



University  
*of* Exeter

# Quantitative Data Insights Report

Report prepared for the research funded by the Solicitors Regulation Authority on the potential causes of differential outcomes in legal professional assessments

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## Introduction

To better understand the potential causes of differential outcomes by ethnicity (commonly referred to as the ethnicity attainment or awarding gap) in legal professional assessments, we undertook an extensive Systematic Literature Review of academic research ([SLR](#), published June 2023). We also reviewed other relevant reports and data from non-academic sources ('grey literature') as part of Workstream 1.

The following are gaps in current research emerging from the SLR, which were used to guide the quantitative strand of our subsequent empirical research, set out in this report:

- The SLR identified a significant number of factors with the potential to be linked to differential outcomes, but which have not been examined in the context of legal professional assessments.
- There is a need for more research examining causal pathways through which factors that have been linked to differential outcomes influence those outcomes. Social Cognitive Career Theory (SCCT), highlighted in the SLR, is a promising explanatory framework that considers how specific social interactions and individual cognitive processes interact to influence career choices and education outcomes. The SCCT studies in the SLR were predominantly from the US, with none focused on legal qualifications.
- The SCCT studies identified in the SLR did not incorporate the role of social identity experiences (linking individuals to a particular social grouping) that often underlie the disadvantage faced by marginalised groups and have the potential to impact academic outcomes. These include the social identity experiences of how minority ethnic candidates of legal assessments perceive themselves as being potential members of the legal profession (which we refer to as 'law identity') and their experiences of socially interacting within legal education ('social interaction experiences').

Consequently, as part of the Workstream 2, which aims to generate new insights through empirical research, our quantitative empirical work presented in this report extends the SCCT approach to investigate these gaps. Using survey data, we examined ethnicity-based differences in factors that have been associated with differential outcomes, specifically in the context of legal professional assessments. We also examined mechanisms through which these factors may influence outcomes within a framework informed by SCCT, incorporating social identity factors. We aimed to reach relatively generalisable conclusions as to differences in experiences and context for students of different ethnicities.

The aim of empirical Workstream 2 is to better understand factors associated with differential outcomes between majority and minority ethnic individuals specifically in the context of legal professional assessments, and to understand the underlying mechanisms linking these factors to differential outcomes. Below, we first provide a brief summary of key findings before going on to explain the methodology and results of this quantitative work. This work included conducting two surveys. The first survey was completed by participants from two populations – current undergraduate (UG) law students, and current Legal Practice Course (LPC) candidates, and collected responses on experiences during legal education (referred to as the UG survey, and the Timepoint 1 survey for LPC candidates). The second survey was a follow-up survey completed at a later timepoint (when some LPC candidates had sat their exams and received their final LPC results) by a portion of the LPC candidates who had completed the Timepoint 1 survey and collected responses on their LPC outcomes.

## Summary of key quantitative findings

It is important to note that the findings in this section were derived from analyses whereby each minority ethnic group was separately compared to the white ethnic group as a reference point. Hence, below we give a broad overview of the findings. For more granular ethnic comparisons see Sections 4 and 5 of this report and accompanying appendices.

Our findings identified clear differences between ethnic groups in a number of factors that have been linked to outcomes (including in literature identified in the SLR). For example:

- Average attainment in assessments prior to legal professional assessments, in school or university or both, was often lower in participants from minority ethnic groups than in white participants.
- Participants from minority groups experienced lower levels of contextual support (environmental supports and encouragements) in early education than white participants did.
- Participants from minority groups felt, on average, less represented and valued in the legal profession than white participants did.
- Participants from minority groups were more likely than white participants to have experienced negative social interactions in legal education including:
  - being discriminated against,
  - feeling unrepresented,
  - feeling the curriculum does not fit them,
  - being aware of social stigmas about their identity in legal education (stigma consciousness), and
  - feeling vulnerable to negative stereotypes associated with their identity in legal education (stereotype vulnerability).
- White participants were more likely to have their LPC funded by an employer than Black and Asian participants were, and all minority group participants

were less likely than white participants to have employment lined up after the LPC.

In some cases, we found evidence about the mechanisms through which differences in these factors may feed through into differential outcomes, which includes:

- Regarding Asian and white candidates in particular (where sample size enabled more detailed analyses), findings identified relationships between poorer outcomes in Asian candidates and their lower contextual support, less positive perceptions of themselves in the legal profession, and negative social interactions. The poorer outcomes could be explained through the aforementioned factors, as these were found to lead to lower levels of ‘remaining persistence’ (referred to as persistence in SCCT), in line with SCCT predictions. In other words, lower levels of support, various negative experiences and candidates’ perceptions of themselves, may affect candidates’ willingness to keep pursuing or persisting in actions related to their legal assessments.
- Some identified differences fed through into lower self-esteem for Black and Asian students, which, based on existing literature, may lead to poorer outcomes (although we did not find support for this relationship at Timepoint 2).
- Differences in LPC funding and employment post LPC may be related to outcomes as these also influence remaining persistence.

## **Aims of quantitative empirical work**

Existing literature highlights a number of factors that have the potential to contribute to differential outcomes based on ethnicity in legal professional assessments (see [SLR, Report 1](#)). In this report, we describe the results of our work examining each of these factors, and variables which may link them to outcomes, in the context of legal professional assessments. Specifically, we report the results of quantitative surveys administered to:

- current UG students intending to pursue a career as a solicitor (UG sample; 700 participants) and
- current LPC candidates (LPC sample; 510 participants).
- We also administered surveys to past LPC candidates and current conversion course students, but due to low sample size in those two groups we do not report their results here (details relating to both of those samples can be found in Appendix A).

In our SLR, we grouped factors that existing work has implicated in differential outcomes into a framework informed by SCCT. We also made (novel) additions to the SCCT framework to capture broader constructs that the literature suggested were important potential contributors to differential outcomes. These additions include what we term ‘law identity’ and ‘social interaction in legal education’. Both are further explained below.

## Contributing variables

In this suggested framework, a number of factors expected to differ by ethnicity were identified as having the potential to contribute to differential outcomes. We refer to these factors as contributing variables.

It is important to note that our SLR adopted an intersectional approach, examining how marginalised groups perform in terms of academic and career attainment. As such, the contributing variables to differential outcomes, along with the accompanying citations, primarily demonstrate their negative impact on marginalised groups in academic and career pursuits. Minority ethnic groups, in the context of differential outcomes, are generally regarded as marginalised due to the disadvantages they face at various stages of academic and career pursuits. Therefore, our overall prediction for the listed contributing variables, specifically pertaining to ethnicity, is that these variables will disproportionately affect minority ethnic students and candidates in a disadvantageous manner when compared to majority ethnic students and candidates. Consequently, these variables are expected to have a negative impact on academic and career attainment, thus contributing to differential outcomes. Expectations relating to each variable are informed by the SLR research.

Moreover, it is important to note that some variables from the SLR were operationalised with more established scales or measurements in the literature or from previous research outside of the SLR. This was the case when the references or research in the SLR did not have established scales or measurements. The contributing variables are categorised under the following headings:

1. **Prior attainment** which can be defined as prior academic achievements (Chung, 2012; Dursi, 2012). This includes attainment in GCSEs (or equivalent international or vocational exams), A-levels (or Access to Higher Education Diploma, or equivalent international or vocational exams), and (for LPC candidates) UG degree marks. We predicted that minority ethnic students and candidates would have poorer prior attainment, such as lower GCSE and A-level grades, compared to majority ethnic students and candidates.
2. **Other background context** refers to distal or indirect contextual factors that externally influence a student's academic and professional development. Potentially important background contextual factors include:
  - i. English proficiency, which refers to a person's ability to use the English language effectively (Frattini and Meschi, 2019; MacKinnon and Parent, 2012; Wei et al., 2012; Yang et al., 2015).
  - ii. Contextual support, which refers to environmental supports or encouragements that impact academic and career-related behaviours (Hall et al., 2017; Lent et al., 2013, 2015; Navarro et al., 2014).

- iii. Financial constraints, which are limitations on the monetary means available for support of a person's academic pursuits (Dahling and Thompson, 2010; Inda et al., 2013; Navarro et al., 2014; Smith et al., 2020).
- iv. Experiences in early education, such as a student's focus on academic learning (referred to in prior research as 'academic press'), drive towards academic pursuits and learning ('academic motivation') and sense of belonging and positive relationships ('school connectedness') (see Anderson-Butcher et al., 2012 for detailed definitions of and standardised scales on these items).
- v. Parental involvement in early education, which is the perception a student has of a parent's interest and engagement in their academic activities in early schooling (Barwegen et al., 2004).
- vi. Early education institutions attended, including preschool and nursery (Flouri et al., 2015; Reardon, Kalogrides and Shores, 2019; Tucker-Drob, 2012).
- vii. Type of secondary school attended, which include nonselective state comprehensive, selective or grammar, and private schools.
- viii. Knowledge of legal professionals/contact with the legal profession, which refers to whether a student has any family or friends in the legal profession.
- ix. Socioeconomic status, which refers to a person's family's social and economic position within society (Flouri et al., 2015; Gutman and Schoon, 2012), and which can be indicated through participation in free school meals schemes by the government, paid work during study, parental occupation, and subjective social class (a person's self-categorisation into a social class).

We predicted that minority ethnic students and candidates, compared to majority ethnic students and candidates, would have a more disadvantaged background context, potentially including:

- lower English proficiency
- greater financial constraints
- fewer positive experiences in early education
- limited parental involvement in education
- lower attendance in preschool and nursery school
- greater attendance in state comprehensive schools as opposed to grammar or selective and private schools
- lesser knowledge or contact with legal professionals
- lower socioeconomic status.



3. **Learning experiences in law** refer to the sources, interactions and activities through which knowledge, skills and confidence for legal career development are acquired. According to SCCT (Ireland and Lent, 2018; Lent et al., 2017; Lent and Brown, 2019), learning experiences can be derived from four primary sources:

- i. Performance accomplishments, which is the successful performance of activities or tasks related to legal educational and career development.
- ii. Vicarious learning, which is the modelling and observing of other people's behaviours that are relevant or related to the legal education and profession.
- iii. Verbal persuasion, which is receiving of support, encouragement, or feedback in relation to one's behaviours or dispositions toward or in favour of the legal education and profession.
- iv. Physiological arousal, which is the experience of positive emotions (such as feeling passion and excitement) in relation to the legal education and profession.

We predicted that minority ethnic students and candidates, compared to majority ethnic students and candidates, would have poorer learning experiences in law. This includes components such as poorer performance accomplishments, fewer secondary opportunities for vicarious learning, limited verbal persuasion from others, and lower physiological arousal.

4. **Law identity** is a social identity factor and refers to the extent to which people relate (in terms of self-concept; how they see themselves) to being members or potential members of the legal profession. The legal profession itself (through popular dispositions and characteristics) can shape how people relate to the legal profession and thus their law identity. Law identity has five components:

- i. Representation: an individual's perception of the numerical representation of people like them in the legal sector (or 'in law') (Hamman, 2017; Owens et al., 2010; Sang et al., 2013; Settles et al., 2019).
- ii. Status: an individual's perception of the social value of people like them in law (Gray et al., 2018; Settles et al., 2019).
- iii. Prototypicality: an individual's perception of whether one's identity is the ideal or prototype identity in the legal profession (Atewologun et al., 2016; Wilkins-Yel et al., 2019).
- iv. Identification: an individual's evaluation of their relationship with law (Francis and Tannuri-Pianto, 2013; Newman et al., 2018).
- v. Identity threat: an individual's perception of the evaluation of the perceived competence of their identity in law (Gray et al., 2018; Smith et al., 2020).

We predicted that minority ethnic students and candidates compared to majority ethnic students and candidates would have a more negatively evaluated or less positive law identity. This includes components such as less representation, status, prototypicality, identification, and increased identity threat.

5. **Social interactions** refer to experiences in relating with the social environment in legal education, such as the different entities (eg the university itself, the university as an authority, the law school, the curriculum, student bodies or unions, etc) and actors (eg faculty, students, executive administrators, other university staff, etc). Components of social interactions in legal education that we considered include:

- i. Discrimination, which is a student's or candidate's experience of unfair or prejudicial treatment in legal education (Settles et al., 2019).
- ii. Institutional support, which is a student's or candidate's perception of an institution's (university or tertiary) disposition to support people of one's identity in legal education (Lent et al., 2021; Smith et al., 2020).
- iii. Student-teacher relationships, which refers to a student's or candidate's characterisation of the nature of interactions or relations with faculty in legal education (Israel et al., 2017; Soled and Hoffman, 2021).
- iv. Representation, which refers to a student's or candidate's experience of the numerical representation of one's identity among staff and students (or candidates) in a legal education institution (Dills, 2018; Israel et al., 2017).
- v. Sense of belonging, which refers to a student's or candidate's need (or intrinsic motivation) to affiliate with others and be socially accepted in a legal education institution (Adjin-Tetty and Deckha, 2010; Owens et al., 2010).
- vi. Complementary fit, which refers to a student's or candidate's experience that their academic or learning environment matches their needs and goals in legal education (Prasad et al., 2017).
- vii. Supplementary fit, which refers to a student's or candidate's experience that their social environment in legal education matches their social needs and goals (Prasad et al., 2017).
- viii. Curriculum fit, which refers to a student's or candidate's evaluation that the curriculum in legal education represents and matches the realities and/or experiences of their identity (Israel et al., 2017; McWhirter and McWha-Hermann, 2021; Oldfield, 2019).
- ix. Stigma consciousness, which refers to a student's or candidate's sensitivity and awareness to social stigmas about one's identity in legal education (Block et al., 2019; Cadaret et al., 2017).

- x. Stereotype vulnerability, which refers to the susceptibility to underperformance in a task due to the awareness of negative stereotypes associated with one’s identity in legal education (Block et al., 2019; Cadaret et al., 2017).
- xi. Coping strategies, which refers to a student’s or candidate’s effort to engage in behaviours to achieve positive outcomes for their identity in interactions or encounters with others in legal education (Atewologun and Singh, 2010; Dickens et al., 2019; Fernando et al., 2019).
- xii. Identification with law school refers to a student’s or candidate’s relationship with the community in their legal education institution (Francis and Tannuri-Pianto, 2013; Newman et al., 2018).

We predicted that minority ethnic students and candidates would be more likely to have more negative social interaction experiences in legal education due to the marginalisation or stigmatisation of their identity within the academic and broader societal context.

### Mediating variables

While contributing variables may influence attainment directly, the research discussed in the SLR provides evidence that they may impact outcomes through influencing mediating variables, roughly via the pattern below:

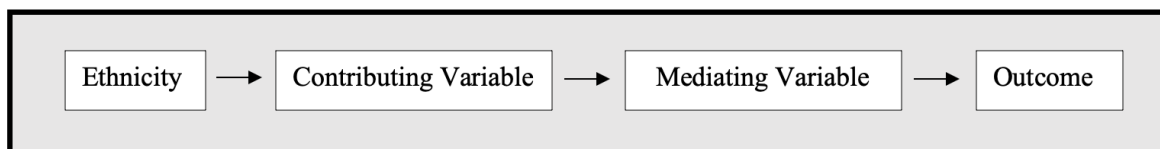


Figure 1. Predicted explanatory pathway of the relationship of ethnicity on LPC outcomes via contributing and mediating variables.

Mediating variables therefore provide potential causal paths through which the contributing variables identified above as differing by ethnicity might influence attainment, and thus contribute to differential outcomes.

Based on SCCT, we also formed predictions about some mechanisms with the potential to explain how these contributing variables may be linked to outcomes, through shaping individuals’ behaviour and motivation. Specifically, we predicted that the contributing variables may be linked to outcomes by the following, which we refer to as mediating variables:

1. Influencing *self-efficacy*, which is a person’s belief in their own ability to perform a task or behaviours required to attain a specific goal in legal education and profession (Lent et al., 2013, 2015; Lent and Brown, 2019; Navarro et al., 2014).
2. Influencing *outcome expectations*, which is a person’s anticipation of the consequences or outcomes that result from their actions regarding a specific

goal in legal education and profession (Lent et al., 2013, 2015, Lent and Brown, 2019; Navarro et al., 2014).

3. Influencing *remaining persistence* (or simply persistence in SCCT), which is a person's willingness to keep pursuing or persisting in actions to achieve a specific goal in legal education and profession (Lent and Brown, 2019).

The contributing variables are expected to influence students' and candidates' self-efficacy, outcome expectations, and remaining persistence, which has the potential to explain or partly explain how the contributing variables lead to differential outcomes.

In addition to these variables, we included additional potentially mediating variables that were not included in our SCCT framework, specifically measures of wellbeing. The inclusion of these variables was exploratory, meaning that we did not have specific predictions relating to them. These variables were: life satisfaction, stress/burnout, anxiety, depression, and self-esteem.

## Contextual factors

Finally, we identified contextual factors at the time of assessment that may vary by ethnicity and potentially influence the experiences of minority ethnic students or candidates, and, relatedly, examination outcomes. These contextual factors include securing funding and job offers or employment. We did not have specific predictions as to how these variables would relate to ethnicity and outcomes, and, so, we examined their role on an exploratory basis.

## Summary

Through the use of two surveys (Timepoint 1 and Timepoint 2), we examine:

- whether each of the contributing variables that have previously been implicated in differential outcomes based on ethnicity differ by ethnicity in our LPC and UG samples in Timepoint 1
- the relationships between contributing variables that differ by ethnicity and potential mediating variables that could connect them to attainment in Timepoint 1
- potential contextual differences at the time of assessment that may be linked to differential outcomes in Timepoint 1
- whether the relationships between the contributing and mediating variables that differ by ethnicity in Timepoint 1 can be linked to final LPC attainment in Timepoint 2.

These examinations, combined with the work outlined in our SLR, provide evidence of factors likely to contribute to differential outcomes specifically in this context. Below we detail the work and results of our two surveys.

## First survey: Timepoint 1

The first survey was conducted from February through to May 2023. This survey collected data from current LPC, UG and conversion course candidates/students, and past LPC candidates. For current LPC candidates, the timeframe of data collection meant that their final results – which are generally expected in the summer – would not have been released. This represented a strength of the survey since responses could not be influenced by hindsight relating to final attainment. However, it also meant that there was a need to have a follow-up survey to get the final LPC attainment for current LPC candidates, which constituted Timepoint 2 (see Section 5) of this quantitative work.

### What we did

Participants from four primary groups (LPC sample, UG sample, current conversion course sample, and past LPC sample) answered survey questions on the Qualtrics survey platform. These questions were designed to measure constructs that existing work suggested could contribute to differential outcomes, as detailed above. Due to low sample sizes and potential issues with representativeness in the conversion course sample and the past LPC sample, this report focuses on our LPC sample and our UG sample.

### Survey participants

#### Current LPC Candidates (the LPC sample).

The survey was completed by 510 LPC candidates, split over 23 different LPC providers.

The survey and its link were advertised to the candidates via emails distributed by LPC providers, and on social media. All candidates who completed the survey were offered a £5 Amazon voucher to compensate them for their time participating.

Candidates who completed the survey were aged between 21 and 52 (*Mean* -  $M=25.66$ , *Standard Deviation* -  $SD=5.26$ ). Candidates' gender identities were 141 male, 365 female, one nonbinary, and three unspecified. In terms of ethnicity, the breakdown of participating candidates was:

- 332 white (made up of 288 English, Welsh, Scottish, Northern Irish or British, five Irish, and 39 any other white background)
- 25 Mixed ethnicity (made up of five white and Black Caribbean, two white and Black, 12 white and Asian, and six any other Mixed ethnicity or multiple background)
- 111 Asian (made up of 39 Indian, 35 Pakistani, six Bangladeshi, 18 Chinese and 13 any other Asian background)
- 31 Black (made up of nine Caribbean, 19 African background and three any other Black, Black British, or Caribbean background)

- 11 Other (made up of six Arab and five any other ethnic group).

To maintain sufficient sample size in analyses, we compare our four main ethnic groups (white, Mixed ethnicity, Asian, and Black) without breaking down into further subgroups (consistent with the ethnicity groupings by the Office for Students 2020/21). However, we acknowledge that there may be important differences based on subgroups within this breakdown.

### Current undergraduate law students (the UG sample)

The survey was completed by 700 UG students from 62 different institutions in the UK (including two universities in Scotland; although the SRA's regulatory remit covers only England and Wales, we chose to include students from Scotland here despite different qualifying processes due to the likely overlap in experiences at the UG level. However, it is important to note that only 20 (2.8 percent of) participants in our final sample were from Scottish institutions).

In order to be eligible, participants had to be intending to pursue a career as a solicitor. Initially, participants needed to be in the second or third year of their degree, but participation was later opened up to students in their first year.

The survey and its link were advertised to the students via emails distributed by university staff, and on social media. All students who completed the survey were offered a £5 Amazon voucher to compensate them for their time participating.

Students who completed the survey were aged between 18 and 56 ( $M = 20.94$ ,  $SD = 3.28$ ), 80 were in the first year of their degree, 328 were in the second year of their degree, 272 were in the third year of their degree, 17 were in the fourth year of their degree and two were in another year (ie 'final' and 'year 6') of their degree. Students' gender identities were 142 male, 549 female, five nonbinary, trans, or genderqueer, and four unspecified. In terms of ethnicity, the breakdown of participating students was:

- 405 white (made up of 342 English, Welsh, Scottish, Northern Irish or British, one Irish, two Roma and 60 any other white background)
- 37 Mixed ethnic (made up of six white and Black Caribbean, five white and Black, 15 white and Asian, and 11 any other Mixed ethnicity or multiple background)
- 173 Asian (made up of 62 Indian, 39 Pakistani, nine Bangladeshi, 29 Chinese and 34 any other Asian background)
- 67 Black (made up of 10 Caribbean, 49 African background and eight any other Black, Black British or Caribbean background)
- 18 Other (made up of 11 Arab and seven other ethnic group).

As with data from LPC candidates, to maintain sufficient sample size in analyses, we compare our four main ethnic groups (white, Mixed ethnicity, Asian, and Black) without breaking down into further subgroups. However, we acknowledge that there may be important differences based on subgroups within this breakdown.

## Survey questions

Questions examined outcomes at:

- different levels of education (although note that collection of LPC attainment data had not been completed yet and was being collected in a follow-up survey once results were available)
- the constructs described above that we identified as potentially differing by ethnicity and contributing to differential outcomes (contributing variables, mediating variables, and contextual factors at the time of assessment)
- other potentially relevant context (eg relating to the Covid-19 pandemic).

The basic survey was the same across our participant groups, although some questions were tweaked to be appropriate for the group answering them (for example, the tense was changed on questions referring to the UG degree). There were also some questions (eg on final UG grades) which were only appropriate to put to a certain sample of participants. Where this is the case, it is indicated below. Note that the list below is not a comprehensive list of measures in the survey, but instead focuses on key constructs we had predicted may be important.

A full list of measures used in the survey along with illustrative questions, citations, and reliability statistics is provided in Appendix A to this report. Below are the variables within each of our key categories of interest that we included in the survey.

## Contributing variables

### Prior attainment

We measured the following types of prior attainment:

- GCSE grades calculated using UCAS points. The UCAS points are not traditionally used to calculate GCSE grades. However, we adopted this UCAS score conversion to have standardised attainment scores for the GCSE that were comparable to that of A-levels.
- A-level/other university entry exams (such as access to Higher Education Diploma, or equivalent international or vocational exams), which were calculated using UCAS points.
- Final undergraduate degree marks.

All prior attainment measures can be found in Appendix A.

### Other background context

Measures relating to background context included:

- English proficiency.
- Contextual support.
- Financial constraints.

- Early education experiences.
- Parental involvement.
- Early education institutions.
- Type of secondary school attended.
- Knowledge of legal professionals/contact with the legal profession.
- Socioeconomic status, which included measures on:
  - a) Free school meals.
  - b) Paid work during study.
  - c) Parental occupation.
  - d) Subjective social class.

All the other background context measures along with their scales can be found in Appendix A.

### Learning experiences

Learning experiences measure assessed:

- Performance accomplishments.
- Vicarious learning.
- Verbal persuasion.
- Physiological arousal.

All the learning experience measures along with their scales can be found in Appendix A.

### Law identity

Measures relating to law identity included:

- Representation in the legal profession.
- Status in the legal profession.
- Prototypicality in the legal profession.
- Identification with the legal profession.
- Identity threat in the legal profession.

All the law identity measures along with their scales can be found in Appendix A.

### Social interaction experiences

Measures relating to social interactions included:

- Discrimination.
- Institutional support.
- Student-teacher relationship.
- Representation in law school.
- Sense of belonging.
- Complementary fit.



- Supplementary fit.
- Curriculum fit.
- Stigma consciousness.
- Stereotype vulnerability.
- Coping strategies.
- Identification in law school.

All the social interaction experience measures along with their scales can be found in Appendix A.

## Mediating variables

### Core social cognitive variables

Measures relating to core SCCT variables include:

- Self-efficacy.
- Remaining persistence.
- Outcome expectations.

All the SCCT measures along with their scales can be found in Appendix A.

### Wellbeing measures

Measures relating to wellbeing include:

- Stress, or burnout.
- Depression.
- Anxiety.
- Self-esteem.

All the wellbeing measures along with their scales can be found in Appendix A.

### Contextual factors at the time of assessment

Measures relating to the context at the time of assessment include:

- Funding source of LPC.
- Legal employment secured.

All the context at the time of assessment measures along with their scales can be found in Appendix A.

## Results Part 1: Differences in contributing variables by ethnicity

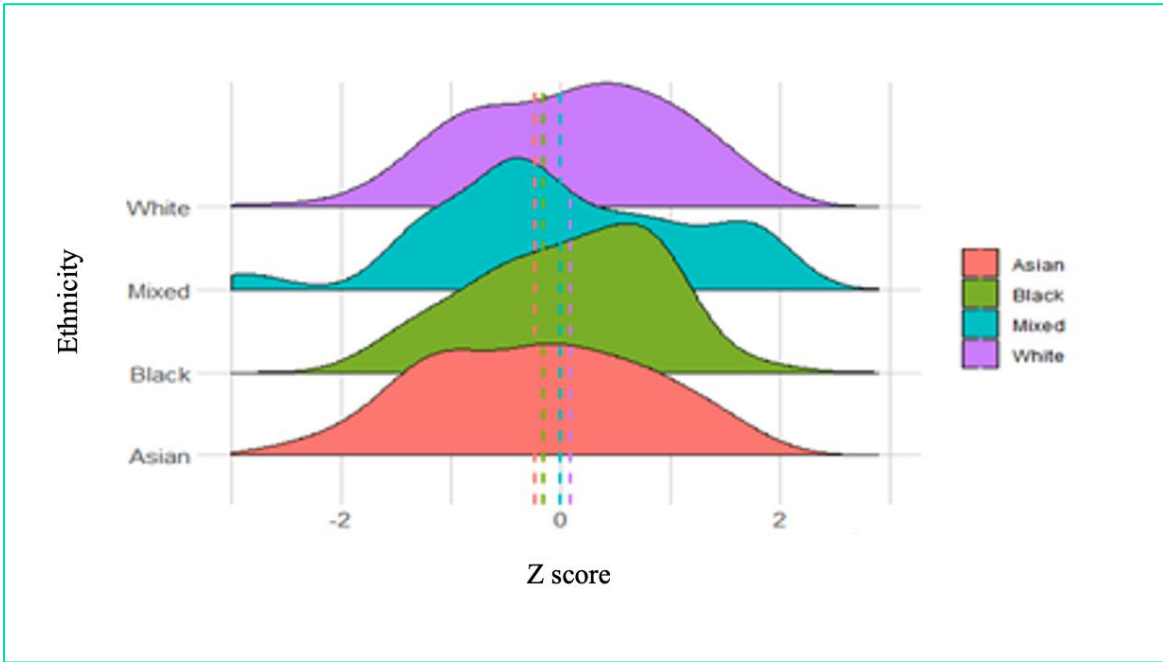
In examining whether the variables that we measured differed by ethnicity we conducted tests to identify variables that differed significantly based on ethnicity (meaning that statistical differences observed based on ethnicity would be unlikely to have occurred due to chance). It is important to note that we would expect more differences to be significant when comparing white and Asian participants due to the higher sample sizes in these groups and therefore greater reliability of findings. The absence of a significant result is not evidence of no difference, but it simply means that we cannot be sufficiently confident that any difference is real and not due to chance.

Below, we report results for all variables which we found to vary significantly by ethnicity alongside follow-up comparisons examining which specific ethnicity groups differed significantly for each of these variables and outlining (where informative) qualitative differences. The only exception to this reporting strategy is for attainment/outcomes, where we fully report all results.

Results are displayed primarily using brief descriptions and visualisations. Full descriptive statistics split by ethnicity relating to all variables measured, and results of statistical comparisons are outlined in Appendices B, C, and D.

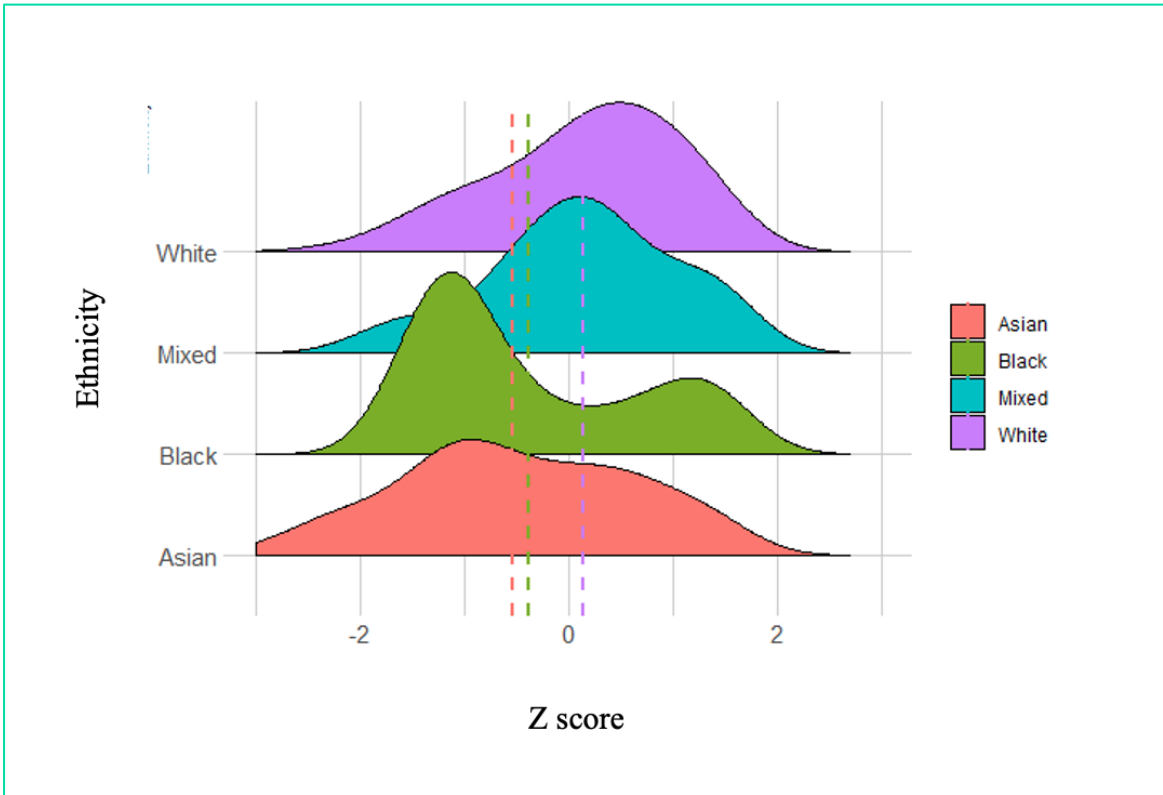
### Contributing variables: Attainment/outcomes

Results across our two samples generally demonstrated differential outcomes throughout assessments that we measured, from GCSE to UG performance, with some variation in terms of whether differences in outcomes met the cut off for statistical significance. In order to effectively compare outcomes across assessments with different grading structures, we calculated Z scores (a statistical measurement of a score's relationship to the mean in a group of scores) for each participant on each assessment. A Z score of 0 indicates that a participant's score on the assessment is equal to the mean score in the cohort (ie an average score). A Z score of 1 indicates that a participant's score on the assessment is equal to one standard deviation above the mean score in the cohort (above average). Finally, a Z score of -1 indicates that a participant's score on the assessment is equal to one standard deviation below the mean score in the cohort (below average). The graphs below illustrate differences in attainment by ethnicity in each of our samples. Colour-coded dashed lines represent the mean Z scores for each ethnic group.



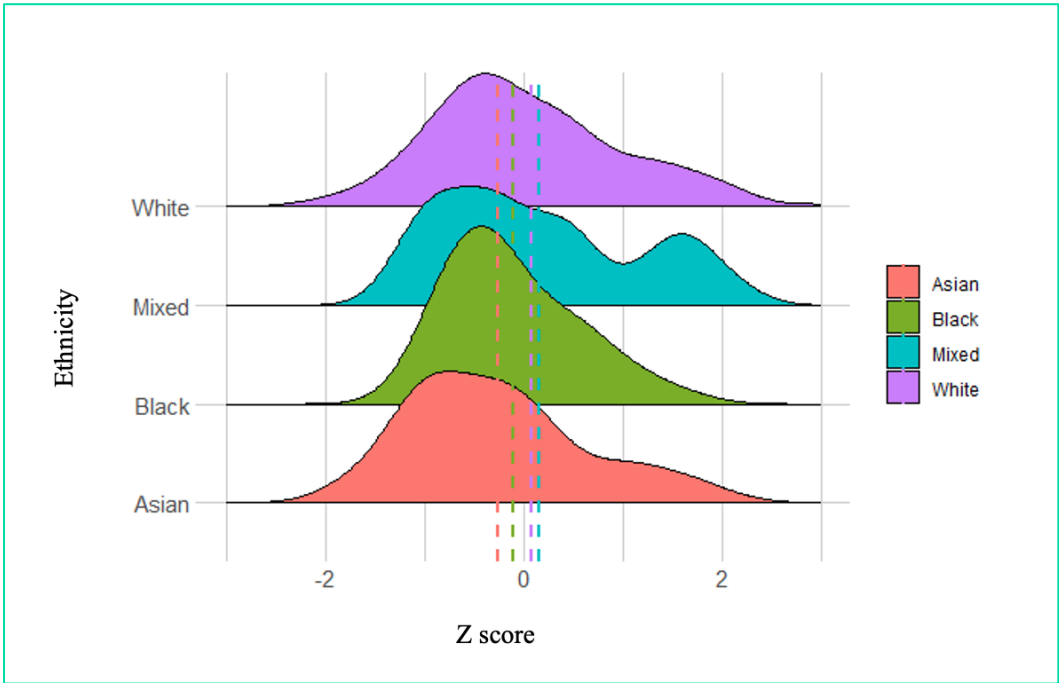
**Undergraduate Sample (N= 700)**

Figure 2: Z scores of GCSE attainment by ethnicity in the UG sample



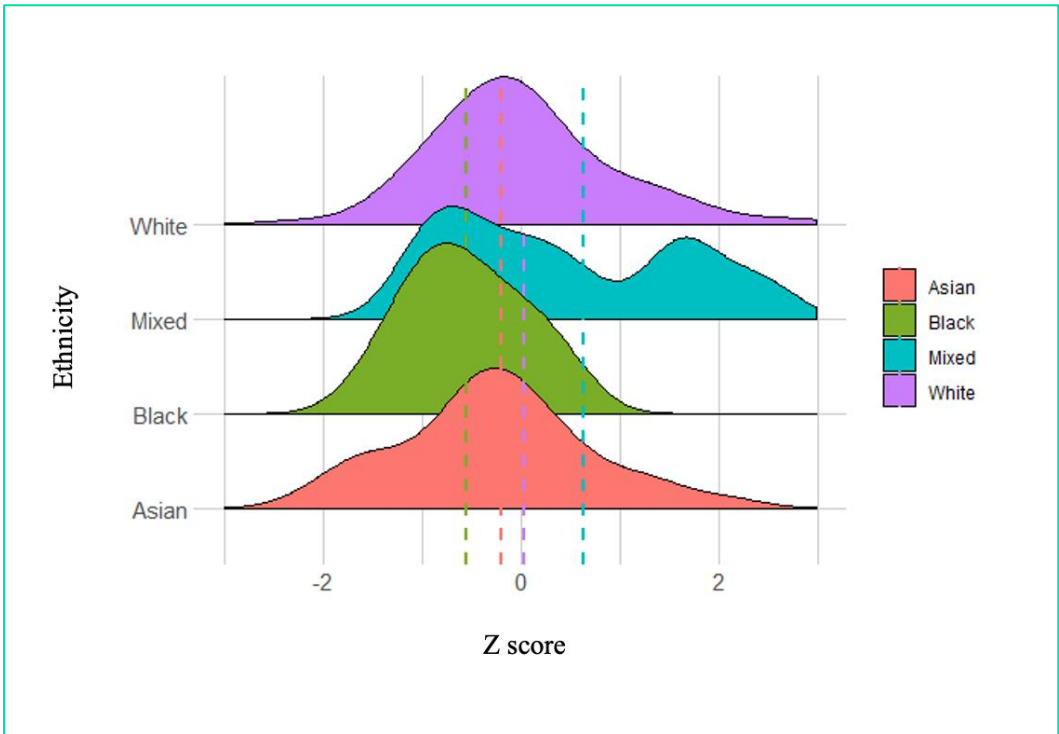
**LPC Sample (N=510)**

Figure 3: Z scores of GCSE attainment by ethnicity in the LPC sample



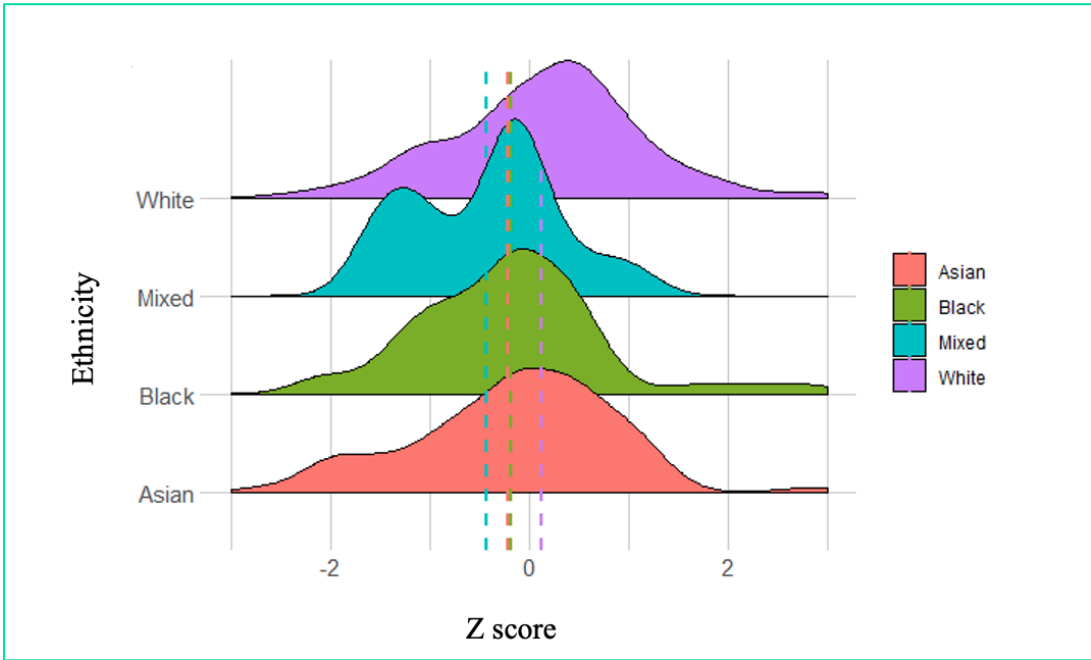
**Undergraduate Sample (N= 700)**

Figure 4: Z scores of UCAS points (A level) attainment by ethnicity in the UG sample



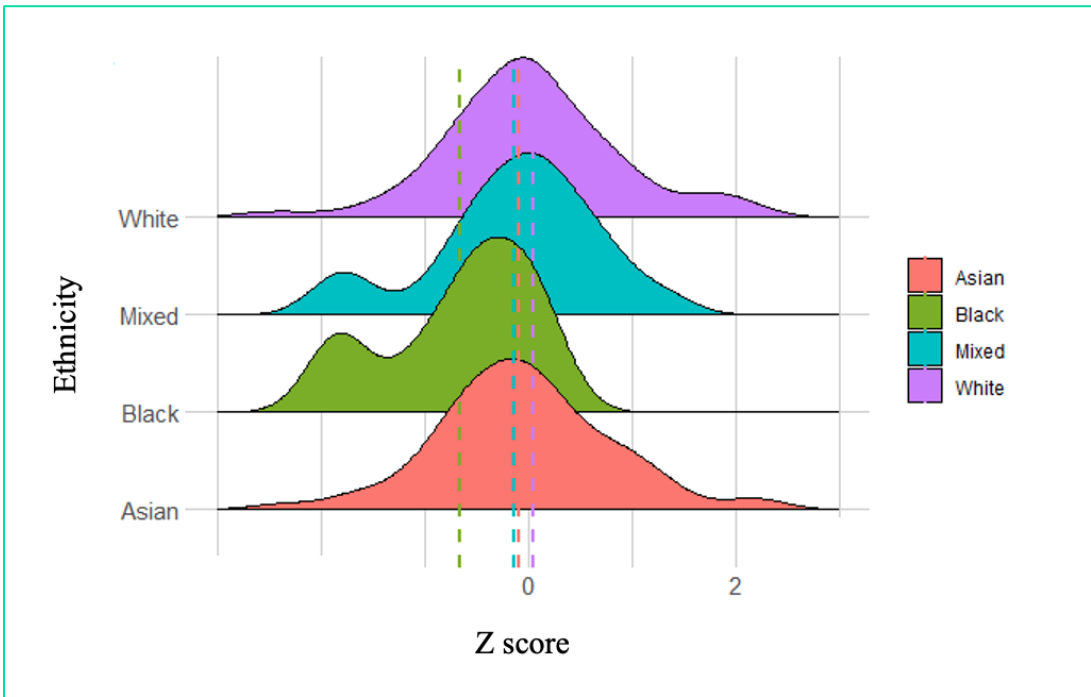
**LPC Sample (N=510)**

Figure 5: Z scores of UCAS points (A level) attainment by ethnicity in the LPC sample



**Undergraduate Sample (N= 700)**

Figure 6: Z scores of UG marks by ethnicity (average to date) in the UG sample



**LPC Sample (N=510)**

Figure 7: Z scores of UG marks by ethnicity (average overall) in the LPC sample

In both our LPC sample and UG sample, white participants performed better on average than all other groups of participants at GCSE level. However, the only group whose outcomes differed significantly from white participants in each sample was Asian participants. In our UG sample, mean Z scores in descending order by group are: .09 for white participants, 0 for Mixed ethnicity participants, -.16 for Black

participants, and  $-.22$  for Asian participants (note that Asian participant attainment was significantly lower than that of white participants). In our LPC sample, mean Z scores in descending order by group are:  $.15$  for white participants,  $.14$  for Mixed ethnicity participants,  $-.37$  for Black participants, and  $-.53$  for Asian participants.

In terms of UCAS points, Asian students' attainment was significantly lower than that of white students in our UG sample, while Mixed ethnicity candidates' attainment was significantly higher than that of white candidates in our LPC sample. In our UG sample, mean Z scores in descending order by group are:  $.17$  for Mixed ethnicity students,  $.09$  for white students,  $-.11$  for Black students, and  $-.26$  for Asian students. Among LPC candidates, mean Z scores in descending order by group are:  $.64$  for Mixed ethnicity candidates,  $.03$  for white candidates,  $-.19$  for Asian candidates, and  $-.55$  for Black candidates.

As in GCSE attainment, white participants outperformed all minority ethnic participants in terms of UG marks in both samples. In our UG sample, Asian and Mixed ethnicity students' attainment was significantly lower than that of white students' attainment. Mean Z scores in descending order by group are:  $0.13$  for white students,  $-0.19$  for Black students,  $-0.22$  for Asian students, and  $-0.43$  for Mixed ethnicity students. In our LPC sample, Black candidates' attainment was significantly lower than that of white candidates. Mean Z scores in descending order by group are:  $.06$  for white candidates,  $-0.09$  for Asian candidates,  $-0.14$  for Mixed ethnicity candidates, and  $-0.66$  for Black candidates.

Overall, results suggest that differential outcomes are consistent, although variable, throughout education prior to legal professional assessments.

### Other contributing variables

Graphs depicting group differences in this section are raincloud plots. These plots depict the jittered (a technique to help us to better visualise the relationship between variables) participants' averaged data points, box-and-whisker plots, means (represented by circles) and frequency distributions.

### Background context other than attainment

Results provide evidence that minority ethnic participants differ from white participants in terms of some background context. However, it is important to note that we did not find support for many of the expected differences in background context in this sample, as described below. That may be because such differences do not exist or, more likely, because they were not picked up in our sample due to sample size or sample bias. Findings should therefore be interpreted alongside the qualitative work conducted as part of this project and any other pertinent data relating to legal professional assessments.

## Socioeconomic background

Although we found some evidence that minority ethnic participants were from lower socioeconomic backgrounds than white participants, differences were inconsistent across samples. Some identified differences are outlined below for completeness, however inconsistency in results and in some cases with prior work, combined with low sample size, means that results should be interpreted with particular caution. For full data on socioeconomic differences, see Appendix E.

In terms of participants' self-reported social class, we found in our LPC sample that Black and Asian candidates were more likely to categorise themselves as being in a higher social class than white candidates. However, in our UG sample, white students were more likely to categorise themselves as being in a higher class compared to Asian students. Additionally, Black UG students were more likely to categorise themselves as being in a high class compared to all other UG ethnic groups

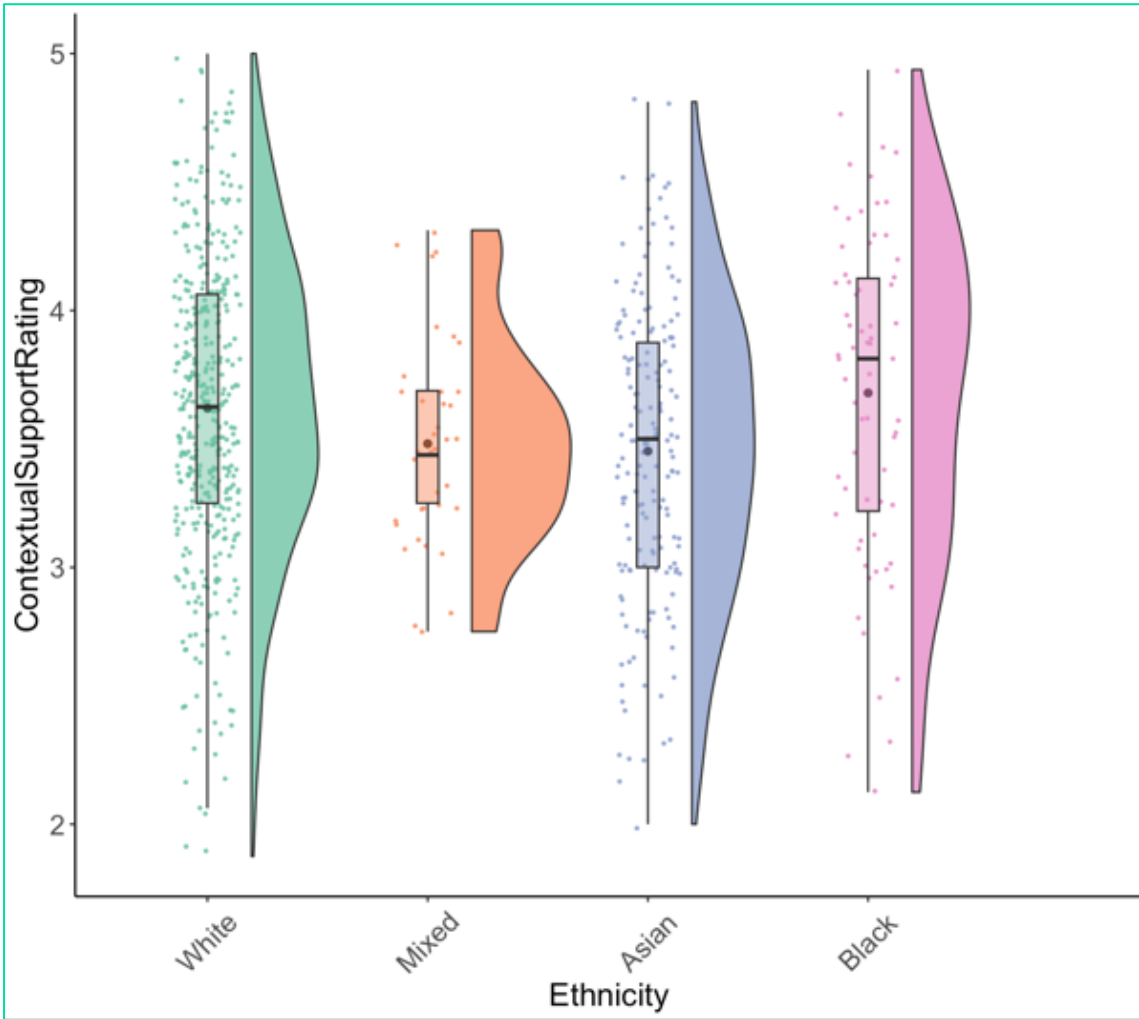
In our LPC sample, Black candidates were more likely to undertake paid work during their studies compared to other ethnicities. In our UG sample, white students were more likely to undertake paid work during their studies compared to other ethnicities.

We also did not find differences in terms of secondary schools attended, although Black and Asian participants in both samples and Mixed ethnicity students in our UG sample were far more likely than white participants to have attended secondary school outside of the United Kingdom. As a result, we could not draw strong conclusions about socioeconomic differences from this data, and note the possibility of some sample bias from a socioeconomic perspective.

## Other background context

We did not find differences in terms of knowledge of legal professionals or contact with the legal profession.

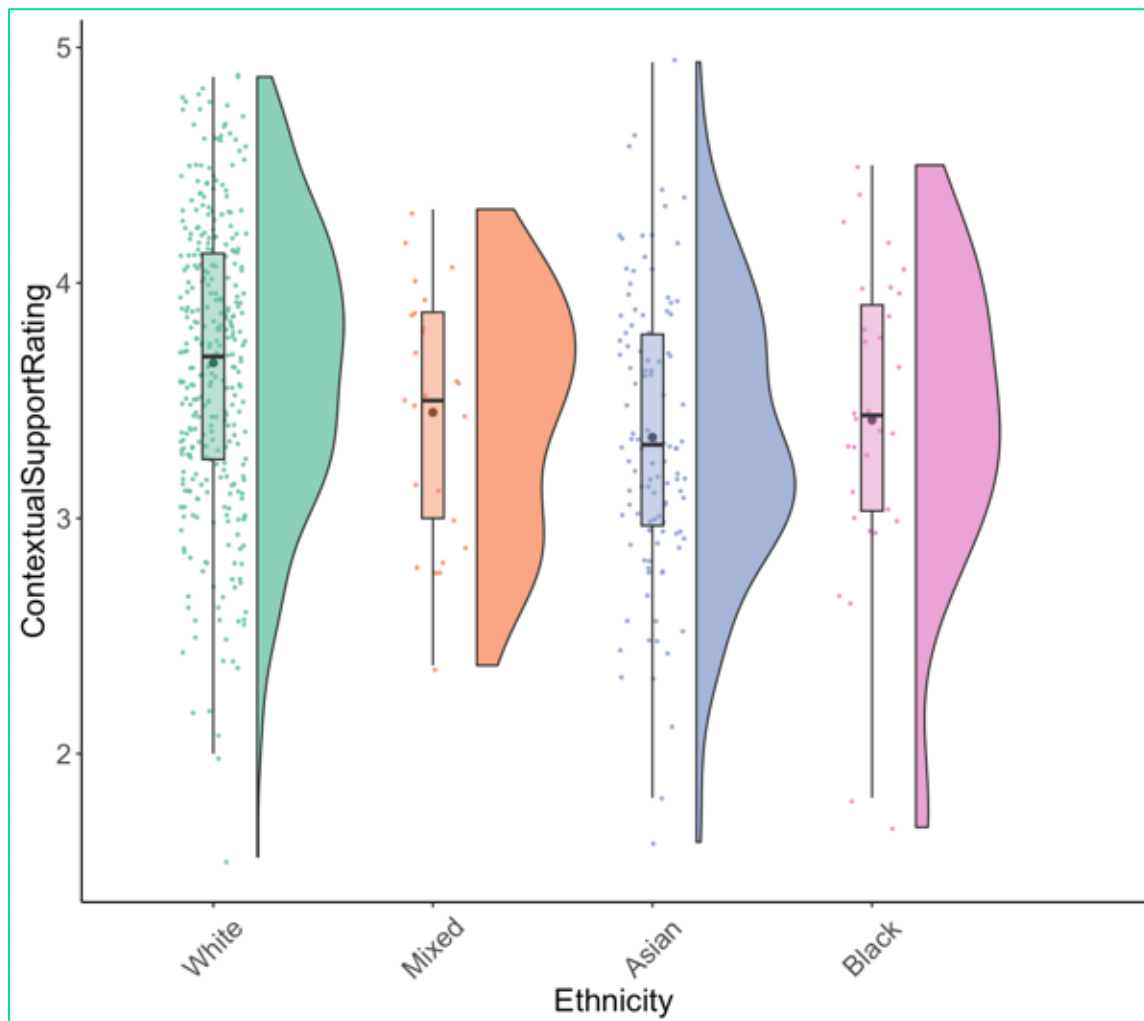
The background context factor where we found consistent significant differences was contextual support (support in the decision to pursue a legal career). In both samples, Asian participants reported having less contextual support than white participants. In the LPC sample only, Black candidates also reported having less contextual support than white candidates (Mixed ethnicity participants' ratings of contextual support were also lower than white participants' ratings in both samples but not significantly so).



**Undergraduate Sample (N= 700)**

Key: Contextual Support Rating, scale (1=Completely disagree, 5=Completely agree) Figure 8: Contextual support ratings by ethnicity in the UG sample





### LPC Sample (N=510)

Key: Contextual Support Rating, scale (1=Completely disagree, 5=Completely agree)

Figure 9: Contextual support ratings by ethnicity in the LPC sample

In the LPC sample only, we also found a number of significant differences in background context, that were not replicated in the UG sample. The significant differences when compared with white candidates were:

- English proficiency was lower in Asian candidates.
- Academic press (ie students' focus on academic learning) in early education ratings were lower in Black candidates.
- Academic motivation (ie students' drive towards academic pursuits and learning) in early education ratings were lower in Mixed ethnicity, Asian and Black candidates.
- School connectedness (ie students' sense of belonging and positive relationships) in early education ratings were lower in Mixed ethnicity and Black candidates.
- Parental involvement in education was lower for Asian candidates.

It is worth noting that this study identifies lower levels of the above factors among specific ethnicities (as shown). However, this does not imply that these factors are inherently lower in certain ethnicities. Instead, as we go on to show, the challenges that some people experience, often because of their ethnicity, cause differences in the levels in a range of factors.

### Learning experiences

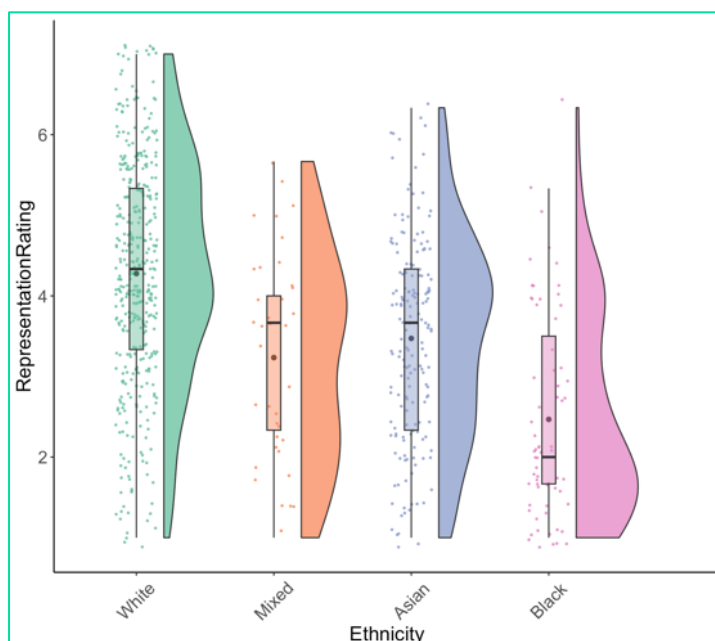
In both of our samples, white participants' ratings of their performance accomplishments (ie the extent to which they performed well on law assessments) were higher than our minority ethnic participants' ratings of their performance accomplishments. However, it is worth noting that this difference was only significant in each sample when comparing white and Asian participants. In our UG sample only, Black and Asian students rated their vicarious learning (ie modelling and observing of other people's behaviours that are relevant to the legal education and profession) as higher than white and Mixed ethnicity students.

### Law identity

We found expected differences based on ethnicity in the majority of our law identity variables.

### Perceptions of representation and status

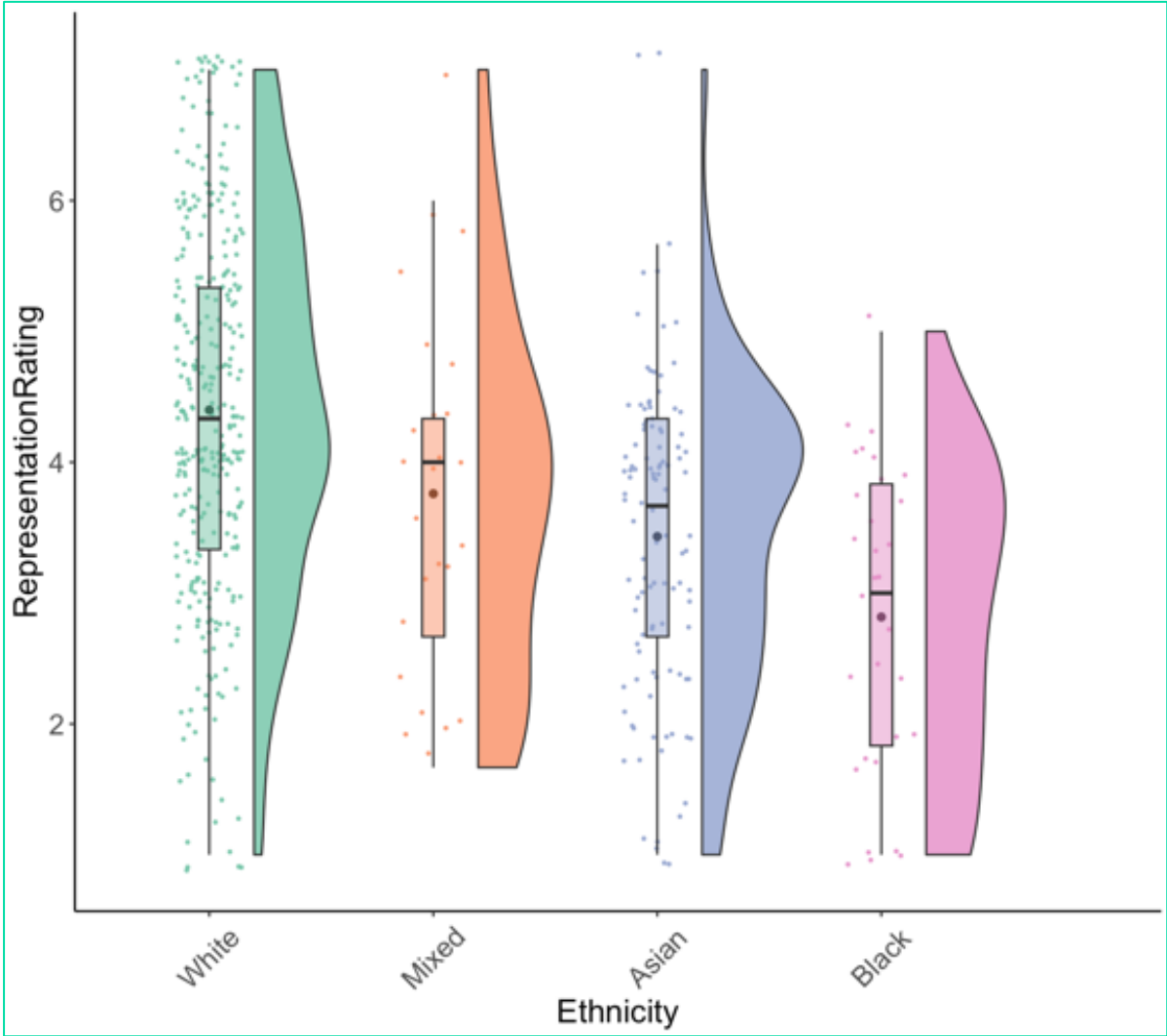
White participants' ratings of representation of people "like them" in the legal profession and the status of people "like them" in the legal profession were significantly higher than equivalent ratings given by Mixed ethnicity, Asian, and Black participants in both samples, except for Mixed ethnicity candidates where the difference was not statistically significant in the LPC sample in relation to status.



### Undergraduate Sample (N=700)

Key: Representation Rating, scale (1= Strongly disagree, 7= Strongly agree)

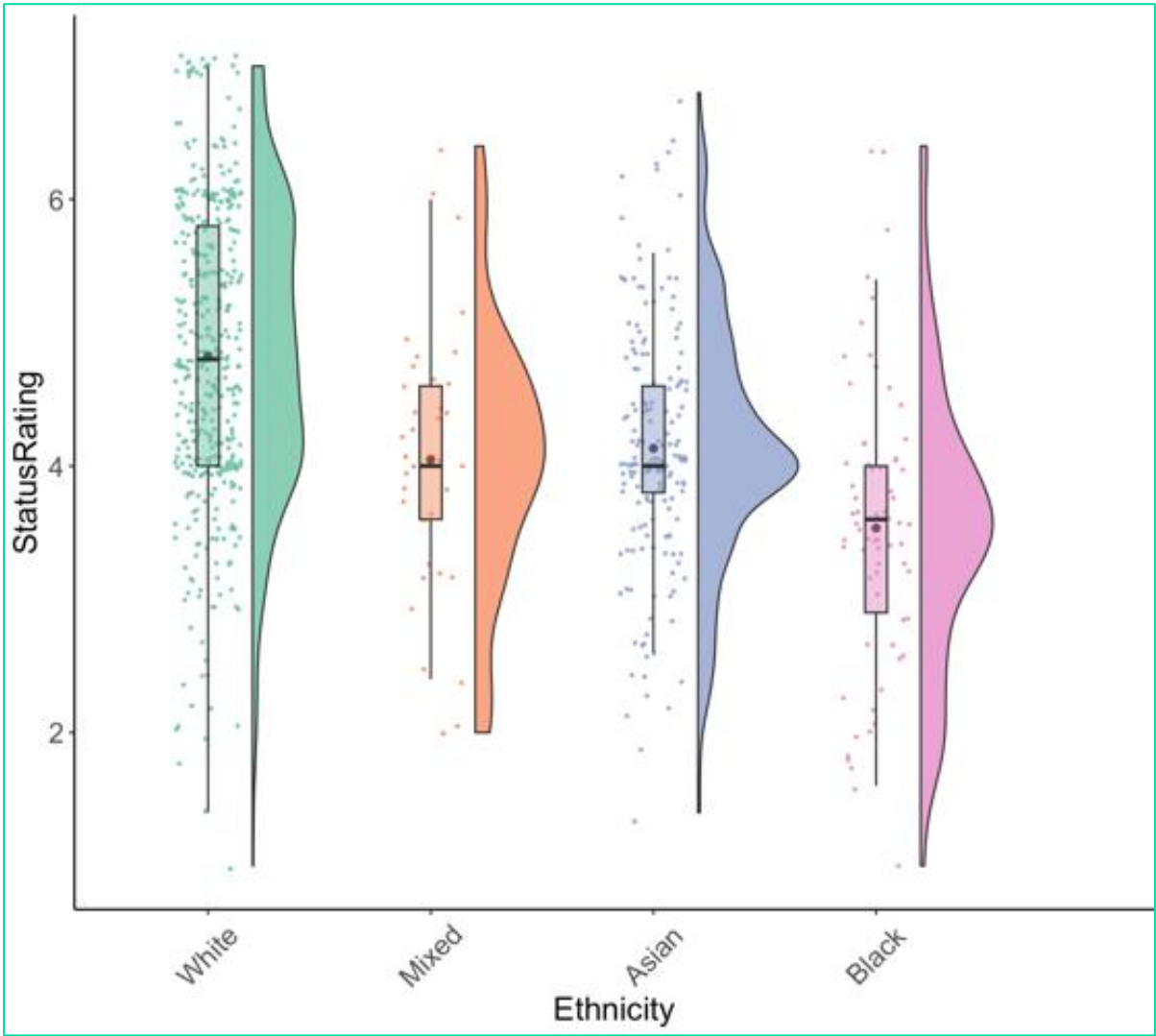
Figure 10: representation ratings by ethnicity in the UG sample



**LPC Sample (N=510)**

Key: Representation Rating, scale (1= Strongly disagree, 7= Strongly agree)

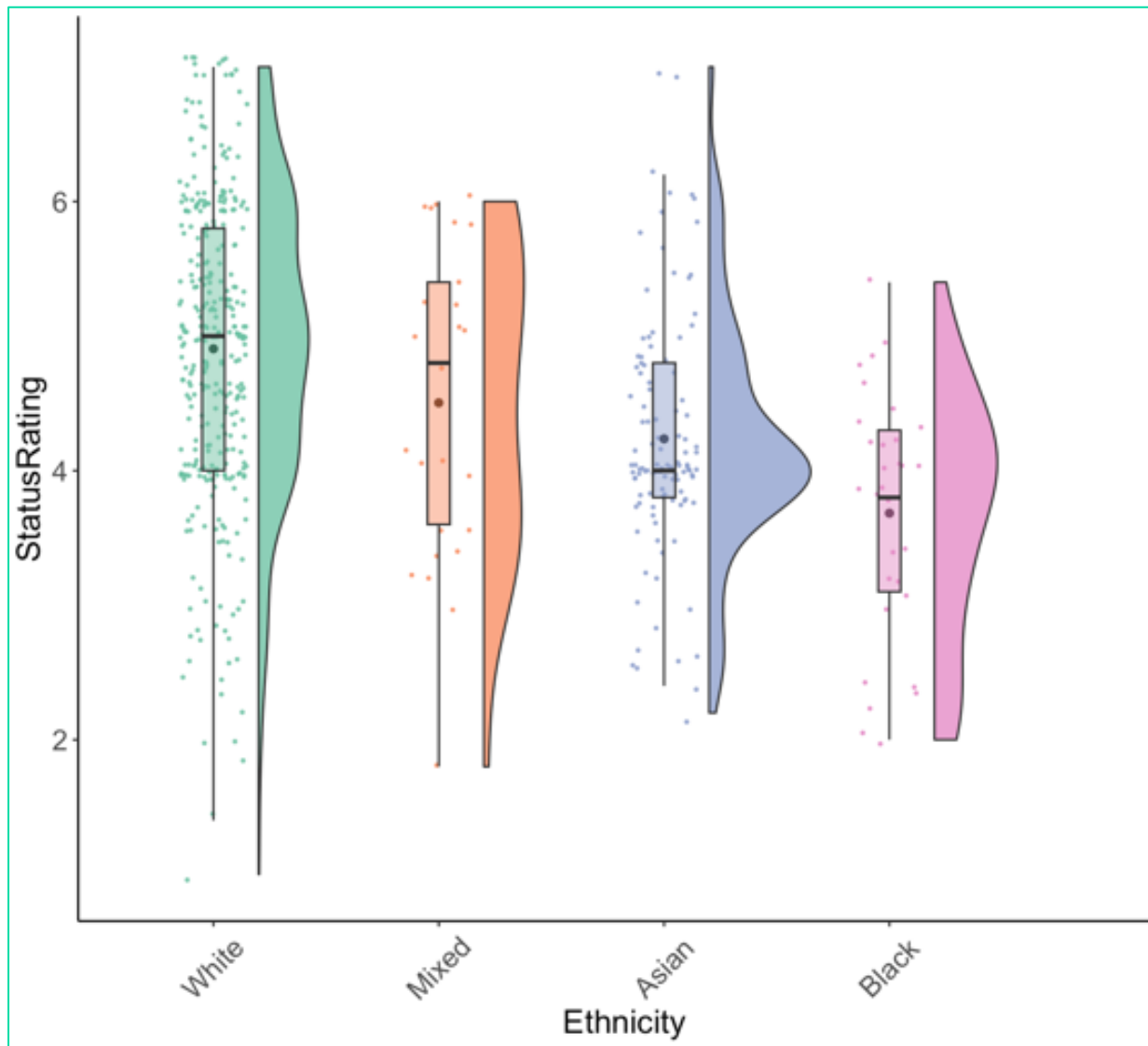
Figure 11: representation ratings by ethnicity in the LPC sample



**Undergraduate Sample (N=700)**

Key: Status Rating, scale (1= Strongly disagree, 7= Strongly Agree)

Figure 12: status ratings by ethnicity in the UG sample



### LPC Sample (N=510)

Key: Status Rating, scale (1= Strongly disagree, 7= Strongly Agree)

Figure 13: status ratings by ethnicity in the LPC sample

### Prototypicality

White participants' ratings of themselves as prototypical legal professionals were significantly higher than the equivalent ratings given by:

- Asian participants in both samples
- Black students in the UG sample.

White participants' prototypicality ratings were also qualitatively higher than those of Mixed ethnicity participants in both samples and of Black candidates in the LPC sample, although they did not reach the threshold of statistical significance.

## Identification with the legal profession

White participants' ratings showed that they identified with the legal profession significantly more than:

- Asian candidates in the LPC sample (and qualitatively more than Mixed ethnicity candidates and less than Black candidates in that sample)
- Asian and Black students in the UG sample (and qualitatively more than Mixed ethnicity students in that sample).

## Identity threat

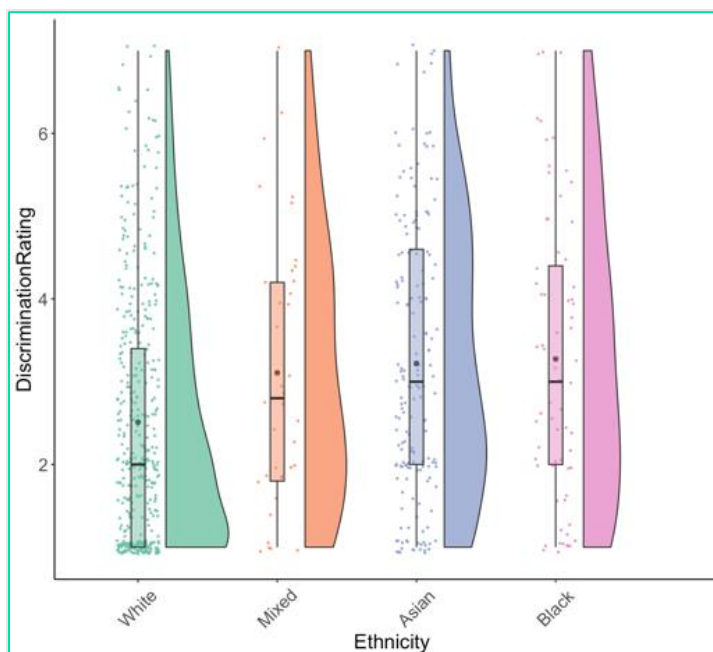
Finally, in both samples, Asian and Black participants reported significantly higher levels of identity threat in the legal profession than white participants did. That is, they felt that people with their identity (or 'like them') were perceived to have lower competence in the profession. Mixed ethnicity participants also reported significantly higher levels of identity threat in the legal profession than white participants did in both samples, although this difference was not significant in the LPC sample.

## Social interactions in law school

Participants also differed significantly by ethnicity in the majority of our social interaction measures, across both samples.

## Discrimination and representation

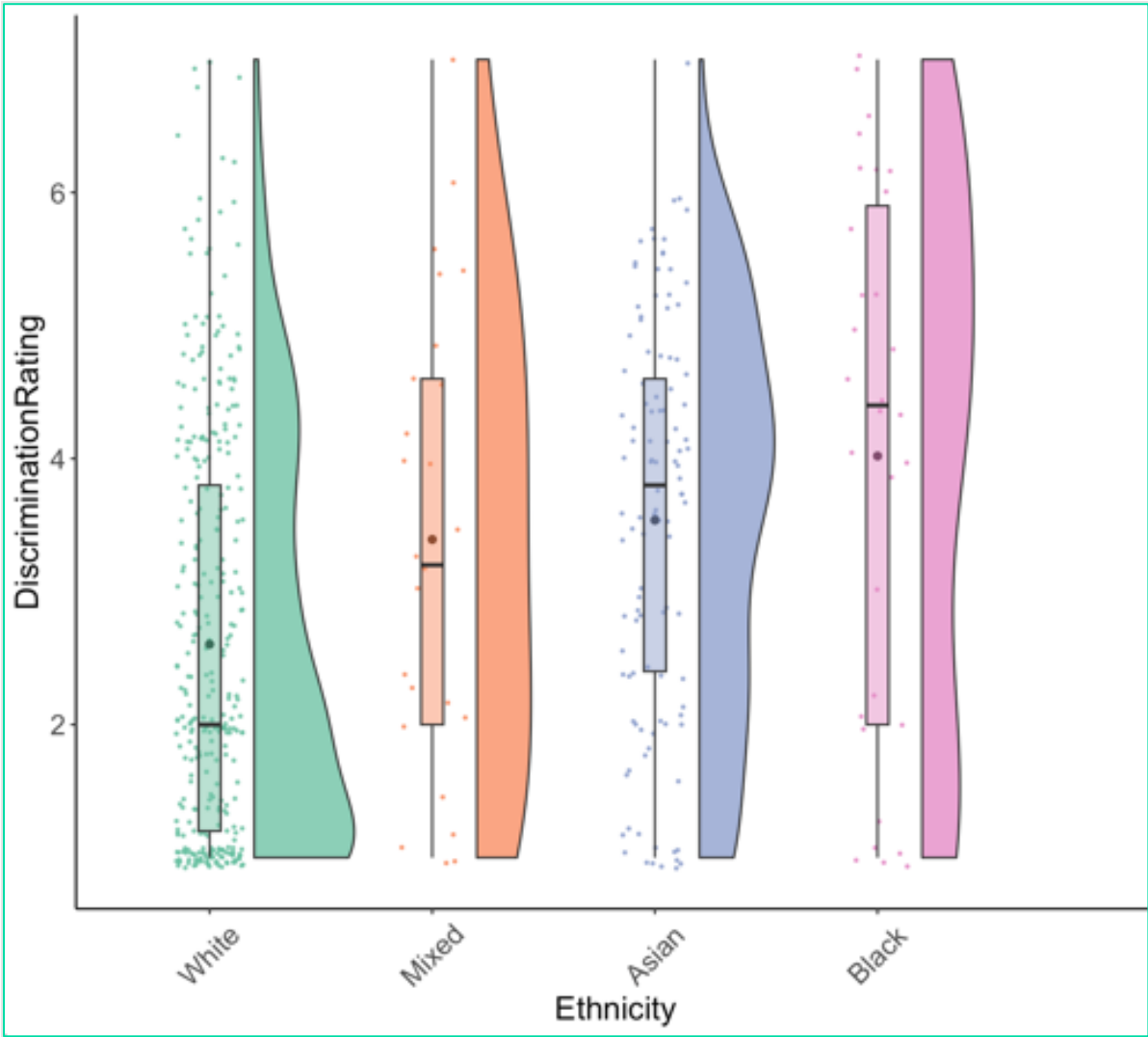
Mixed ethnicity, Asian, and Black participants reported higher levels of discrimination and lower levels of representation of people 'like them' during their legal education than white participants did across both of our samples.



### Undergraduate Sample (N=700)

Key: Discrimination Rating, scale (1= Strongly disagree, 7= Strongly agree)

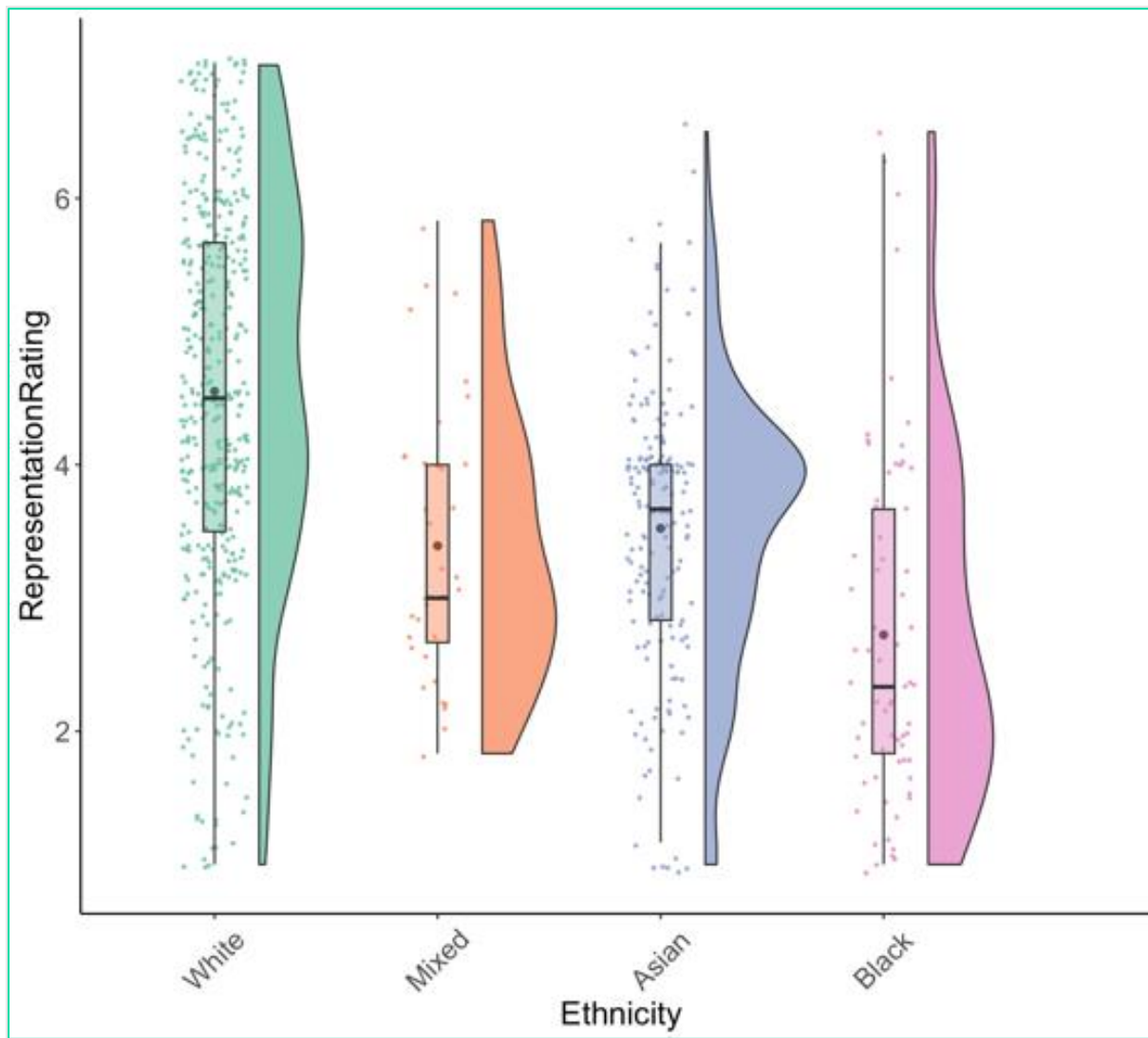
Figure 14: Discrimination by ethnicity in the UG sample



**LPC Sample (N=510)**

Key: Discrimination Rating, scale (1= Strongly disagree, 7= Strongly agree)

Figure 15: Discrimination ratings by ethnicity in the LPC sample

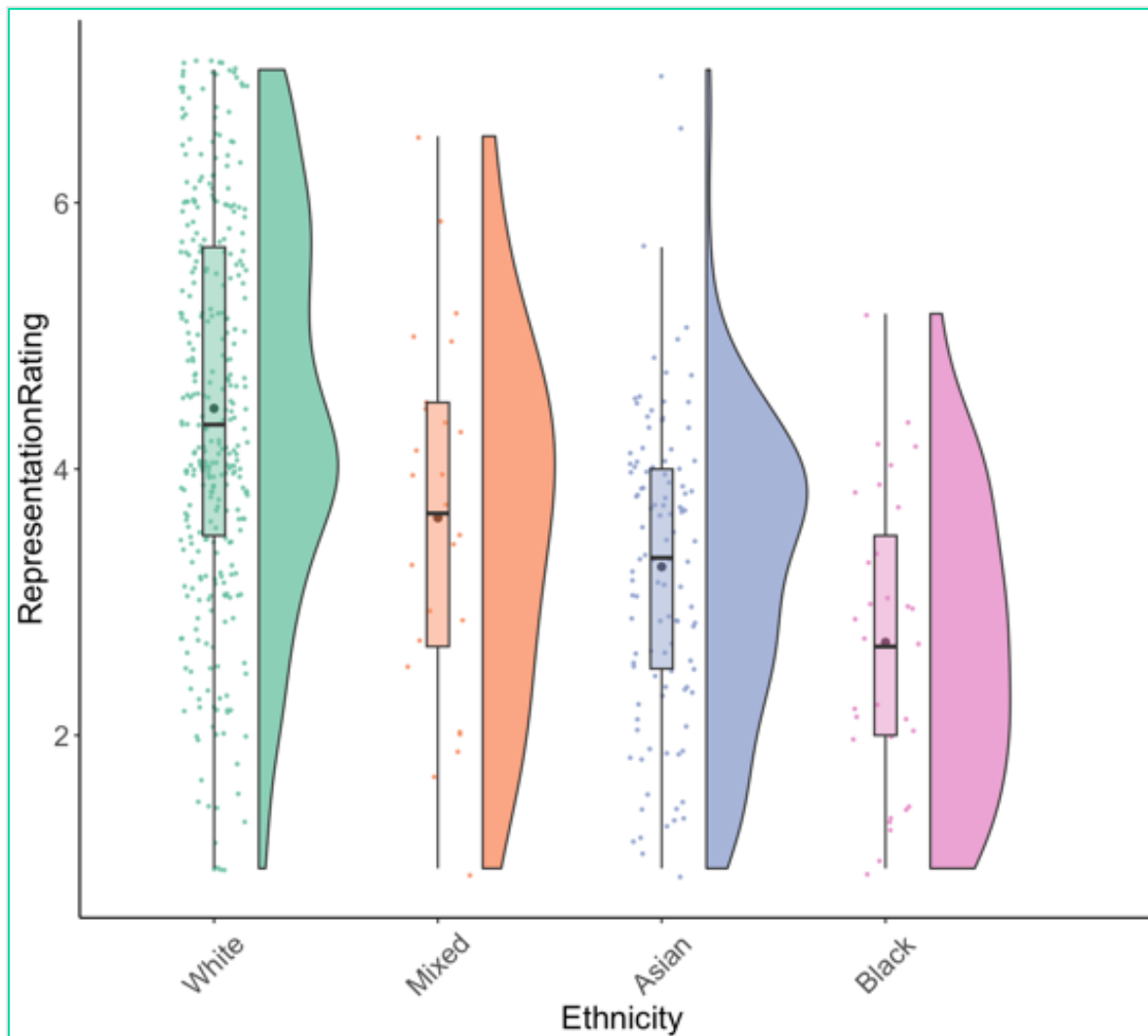


**Undergraduate Sample (N=700)**

Key: Representation Rating, scale (1= Strongly disagree, 7= Strongly agree)

Figure 16: Representation ratings by ethnicity in the UG sample





### LPC Sample (N=510)

Key: Representation Rating, scale (1= Strongly disagree, 7= Strongly agree)

Figure 17: Representation ratings by ethnicity in the LPC sample

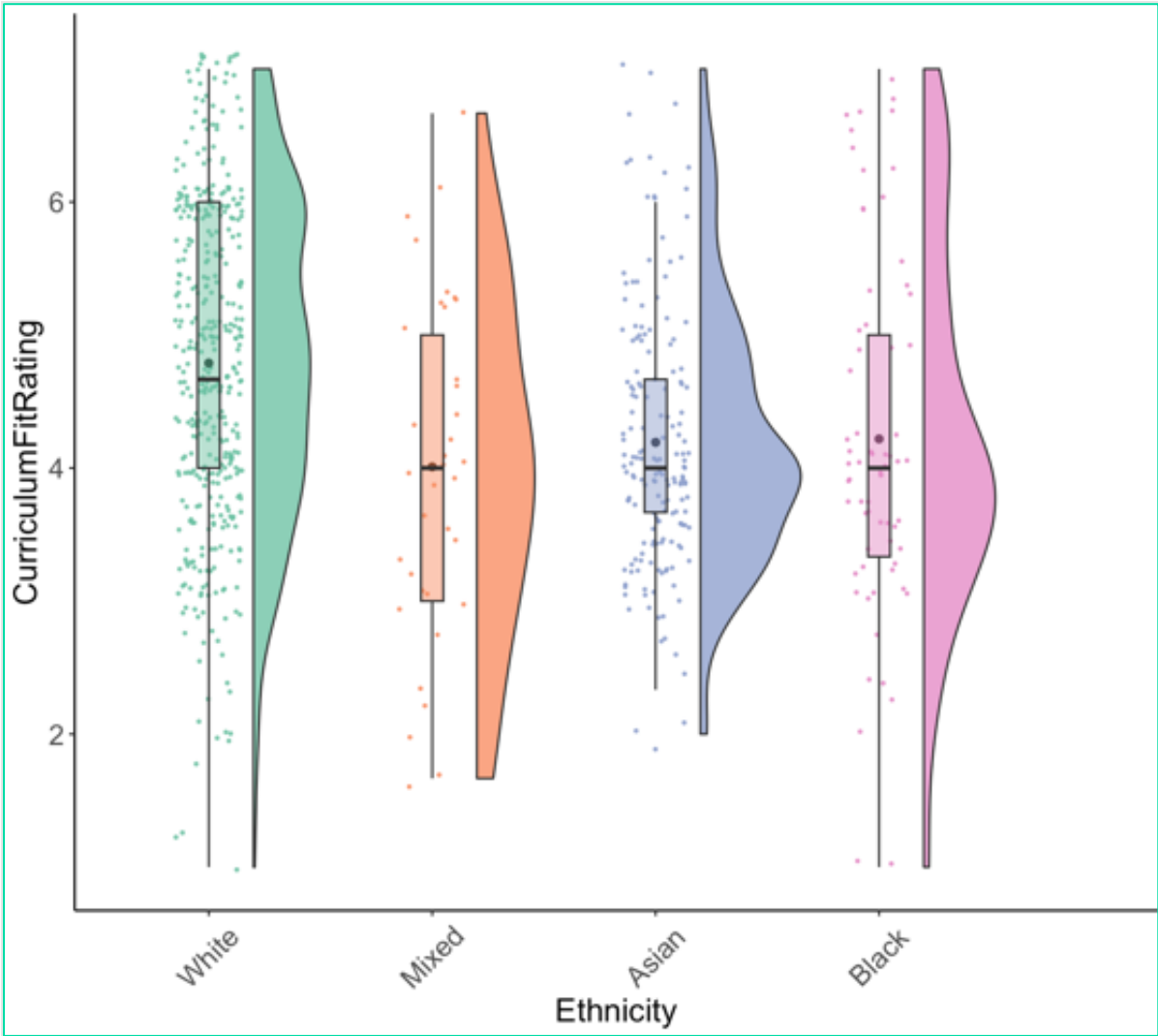
### Sense of belonging

In both samples, minority ethnic participants reported lower levels of sense of belonging than white participants, although differences from white participants were not significant for Mixed ethnicity candidates in the LPC sample and for Black students in the UG sample.

### Complementary fit, supplementary fit, and curriculum fit

In both samples, minority ethnic participants reported lower levels of complementary fit than white participants, although differences from white participants were nonsignificant for Black and Mixed ethnicity participants.

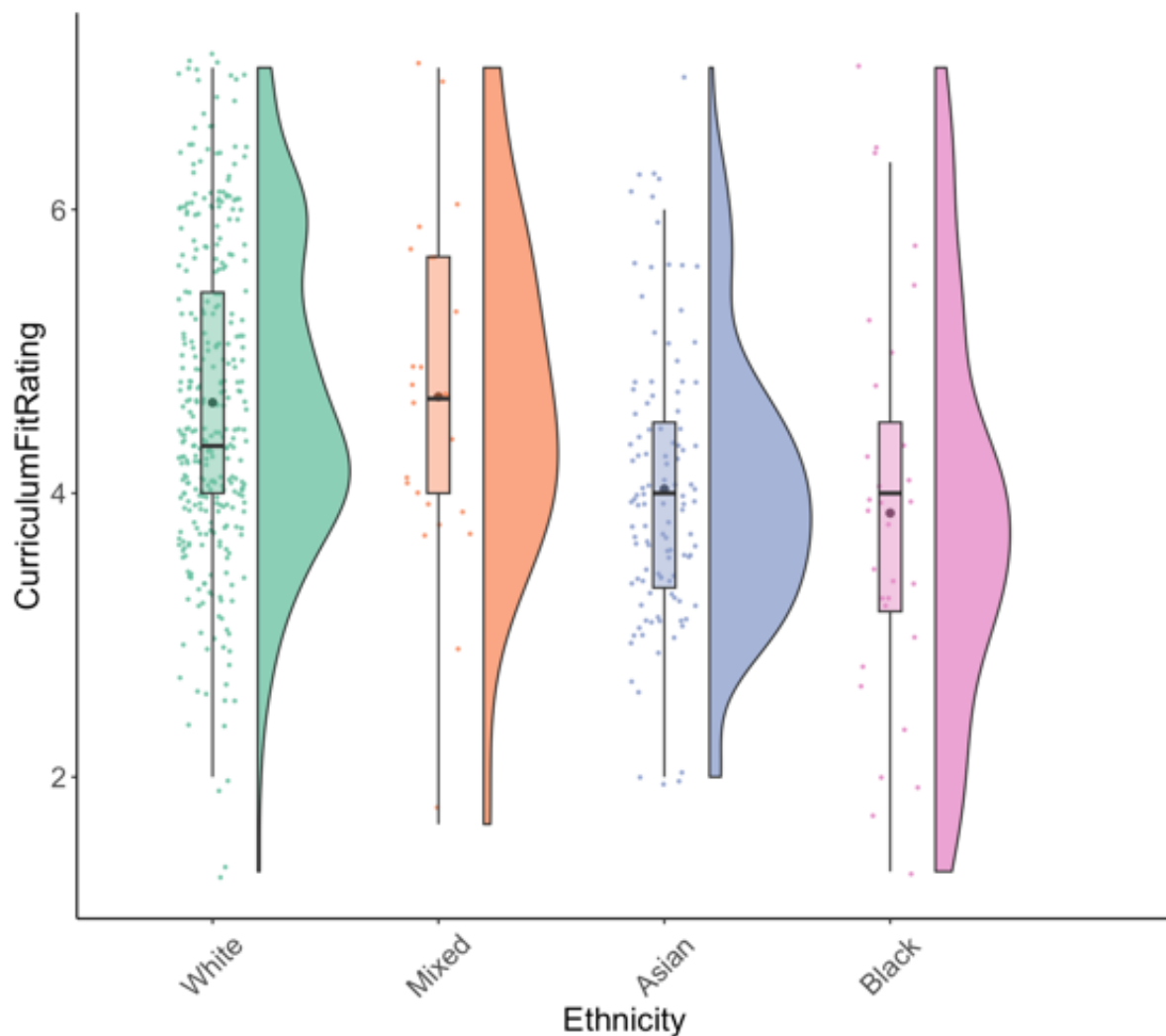
Also in both samples, Black and Asian participants reported less curriculum fit than white participants did. Mixed ethnicity participants also reported less curriculum fit than white participants in the UG sample, but not in the LPC sample.



**Undergraduate Sample (N=700)**

Key: Curriculum Fit Rating, scale (1= Strongly disagree, 7= Strongly agree)

Figure 18: Curriculum fit rating by ethnicity in the UG sample



### LPC Sample (N=510)

Key: Curriculum Fit Rating, scale (1= Strongly disagree, 7= Strongly agree)

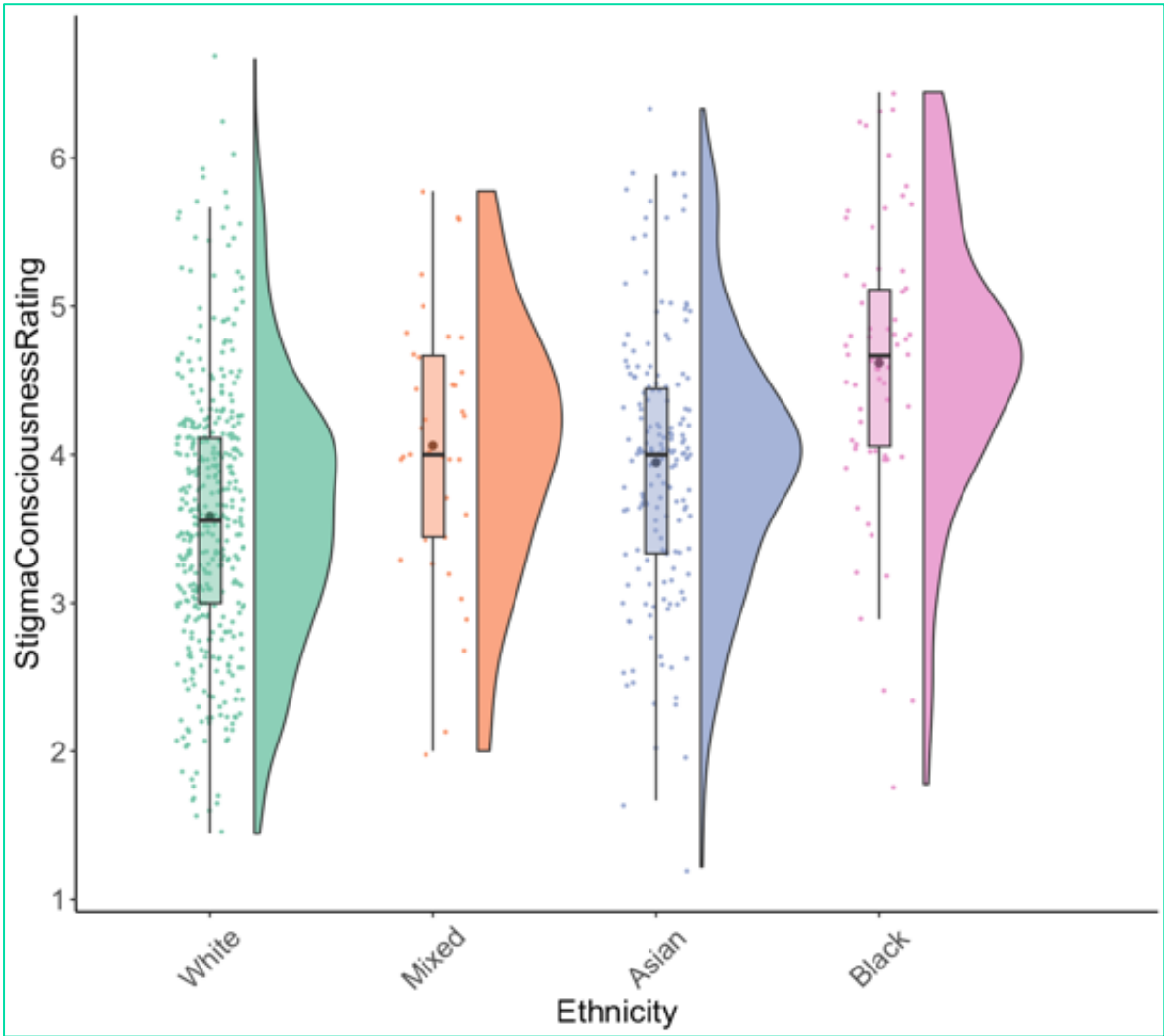
Figure 19: Curriculum fit rating by ethnicity for LPC sample

In the UG sample only, minority ethnic students reported lower levels of supplementary fit than white students, although this difference was not significant between Black students and white students.

### Stigma consciousness, stereotype vulnerability, and coping strategies

In both samples, all minority groups reported higher levels of stigma consciousness than white participants did (although note that the difference between Mixed ethnicity candidates and white candidates was not significant in the LPC sample).

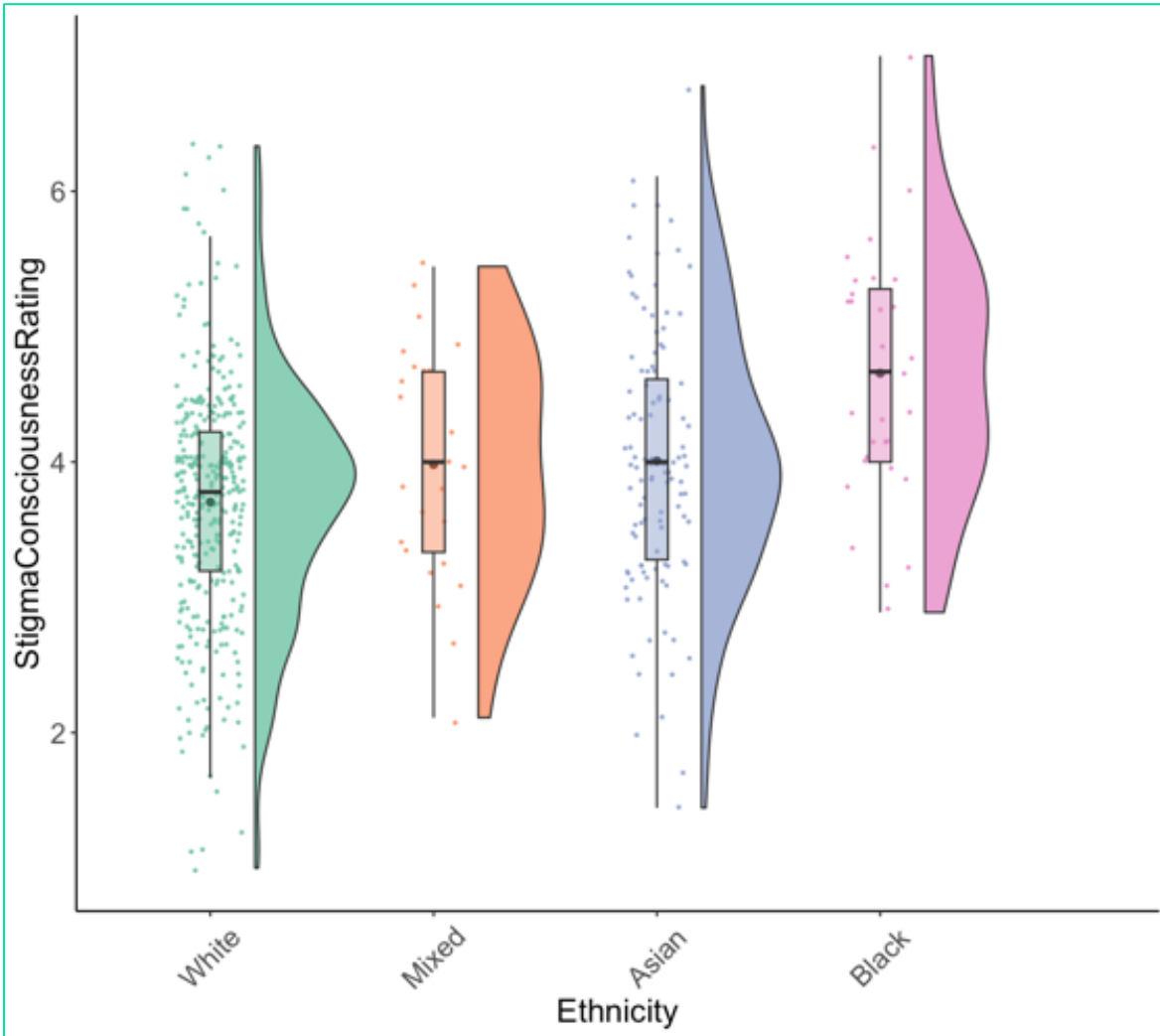
In both samples, all minority ethnic groups reported higher levels of stereotype vulnerability than white participants did (although note that the differences between Mixed ethnicity participants and white participants were not significant in either sample).



**Undergraduate Sample (N=700)**

Key: Stigma Consciousness Rating, scale (1=Strongly disagree, 7=Strongly agree)

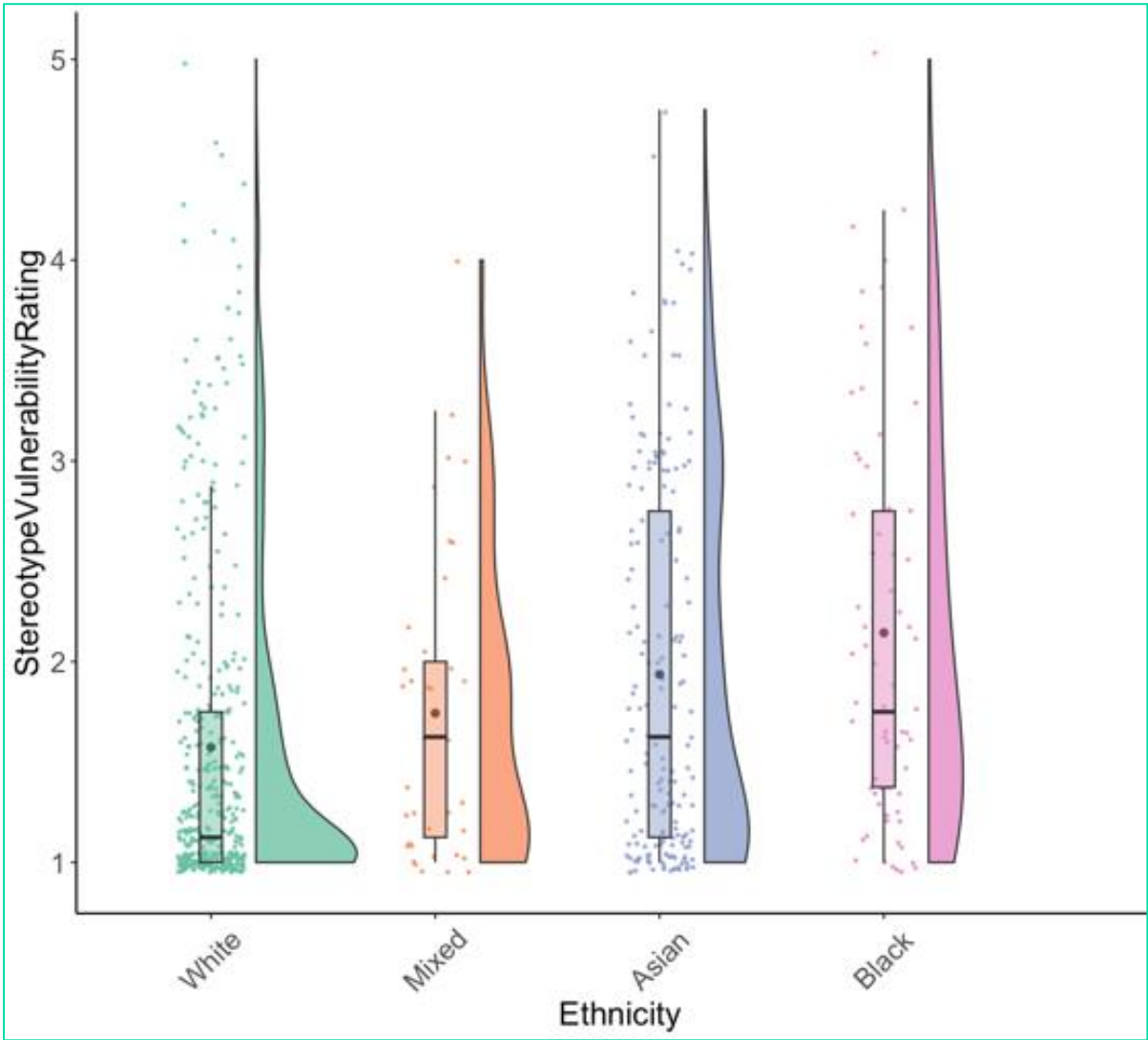
Figure 20: Stigma consciousness ratings by ethnicity in the UG sample



**LPC Sample (N=510)**

Key: Stigma Consciousness Rating, scale (1=Strongly disagree, 7=Strongly agree)

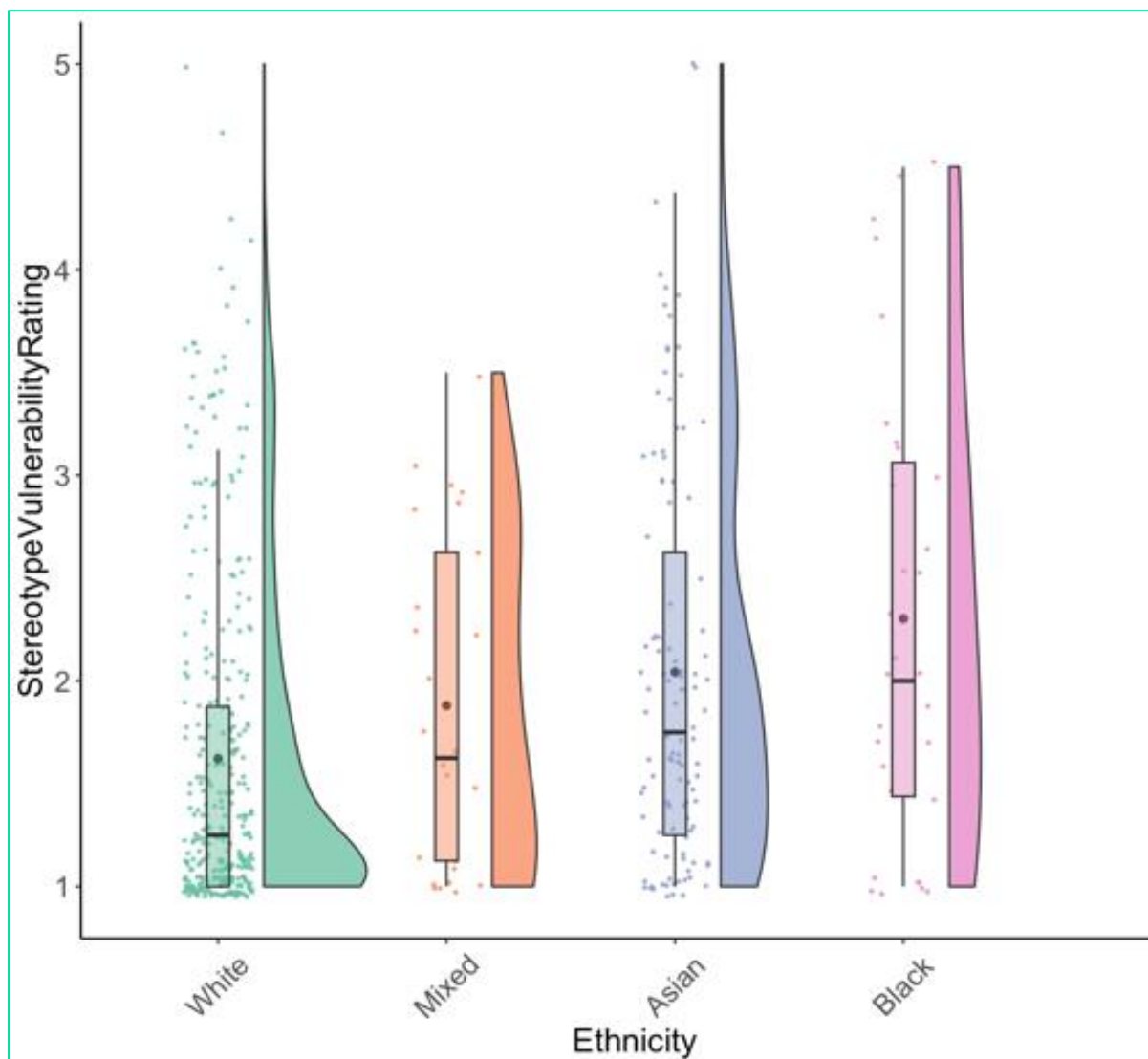
Figure 21: Stigma consciousness ratings by ethnicity in the LPC sample



**Undergraduate Sample (N=700)**

Key: Stereotype Vulnerability Rating, scale (1=Never, 5=Almost always)

Figures 22: Stereotype vulnerability ratings by ethnicity in the UG sample



### LPC Sample (N=510)

Key: Stereotype Vulnerability Rating, scale (1=Never, 5=Almost always)

Figure 23: Stereotype vulnerability ratings by ethnicity in the LPC sample

In terms of coping strategies, all minority ethnic participants reported greater use of coping strategies than white participants did. However, differences between Mixed ethnicity candidates and white candidates were not statistically significant in the LPC sample.

### Identification

In both samples, all minority ethnic participants reported lower levels of identification with the law community during their legal education than white participants did (although note that the difference between Mixed ethnicity participants and white participants was not statistically significant in either sample).

## Results Part 2: Relationships with mediating variables

While contributing variables may influence outcomes directly, the research discussed in the SLR provides evidence that they may also impact outcomes through influencing mediating variables (as discussed above). Put simply, in the SCCT framework what we have termed contributing variables (which are predicted to differ by ethnicity) impact mediating variables, which then influence outcomes. Although we could not perform a full mediation analysis looking at outcomes at this stage, since we did not have data on outcomes (for this analysis see Timepoint 2 results), we were able to assess:

- (1) whether our mediating variables did differ by ethnicity
- (2) whether any differences in our mediating variables by ethnicity could be explained by our contributing variables.

For example, we could examine whether levels of self-esteem differed by ethnicity, and, if so, whether this difference could be explained by differences in contextual support (thus examining the first and second arrows in Figure 1, above). Please note that in these analyses we are examining a portion of our overall model. Here, we look at whether what we have termed 'contributing variables' in the overall model mediate (explain) the relationship between ethnicity and what we have termed 'mediating variables' in the overall model. Thus technically in these analyses the contributing variables are the mediators and the mediating variables are the outcome variables.

As in the section above, graphs depicting group differences in this section are raincloud plots. These plots depict the jittered participants' averaged data points, box-and-whisker plots, means (represented by circles) and frequency distributions. Full descriptions of statistical tests and results of this analysis are provided in Appendix F.

### Relationships between ethnicity and mediating variables

#### Core social cognitive measures

##### Self-efficacy

Asian participants had lower levels of self-efficacy than white participants, although this difference was only significant in the LPC sample. In both samples Mixed ethnicity and Black participants had higher self-efficacy than white participants, although this difference was only significant in the case of Black participants in the UG sample.

##### Outcome expectations

Asian participants had lower outcome expectations than white participants in both samples. Black participants had higher outcome expectations than white participants in both samples, although these differences were not significant. Mixed ethnicity participants had greater outcome expectations than white participants in the LPC sample and lower outcome expectations than white participants in the UG sample although again these differences were not significant.



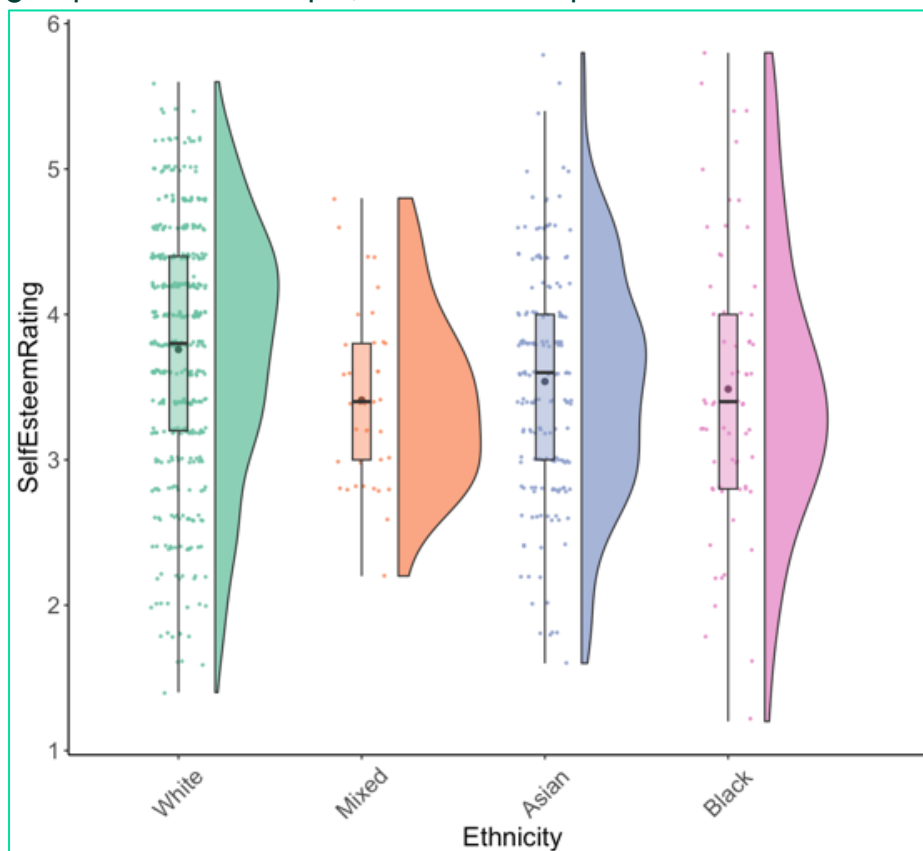
## Remaining persistence

Asian participants had lower levels of remaining persistence than white participants in both samples. Unexpectedly (based on SCCT which associates lower scores on contributing variables with lower scores on mediating variables), in both samples Mixed ethnicity and Black participants had higher remaining persistence than white participants, although this difference was only significant in the case of Black participants in the UG sample (and not for Mixed ethnicity participants in either sample). It is worth noting that this study identifies lower levels of remaining persistence among specific ethnicities, but this does not imply that ethnicity is a determinant of remaining persistence.

## Wellbeing measures

### Self-esteem

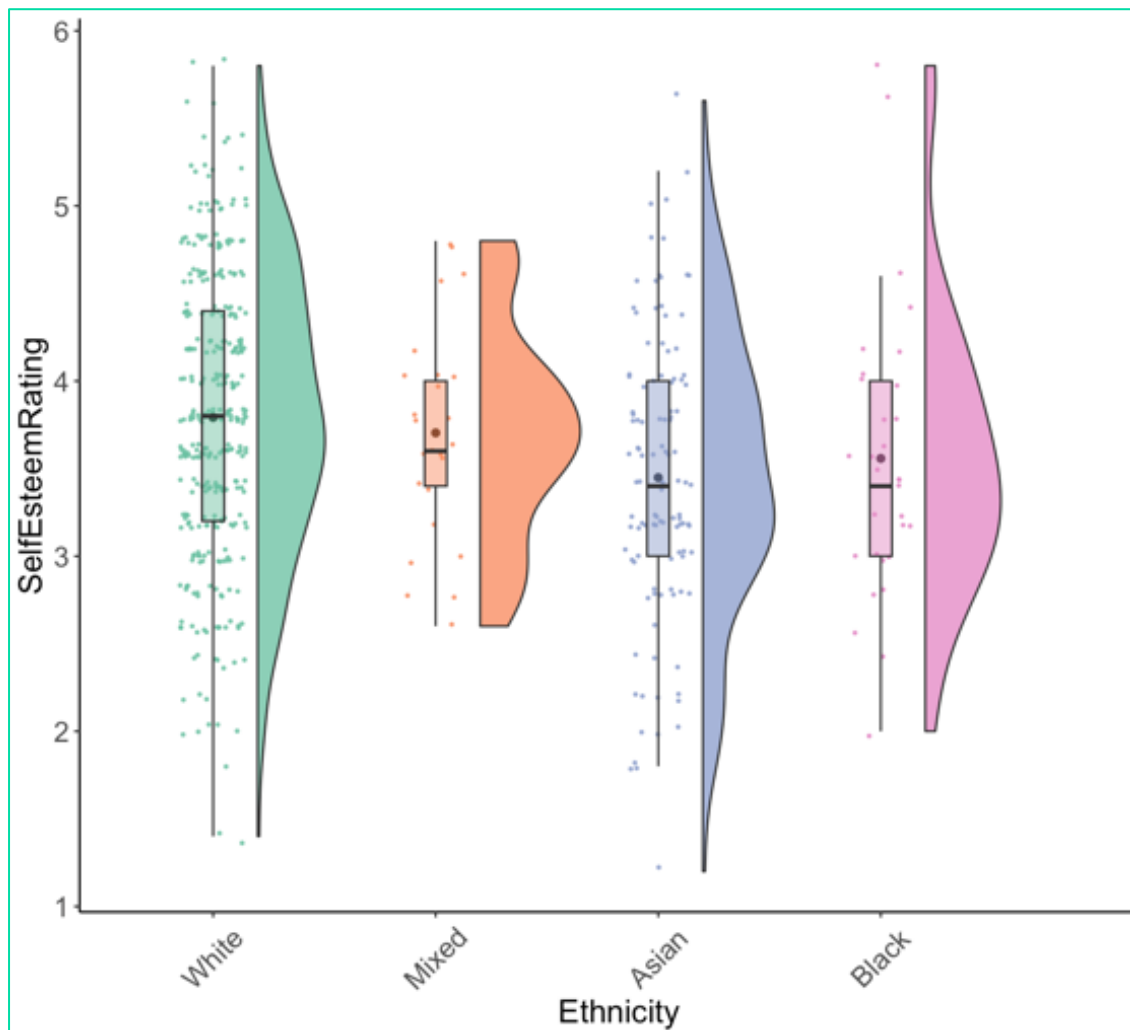
Self-esteem differed significantly based on ethnicity in both of our samples. In both samples, white participants reported higher levels of self-esteem than minority ethnic participants did, with statistically significant higher levels of self-esteem than all other groups in the UG sample, and when compared to Asian candidates in the LPC sample.



### Undergraduate Sample (N=700)

Key: Self-esteem Rating, scale (1=Strongly disagree, 5=Strongly agree)

Figure 24: Self-esteem ratings by ethnicity in the UG sample



### LPC Sample (N=510)

Key: Self-esteem Rating, scale (1=Strongly disagree, 5=Strongly agree)

Figure 25: Self-esteem ratings by ethnicity in the LPC sample

### Depression

Levels of depression also differed significantly based on ethnicity, specifically in our LPC sample. Minority ethnic candidates showed higher levels of depression than white candidates, although this difference was only statistically significant for Asian candidates. Results were qualitatively similar in our UG sample but missed statistical significance, except for Asian students when compared to white students where the difference was statistically significant.

### Do contributing variables explain relationships between ethnicity and mediating variables?

In this set of analyses, we examined whether differences in contributing variables could explain differences in mediating variables based on ethnicity. We did this by first looking at relationships between contributing variables and mediating variables, and then looking at whether those relationships could explain identified relationships between mediating variables and ethnicity (outlined above). The mediating variables examined here reliably differed by ethnicity in both of our samples.

## Self-esteem

Many of the contributing variables that we identified as differing by ethnicity were also significantly associated with self-esteem consistently across both of our samples. These included:

1. For the contributing variables of law identity, viewing people 'like me' as less represented in law, having lower status in law, and fear of confirming negative stereotypes were all associated with lower self-esteem.
2. In relation to the contributing variables of social interactions in law school, discrimination, less representation in law school, poor curriculum fit, higher stigma consciousness and stereotype vulnerability, and lower identification with the law community were all associated with lower self-esteem.

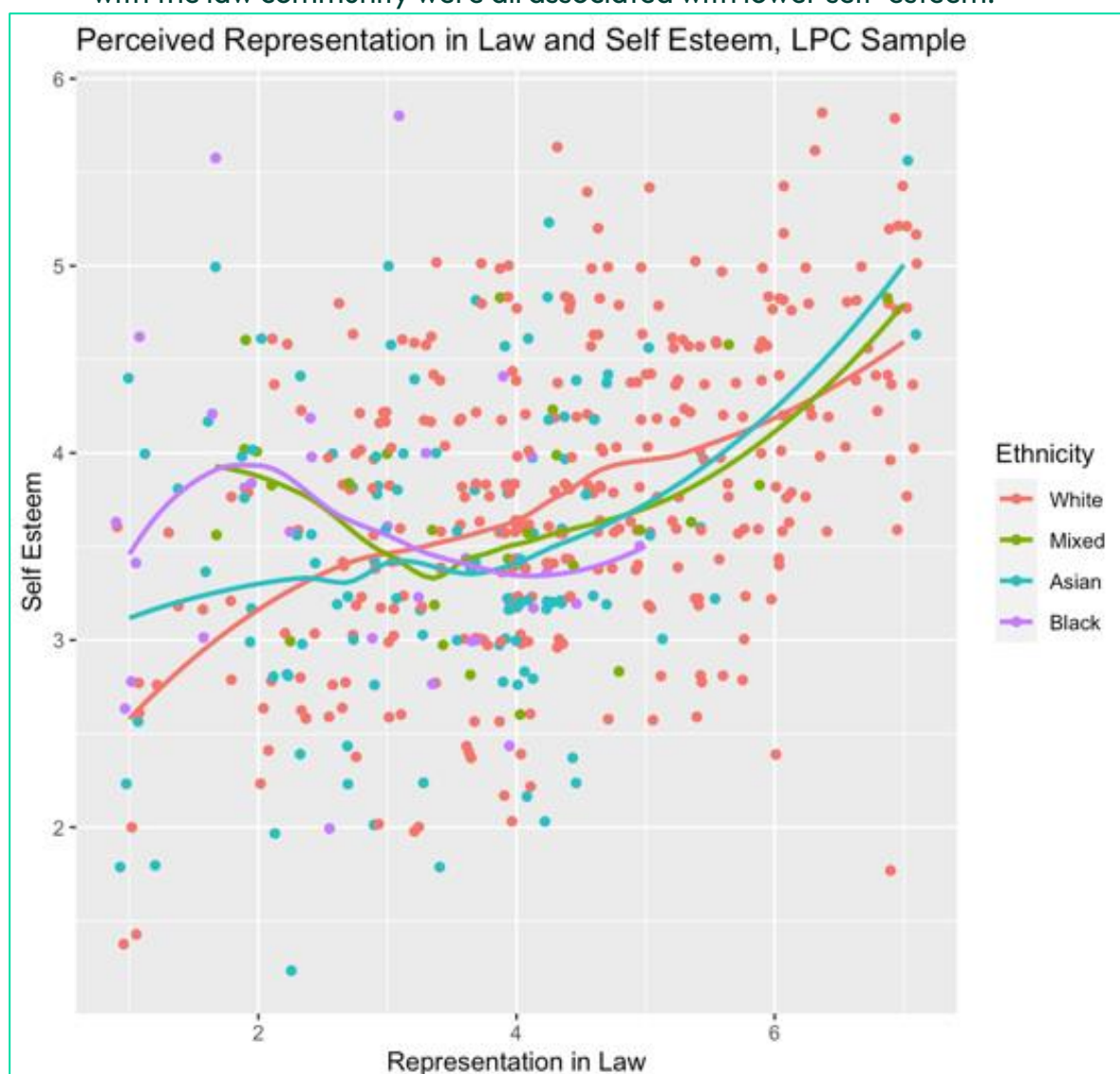


Figure 26: Simple mediation analysis of self-esteem with perceived representation in law by ethnicity in the LPC sample

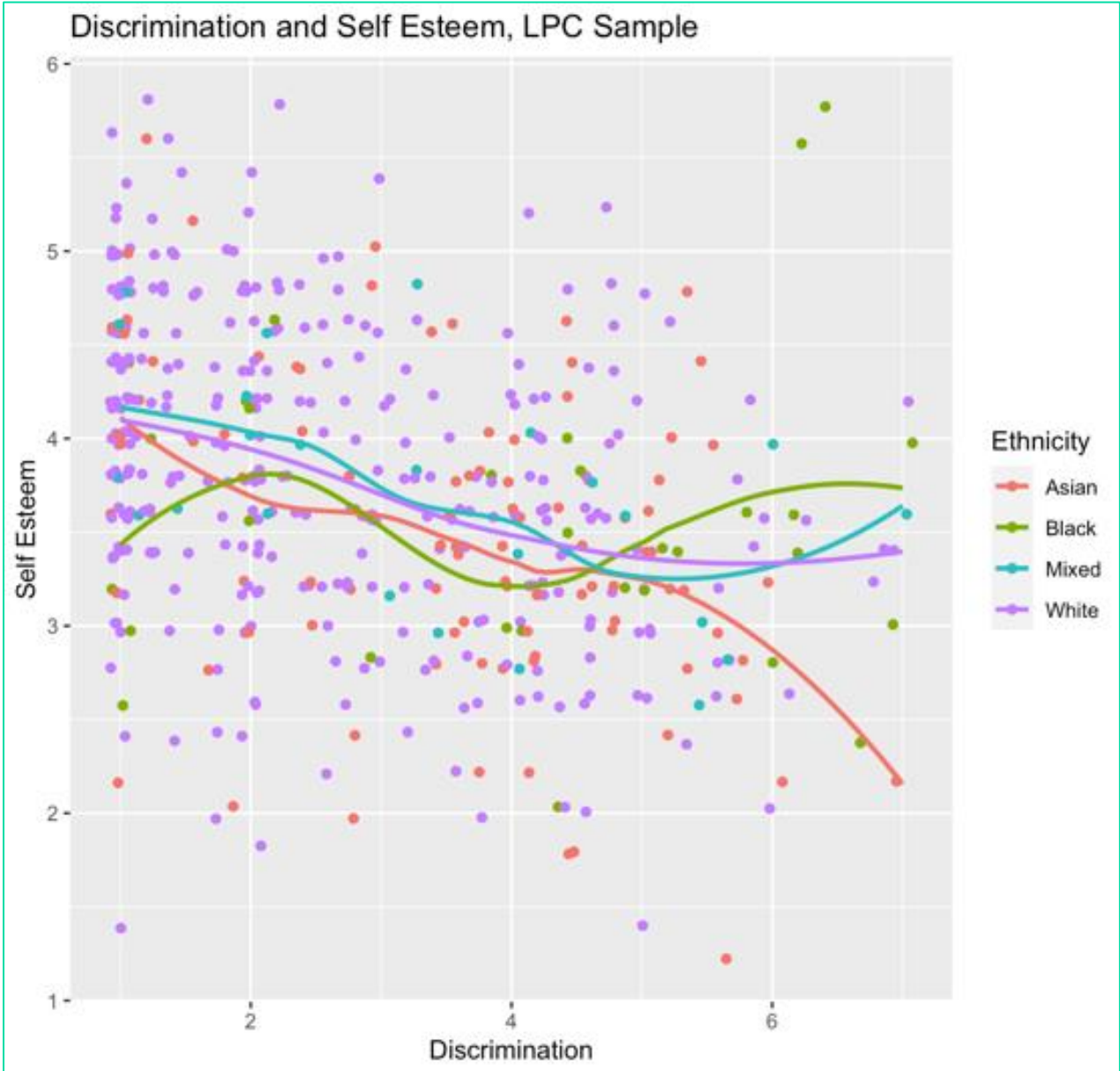


Figure 27: Simple mediation analysis of self-esteem with discrimination by ethnicity in the LPC sample

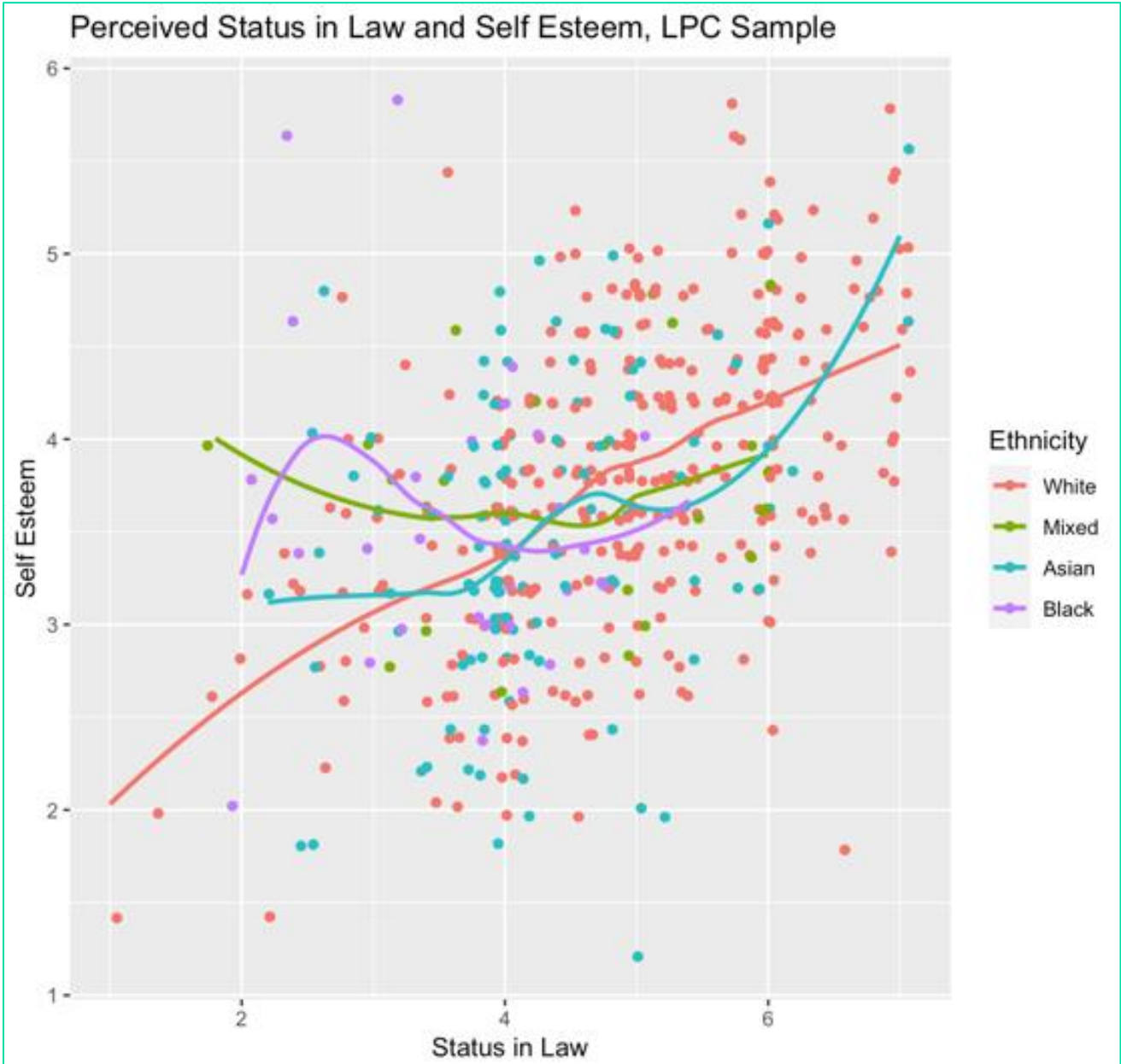


Figure 28: Simple mediation analysis of self-esteem with perceived status in law by ethnicity in the LPC sample

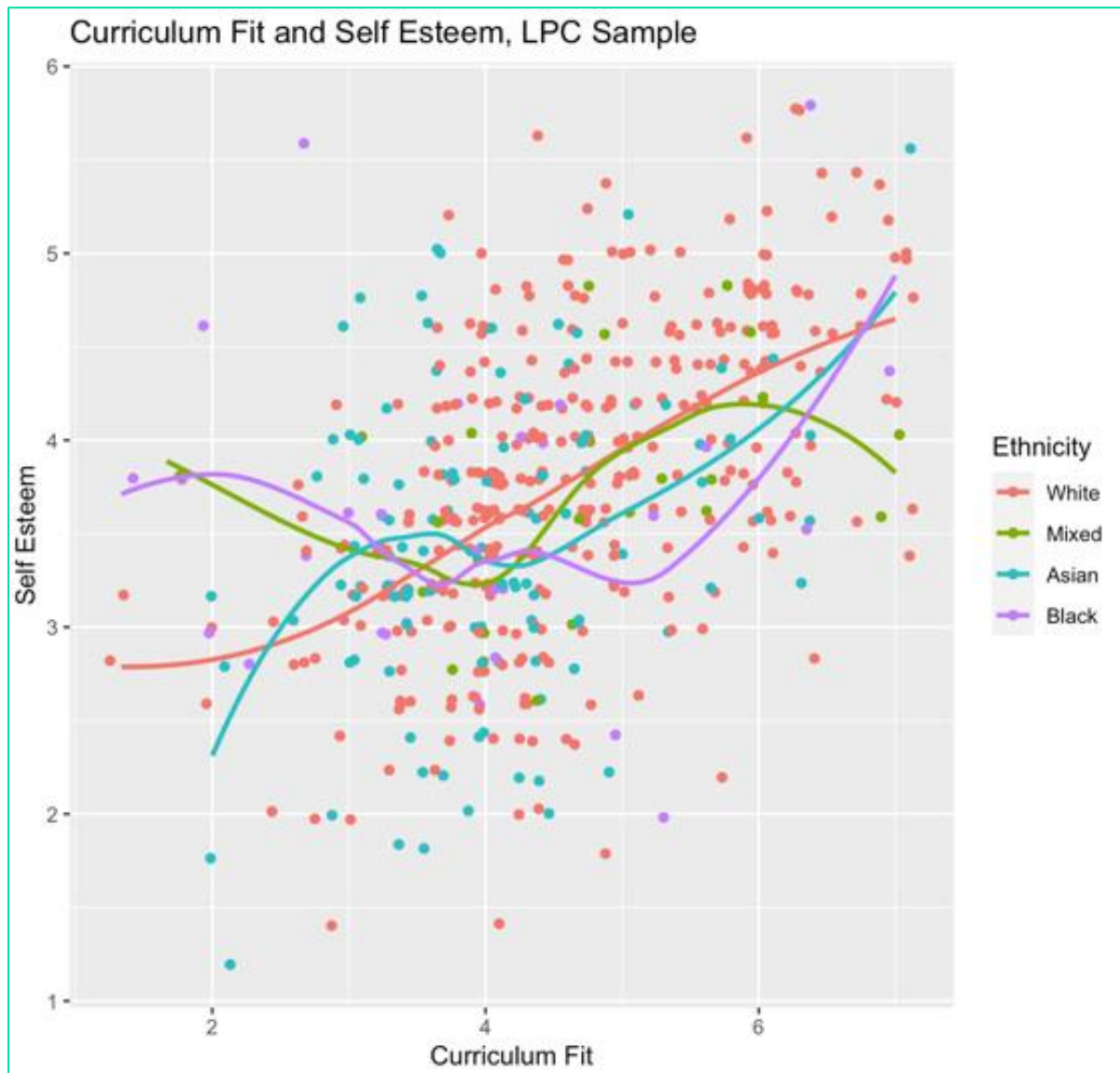


Figure 29: Simple mediation analysis of self-esteem with curriculum fit by ethnicity in the LPC sample

1. For the law identity contributing variables:
  - a. In both the LPC and UG samples, findings revealed that viewing people 'like me' as less represented in law and having lower status in law, and fear of confirming negative stereotypes explained the relationship between ethnicity and lower self-esteem for Asian and Black participants compared to white participants.
  - b. In our LPC sample, for comparisons between Mixed ethnicity and white candidates, it was only viewing people 'like me' as less represented in law that explained the relationship between ethnicity and lower self-esteem.
  - c. In our UG sample, for comparison between Mixed ethnicity and white students, viewing people 'like me' as less represented in law and having lower status in law, and fear of confirming negative stereotypes explained the relationship between ethnicity and lower self-esteem.

2. For the social interactions in law school contributing variables:
  - a. In both LPC and UG samples, findings revealed that discrimination, less representation in law school, poor curriculum fit, higher stigma consciousness and stereotype vulnerability explained the relationship between ethnicity and lower self-esteem for Asian and Black participants compared to white participants.
  - b. In our LPC sample, for comparisons between Mixed ethnicity and white candidates, it was only discrimination and less representation in law school that explained the relationship between ethnicity and lower self-esteem.
  - c. In our UG sample, for comparisons between Mixed ethnicity and white students, it was only discrimination, less representation in law school, poor curriculum fit, and higher stigma consciousness that explained the relationship between ethnicity and lower self-esteem.
  - d. Lower identification with the legal profession explained the relationship between ethnicity and lower self-esteem for Asian and Black candidates compared to white candidates in our LPC sample. Additionally, lower identification explained the relationship between ethnicity and lower self-esteem only for Asian students compared to white students in our UG sample.

### Remaining persistence (Asian/white comparison)

Many of the contributing variables that we identified as differing by ethnicity (specifically between white and Asian participants because of the larger sample sizes) were also significantly associated with remaining persistence consistently across both of our samples. These included:

1. For the contributing variables of background context other than prior attainment: Lower contextual support was associated with lower remaining persistence.
2. For the contributing variables of learning experiences: Higher performance accomplishments were associated with greater remaining persistence.
3. For the contributing variables of law identity, viewing people 'like me' as having lower status in law, fear of confirming negative stereotypes, and feeling less like a prototypical legal professional were all associated with lower remaining persistence.
4. In relation to the contributing variables of social interactions in law school, discrimination, less sense of belonging, poor curriculum fit, poor fit with law school, higher stereotype vulnerability, greater use of coping strategies, and lower identification with the law community were all associated with lower remaining persistence.

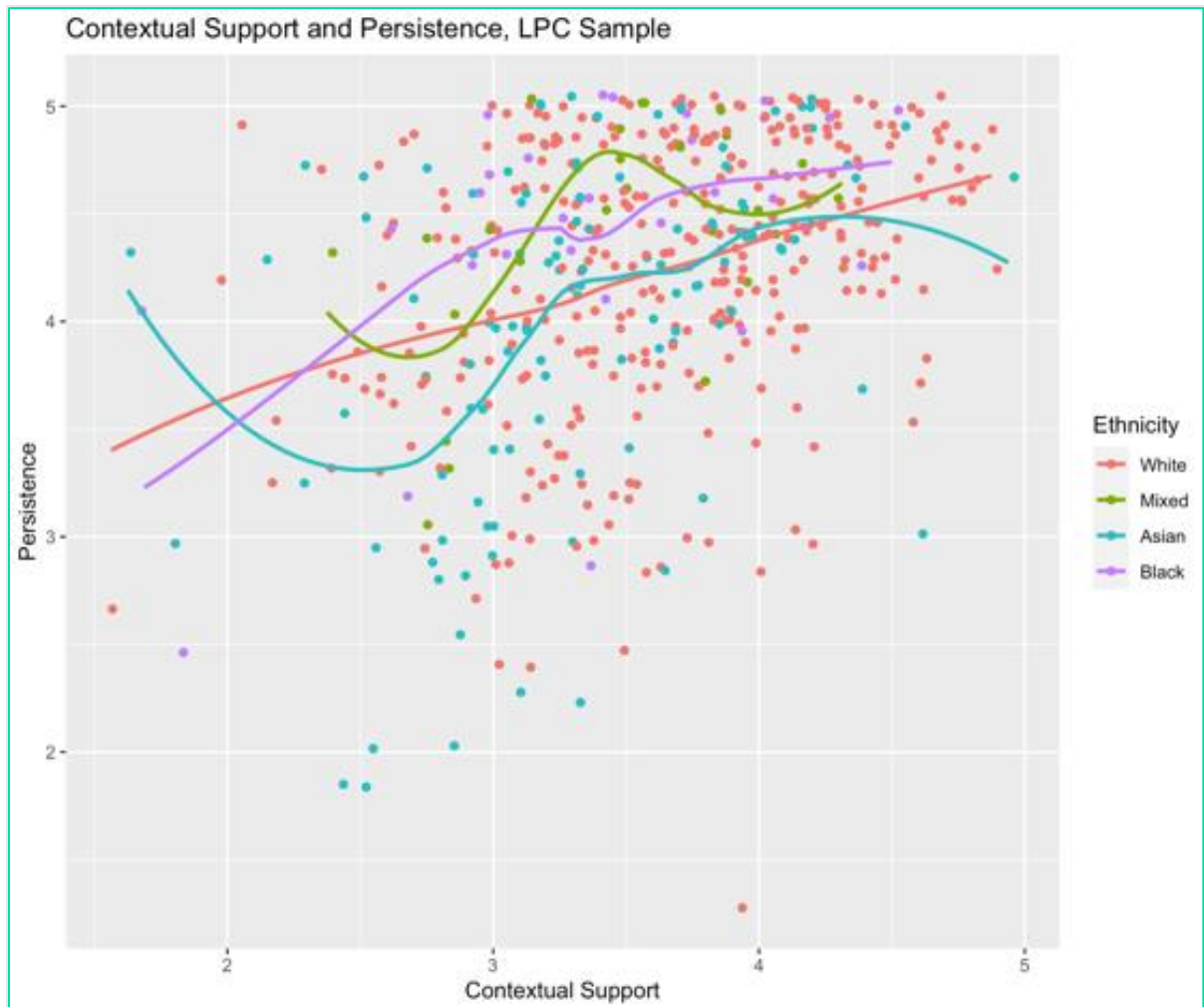


Figure 30: Simple mediation analysis of remaining persistence with contextual support by ethnicity in the LPC sample



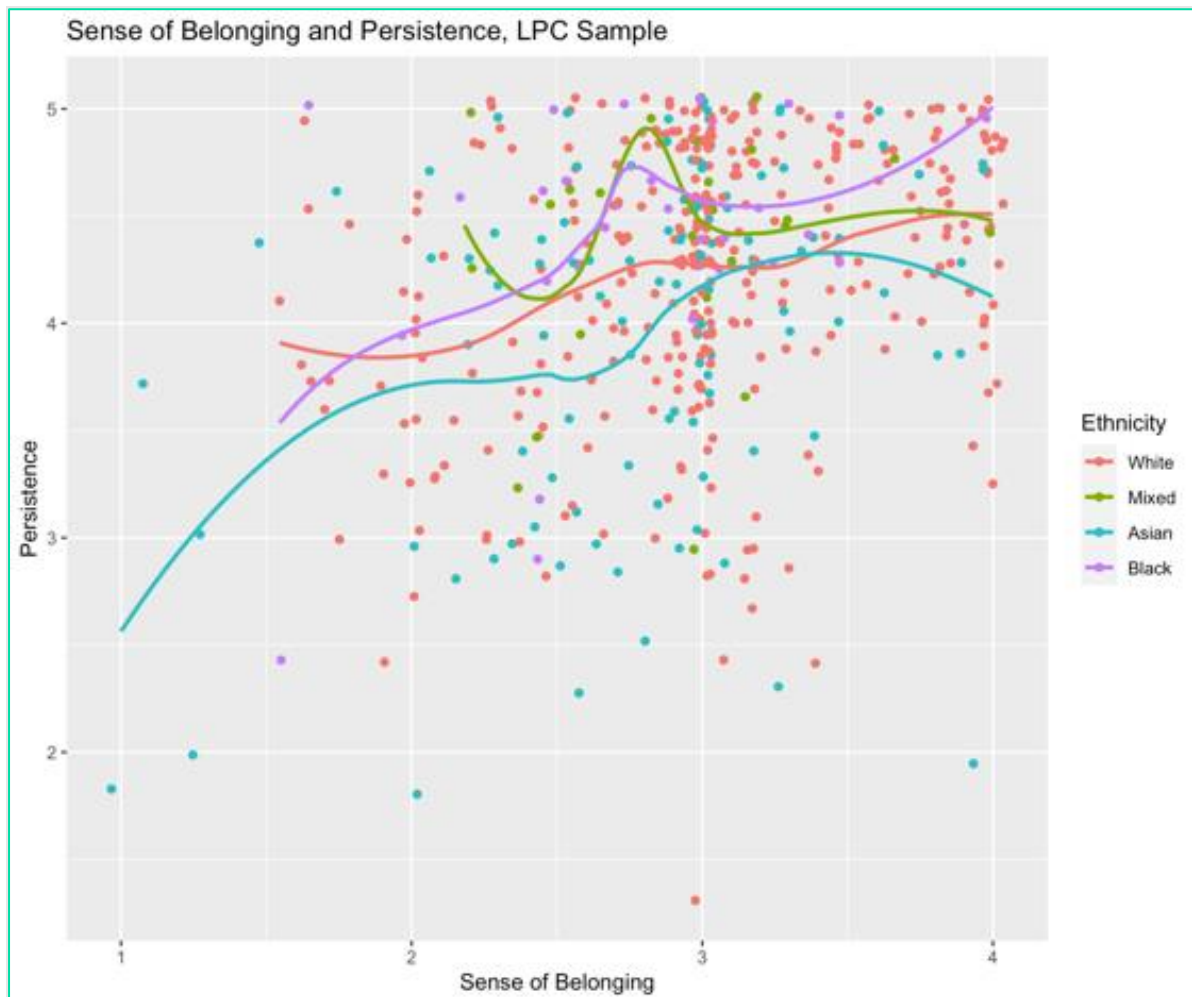


Figure 31: Simple mediation analysis of remaining persistence with sense of belonging by ethnicity in the LPC sample

1. For the contributing variables of other background context: In both the LPC and UG samples, findings revealed that lower contextual support explained the relationship between ethnicity and lower remaining persistence for Asian participants compared to white participants.
2. For the contributing variables of learning experiences: In both LPC and UG samples, findings revealed that performance accomplishments explained the relationship between ethnicity and remaining persistence for Asian participants compared to white participants.
3. For the law identity contributing variables: In both LPC and UG samples, findings revealed that viewing people 'like me' as having lower status in law, fear of confirming negative stereotypes and feeling less like a prototypical legal professional explained the relationship between ethnicity and lower remaining persistence for Asian participants compared to white participants.
4. For the contributing variables of social interactions in law school:
  - a. In both the LPC and UG samples, findings revealed that in legal education, less sense of belonging, poor curriculum fit, poor fit with law school, higher stereotype vulnerability, and lower identification with the law community

- explained the relationship between ethnicity and lower remaining persistence for Asian participants compared to white participants.
- b. However, discrimination and greater use of coping strategies explained the relationship between ethnicity and lower remaining persistence for Asian participants compared to white participants only in the LPC sample.

### Outcome expectations (Asian/white comparison)

Many of the contributing variables that we identified as differing by ethnicity (specifically between white and Asian participants) were also significantly associated with outcome expectations consistently across both of our samples. These included:

1. For the contributing variables of other background context: Lower contextual support was associated with lower outcome expectations.
2. For the contributing variables of learning experiences: Higher performance accomplishments were associated with greater outcome expectations.
3. For the contributing variables of law identity, viewing people 'like me' as less represented in law and having lower status in law, fear of confirming negative stereotypes, and feeling less like a prototypical legal professional were all associated with lower outcome expectations.
4. In relation to the contributing variables of social interactions in law school, discrimination, less sense of belonging, poor curriculum fit, poor fit with law school, higher sigma consciousness and stereotype vulnerability, greater use of coping strategies, and lower identification with the law community were all associated with lower outcome expectations.

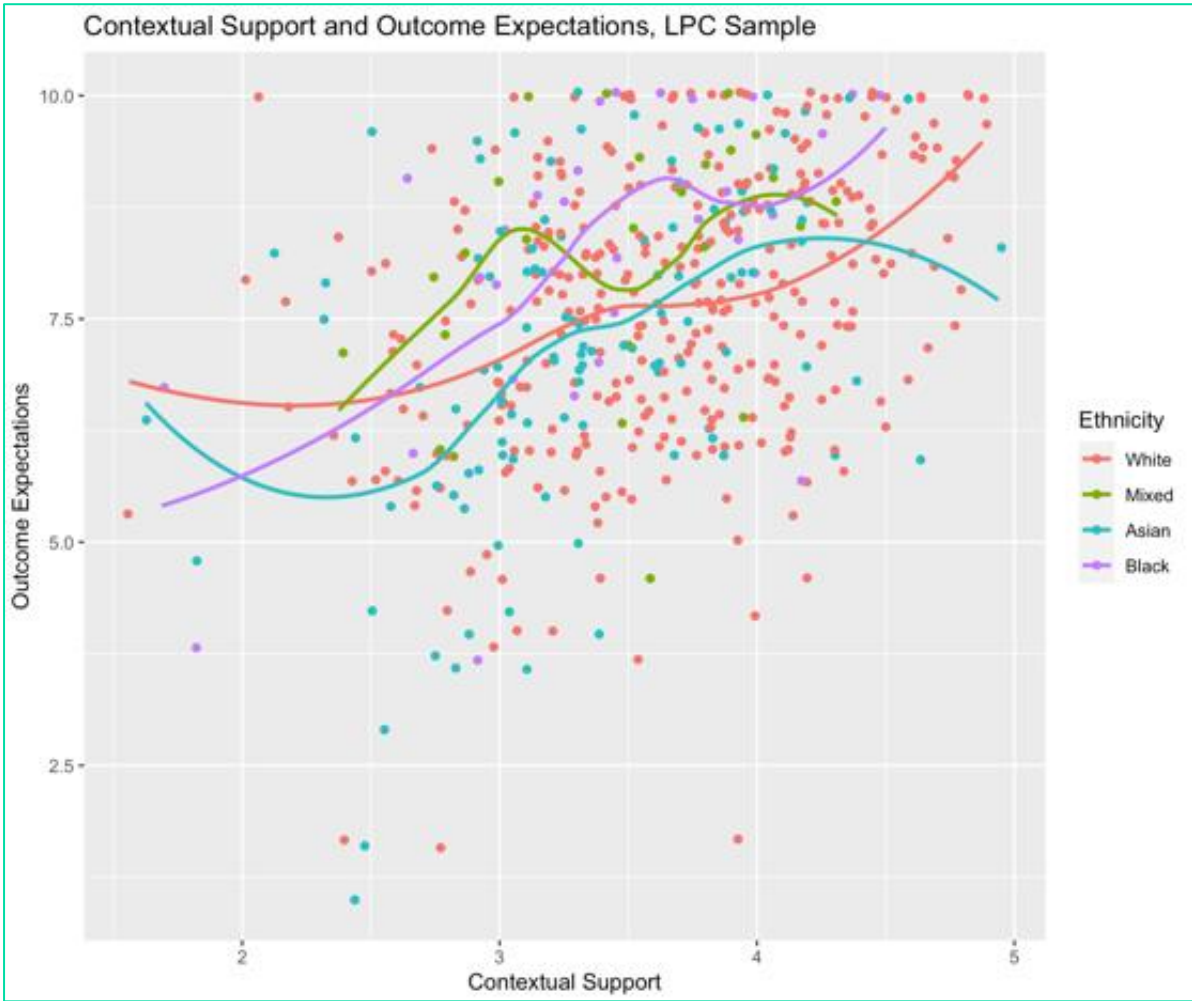


Figure 32: Simple mediation analysis of outcome expectations with contextual support by ethnicity in the LPC sample.



Figure 33: Simple mediation analysis of outcome expectations with sense of belonging by ethnicity in the LPC sample

1. For the contributing variables of other background context: In both the LPC and UG samples, findings revealed that lower contextual support explained the relationship between ethnicity and lower outcome expectations for Asian participants compared to white participants.
2. For the contributing variables of learning experiences: In both the LPC and UG samples, findings revealed that performance accomplishments explained the relationship between ethnicity and outcome expectations for Asian participants compared to white participants.
3. For the law identity contributing variables: In both the LPC and UG samples, findings revealed that viewing people 'like me' as less represented and having lower status in law, fear of confirming negative stereotypes, and feeling less like a prototypical legal professional explained the relationship between ethnicity and lower outcome expectations for Asian participants compared to white participants.
4. For the social interactions in law school contributing variables: In both the LPC and UG samples, findings revealed that in legal education facing discrimination, having less sense of belonging, poor curriculum fit, poor fit with law school, higher stigma consciousness and stereotype vulnerability, greater use of coping strategies and lower identification with the law community

explained the relationship between ethnicity and lower outcome expectations for Asian participants compared to white participants.

## Results Part 3: Contextual factors

### Funding source of LPC (LPC sample only)

Based on our survey data, Asian candidates were more likely to self-fund their LPC compared to other ethnicities. Similarly, Asian and Black candidates were less likely to have employer funding compared to white and mixed ethnicity candidates. Moreover, Black candidates were more likely to fund their LPC with support from family and/or friends compared to other ethnicities. Please note that these findings have to be interpreted in the context of our unbalanced samples in respect to ethnicity (especially in relation to minority ethnic LPC candidates).

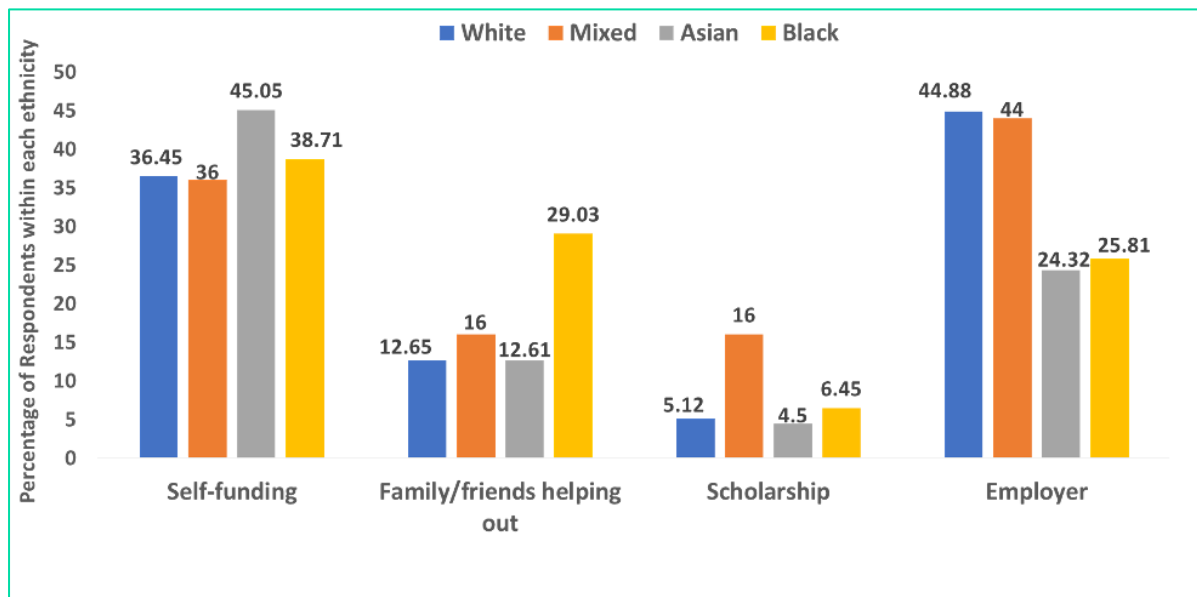


Figure 34: Funding sources for LPC candidates by ethnicity

While we did not test specific predictions relating to the role of LPC funding on outcomes, we note that LPC funding was related to three of the mediating variables which we expect to be linked to outcomes. Specifically, LPC candidates who were funding the LPC themselves had significantly lower levels of self-esteem, outcome expectations and remaining persistence compared to candidates who had their LPC funded by an employer.

### Future legal employment (LPC sample only)

Minority ethnic candidates were less likely to have legal employment lined up for when they completed their LPC.

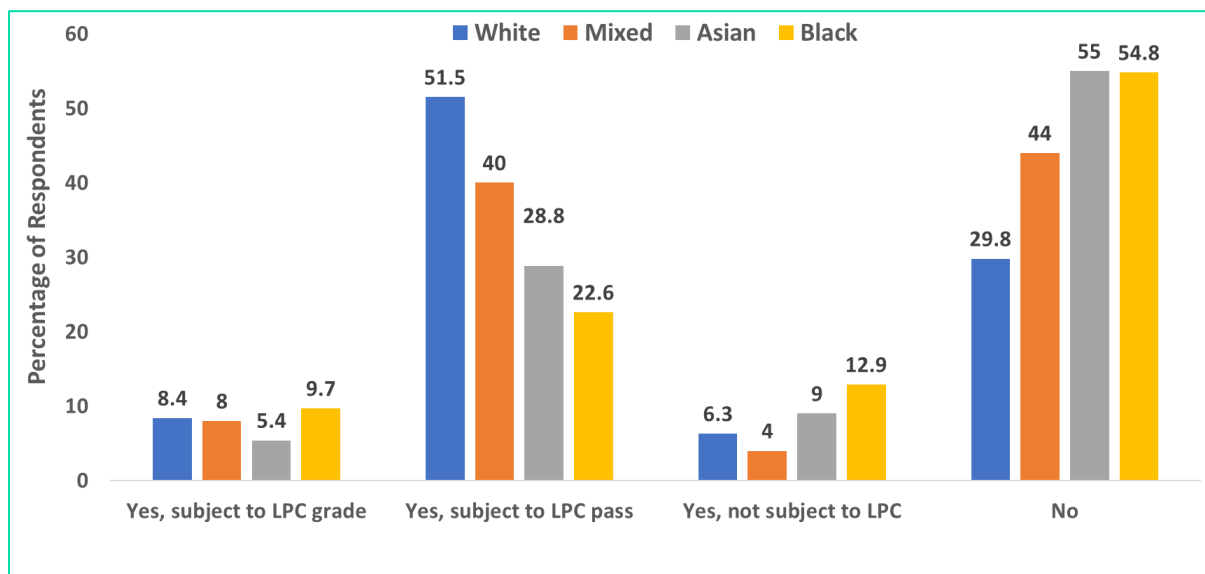


Figure 35: Future legal employment secured by ethnicity

While we did not test specific predictions relating to the role of having secured employment on outcomes, we note that whether employment was secured was related to three of the mediating variables, which we expect to be linked to outcomes. Specifically, participants who did not have employment secured had, on average, lower levels of self-esteem, lower remaining persistence, and lower outcome expectations.

Further insight into how these contextual variables may have fed through into our mediating variables and ultimately into differential outcomes was obtained through our survey feedback, discussed in the conclusions section below.

## Follow-up survey for final LPC outcomes: Timepoint 2

The follow-up survey was conducted only for LPC candidates to acquire their final grades. Specifically, our first survey started in February and ended in May 2023. Therefore, some participants were on the journey of concluding their final examinations and getting their results in June and July 2023. It was for these participants that the follow-up survey was designed. In other words, this meant we expected attrition because not all participating LPC candidates were concluding their LPC in 2023. Ultimately, this follow-up survey enabled us to link ethnicity and other contributing factors in our initial survey to the actual outcome scores of LPC candidates.

### What we did

396 LPC candidates from the initial survey were invited to answer questions on the Qualtrics survey platform. These questions asked for participants' final LPC examination results and were linked to Timepoint 1 responses to allow insight into how identified factors fed through into final outcomes.

### Survey participants

The survey was completed by 160 LPC candidates, split over 14 different LPC providers. The survey and its link were emailed to participants who indicated their

interest in the initial survey to participate in a follow-up survey. All candidates who completed the survey were offered a £5 Amazon voucher to compensate them for their time participating.

Candidates who completed the survey were aged between 21 and 48 ( $M = 25.23$ ,  $SD = 4.38$ ). Candidates' gender identities were 45 male, 114 female, and one unspecified. In terms of ethnicity, the breakdown of participants was:

- 106 white (made up of 90 English, Welsh, Scottish, Northern Irish or British, two Irish, and 14 any other white background)
- 13 Mixed ethnicity (made up of two white and Black Caribbean, two white and Black African, eight white and Asian, and one any other Mixed or multiple backgrounds)
- 27 Asian (made up of nine Indian, 13 Pakistani, three Chinese and two any other Asian background)
- 11 Black (made up of two Caribbean, eight African, and one any other Black, Black British, or Caribbean background)
- Three Other (made up of two Arabs and one any other ethnic group).

To maintain sufficient sample size in analyses, we compare our four main ethnic groups (white, Mixed ethnicity, Asian, and Black) without breaking down into further subgroups, consistent with the ethnicity groupings by the Office for Students 2020/21. However, we acknowledge that there may be important differences based on subgroups within this breakdown.

### Survey questions

Questions examined participants' LPC scores. Participants were asked for their:

- Final grade classification (ie distinction, commendation, pass, fail, and final grade undetermined as I have examination/modules to retake etc).
- Overall numeric grade (ie 60, 67, 79, 85, etc).
- Overall grade range (ie 80 or above, 70 to 79, 60 to 69, 50 to 59, 40 to 49, 39 and below).

Participants were also asked to list the modules and the accompanying grade classification they achieved on the LPC. Participants were allowed to write down up to eight modules and grades for each stage of the LPC. However, due to differences in modules offered by the different LPC providers, missing data, and uneven participation by ethnicity (ie low sample size), tests of differences were unachievable. Therefore, these questions will not be analysed in this annex. A full list of questions used in the Timepoint 2 survey along with illustrative questions is provided in Appendix A to this report.

## Results Part 1: Ethnic differences in LPC outcomes

In the first phase of the analysis, we tested whether LPC outcomes significantly differed between ethnic groups. Because the number of respondents within each ethnic group was relatively low, there might have been meaningful differences in

outcomes by ethnicity that we could not reliably detect due to limited statistical power.

The graph below illustrates differences in LPC outcomes by ethnicity. Colour-coded dashed lines represent the mean LPC grades for each group. Descriptively, there are differences in LPC outcomes across the four ethnic groups. Overall, white candidates demonstrated the highest mean outcomes for all variables followed by Mixed ethnicity, Black, and Asian candidates respectively. However, most of these differences did not reach the conventional threshold for determining statistical significance, likely due in part to the low numbers of participants within each ethnic group. Full descriptive statistics relating to all attainment variables measured, split by ethnicity, and results of statistical comparisons are outlined in Appendix G.

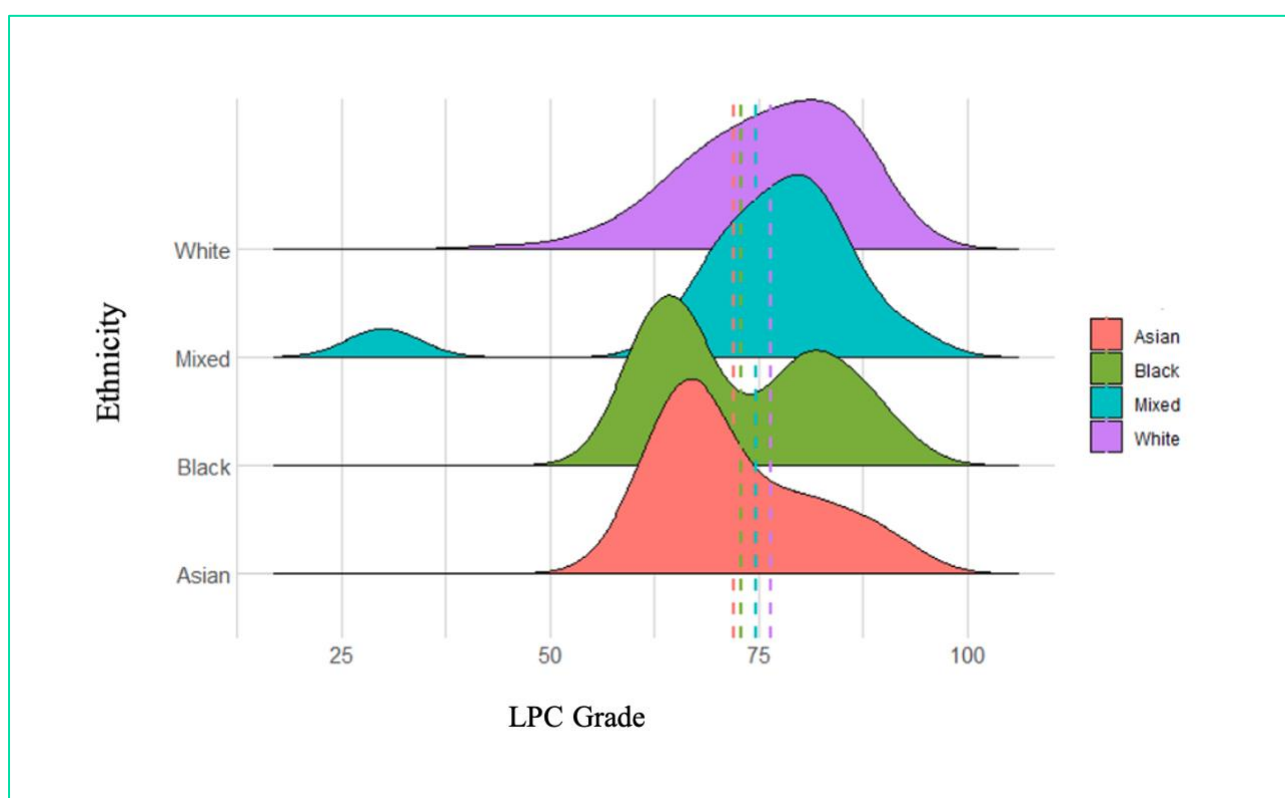


Figure 36: Overall numeric LPC grade by ethnicity (Timepoint 2)

Notwithstanding the above, a direct comparison of Asian and white candidates for the overall numeric grade variables revealed a significant difference, such that white candidates had higher numeric grades on average compared to Asian candidates. Given this significant difference, subsequent analyses (in Part 2) were only conducted using the Asian/white comparison.



## Results Part 2: Linking LPC outcomes to the initial survey findings for Asian/white comparison

Due to the significant difference between Asian and white candidates on LPC outcomes, the final phase of the analysis involved examining whether the variables we found to differ for the Asian/white comparison (at Timepoint 1) influence LPC outcomes through the predicted explanatory pathway informed by SCCT (see Figure 1 above). Specifically, this involved examining whether the contributing variables that differed significantly by ethnicity at Timepoint 1 influenced outcomes (and relatedly contributed to differential outcomes) through influencing the mediating variables, which in turn influenced outcomes. The findings revealed that Asian candidates' lower LPC grades compared to white candidates could be explained through some contributing variables that differed by ethnicity (specifically, Asian candidates having lower contextual support; having lower status, fear of confirming negative stereotypes and feeling less like a prototypical legal professional; facing discrimination, lower curriculum fit, lower fit with law school and higher stereotype vulnerability), leading to lower remaining persistence, which, in turn, led to lower outcomes (see Figure 37). However, self-esteem and outcome expectations were nonsignificant mediating variables when linking Timepoint 1's results to the final LPC attainment for the Asian/white comparison.

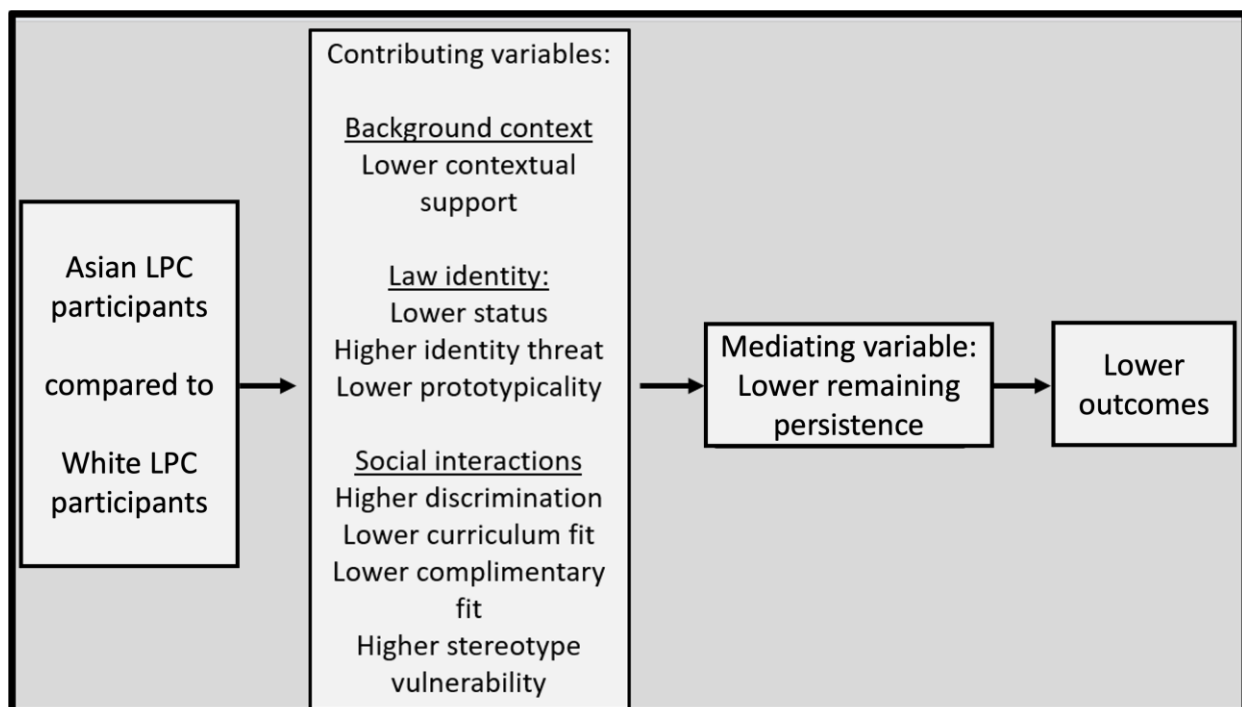


Figure 37: Pathway diagram of the explanatory analysis for the different outcomes between Asian and white LPC research participants

These analyses were only conducted using the overall numeric LPC grade. The findings included:

1. For the other background context contributing variables for Asian/white comparison: there was a significant pathway of ethnicity via lower contextual support via lower remaining persistence to lower LPC outcomes.
2. For the law identity contributing variables for Asian/white comparison: there were significant pathways of ethnicity via having perceptions of lower status, fear of confirming negative stereotypes and feeling less like a prototypical legal professional via lower remaining persistence to lower LPC outcomes.
3. For the social interactions in law contributing variables for Asian/white comparison: there were significant pathways of ethnicity via facing discrimination, lower curriculum fit, lower fit with law school and higher stereotype vulnerability via lower remaining persistence to lower LPC outcomes.

## **Conclusions and limitations of quantitative work**

1. Findings from Timepoint 1, revealed that law students and candidates for legal professional assessments from minority ethnic groups differ from white students and candidates in terms of a number of variables that have been linked to differential outcomes. In our sample:
  - There were differences in a range of variables that have been associated with differential outcomes. Specifically, minority ethnic participants, on average, had poorer outcomes prior to university and the LPC (ie lower attainment from school, university, or both), had lower law identity (ie feel less that people like them are represented and valued in the legal profession) and more negative social interaction experiences (being discriminated against, feeling unrepresented, feeling the curriculum does not fit them, and feeling stigma consciousness and stereotype vulnerability) than white participants did.
  - Black and Asian participants were also less likely to have their LPC funded by an employer than white participants were, and all minority group participants were less likely to have employment lined up after the LPC than white participants were.
  - Findings also show some differences in self-esteem, remaining persistence, and outcome expectations between white participants and minority ethnic participants that may help to explain the relationships between the factors above and differences in outcomes (although only remaining persistence was found to explain relationships between contributing variables and outcomes at Timepoint 2). It is worth repeating that this study identifies lower levels of remaining persistence among specific ethnicities, but this does not imply that ethnicity is a determinant of remaining persistence.
2. Findings from Timepoint 2, revealed that Asian LPC candidates' lower LPC grades compared to white candidates was explained through contributing variables that differ by ethnicity (ie having lower contextual support; having lower status, fear of confirming negative stereotypes and feeling less like a legal professional; facing discrimination, lower curriculum fit, lower fit with law

school and higher stereotype vulnerability), feeding into remaining persistence, and remaining persistence, in turn, feeding into LPC grades.

It is important to note that the significant difference in LPC outcomes we found was amongst our two largest ethnic samples at Timepoint 2 (Asian and white candidates). See point 3 below for a discussion of why we may not have detected differences amongst other ethnic groups, and how to most appropriately interpret those nonsignificant differences.

The participating candidates' survey feedback (in response to questions asked after the rest of the survey had been completed) provides additional insight that can be used to contextualise results (alongside findings of our Qualitative work reported in the Qualitative Interview Insights Report). Importantly, candidates' survey feedback provided additional insight to help understand the relationship between our contextual factors and outcomes. Specifically, feedback suggested that being sponsored by and/or having a training contract (which is employment after the LPC) from an employer (both of which were more common in white participants than in minority ethnic participants, see Timepoint 1 Results Part 3, above) helped candidates persist and attain a higher grade on the LPC. For example, a white LPC candidate talked about how having a training contract from an employer was the only motivation that got them through a very mundane course as they had to get things done quickly in order to start the job.

“I was very unmotivated and disengaged intellectually by the end of the course. The need to pass everything in time to start my training contract this September was ultimately my only source of motivation, as I found the course very boring.”

Another white LPC candidate pointed out how sponsorship from a law firm made it possible to pursue a legal career:

“Having sponsorship for both my GDL [Graduate Diploma in Law] and LPC from my employer has helped me greatly. I would not have pursued a career in law without this funding, as I would not have been able to afford it.”

Some other white LPC candidates pointed out how being sponsored and/or having a training contract removed stress and was a positive pressure which helped their good outcomes on the LPC:

“Being sponsored for the LPC has had a very positive impact on my experience of the course. Knowing I have [a] TC [training contract] lined up has taken away a lot of the stress...”

“Helped: pressure from knowing I had a training contract...”

Altogether, the picture from the examination of the survey feedback is that having a sponsorship for the LPC and/or a training contract motivates individuals to weather the challenges on the LPC (ie persist). This is likely to ultimately improve their chances of attaining a good grade. This feedback suggests our contextual factors, in addition to our contributing factors, may have their impact manifested through influencing remaining persistence.

3. We must be cautious in interpreting the statistically nonsignificant results that emerged when comparing LPC outcomes across the four ethnic groups. Given the relatively small number of participants who provided data on LPC outcomes, this statistically nonsignificant difference should not be interpreted as indicating that there are no ethnic group differences. Rather, it more likely indicates that this particular dataset simply did not have sufficient statistical power to determine whether ethnic group differences exist or not. All findings should also be interpreted in light of the representativeness of our sample and in light of the fact we were unable to break ethnic groups down into smaller subgroups.

Importantly, the proportion of the ethnic sample breakdown in Timepoints 1 and 2 corresponds with the real ethnic proportion of LPC candidates annually when considering the LPC outcomes data held by the SRA (from the academic sessions of 2013 to 2014 and 2015 to 2021). However, we faced a challenge of self-selection of participants who relatively did well on the LPC, and of an inability to reach those who relatively did poorly. This meant that the Timepoint 2 survey participants were unrepresentative by education outcomes despite being representative by ethnicity.

Therefore, to better determine the causes of ethnic group differences in LPC outcomes, additional data are needed from larger and more representative samples of individuals across different ethnic groups. Obtaining such a sample requires very high degrees of participation, and therefore may be most effectively done by training providers themselves in surveys administered as part of professional training courses.

## References

- Adjin-Tettey, E. & Deckha, M. 2010. Promises and Challenges of Achieving Racial Equality in Legal Education in Canada. *Canadian Legal Education Annual Review*, pp. 171-209.
- Anderson-Butcher, D., Amorose, A., Iachini, A. and Ball, A., 2012. The development of the perceived school experiences scale. *Research on Social Work Practice*, 22(2), pp.186-194.
- Atewologun, D. and Singh, V. 2010. Challenging ethnic and gender identities: An exploration of UK black professionals' identity construction. *Equality, Diversity and Inclusion: An International Journal*, 29(4), pp. 332-347.
- Atewologun, D., Sealy, R. and Vinnicombe, S. 2016. Revealing intersectional dynamics in organizations: Introducing 'intersectional identity work'. *Gender, Work & Organization*, 23(3), pp. 223-247.
- Barwegen 2004 Parental involvement in early education, which is the perception a student has of a parent's interest and engagement in their academic activities in early schooling Is this it?: Barwegen, L.M., Falciani, N.K., Putnam, S.J., Reamer, M.B. and Stair, E.E., 2004. Academic Achievement of Homeschool and Public School Students and Student Perception of Parent Involvement. *School community journal*, 14(1), pp.39-58.
- Block, C. J., Cruz, M., Bairley, M., Harel-Marian, T. and Roberson, L. 2019. Inside the prism of an invisible threat: Shining a light on the hidden work of contending with systemic stereotype threat in STEM fields. *Journal of Vocational Behavior*, 113, pp. 33-50.
- Cadaret, M. C., Hartung, P. J., Subich, L. M. and Weigold, I. K. 2017. Stereotype threat as a barrier to women entering engineering careers. *Journal of Vocational Behavior*, 99, pp. 40-51.
- Chung, J. E. 2012. Education at a Glance: OECD Indicators 2012. Country report: Korea. OECD Publishing, Paris.
- Dahling, J. J. and Thompson, M. N. 2010. Contextual supports and barriers to academic choices: A policy-capturing analysis. *Journal of Vocational Behavior*, 77(3), pp. 374-382.
- Dickens, D. D., Womack, V. Y. and Dimes, T. 2019. Managing hypervisibility: An exploration of theory and research on identity shifting strategies in the workplace among Black women. *Journal of Vocational Behavior*, 113, pp. 153-163.
- Dills, A. K. 2018. Classroom diversity and academic outcomes. *Economic Inquiry*, 56(1), pp. 304-316.
- Dursi, A. 2012. Social mobility and the Bar. *The Law Teacher*, 46(3), pp. 283-287.
- Fernando, D., Cohen, L. and Duberley, J. 2019. Navigating sexualised visibility: A study of British women engineers. *Journal of Vocational Behavior*, 113, pp. 6-19.
- Flouri, E., Tsivrikos, D., Akhtar, R. and Midouhas, E. 2015. Neighbourhood, school and family determinants of children's aspirations in primary school. *Journal of Vocational Behavior*, 87, pp. 71-79.
- Francis, A. M. and Tannuri-Pianto, M. 2013. Endogenous race in Brazil: affirmative action and the construction of racial identity among young adults. *Economic Development and Cultural Change*, 61(4), pp. 731-753.

- Frattini, T. and Meschi, E. 2019. The effect of immigrant peers in vocational schools. *European Economic Review*, 113, pp. 1-22.
- Gray, B., Johnson, T., Kish-Gephart, J. and Tilton, J. 2018. Identity work by first-generation college students to counteract class-based microaggressions. *Organization Studies*, 39(9), pp. 1227-1250.
- Gutman, L. M. and Schoon, I. 2012. Correlates and consequences of uncertainty in career aspirations: Gender differences among adolescents in England. *Journal of Vocational Behavior*, 80(3), pp. 608-618.
- Hall, A. R., Nishina, A. and Lewis, J. A. 2017. Discrimination, friendship diversity, and STEM-related outcomes for incoming ethnic minority college students. *Journal of Vocational Behavior*, 103, pp. 76-87.
- Hamman, E. 2017. Culture, humility and the law: Towards a more transformative teaching framework. *Alternative Law Journal*, 42(2), pp. 156-161.
- Hoffman 2021 – student teacher relationships; is this it?: Hoffmann, J., 2021. Student Teachers and Kindergarten Children Talking about Picturebooks Focusing School in Didactic Research Labs at University. *Journal of Literary Education*, (4), pp.69-95.
- Inda, M., Rodríguez, C. and Peña, J. V. 2013. Gender differences in applying social cognitive career theory in engineering students. *Journal of Vocational Behavior*, 83(3), pp. 346-355.
- Ireland and Lent, 2018 – SCCT; is this it?: Ireland, G.W. and Lent, R.W., 2018. Career exploration and decision-making learning experiences: A test of the career self-management model. *Journal of Vocational Behavior*, 106, pp.37-47.
- Israel, M., Skead, N., Heath, M., Hewitt, A., Galloway, K. and Steel, A. 2017. Fostering "quiet inclusion": Interaction and diversity in the Australian law classroom. *Journal of Legal Education*, 66(2), pp. 332-356.
- Lent, R. W., Miller, M. J., Smith, P. E., Watford, B. A., Hui, K. and Lim, R. H. 2015. Social cognitive model of adjustment to engineering majors: Longitudinal test across gender and race/ethnicity. *Journal of Vocational Behavior*, 86, pp. 77-85.
- Lent, R. W., Miller, M. J., Smith, P. E., Watford, B. A., Lim, R. H., Hui, K., Morrison, M. A., Wilkins, G. and Williams, K. 2013. Social cognitive predictors of adjustment to engineering majors across gender and race/ethnicity. *Journal of Vocational Behavior*, 83(1), pp. 22-30.
- Lent et al., 2017; scct; Is this it?: Lent, R.W., Ireland, G.W., Penn, L.T., Morris, T.R. and Sappington, R., 2017. Sources of self-efficacy and outcome expectations for career exploration and decision-making: A test of the social cognitive model of career self-management. *Journal of vocational behavior*, 99, pp.107-117.
- Lent and Brown, 2019 scct; Is this it?: Lent, R.W. and Brown, S.D., 2019. Social cognitive career theory at 25: Empirical status of the interest, choice, and performance models. *Journal of Vocational Behavior*, 115, p.103316.
- Lent, R. W., Morris, T. R., Tatum, A. K., Wang, R. J., Moturu, B. P. and Ireland, G. W. 2021. Predictors of workplace sexual identity management behaviors: A test of the social cognitive career self-management model. *Journal of Vocational Behavior*, 127, 103566.

- MacKinnon, M. and Parent, D. 2012. Resisting the melting pot: The long term impact of maintaining identity for Franco-Americans in New England. *Explorations in Economic History*, 49(1), pp. 30-59.
- McWhirter, E. H. and McWha-Hermann, I. 2021. Social justice and career development: Progress, problems, and possibilities. *Journal of Vocational Behavior*, 126, 103492.
- Navarro, R. L., Flores, L. Y., Lee, H.-S. and Gonzalez, R. 2014. Testing a longitudinal social cognitive model of intended persistence with engineering students across gender and race/ethnicity. *Journal of Vocational Behavior*, 85(1), pp. 146-155.
- Newman, A., Nielsen, I., Smyth, R., Hirst, G. & Kennedy, S. 2018. The effects of diversity climate on the work attitudes of refugee employees: The mediating role of psychological capital and moderating role of ethnic identity. *Journal of Vocational Behavior*, 105, pp. 147-158.
- Owens, D., Lacey, K., Rawls, G. and Holbert-Quince, J. A. 2010. First-generation African American male college students: Implications for career counselors. *The Career Development Quarterly*, 58(4), pp. 291-300.
- Prasad, J. J., Showler, M. B., Ryan, A. M., Schmitt, N. and Nye, C. D. 2017. When belief precedes being: How attitudes and motivation before matriculation lead to fit and academic performance. *Journal of Vocational Behavior*, 100, pp. 27-42.
- Reardon, S. F., Kalogrides, D. and Shores, K. 2019. The geography of racial/ethnic test score gaps. *American Journal of Sociology*, 124(4), pp. 1164-1221.
- Sang, K., Al-Dajani, H. and Özbilgin, M. 2013. Frayed careers of migrant female professors in British academia: An intersectional perspective. *Gender, Work & Organization*, 20(2), pp. 158-171.
- Settles, I. H., Buchanan, N. T. and Dotson, K. 2019. Scrutinized but not recognized:(In) visibility and hypervisibility experiences of faculty of color. *Journal of Vocational Behavior*, 113, pp. 62-74.
- Smith, R. W., Baranik, L. E. and Duffy, R. D. 2020. Psychological ownership within psychology of working theory: A three-wave study of gender and sexual minority employees. *Journal of Vocational Behavior*, 118, 103374.
- Tucker-Drob, E. M. 2012. Preschools reduce early academic-achievement gaps: A longitudinal twin approach. *Psychological Science*, 23(3), pp. 310-319.
- Wei, M., Wang, K.T. and Ku, T.Y., 2012. A development and validation of the Perceived Language Discrimination Scale. *Cultural Diversity and Ethnic Minority Psychology*, 18(4), p.340.
- Wilkins-Yel, K. G., Hyman, J. and Zounlome, N. O. 2019. Linking intersectional invisibility and hypervisibility to experiences of microaggressions among graduate women of color in STEM. *Journal of Vocational Behavior*, 113, pp. 51-61.
- Yang, Y., Wang, H., Zhang, L., Sylvia, S., Luo, R., Shi, Y., Wang, W. and Rozelle, S. 2015. The Han-minority achievement gap, language, and returns to schools in rural China. *Economic development and cultural change*, 63(2), pp. 319-359.