, 48% as male, and 83% had at least an undergraduate degree. For the South Asian participant group, the average age was 34.3 ($SD = 10.7$), 45% identified as female, 54% as male, and 79% had at least an undergraduate degree. The white group was comprised of participants with an average age of 42.0 ($SD = 13.2$), 53% identified as female, 46% male, and only 51% had at least an undergraduate degree. All three of these demographics were controlled for in our analyses.

Measures

We collected the survey data on-line using Qualtrics. The survey included the following measures (see Online Appendix for full scales):

In-group COVID conspiracy belief scale (*UK: $\alpha = .95$, US: $\alpha = .97$*). Adapted from Allington et al., (2021), participants indicated their agreement with five conspiratorial statements (e.g. “Reporters, scientists, and government officials are involved in a conspiracy to keep important information about COVID from my ethnic group”).

Universal COVID conspiracy belief scale (*UK: $\alpha = .95$, US: $\alpha = .96$*). The five questions employed in the in-group COVID conspiracy beliefs scale were amended to replace “my ethnic group” with “the British public/people” (e.g. “Reporters, scientists, and government officials are involved in a conspiracy to keep important information about COVID from the British public.”) on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). This national identity invokes a wider group to draw a contrast with ethnic/racial ingroup that might be invoked if a more general term was used. To ensure we were tapping into two different constructs, we undertook an exploratory factor analysis of the combined scales. Sampling adequacy was excellent with KMO of .94 (Hutcheson & Sofroniou, 1999) and Bartlett’s test of sphericity indicated that the correlation matrix was not random ($\chi^2(45) = 10969.87, p < .001$). All of the universal conspiracy items loaded on the first factor (loading range: 0.72 - 0.92) and all of the ingroup conspiracy items loaded on the second factor (loading range: 0.74 - 0.89). As expected, the two factors were highly correlated ($r = .79$). A two-factor model fit of the data ($\chi^2(26) = 480.32, p < .001, RMSEA = 0.14, TLI = .93$) was far superior to a constrained one-factor model ($\chi^2(35) = 1628.31, p <$

.001, RMSEA = .23, TLI = .81). These findings support the contention that the two constructs, though related, are empirically distinguishable.

Institutional trust (*UK: $\alpha = .90$, US: $\alpha = .91$*). Participants responded to “to what extent do you trust the following?” for a list of social institutions including reporters, the UK legal system, and doctors. Responses were on a 10-point sliding scale (0 = don’t trust at all, 10 = trust completely).

Lack of collective recognition (*UK: $\alpha = .85$, US: $\alpha = .88$*). The lack of collective recognition scale reflects the nine-item collective narcissism scale by Golec de Zavala (2009) but removes three items that relate to the group’s superiority (items 1, 2 and 6). For example, “I wish other groups would more quickly recognize the authority of my ethnic group” was removed, but “I insist upon my ethnic group getting the respect that is due to it” was retained.

Discrimination (*UK: $\alpha = .93$, US: $\alpha = .94$*). From (Williams et al., 1997), eight items measuring current experiences of discrimination on a 6-point scale (from “never” to “almost every day”) asked participants “In your day-to-day life, how often do any of the following things happen to you?”. Items included “People act as if they think you are not smart” and “people act as if they are afraid of you”.

Stress. We controlled for stress, an individual difference which is linked to the propensity to endorse conspiratorial beliefs, with those higher in stress more likely to seek sense-making available through simplified explanations (Swami et al., 2016). We reasoned that general stress levels may impact perceptions of the above primary predictor variables. From (Cohen et al., 1983), four items measuring stress on a 5-point scale (from never to very often) asked participants to indicate how often they felt or thought a certain way in the last month. For example, “how often have you felt that things were going your way?”.

Demographic variables. Information regarding age, gender, education (as a proxy for socio-economic status) was collected to use as control variables.

Results

Through regression analysis, we first established the findings in previous literature that membership in an ethnic minority group predicts a higher level of belief in both ingroup and universal conspiracy theories. This baseline is reflected in Block 1 of each of the scenarios below. Descriptive statistics for these outcome variables are in Table 1.

Table 1

Means and (standard deviation) of universal and ingroup conspiracy endorsement by racial/ethnic group

Ethnic/racial group	Universal <i>M (SD)</i>	Ingroup <i>M (SD)</i>
Black	16.66 (5.12)	15.05 (5.27)
South Asian	14.73 (5.78)	12.64 (5.57)
White	13.55 (5.99)	11.16 (5.64)

To address Hypothesis 1, we assessed two scenarios using hierarchical regression analysis. Scenario A assesses whether the link between ethnic group membership and universal conspiracy theories can be explained by belief in ingroup conspiracy. In this scenario, the ability of ethnic group to predict belief in universal conspiracy would no longer be significant after controlling for ingroup conspiracy theories. Because universal and ingroup conspiratorial beliefs are highly correlated, we tested a second scenario. The alternative scenario (B) predicts that the inverse is true: ingroup conspiracy theories can be explained by universal conspiracy belief. In this scenario, the ability of ethnic group to predict belief in ingroup conspiracy would no longer be significant after controlling for universal conspiracy theories. If this latter scenario is established, it would suggest that universal conspiracy belief is substantially explained by elements that are independent of ingroup conspiracy belief, suggesting a general conspiratorial mindset.

Scenario A

We analysed the effect of race/ethnicity and ingroup conspiratorial beliefs on universal conspiracy theories with hierarchical regression analyses. In the first block, we regressed belief in universal conspiracy theories on racial/ethnic group (dummy coded, white 0, 0; Black 1, 0; South Asian 0, 1), controlling for age, gender (male, 1; female, 2), and education. In the second block, we entered also belief in ingroup conspiracy to assess the impact of this variable on the relationship between ethnicity and universal conspiracy belief.

Table 2 indicates that the regression model for Block 1 was significant ($R^2 = .09$, $F = 17.29$, $p < .001$). This was largely due to significant effects of ethnicity (Black v White: $p < .001$; South Asian v white: $p < .001$). Education ($\beta = -0.16$, $p < .001$) and gender ($\beta = -0.05$, $p < .001$) were also significant.

Table 2

Hierarchical OLS regression of universal conspiracy beliefs on ingroup conspiracy and racial/ethnic group: UK sample

Variable	Block 1			Block 2		
	B (SE)	β	p	B (SE)	β	p
Ingroup conspiracy beliefs				0.82 (0.02)	0.82	<.001
Black (v white)	3.59 (0.48)		<.001	-0.20 (0.30)		.946
South Asian (v white)	1.57 (0.48)		.000	-0.01 (0.28)		.969
Gender	1.05 (0.31)	0.11	<.001	0.45 (0.18)	0.05	.014
Education	-0.74 (0.15)	-0.16	<.001	-0.31 (0.09)	-0.07	<.001
Age	-0.03 (0.02)	-0.05	.123	-0.30 (0.01)	-0.06	.002
Intercept	15.63 (0.99)		<.001	5.70 (0.63)		<.001

Adjusted R^2	.09	.69
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For Block 2 (Table 2) we fitted a model of universal conspiracy theories having both ethnic group (again, represented using dummy coding) and ingroup conspiracy theories as predictors (in addition to age, gender, and education as control variables). Block 2 was significant ($R^2 = .69$, $F = 327.83$, $p < .001$). As expected, ingroup conspiratorial beliefs significantly predicted universal conspiracy ($\beta = 0.82$, $p < .001$). Age and education remained significant contributors ($\beta = -0.06$, $p < .001$; $\beta = -0.07$, $p < .001$). To the current purpose, the effect of ethnicity is removed in Block 2 when belief in ingroup conspiracy was added as predictor (Black v white: $p = .946$; South Asian v white: $p = .969$).

Based on this model, we employed the bootstrap method (Hayes, 2009; Preacher & Hayes, 2004) to assess whether the effect of ethnic group on universal COVID conspiracy belief is mediated by ingroup COVID conspiracy belief. This revealed a non-significant direct effect of Black v whites (effect = .01, $t(594) = .04$, $p = .964$, 95% CI [-.57, .60]) alongside significant indirect effects via ingroup conspiracy belief (effect = 3.52, bootstrap 95% CI [2.77 – 4.29]). The South Asian versus white also revealed a non-significant effect of ethnicity (effect = .08, $t(594) = -.27$, $p = .790$, 95% CI [-.65, .49]) alongside significant indirect effects via ingroup conspiracy belief (effect = 1.65, bootstrap 95% CI [0.86 – 2.46]). Figures and further detail of the mediation analyses are included in the Online Appendix. We can therefore conclude that ingroup COVID conspiratorial beliefs fully mediate the effect of ethnicity on universal COVID conspiratorial beliefs in both Black and South Asian samples. In other words, belief in ingroup conspiracy explains the difference between ethnic groups in universal conspiratorial beliefs in the UK sample.

Scenario B

Next, we aimed to assess the possibility that the association between ethnic group and ingroup conspiratorial belief could be explained by a general conspiratorial mindset. To this aim in Block 1 we fitted a regression model having ingroup COVID conspiracy as the dependent variable and ethnicity as the predictor, while controlling for gender, education, and age. In the second block we added universal COVID conspiracy beliefs to the model (Table 3).

Table 3

UK sample: Hierarchical OLS regression of ingroup conspiracy beliefs on universal conspiracy and racial/ethnic group

Variable	Block 1			Block 2		
	B (SE)	β	p	B (SE)	β	p
Universal conspiracy beliefs				0.80 (0.02)	0.81	<.001
Black (v white)	4.39 (0.48)		<.001	1.52 (0.29)		<.001
South Asian (v white)	1.92 (0.47)		<.001	0.67 (0.28)		.016

Gender	0.74 (0.30)	0.08	.016	-0.11 (0.18)	-0.01	.557
Education	-0.53 (0.15)	-0.12	<.001	0.67 (0.09)	0.15	.452
Age	0.01 (0.02)	0.01	.763	0.30 (0.01)	0.05	.008
Intercept	12.06 (0.97)		<.001	-0.42 (0.65)		<.001
R^2		.09			.69	

Block 1 was again significant ($R^2 = .09$, $F = 17.29$, $p < .001$). This effect was largely due to significant effects of ethnicity (Black v white: $p < .001$; South Asian v white: $p < .001$). When universal conspiratorial belief was added in Block 2, the effect of minority group remained significant (Black v white: $p < .001$; South Asian v white: $p = .016$). The results indicate that ingroup COVID conspiracy belief exists in minority groups outside of support for universal COVID conspiratorial beliefs.

Overall, these analyses demonstrate that the higher endorsement by ethnic groups of universal conspiracy theories can be explained terms of support for ingroup conspiracy theories.

Social psychological variables

Next, we explored the role of the social psychological variables mentioned above as potential mediators of the effect exerted by ethnic group upon ingroup conspiracy theories. To this aim, we regressed belief in ingroup COVID conspiracy on ethnicity, institutional trust, lack of collective recognition, and discrimination. Descriptive statistics for these predictor variables are in Table 4 below.

Table 4

Means and (standard deviation) of trust, lack of collective recognition, and discrimination by racial/ethnic group.

Group	Institutional Trust	Lack of Collective Recognition	Discrimination
	$M (SD)$	$M (SD)$	$M (SD)$
Black	48.31 (20.30)	21.53 (4.31)	24.89 (9.60)
South Asian	48.43 (15.60)	18.79 (4.46)	21.63 (8.96)
White	50.59 (15.87)	13.95 (4.53)	17.78 (6.81)

We included age, gender, stress, and education (a proxy for social economic status) as controls. The UK model for ingroup COVID conspiracy was significant (Table 5), explaining 29% of the variance ($R^2 = .29$, $F = 39.88$, $p < .001$). Of our psychological variables, both lack of collective recognition ($\beta = 0.26$, $p < .001$) and trust ($\beta = -0.35$, $p < .001$) were significant

Discrimination bordered on significance ($\beta = 0.06, p = .050$). While Black ethnicity remained as a significant predictor, the inclusion of these psychological variables led South Asian identity to become insignificant.

In a Black v white bootstrap mediation analysis, a significant direct effect of ethnicity persisted (effect = 1.61, $t(591) = 2.83, p = .005$, 95% CI [.49, 2.73]) alongside significant indirect effects via trust (effect = .39, 95% CI [.06, .71]) and via lack of collective recognition (effect = 2.29, 95% CI [1.44, 3.15]), but not via discrimination (effect = .17, 95% CI [-.18, .54]). The South Asian v white analysis revealed a non-significant direct effect of South Asian vs White (effect = .054, $t(591) = .11, p = .911$, 95% CI [-.89, 1.00]) alongside significant indirect effects via discrimination (effect = .23, 95% CI [.06, .44]) and via lack of collective recognition (effect = 1.39, 95% CI [.89, 1.91]), but not via trust (effect = .24, 95% CI [-.11, .60]). This indicates that, in the context of belief in COVID conspiracy theories, while the effect of South Asian ethnic group on ingroup conspiracy belief can be explained by lack of collective recognition and discrimination (but not trust), these three variables do not fully account for the effect of ethnicity in the Black group, but the relationship is partially mediated by trust and lack of collective recognition. Figures and further detail of the mediation analyses are included in the Online Appendix.

Table 5

UK sample: Regression of ingroup conspiracy belief on psychological variables

Variable	B (SE)	β	<i>p</i> -value
Black (v white)	1.71 (0.52)		<.001
South Asian (v white)	0.13 (0.46)		.774
Lack of collective recognition	0.27 (0.04)	0.26	<.001
Trust	-0.11 (0.10)	-0.35	<.001
Discrimination	0.04 (0.02)	0.06	.050
Stress	0.05 (0.06)	0.03	.330
Gender	0.06 (0.28)	0.01	.839
Education	-0.24 (0.14)	-0.05	.082
Age	0.03 (0.02)	0.06	.050
Intercept	11.97 (1.36)		
R^2	.29		

Study 2: US Sample

For Study 2, we extended our findings regarding COVID conspiracy in UK racial/ethnic groups by replicating the study with US-based participants. In addition, to understand if the

Study 1 findings are consistent across different types of conspiracy, we assessed non-COVID, as well as COVID-based conspiratorial beliefs. The assessment of differing types of conspiracy theory is important as studies have found that both the predictors and social consequences of conspiratorial belief vary according to the content of conspiracy theory tested (Cichocka et al., 2016; Oleksy et al., 2021). By assessing both COVID and non-COVID conspiracy theories, we aim to address the generalisability of our findings.

Method

Participants

Data collection followed the same process as in Study 1. In August 2023, we recruited 950 US-based participants, with the final sample reflecting 900 participants, 300 that identified with one of each of the three largest racial/ethnic groups in the country. In the US, the groups recruited were: white (58% of the population in the US, non-white Hispanic (19% of the population), and Black (12%) (US Census Bureau, 2020). Participants were asked to confirm their racial/ethnic identity as part of the study questionnaire. Those who failed the attention check and identified as Mixed or Other were not included in the final sample. In the group of Hispanic participants, the average age was 34.6 ($SD = 11.3$), 45% identified as female, 53% as male, and 49% had at least an undergraduate degree. For the Black participant group, the average age was 39.7 ($SD = 13.4$), 46% identified as female, 53% as male, and 54% had at least an undergraduate degree. The white group was comprised of participants with an average age of 40.6 ($SD = 13.0$), 53% identified as female, 44% male, and 64% had at least an undergraduate degree. All three of these demographics were controlled for in our analyses.

Measures

In addition to the measures used in Study 1—with the exception that we did not control for stress, which proved to be an insignificant control variable—in Study 1 we asked participants about their beliefs in non-COVID conspiracy theories by adding two scales:

Universal non-COVID conspiracy belief scale ($\alpha = .88$). Sourced from Allington et al., (2021), participants indicated their agreement with five conspiratorial statements (*e.g.* “Reporters, scientists, and government officials are involved in a conspiracy to keep important information from the American public.”) on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree).

In-group non-COVID conspiracy belief scale ($\alpha = .91$). The five questions employed in the universal non-COVID conspiracy beliefs scale were amended to replace “the American public/people” with “my ethnic group” (*e.g.* “Reporters, scientists, and government officials are involved in a conspiracy to keep important information from my ethnic group.”). Like in Study 1, an exploratory factor analysis confirmed that these are distinct constructs. In a constrained 2-factor model, all of the ingroup conspiracy items loaded on the first factor (loading range: 0.72 - 0.92) and all of the universal conspiracy items loaded on the second factor (loading range: 0.64 - 0.90). The two factors were highly correlated ($r = .83$), but a two-factor model fit of the data ($\chi^2(26) = 674.08, p < .001, RMSEA = 0.17, TLI = .91$) was superior to a constrained one-factor model ($\chi^2(35) = 1724.39, p < .001, RMSEA = .23, TLI = .83$). These findings indicate that these two constructs are empirically distinguishable in this geography as well.

Results

We again analysed the effect of race/ethnicity and ingroup conspiratorial beliefs on universal conspiracy theories with hierarchical regression analyses. For this study, we considered both COVID and non-COVID conspiratorial beliefs. We did this by running two sets of regression analyses, one where COVID conspiratorial beliefs appear as dependent variable, the other where non-COVID conspiratorial beliefs appear as dependent variable. Descriptive statistics for these outcome variables are in Table 6 below.

Table 6

Means and (standard deviation) of universal and ingroup conspiracy belief endorsement by racial/ethnic group.

Group	Universal	Ingroup	Universal	Ingroup
	COVID		Non-COVID	
Black	14.79 (6.10)	13.90 (5.73)	18.43 (4.80)	17.79 (4.91)
Hispanic	13.39 (6.38)	11.82 (5.80)	17.90 (5.30)	15.73 (5.27)
White	11.54 (6.55)	9.68 (5.76)	16.60 (4.86)	12.12 (5.59)

As in Study 1, each set of regression analyses included two blocks. In the first block, we regressed belief in universal conspiracy theories on racial/ethnic group (dummy coded, White 0, 0; Black 1, 0; Hispanic 0, 1), controlling for age, gender (male, 1; female, 2), and education. In the second block, we also entered belief in ingroup conspiracy to assess the impact of this variable on the relationship between ethnicity and universal conspiracy belief.

Scenario A

Table 7 indicates that Block 1 was significant for both COVID and non-COVID conspiracy belief (COVID: $R^2 = .06$, $F = 10.62$, $p < .001$; non-COVID: $R^2 = .03$, $F = 6.15$, $p < .001$), a result largely due to significant effects of ethnicity for both (COVID: Black v White: $\beta = 0.18$, $p < .001$; Hispanic v White: $\beta = 0.12$, $p < .001$; non-COVID: Black v White: $\beta = 0.24$, $p < .001$; Hispanic v White: $\beta = 0.16$, $p = .002$). This shows that participants who identified as Black were most likely to endorse universal conspiratorial beliefs, followed by those who identified as Hispanic, when compared to the White participant group.

Table 7

US sample: Hierarchical OLS regression of universal COVID conspiracy beliefs on ingroup COVID conspiracy belief and racial/ethnic group

		COVID				Non-COVID			
		Block 1		Block 2		Block 1		Block 2	
		B	β	B	β	B	β	B	β
		(SE)	(p)	(SE)	(p)	(SE)	(p)	(SE)	(p)

Ingroup			0.96	0.89			0.71	0.82
conspiracy beliefs			(0.02)	(<.001)			(0.20)	(<.001)
Black (v White)	3.29		-0.78		1.85		-2.13	
	(0.53)	(<.001)	(0.27)	(.004)	(0.41)	(<.001)	(0.29)	(<.001)
Hispanic (v	2.14		-0.13		1.30		-1.26	
White)	(0.53)	(<.001)	(0.27)	(.625)	(0.41)	(.002)	(0.28)	(<.001)
Gender	0.97	0.08	0.84	0.07	0.82	0.08	0.55	0.06
	(0.43)	(.024)	(0.21)	(<.001)	(0.33)	(.013)	(0.22)	(.011)
Education	-0.42	-0.06	-0.16	-0.02	-0.20	-0.04	-0.17	-0.03
	(0.23)	(.066)	(0.11)	(.162)	(0.18)	(.253)	(0.12)	(.141)
Age	0.04	0.08	0.00	0.00	-0.01	-0.03	-0.02	-0.04
	(0.02)	(.025)	(0.01)	(.915)	(0.01)	(.358)	(0.01)	(.048)
Intercept	11.09		1.71		16.58		8.38	
	(1.31)		(0.67)		(1.02)		(0.71)	
R^2	.06		.77		.03		.59	

When belief in ingroup COVID conspiracy belief was added as predictor in Block 2, the association between ethnic group membership and universal COVID conspiracy belief became negative (Black v white: $B = -0.78$, $p = .004$; Hispanic v white: $B = -0.13$, $p = .625$). While the effect of Hispanic ethnicity was no longer significant, the negative effect of Black was. This indicates that, once belief in ingroup conspiracy theories is controlled for, Hispanic and Black participants had lower universal conspiratorial beliefs than white participants. The distinction becomes even starker when considering non-COVID universal conspiracy beliefs where the inclusion of ingroup conspiracy beliefs in Block 2 also reversed the effect of ethnicity for both Hispanic ($B = -1.26$, $p < .001$) and Black ($B = -2.13$, $p < .001$) participants.

Based on these models, we assessed whether the effect of ethnic group on universal COVID and non-COVID conspiracy belief is mediated by ingroup COVID and non-COVID conspiracy belief, respectively. Figures and further detail of the mediation analyses are included in the Online Appendix. The bootstrap mediation models related to the effect of Black ethnicity v white to conspiratorial beliefs revealed a significant negative direct effect of Black vs white (effect = -3.03 , $t(594) = .04$, $p = .003$, 95% CI [-1.34 , $-.29$]) alongside a significant indirect effect via ingroup conspiracy belief (effect = 4.06 , 95% CI [3.16 , 4.98]) for COVID conspiratorial belief. Likewise, for non-COVID beliefs, there was a significant negative direct effect of ethnicity (effect = -2.12 , $t(594) = -7.05$, $p < .001$, 95% CI [-2.71 , -1.53]) alongside a significant indirect effect via ingroup conspiracy belief (effect = 3.98 , 95% CI [3.36 , 4.64]). The negative direct effect of Black vs white indicates that, when ingroup conspiracy belief is controlled, Black participants have lower universal conspiracy belief than white participants.

The Hispanic v white mediation analysis revealed a non-significant direct effect of ethnicity (effect = $-.19$, $t(594) = .04$, $p = .003$, 95% CI [$-.75, .34$]) alongside a significant indirect effect via ingroup conspiracy belief (effect = 2.18 , 95% CI [$1.25, 3.10$]) for COVID-related conspiratorial beliefs. For non-COVID conspiratorial beliefs, there was a negative significant direct effect of Hispanic vs white (effect = -1.24 , $t(594) = -4.07$, $p < .001$, 95% CI [$-1.83, -.64$]) alongside a significant indirect effect via ingroup conspiracy belief (effect = 2.30 , 95% CI [$1.67, 2.96$]). For this group, when ingroup conspiracy belief is controlled, the direct effect of ethnicity was either eliminated (COVID) or reversed (non-COVID).

We can conclude that ingroup COVID and non-COVID conspiratorial beliefs fully mediate any effect of ethnicity on universal COVID and non-COVID conspiratorial beliefs in both Black and Hispanic samples. Like the UK sample, belief in ingroup conspiracy drives the difference between white and non-white racial/ethnic groups in universal conspiratorial beliefs in the US sample.

Scenario B

Like Study 1, we proceeded by addressing the possibility that the link between racial/ethnic group membership and ingroup conspiratorial belief is driven by a general conspiratorial mindset (Table 8). For Block 1, a regression model of ingroup conspiracy belief was fitted having ethnicity, age, gender and education as predictors. Universal conspiracy belief was added as predictor in Block 2. Similar to the UK sample, the predictive ability of ethnic group remained significant in Block 2, in the context of both COVID (Black v white: $p < .001$; Hispanic v white: $p = .005$) and non-COVID conspiratorial belief (Black v white: $p < .001$; Hispanic v white: $p < .001$). This further corroborates the hypothesis that ingroup conspiracy belief exists in ethnic minority groups outside their support for universal conspiratorial belief.

Table 8

US sample: Hierarchical OLS regression of universal COVID conspiracy beliefs on ingroup COVID conspiracy beliefs and racial/ethnic group

	COVID				Non-COVID			
	Block 1		Block 2		Block 1		Block 2	
	B (SE)	β	B (SE)	β	B (SE)	β	B (SE)	β
Universal conspiracy beliefs			0.79 (0.02)	0.85 ($<.001$)			0.82 (0.02)	0.70 ($<.001$)
Black (v white)	4.24 (0.48)	$<.001$	1.65 (0.24)	$<.001$	5.65 (0.44)	$<.001$	4.14 (0.29)	$<.001$
Hispanic (v white)	2.37 (0.48)	$<.001$	0.68 (0.24)	(.005)	3.64 (0.44)	$<.001$	2.58 (0.29)	$<.001$

Gender	0.14 (0.39)	0.01 (.725)	-0.63 (0.19)	-0.05 (.001)	0.38 (0.36)	0.03	-0.29 (0.23)	-0.03 (.217)
Education	-0.28 (0.21)	-0.04 (.186)	0.06 (0.10)	0.01 (.569)	-0.05 (0.19)	-0.01	0.12 (0.13)	0.02 (.338)
Age	0.04 (0.02)	0.08 (.012)	0.01 (0.01)	0.02 (.253)	0.01 (0.01)	0.02	0.02 (0.01)	0.04 (.069)
Intercept	9.78 (1.91)		1.02 (0.61)		11.62 (1.09)		-1.89 (0.81)	
R^2	.09		.78		.17		.65	

Social psychological variables

We separately regressed COVID and non-COVID ingroup conspiratorial belief on the same predictor variables examined in the UK sample with the exception that we did not control for stress, which proved to be an insignificant variable in Study 1. In the case of COVID ingroup conspiracy theory belief, we found that, as in the UK sample, both lack of collective recognition ($\beta = 0.28, p < .001$) and trust were significant ($\beta = -0.26, p < .001$). Unlike the UK sample, discrimination was also a significant predictor ($\beta = 0.10, p = .003$). In contrast to the UK sample where the effect of Black ethnicity continued to be significant after the inclusion of social psychological variables, in the US the effect of both Black ($p = .051$) and Hispanic ($p = .857$) ethnicity became insignificant, though this the significance is marginal for Black ethnicity.

A mediation analysis revealed a non-significant direct effect of Black vs white (effect = .27, $t(591) = .42, p = .676, 95\% \text{ CI} [-1.00, 1.54]$) alongside significant indirect effects via lack of recognition (effect = 3.60, $95\% \text{ CI} [2.46, 4.79]$) and via discrimination (effect = .33, $95\% \text{ CI} [.04, .65]$), but not via trust (effect = .00, $95\% \text{ CI} [-.25, .27]$). For the Hispanic group, the analysis found a non-significant direct effect of ethnicity (effect = -.51, $t(591) = -.90, p = .367, 95\% \text{ CI} [-1.63, .61]$) alongside significant indirect effects via discrimination (effect = .21, $95\% \text{ CI} [.04, .43]$) and via lack of collective recognition (effect = 2.55, $95\% \text{ CI} [1.69, 3.39]$), but not via trust (effect = .04, $95\% \text{ CI} [-.25, .33]$). Therefore, in the US sample, the relationship between ethnicity and ingroup conspiracy was fully mediated by lack of recognition and discrimination but not trust. Figures and further detail of the mediation analyses are included in the Online Appendix.

Table 9

US sample: Regression of ingroup conspiracy belief on psychological variables:

	COVID			Non-COVID		
	B (SE)	β	p	B (SE)	β	p

Black (v white)	1.17 (0.60)		.051	1.75 (0.52)		<.001
Hispanic (v white)	0.10 (0.55)		.857	0.72 (0.48)		0.133
Lack of collective recognition	0.26 (0.04)	0.28	<.001	0.35 (0.04)	0.38	<.001
Trust	-0.09 (0.01)	-0.26	<.001	-0.02 (0.01)	-0.31	<.001
Discrimination	0.06 (0.02)	0.10	.003	0.05 (0.02)	0.09	.004
Gender	-0.21 (0.36)	-0.02	.569	-0.04 (0.32)	0.00	.907
Education	-0.09 (0.20)	-0.01	.654	0.15 (0.17)	0.03	0.374
Age	0.07 (0.02)	0.14	<.001	0.03 (0.01)	0.09	0.008
Intercept	8.67 (1.25)		<.001	-1.80 (0.87)		<.001
<i>R</i> ²		.22			.35	

The results for non-COVID ingroup conspiracy belief contrasted only slightly with the COVID ones. Both lack of collective recognition ($\beta = 0.38, p < .001$) and trust ($\beta = -0.31, p < .001$) were significant predictors, but while the effect of Hispanic ethnic membership became insignificant ($p = .133$), the effect of Black ethnicity remained significant ($p < .001$). This indicates that, in the context of belief in both COVID and non-COVID conspiracy theories in the US, the effect of Hispanic ethnic group membership on ingroup conspiracy belief can be explained by differences in lack of collective recognition, trust and discrimination. In contrast, while the effect of Black ethnicity can be explained by these social psychological variables for COVID-related conspiracy theories, but not for belief in non-COVID conspiracy theories.

A mediation analysis for non-COVID conspiratorial beliefs found a significant direct effect of Black vs white was retained (effect = 1.40, $t(591) = 2.49, p = .013, 95\% \text{ CI } [.30, 2.51]$) alongside significant indirect effects via discrimination (effect = .37, 95% CI [.14, .63]) and via lack of collective recognition (effect = 4.01, 95% CI [3.15, 4.94]), but not via trust (effect = .00, 95% CI [-.29, .30]). For the Hispanic group, there was a non-significant direct effect of ethnicity (effect = .38, $t(591) = .73, p = .466, 95\% \text{ CI } [-.65, 1.41]$) alongside significant indirect effects via discrimination (effect = .19, 95% CI [.03, .37]) and via lack of collective recognition (effect = 2.95, 95% CI [2.25, 3.69]), but not via trust (effect = .04, 95% CI [-.24, .32]). Figures and further detail of the mediation analyses are included in the Online Appendix. For non-COVID conspiratorial beliefs, therefore, trust, like for COVID-related beliefs, does not feature. Lack of collective recognition and discrimination fully mediate the effect of Hispanic ethnicity, but only partially mediate Black ethnicity.

Discussion

This study brought together two strands of research in conspiracy theory beliefs: universal and ingroup conspiratorial beliefs, finding that higher level of universal conspiratorial belief

in ethnic minority groups may largely be attributable to belief in ingroup conspiracy theories. These findings were derived from an unusually broad base of participants spanning four racial/ethnic groups (Black, Hispanic, South Asian, and white) and two geographies (the UK and the US). In addition, we were able to contrast the role of type of conspiracy theory by examining belief in both COVID- and non-COVID related conspiracy theories. In both geographical samples and types of conspiracy theory, once belief in ingroup conspiracy was accounted for, the previously noted excess of conspiratorial beliefs related to non-white groups as compared to white groups in belief in universal conspiracy was eliminated. In other words, for the non-white participant groups, the extent to which belief in universal conspiracies exists is predicated on the existence of ingroup conspiratorial beliefs.

Across both nationalities and types of conspiracy theory, we found that a lack of collective recognition was the most substantial mediator of belief in ingroup conspiracy. While a lack of institutional trust served to mediate between Black ethnicity and COVID conspiracy belief in the UK, it did not significantly mediate any of the relationships between ethnicity and conspiratorial belief in the US, nor for the South Asian group in the UK. Current experiences of discrimination were far less substantial than lack of collective recognition but did serve to mediate the relationship for all scenarios except for the Black UK group. The measure of lack of collective recognition, which is a modification of the collective narcissism scale (Golec de Zavala et al., 2009) to remove the element of “superiority”, not only has been shown to be useful in explaining the nature of ingroup conspiratorial beliefs, but may go some way in addressing questions regarding the applicability and interpretation of collective narcissism to disadvantaged groups (Golec de Zavala & Keenan, 2022).

The wide-reaching damaging effects of conspiratorial belief have prompted governments and health organisations to seek interventions that may curb the proliferation of conspiracy belief and misinformation. Largely positioning conspiracy belief as an individual phenomenon, these interventions have focused on individual skills (e.g. analytical thinking) and individual inoculation against belief in specific conspiracy theories (O’Mahony et al., 2023). By demonstrating that the connection between ethnic minority membership and universal conspiracy belief can be explained by ingroup conspiracy belief in these groups, and the explanatory lack of group recognition variable, we highlight an opportunity to shift the focus from individual-centric interventions to combat the spread of conspiracy belief and misinformation. Our work suggests that interventions for political, educational, health and other social inequalities need to address ingroup conspiratorial beliefs and the difficult area of group recognition by designing and testing interventions that incorporate communications that target belief in ingroup conspiracy, enhance perceptions of group image, and accentuate positive intergroup relations. Experimental evidence is required however to understand the approaches that might be affective, both at the individual and wider communications levels. Opportunities for these intervention enhancements may be available at both a mass communication and an individual level. Mass communication from organisations aiming to promote group recognition to address social and economic inequalities should aim to go beyond featuring images of people from the community and signalling cultural empathy to highlight the importance of that community in wider society, the contributions made by their specific ethnic group, and working with other (including the majority) group. On an individual level, communications should include recognition of the susceptibility to ingroup conspiracy belief, of past injustices, but also and similarly seek to build group image and dissipate intergroup mistrust. An example of an opportunity for this type of communication is in an the empathetic refutation interview—in which the validation of initial viewpoints is

emphasized—used to tackle vaccine misperceptions at the universal level (Holford et al., 2024).

There is also further work required to understand the nuances between ethnic groups in this area. Previous research that has focused on conspiratorial beliefs in ethnic minorities has often either studied single, often Black, ethnic minority samples (e.g., Davis et al., 2018), dichotomised non-white and white status (e.g., van Prooijen et al., 2018) or, in the case of Goertzel's 1994 landmark work, treated minority status as linear (where Hispanics were treated as being 'between' the white and Black participants in the US). These approaches, while highlighting the importance of ethnic group membership in the role of conspiratorial belief, haven't allowed for understanding of differences between racial/ethnic communities that would be derived from comparison of these groups. As evidenced by our disparate findings regarding the mediating effects of discrimination and institutional trust for different ethnic/racial groups, as well as the extent to which the relationship between ethnicity and conspiratorial beliefs are mediated by any of the social psychological variables, there is much to be gained by studying different ethnic group simultaneously. There is also more to do to understand these differences more fully.

Likewise, the interaction between ethnic/racial group membership and type of conspiracy theory requires further exploration. Our US results demonstrated substantive and significant differences in the predictive value of non-white versus white participants for non-COVID universal conspiracy beliefs once ingroup conspiracy beliefs were accounted for. While this particular difference may be due to the politicised nature of COVID conspiracy theories in the US, this determination must be left for future research. Our work, however, demonstrates the importance of the type of conspiracy theory in conspiratorial belief research identified by other researchers (e.g., Cichocka et al., 2016; Oleksy et al., 2021). The current studies extend previous research which has noted the importance of conspiracy type in the general population by highlighting the differing impact of conspiracy type by ethnic/racial group.

While we highlight the importance of ingroup perceptions, we recognise the immense difficulty in changing these while the reality is that devaluation of certain social groups continues to exist in society. For social groups whose experiences of social devaluation have been transmitted across generations, conspiratorial endorsement can be seen as a rational, social-functional reaction (e.g., Bilewicz, 2022; Vandrevala et al., 2022). The consequent high cognitive accessibility of victimhood in these groups allows for sense-making that incorporates conspiratorial beliefs because they view further injustice as likely. It is the disjoining of the historical and contemporary evidence and experience with future injustice that can attempt to be addressed. This is a slow and enormous task, but our evidence indicates that little change will come unless wider issues of past and contemporary injustices are acknowledged and addressed.

Funding

This study was supported by grants from Kingston University, London.

Competing interests

The authors have declared that no competing interests exist.

Acknowledgements

The authors have no additional (i.e., non-financial) support to report.

References

- Allington, D., McAndrew, S., Moxham-Hall, V., & Duffy, B. (2021). Coronavirus conspiracy suspicions, general vaccine attitudes, trust and coronavirus information source as predictors of vaccine hesitancy among UK residents during the COVID-19 pandemic. *Psychological Medicine*, 1–12. <https://doi.org/10.1017/S0033291721001434>
- Armaly, M. T., Buckley, D. T., & Enders, A. M. (2022). Christian Nationalism and Political Violence: Victimhood, Racial Identity, Conspiracy, and Support for the Capitol Attacks. *Political Behavior*, 44(2), 937–960. <https://doi.org/10.1007/s11109-021-09758-y>
- Bilewicz, M. (2022). Conspiracy beliefs as an adaptation to historical trauma. *Current Opinion in Psychology*, 47, 101359. <https://doi.org/10.1016/j.copsy.2022.101359>
- Bilewicz, M., Witkowska, M., Pantazi, M., Gkinopoulos, T., & Klein, O. (2019). Traumatic Rift: How Conspiracy Beliefs Undermine Cohesion After Societal Trauma? *Europe's Journal of Psychology*, 15(1), Article 1. <https://doi.org/10.5964/ejop.v15i1.1699>
- Bowes, S. M., Costello, T. H., & Tasimi, A. (2023). *The Conspiratorial Mind: A Meta-Analytic Review of Motivational and Personological Correlates*.
- Cichocka, A., Marchlewska, M., Golec de Zavala, A., & Olechowski, M. (2016). 'They will not control us': Ingroup positivity and belief in intergroup conspiracies. *British Journal of Psychology*, 107(3), 556–576. <https://doi.org/10.1111/bjop.12158>
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A Global Measure of Perceived Stress. *Journal of Health and Social Behavior*, 24(4), 385–396. <https://doi.org/10.2307/2136404>
- Crocker, J., Luhtanen, R., Broadnax, S., & Blaine, B. E. (1999). Belief in U.S. Government Conspiracies Against Blacks among Black and White College Students:

- Powerlessness or System Blame? *Personality and Social Psychology Bulletin*, 25(8), 941–953. <https://doi.org/10.1177/01461672992511003>
- Davis, J., Wetherell, G., & Henry, P. J. (2018). Social devaluation of African Americans and race-related conspiracy theories. *European Journal of Social Psychology*, 48(7), 999–1010. <https://doi.org/10.1002/ejsp.2531>
- de Vroome, T., Hooghe, M., & Marien, S. (2013). The Origins of Generalized and Political Trust among Immigrant Minorities and the Majority Population in the Netherlands. *European Sociological Review*, 29(6), 1336–1350. <https://doi.org/10.1093/esr/jct018>
- Douglas, K. M., Sutton, R. M., & Cichocka, A. (2017). The Psychology of Conspiracy Theories. *Current Directions in Psychological Science*, 26(6), 538–542. <https://doi.org/10.1177/0963721417718261>
- Douglas, K. M., Uscinski, J. E., Sutton, R. M., Cichocka, A., Nefes, T., Ang, C. S., & Deravi, F. (2019). Understanding Conspiracy Theories. *Political Psychology*, 40(S1), 3–35. <https://doi.org/10.1111/pops.12568>
- Ethnic group—Census Maps, ONS.* (n.d.). Retrieved 11 June 2024, from <https://www.ons.gov.uk/census/maps/choropleth/identity/ethnic-group/ethnic-group-tb-20b/asian-asian-british-or-asian-welsh-bangladeshi>
- Fareed, N., Swoboda, C. M., Jonnalagadda, P., Walker, D. M., & Huerta, T. R. (2021). Differences Between Races in Health Information Seeking and Trust Over Time: Evidence from a Cross-Sectional, Pooled Analyses of HINTS Data. *American Journal of Health Promotion*, 35(1), 84–92. <https://doi.org/10.1177/0890117120934609>
- Goertzel, T. (1994). Belief in Conspiracy Theories. *Political Psychology*, 15(4), 731–742. <https://doi.org/10.2307/3791630>
- Golec de Zavala, A. (2023). *The psychology of collective narcissism: Insights from social identity theory*. Routledge.

- Golec de Zavala, A., Cichocka, A., Eidelson, R., & Jayawickreme, N. (2009). Collective narcissism and its social consequences. *Journal of Personality and Social Psychology*, 97(6), 1074–1096. <https://doi.org/10.1037/a0016904>
- Golec de Zavala, A., & Keenan, O. (2022). *Collective narcissism in advantaged and disadvantaged groups*. PsyArXiv. <https://doi.org/10.31234/osf.io/q43ns>
- Gundersen, A. B., van der Linden, S., Piksa, M., Morzy, M., Piasecki, J., Ryguła, R., Gwiazdziński, P., Noworyta, K., & Kunst, J. R. (2023). The role of perceived minority-group status in the conspiracy beliefs of factual majority groups. *Royal Society Open Science*, 10(10), 221036. <https://doi.org/10.1098/rsos.221036>
- Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, 76(4), 408–420. <https://doi.org/10.1080/03637750903310360>
- Holford, D., Schmid, P., Fasce, A., & Lewandowsky, S. (2024). The empathetic refutational interview to tackle vaccine misconceptions: Four randomized experiments. *Health Psychology: Official Journal of the Division of Health Psychology, American Psychological Association*, 43(6), 426–437. <https://doi.org/10.1037/hea0001354>
- Hornsey, M. J., Lobera, J., & Díaz-Catalán, C. (2020). Vaccine hesitancy is strongly associated with distrust of conventional medicine, and only weakly associated with trust in alternative medicine. *Social Science & Medicine*, 255, 113019. <https://doi.org/10.1016/j.socscimed.2020.113019>
- Jennings, W., Stoker, G., Bunting, H., Valgarðsson, V. O., Gaskell, J., Devine, D., McKay, L., & Mills, M. C. (2021). Lack of Trust, Conspiracy Beliefs, and Social Media Use Predict COVID-19 Vaccine Hesitancy. *Vaccines*, 9(6), Article 6. <https://doi.org/10.3390/vaccines9060593>

- Jolley, D., & Douglas, K. M. (2014). The Effects of Anti-Vaccine Conspiracy Theories on Vaccination Intentions. *PLOS ONE*, *9*(2), e89177.
<https://doi.org/10.1371/journal.pone.0089177>
- Jolley, D., Meleady, R., & Douglas, K. M. (2020). Exposure to intergroup conspiracy theories promotes prejudice which spreads across groups. *British Journal of Psychology*, *111*(1), 17–35. <https://doi.org/10.1111/bjop.12385>
- Keeley, B. L. (1999). Of Conspiracy Theories. *The Journal of Philosophy*, *96*(3), 109–126.
<https://doi.org/10.2307/2564659>
- Kukafka, R., Millery, M., Pan, S., Silverman, T. B., McGuinness, J. E., & Crew, K. D. (2022). Trust and credibility of information sources related to COVID-19 among high-risk ethnically diverse adults at the onset of the New York City outbreak: A cross-sectional survey conducted via a community health portal. *AMIA Annual Symposium Proceedings, 2021*, 660–667.
- Oleksy, T., Wnuk, A., Maison, D., & Łyś, A. (2021). Content matters. Different predictors and social consequences of general and government-related conspiracy theories on COVID-19. *Personality and Individual Differences*, *168*, 110289.
<https://doi.org/10.1016/j.paid.2020.110289>
- O'Mahony, C., Brassil, M., Murphy, G., & Linehan, C. (2023). The efficacy of interventions in reducing belief in conspiracy theories: A systematic review. *PLOS ONE*, *18*(4), e0280902. <https://doi.org/10.1371/journal.pone.0280902>
- Papaioannou, K., Pantazi, M., & van Prooijen, J.-W. (2023). Is democracy under threat? Why belief in conspiracy theories predicts autocratic attitudes. *European Journal of Social Psychology*, *53*(5), 846–856. <https://doi.org/10.1002/ejsp.2939>

- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments & Computers*, *36*(4), 717–731. <https://doi.org/10.3758/BF03206553>
- Romer, D., & Jamieson, K. H. (2020). Conspiracy theories as barriers to controlling the spread of COVID-19 in the U.S. *Social Science & Medicine*, *263*, 113356. <https://doi.org/10.1016/j.socscimed.2020.113356>
- Ross, M. W., Essien, E. J., & Torres, I. (2006). Conspiracy Beliefs about the Origin of HIV/AIDS in Four Racial/Ethnic Groups. *Journal of Acquired Immune Deficiency Syndromes (1999)*, *41*(3), 342–344. <https://doi.org/10.1097/01.qai.0000209897.59384.52>
- Swami, V., Furnham, A., Smyth, N., Weis, L., Lay, A., & Clow, A. (2016). Putting the stress on conspiracy theories: Examining associations between psychological stress, anxiety, and belief in conspiracy theories. *Personality and Individual Differences*, *99*, 72–76. <https://doi.org/10.1016/j.paid.2016.04.084>
- Thorburn, S., & Bogart, L. M. (2005). Conspiracy beliefs about birth control: Barriers to pregnancy prevention among African Americans of reproductive age. *Health Education & Behavior: The Official Publication of the Society for Public Health Education*, *32*(4), 474–487. <https://doi.org/10.1177/1090198105276220>
- US Census Bureau. (2020). *Racial and Ethnic Diversity in the United States: 2010 Census and 2020 Census*. Census.Gov. <https://www.census.gov/library/visualizations/interactive/racial-and-ethnic-diversity-in-the-united-states-2010-and-2020-census.html>
- Uslaner, E. M., & Conley, R. S. (2003). Civic Engagement and Particularized Trust: The Ties that Bind People to their Ethnic Communities. *American Politics Research*, *31*(4), 331–360. <https://doi.org/10.1177/1532673X03031004001>

- van Prooijen, J.-W., Spadaro, G., & Wang, H. (2022). Suspicion of institutions: How distrust and conspiracy theories deteriorate social relationships. *Current Opinion in Psychology*, *43*, 65–69. <https://doi.org/10.1016/j.copsyc.2021.06.013>
- van Prooijen, J.-W., Staman, J., & Krouwel, A. P. M. (2018). Increased conspiracy beliefs among ethnic and Muslim minorities. *Applied Cognitive Psychology*, *32*(5), 661–667. <https://doi.org/10.1002/acp.3442>
- van Prooijen, J.-W., & van Vugt, M. (2018). Conspiracy Theories: Evolved Functions and Psychological Mechanisms. *Perspectives on Psychological Science*, *13*(6), 770–788. <https://doi.org/10.1177/1745691618774270>
- Vandrevalla, T., Hendy, J., Hanson, K., Alidu, L., & Ala, A. (2022). Unpacking COVID-19 and conspiracy theories in the UK black community. *British Journal of Health Psychology*, *n/a*(*n/a*). <https://doi.org/10.1111/bjhp.12636>
- Vegetti, F., & Littvay, L. (2022). Belief in conspiracy theories and attitudes toward political violence. *Italian Political Science Review / Rivista Italiana Di Scienza Politica*, *52*(1), 18–32. <https://doi.org/10.1017/ipo.2021.17>
- Wilkes, R., & Wu, C. (2018). Ethnicity, Democracy, Trust: A Majority-Minority Approach. *Social Forces*, *97*(1), 465–494. <https://doi.org/10.1093/sf/soy027>
- Williams, D. R., Yan Yu, Jackson, J. S., & Anderson, N. B. (1997). Racial Differences in Physical and Mental Health: Socio-economic Status, Stress and Discrimination. *Journal of Health Psychology*, *2*(3), 335–351. <https://doi.org/10.1177/135910539700200305>
- YouGov. (2021). *Where do people believe in conspiracy theories?* / YouGov (2020 YouGov-Cambridge Globalism Project). YouGov. <https://yougov.co.uk/international/articles/33746-global-where-believe-conspiracy-theories-true>

