Do Black, Asian and Minority Ethnic nurses and midwives experience a career delay? A cross-sectional survey investigating career progression barriers

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Background: Black, Asian and Minority Ethnic nurses and midwives are under-represented in higher and managerial roles.

Aims: This study explored the presence and nature of career progression delays for Black, Asian and Minority Ethnic nurses and midwives and investigated where the barriers to progression were.

Design: A secondary analysis of data from a wider cross-sectional survey investigating workplace experiences, burnout and patient safety in nurses and midwives.

Methods: 538 nurses and midwives were recruited from four UK hospitals between February and March 2017. A career progression delay was viewed as being present if Black, Asian and Minority Ethnic nurses and midwives had spent longer on the entry level nursing grade and less time on higher grades in the previous 10 years. The analysis included items pertaining to: receipt of professional training, perceived managerial support for progression, likelihood of submitting applications and application success rates. Data were analysed using linear regression, odds ratios and t-tests. Results were reported using the STROBE Checklist.

Results: Black, Asian and Minority Ethnic nurses and midwives (n = 104; 19.4%) had spent more months working at the entry-level grade (M = 75.75, SD = 44.90) than White nurses and midwives (n = 428; 79.7%; M = 41.85, SD = 44.02, p < 0.001) and fewer months at higher grades (M = 15.29, SD = 30.94 v M = 29.33, SD = 39.78, p = 0.006 at Band 6; M = 6.54, SD = 22.59 v M = 19.68, SD = 37.83, p = 0.001 at Band 7) over the previous 10 years. Black, Asian and Minority Ethnic nurses and midwives were less likely to have received professional training in the previous year (N = 53; 53.0% v N = 274; 66.0%, p = 0.015) and had to apply for significantly more posts than White nurses and midwives before gaining their first post on their current band (M = 1.22, SD = 1.51 v M = 0.81, SD = 1.55, p = 0.026).

Conclusions: Interventions are needed to improve racial equality regarding career progression in nurses and midwives. Increasing access to professional training and reducing discriminatory practice in job recruitment procedures may be beneficial.

Impact statement: Black, Asian and Minority Ethnic nurses and midwives experience career progression inequalities. Interventions should improve transparency in recruitment procedures and enhance training opportunities.

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Introduction

Racial inequalities in career progression have been identified across organisational sectors internationally. A US report found that Black and Hispanic workers earned 15–19% less than White workers in science, technology, engineering and math (STEM) careers and the gap was even higher (27–33%) in non-STEM jobs (PRC, 2018). In Europe, a report including multiple countries found Black, Asian and Minority Ethnic workers have a broadly lower chance of being recruited than White workers and tend to have jobs lower in workplace hierarchies with concomitant lower wages (ENAR, 2017).

Similar to other sectors, racial inequalities in employment are present in healthcare systems (WRES, 2019a). Due to significant nurse and midwifery shortages and corresponding international recruitment strategies (WHO, 2014), recent years have seen a growing interest regarding these groups in particular (Phillips & Malone, 2014; West & Nayar, 2016). Empirical studies have reported concerning findings, suggesting that Black, Asian, Minority Ethnic and migrant nurses perceive fewer career development opportunities in their work (Likupe et al., 2014) and receive lower pay (Pittman et al., 2014). The reasons for these inequalities are unclear, indicating the presence of discrimination (Moore & Continelli, 2016). The need to address these issues is imperative for two main reasons. First, workplace discrimination has been associated with a range of negative outcomes including poorer health, retention and performance in workers (Jones et al., 2016) and lower patient satisfaction (West & Dawson, 2011). Second, due to global workforce shortages, the diversity of the healthcare workforce in developed nations is increasing (Aluttis et al., 2014) and these increases are likely to continue (WHO, 2014). As such, these issues could become ever-more pertinent in coming years.

To address inequalities in nursing and midwifery career progression, the mechanisms which underly these need to be understood. As indicated above, discrimination is a likely cause, but only a limited number of studies have investigated the nature of career progression barriers in nursing and midwifery groups. The majority of these have used a qualitative approach and have reported that Black, Asian and Minority Ethnic and migrant nurses perceive discriminatory practices regarding their seniority within the nursing hierarchy, their pay and the tasks they are assigned (Deegan & Simkin, 2010; Larsen, 2007). As such, further quantitative research is needed to understand broader patterns in career progression-related experiences, behaviours and perceptions. First, there is a need to establish whether Black, Asian and Minority Ethnic nurses and midwives experience a career “delay”, spending more time in entry-level roles. Second, there is a need to explore whether Black, Asian and Minority Ethnic nurses and midwives experience a career “delay”, spending more time in entry-level roles. Second, there is a need to explore whether Black, Asian and Minority Ethnic nurses and midwives are more reluctant to apply for promotion than White nurses and midwives, and whether this could be compounding any discriminatory practices to further increase progression delays (Alexis et al., 2006; Larsen, 2007). Third, perceptions that Black, Asian and Minority Ethnic nurses are less motivated to progress persist (Deegan & Simkin, 2010); understanding application submission patterns and levels of career aspiration could help establish whether these account for progression gaps. Understanding these issues could indicate whether interventions should aim to support Black, Asian and Minority Ethnic nurses and midwives with submitting applications for promotion.

Another area where barriers may occur is in reduced access to training opportunities. A UK report found that overall, White NHS employees were 15% more likely to access professional development training than Black, Asian and Minority Ethnic staff (WRES, 2019a). The data for this report was collected at the organisation level and the authors warn it should be interpreted cautiously due to likely recording inaccuracies. However, similar patterns have also been
identified in qualitative studies. For example, Alexis et al. (2006) reported that migrant nurses perceived discrimination by managers in allocating such opportunities between their staff, but further research is needed to confirm and explore this.

The study

The present research addressed these issues by conducting a cross-sectional survey to investigate the presence of career delay for Black, Asian and Minority Ethnic nurses and midwives and to explore barriers to progression. Barriers to progression were explored by examining behaviours regarding application submission likelihood, application success rate and receipt of professional training, together with perceptions of managerial support. The overarching aim of the present research was to identify career progression barriers for Black, Asian and Minority Ethnic nurses and midwives. Specific aims were to:

1. Investigate whether Black, Asian and Minority Ethnic nurses and midwives experience inequality in the form of career progression delays.
2. Investigate whether there were significant differences in receipt of professional training, managerial support, likelihood of application submission and application success rates.

Methods

Design

The research used a cross-sectional questionnaire survey design. We reported study results consistent with the STROBE checklist (supplementary file 1).

Setting

Four National Health Service (NHS) UK hospitals in the north of England. The NHS provides healthcare which is free at the point of access to UK residents. Around 20% of the NHS workforce is of Black, Asian or Minority Ethnic origin (NHS Digital, 2019).

Participants

We recruited registered nurses and midwives during February and March 2017 as part of a wider study into experiences and views in nurses and midwives (Johnson et al., 2019). The inclusion criteria was that participants were registered nurses or midwives working in that organisation; there were no exclusion criteria. All participants were employed by one NHS Trust. Ethical approval was received from the University of Leeds (School of Psychology) Ethics Committee (Date: 20 October 2016; Ref: 16-0267) and the Health Regulatory Authority (Date: 19 January 2017; Ref: ID 217229).

Procedure

We circulated study information via an organisation-wide email. We identified eligible participants using the Electronic Staff Record database and provided paper questionnaires and stamped addressed return envelopes, as it was judged that this would increase participation rate over an electronic survey. Participants responded via the organisation’s internal mail. If we received no response within two weeks, we provided a second paper questionnaire. Due to the sensitive
nature of the questions, we informed participants their responses were confidential and not viewable by members of their organisation. Participants were asked to seal their questionnaires in envelopes prior to returning them and once received, confidentiality was maintained by only providing access to identifiable data to members of the research team who were not employed by the NHS Trust under study. Paper data was stored in locked filing cabinets. Data upload was undertaken by two members of the research team who worked together to verify and error check their work (LM, MP). Once uploaded, data was further checked for errors by the lead author.

**Measures**

In addition to the measures reported below, the full survey also collected information on variables which were analysed separately in a separate report (Johnson et al., 2019). These included burnout, patient safety perceptions, perceived harassment and discrimination (Johnson et al., 2019). The only information reported in the previous study which is also reported here relates to the sample demographics.

**Demographic information**

We collected information relating to age, ethnicity, gender, current Band, how many years qualified and how many years working for the Trust. Ethnicity information was collapsed to create two categories (White was coded as “1” and Black, Asian and Minority Ethnic was coded as “2”) to allow for comparisons. We also collected data for highest qualification; this was coded into a dichotomous variable, such that GCSEs or equivalent, A-Levels or equivalent or Advanced Diploma = 1 and University degree or higher = 2.

**Career progression**

Career progression was measured according to the length of time nurses and midwives had spent on each qualified nursing grade in the previous 10 years. A career progression delay was viewed as being present if Black, Asian and Minority Ethnic nurses and midwives had spent longer on the entry level nursing grade and less time on higher grades in previous 10 years than White nurses and midwives. In the UK NHS, pay grades are referred to as “Bands”. Band 5 is the entry-level grade for a qualified nurse or midwife; Band 6 roles are those involving some specialising or leadership responsibility, such as team leader positions; Band 7 roles are specialist or managerial positions such as advanced nurses or midwife team managers and Band 8 roles are senior positions such as nurse consultants or modern matrons. Participants were asked to indicate how many years and months within the last 10 years they had spent working at each qualified grade (bands 5, 6, 7 and 8). We converted responses to number of months to create continuous variables.

**Receipt of professional training**

Participants were asked if they had received development or training in the past year, outside of standard mandatory training. They could respond “yes” or “no”.

**Perceived managerial support for progression**

This was measured using two questions: “My manager supports me in my career aspirations” and “I have been encouraged to apply for promotion opportunities where these exist”, which were
responded to using a five-point Likert scale (from “strongly disagree” to “strongly agree”). These items were summed to create a total score.

**Application submission and success**

Participants were asked whether they had applied for a higher position in the previous year. There were three response options: “Yes, and I gained the position”; “Yes, but I was not successful in gaining the position” and “No, I have not applied for a higher position/banding”. Responses were coded in two ways: (1) in order to compare individuals who had applied for promotion with those who had not, and (2) in order to compare those who had applied with success with those who had applied without success. In this way, one question was used to measure both application submission and application success.

Application success was also measured through a second question which asked participants how many posts they had applied for before gaining their first post on their current band. They responded by indicating the relevant number.

**Career aspirations**

We measured participants’ career aspirations using five questions adapted from the New Zealand Public Service Career Progression and Development Survey (SSC, 2005). These included: “I see my current position as a stepping stone for my next career move” and “I want to work in a higher-level position”. Participants responded on a five-point Likert scale (from “strongly disagree” to “strongly agree”) and scores were summed to create a scale total. In the current study, the Cronbach’s alpha for the scale was acceptable ($\alpha = 0.76$).

**Data analysis**

A power analysis was conducted using G* Power 3.1 software (Faul et al., 2009). This indicated that for a multiple linear regression with a medium effect size ($f = 0.15$), error probability of 0.05, testing 1 predictor and including 6 control predictors, 89 participants would be needed to detect an effect with 95% power.

First, we conducted descriptive statistics on the included variables. To address the first aim of the study and investigate the presence of career delays, we conducted three linear regressions to see whether Black, Asian and Minority Ethnic status was associated with having worked longer at Band 5 and for less time at Bands 6 and 7 in the previous 10 years than White status, when controlling for other relevant factors (age; highest level of qualification; years qualified; years working at BTHFT; career aspirations). We focused on Bands 5, 6 and 7 as the large majority of participants were employed at these levels.

To investigate whether the presence of barriers to career differed between Black, Asian and Minority Ethnic and White nurses and midwives, we conducted a series of t-tests (where outcomes were continuous) and odds ratios and Chi square tests (where outcomes were dichotomous). In particular, we conducted odds ratios and Chi square tests to assess possible differences for the outcome variables of: (1) receipt of professional training, (2) whether participants had applied for a higher banded role in the previous year and (3) whether any applications submitted for a higher banded role in the previous year were successful. We conducted t-tests to investigate possible differences for the outcome variables of: (1) perceived managerial support and (2) number of posts applied before gaining first post on current band.

The continuous outcome variables were skewed and so violated the assumptions of parametric tests. To manage this, for the regressions and t-tests we used Bootstrapping in SPSS 22
Bootstrapping is a powerful and versatile non-parametric approach which can be used with small samples or skewed data distributions. It estimates how accurate point estimates are, and can be used to generate Standard Errors and Confidence Intervals for any statistic (Wright et al., 2011). It does not require the distributions of variables to conform to normality as it uses a resampling procedure to estimate the sampling distribution (Field & Wilcox, 2017). We used the bias-corrected and accelerated (BCa) method, 5000 samples for each Bootstrap analysis and a 95% confidence interval (Field & Wilcox, 2017).

One case was deleted list-wise as the majority of their data was missing. Rates of missing data for remaining cases was small (less than 5% for all variables). Because of this, means imputation was conducted for continuous variables entered into the inferential statistics, whereby the sample mean was imputed in place of the missing value (Garson, 2015). As means imputation is not appropriate for binary variables, cases which were missing binary data were excluded list-wise from analyses where these were integral, but were included in the remaining analyses.

**Results**

**Participant characteristics**

Information about characteristics of the population is shown in Table 1. We contacted 1704 (100%) nurses and midwives and 538 (31.6%) participated. One (0.2%) participant was excluded due to a large amount of missing data, producing a final sample size of 537 (31.5%). No data was able to be collected regarding non-responder’s reasons for declining to participate. Participants’ mean age was 43.55 (SD = 12.7) and 486 (91.9%) were female.

**Career progression**

Black, Asian and Minority Ethnic nurses and midwives had spent longer working at Band 5 than White nurses and midwives (75.8 months, SD = 44.9 and 41.9 months, SD = 44.02). A linear regression analysis investigated whether ethnicity was significantly associated with time spent working at Band 5 once other factors had been controlled for this (Table 2). Once control variables (gender, age, years qualified, years at the trust, highest qualification, aspiration scale score) had been entered, ethnicity added significant variance to the model ($\Delta R^2 = 0.072, p < 0.001$) and had a significant independent association with months spent working at Band 5 ($\beta = 30.72, p < 0.001; \text{CI} = 20.52, 40.93$).

In contrast, Black, Asian and Minority Ethnic nurses and midwives had spent fewer months working at Band 6 over the previous 10 years than White nurses and midwives (15.3 months, SD = 30.9 and 29.3 months, SD = 39.8). A second linear regression analysis indicated that once control variables (gender, age, years qualified, years at the trust, highest qualification, aspiration scale score) had been entered, ethnicity added significant variance to the model ($\Delta R^2 = 0.011, p = 0.017$) and had a significant independent association with months spent working at Band 6 ($\beta = -9.77, p = 0.006; \text{CI} = -16.12, -2.81$).

Black, Asian and Minority Ethnic nurses and midwives had also spent fewer months working at Band 7 over the previous 10 years than White nurses and midwives (6.5 months, SD = 22.6 and 19.7 months, SD = 37.8). A third linear regression analysis indicated that once control variables (gender, age, years qualified, years at the trust, highest qualification, aspiration scale score) had been entered, ethnicity added significant variance to the model ($\Delta R^2 = 0.010, p = 0.013$) and had a significant independent association with months spent working at Band 7 ($\beta = -9.10, p = 0.001; \text{CI} = -14.18, -3.65$).
|                      | Total sample N (%) | White nurses and midwives only N (%) | Black, Asian and Minority Ethnic nurses and midwives only N (%) | Total sample M (SD) | White nurses and midwives only M (SD) | Black, Asian and Minority Ethnic nurses and midwives only M (SD) |
|----------------------|--------------------|--------------------------------------|----------------------------------------------------------------|--------------------|---------------------------------------|----------------------------------------------------------------|
| **Age**              |                    |                                      |                                                                |                    |                                       |                                                                |
| **Gender**           | Female             | 486 (91.9)                           | 395 (93.4)                                                      | 88 (85.4)          |                                       | 43.3 (12.3)                                                     |
|                      | Male               | 42 (8.1)                             | 34 (8.6)                                                       | 8 (7.6)            |                                       | 42.7 (10.3)                                                     |
| **Ethnicity**        | White              | 428 (79.7)                           | 334 (81.8)                                                     | 94 (86.4)          |                                       | 43.2 (12.0)                                                     |
|                      | Asian              | 83 (15.5)                            | 61 (14.6)                                                      | 22 (20.2)          |                                       | 43.1 (11.7)                                                     |
|                      | Black              | 12 (2.2)                             | 10 (2.4)                                                       | 2 (1.8)            |                                       | 42.9 (10.0)                                                     |
|                      | Mixed              | 7 (1.3)                              | 5 (1.2)                                                        | 2 (1.9)            |                                       | 43.2 (11.9)                                                     |
|                      | Other              | 2 (0.4)                              | 2 (0.5)                                                        | 0 (0.0)            |                                       | 43.1 (12.1)                                                     |
| **Current band**     | 5                  | 3 (0.6)                              | 2 (0.5)                                                        | 1 (0.9)            |                                       | 41.1 (11.2)                                                     |
|                      | 6                  | 159 (30.2)                           | 130 (30.0)                                                     | 29 (26.8)          |                                       | 41.3 (11.3)                                                     |
|                      | 7                  | 113 (21.4)                           | 90 (20.8)                                                      | 23 (21.5)          |                                       | 42.1 (12.0)                                                     |
|                      | 8 (a, b, or c)     | 38 (7.2)                             | 31 (7.2)                                                       | 7 (6.5)            |                                       | 43.0 (12.2)                                                     |
| **Highest qualification** | |                          |                                                  |                  |                                       |                                                                |
|                      | GCSE/A-Level equivalent/Advanced Diploma | 128 (25) | 110 (23.6) | 18 (16.7) | 29 (6.5) | 2 (0.4) | 17.5 (11.8) | 75.8 (45.0) | 15.3 (31.0) |
|                      | University first degree or higher | 384 (75) | 296 (66.3) | 88 (84.3) | 324 (64.1) | 0 (0.0) | 17.5 (11.8) | 75.8 (45.0) | 15.3 (31.0) |
| **Years qualified**  |                     |                                      |                                                                |                    |                                       |                                                                |
|                      |                     |                                      |                                                                |                    |                                       |                                                                |
|                      |                     | 16.9 (11.3)                          | 17.5 (11.8)                                                   | 14.2 (8.7)         |                                       |                                                                |
|                      |                     | 12.1 (10.3)                          | 12.6 (11.1)                                                   | 10.0 (6.4)         |                                       |                                                                |
| **Years at the Trust** |                 |                                      |                                                                |                    |                                       |                                                                |
|                      |                     | 12.1 (10.3)                          | 12.6 (11.1)                                                   | 10.0 (6.4)         |                                       |                                                                |
|                      |                     | 48.5 (46.2)                          | 41.9 (44.0)                                                   | 75.8 (45.0)        |                                       |                                                                |
| **Months at Band 5** |                     | 26.8 (38.8)                          | 29.3 (39.8)                                                   | 15.3 (31.0)        |                                       |                                                                |
| **Months at Band 6** |                     | 36.1 (45.2)                          | 33.9 (45.0)                                                   | 75.8 (45.0)        |                                       |                                                                |
| **Months at Band 7** |                     | 17.1 (35.7)                          | 19.7 (37.8)                                                   | 6.5 (22.6)         |                                       |                                                                |
| **Months at Band 8 (a,b or c)** | |                          |                                                  |                  |                                       |                                                                |
|                      |                     | 7.0 (28.0)                           | 8.4 (30.5)                                                    | 1.53 (12.5)        |                                       |                                                                |
| Table 1. Continued. | Total sample N (%) | White nurses and midwives only N (%) | Black, Asian and Minority Ethnic nurses and midwives only N (%) | Total sample M (SD) | White nurses and midwives only M (SD) | Black, Asian and Minority Ethnic nurses and midwives only M (SD) |
|-------------------|--------------------|-------------------------------|-------------------------------------------------|-------------------|-----------------------------|-------------------------------------------------|
| Number of applications before first post on current band | | | | 0.9 (1.5) | 0.8 (1.6) | 1.2 (1.5) |
| Applied for promotion in previous year | Yes | 111 (21.1) | 89 (21.2) | 22 (22.0) | | |
| Promotion application successful | Yes | 60 (54.1) | 49 (55.1) | 11 (50.0) | | |
| Learning, development or training in previous 12 months | Yes | 330 (63.7) | 274 (66.0) | 53 (53.0) | | |
| Managerial support | | | | 6.9 (1.8) | 7.0 (1.7) | 6.6 (2.0) |
| Aspirations scale | | | | 16.5 (4.2) | 16.1 (4.4) | 17.9 (3.4) |
Table 2. Hierarchical regression analyses predicting months spent working at Bands 5, 6 and 7.

| Band | Step               | Variable entered       | β    | BCa 95% confidence intervals | Total $R^2$ | $\Delta R^2$ |
|------|--------------------|------------------------|------|-------------------------------|-------------|--------------|
| 5    | 1. Control variables | Gender                 | $-19.08^{**}$ | $-33.42, -4.41$             | $0.070^{***}$ |              |
|      |                    | Age                    | $0.92^{***}$  | $0.51, 1.31$                 |              |              |
|      |                    | Years qualified        | $-1.18^{***}$ | $-1.72, -0.62$              |              |              |
|      |                    | Years at the Trust     | $0.09$       | $-0.39, 0.55$               |              |              |
|      |                    | Highest qualification  | $-16.25^{**}$ | $-25.26, -7.45$            |              |              |
|      |                    | Aspiration scale       | $0.79$       | $-0.28, 1.88$               |              |              |
|      | 2. Ethnicity       | Gender                 | $-14.69^*$   | $-26.80, -2.45$            | $0.141$     | $0.072^{***}$|
|      |                    | Age                    | $0.84^{***}$  | $0.40, 1.27$                |              |              |
|      |                    | Years qualified        | $-1.08^{**}$  | $-1.60, -0.55$             |              |              |
|      |                    | Years at the Trust     | $0.98$       | $-0.38, 0.56$              |              |              |
|      |                    | Highest qualification  | $-18.16^{***}$| $-27.04, -9.75$           |              |              |
|      |                    | Aspiration scale       | $0.41$       | $-0.65, 1.44$              |              |              |
|      |                    | Ethnicity              | $30.72^{***}$| $20.52, 40.93$             |              |              |
| 6    | 1. Control variables | Gender                 | $3.99$       | $-8.57, 16.16$             | $0.042^{***}$|              |
|      |                    | Age                    | $-0.28^*$    | $-0.52, 0.00$              |              |              |
|      |                    | Years qualified        | $0.81^{**}$  | $0.39, 1.23$                |              |              |
|      |                    | Years at the Trust     | $0.19$       | $-0.29, 0.66$              |              |              |
|      |                    | Highest qualification  | $-0.59$      | $-8.52, 6.93$              |              |              |
|      |                    | Aspiration scale       | $0.00$       | $-0.96, 0.97$              |              |              |
|      | 2. Ethnicity       | Gender                 | $2.59$       | $-9.72, 14.30$             | $0.051$     | $0.011^*$    |
|      |                    | Age                    | $-0.26^*$    | $-0.50, 0.01$              |              |              |
|      |                    | Years qualified        | $0.78^{**}$  | $0.36, 1.20$                |              |              |
|      |                    | Years at the Trust     | $0.19$       | $-0.30, 0.67$              |              |              |
|      |                    | Highest qualification  | $0.05$       | $-7.84, 7.43$              |              |              |
|      |                    | Aspiration scale       | $0.13$       | $-0.83, 1.09$              |              |              |
|      |                    | Ethnicity              | $-9.77^{**}$ | $-16.12, -2.81$            |              |              |
| 7    | 1. Control variables | Gender                 | $5.78$       | $-4.32, 14.76$             | $0.166^{***}$|              |
|      |                    | Age                    | $-0.27^{**}$ | $-0.46, -0.09$             |              |              |
|      |                    | Years qualified        | $1.58^{***}$ | $1.18, 2.00$               |              |              |
|      |                    | Years at the Trust     | $-0.27$      | $-0.77, 0.21$              |              |              |
|      |                    | Highest qualification  | $6.47$       | $-0.42, 13.02$             |              |              |
|      |                    | Aspiration scale       | $-0.45$      | $-1.24, 0.36$              |              |              |
|      | 2. Ethnicity       | Gender                 | $4.48$       | $-5.37, 13.27$             | $0.174$     | $0.010^*$    |
|      |                    | Age                    | $-0.25^{**}$ | $-0.44, -0.07$             |              |              |
|      |                    | Years qualified        | $1.55^{***}$ | $1.15, 1.97$               |              |              |
|      |                    | Years at the Trust     | $-0.27$      | $-0.77, 0.20$              |              |              |
|      |                    | Highest qualification  | $7.04^*$     | $-0.05, 13.76$             |              |              |
|      |                    | Aspiration scale       | $-0.34$      | $-1.12, 0.47$              |              |              |
|      |                    | Ethnicity              | $-9.10^{**}$ | $-14.18, -3.648$           |              |              |

Note. *$p<.05$, **$p<.01$, ***$p<.001$. 
**Career progression barriers**

**Professional training and development**

A lower rate of Black, Asian and Minority Ethnic participants ($N = 53; 53.0\%$) reported receiving any form of non-mandatory professional learning, training or development in the previous year compared with White participants ($N = 274; 66.0\%$). The odds of receiving professional training were 1.7 times higher for White nurses and midwives (95\% CI = 1.11, 2.268) and the Chi-square test suggested this was significant ($X^2 [1, N = 515] = 5.90, p = 0.015$).

**Managerial support**

Perceived managerial support was similar between White and Black, Asian and Minority Ethnic nurses and midwives ($M = 7.0, SD = 1.7; M = 6.6, SD = 2.0$, respectively). Results from the t-test suggested there was no significant difference in perceptions between groups ($t[530] = 1.74, CI = −0.08, 0.73, p = 0.11$).

**Likelihood of submission of applications for promotion**

The rates of application for promotion within the Trust in previous year were similar between the groups, with 89 (21.2\%) White participants and 22 Black, Asian and Minority Ethnic participants (22.0\%) reporting they had submitted applications in this time window. The odds ratio = 0.95 (CI = 0.56, 1.61) and the Chi-square was non-significant ($X^2 [1, N = 522] = 0.040, p = 0.84$).

**Application success rates**

To investigate application success rate differences, we first tested whether there were differences in success rates between those Black, Asian and Minority Ethnic and White participants who had applied for promotion in the previous year. Forty-nine (55.1\%) White participants been successful, and 11 (50.0\%) Black, Asian or Minority Ethnic participants had been successful. The odds ratio indicated higher likelihood of success in White participants (odds ratio = 1.23, CI = 0.048, 3.12) but the Chi-square indicated this difference was non-significant ($X^2 [1, N = 111] = 0.18, p = 0.67$).

Second, we tested whether there were differences in the number of posts participants had to apply for before gaining their first post on their current band. Black, Asian and Minority Ethnic nurses and midwives reported a higher mean number of applications ($M = 1.2, SD = 1.5$) than White nurses and midwives ($M = 0.8, SD = 1.6$) and results from a t-test suggested this difference was statistically significant ($t[530] = −2.28, CI = −0.72, −0.06, p = 0.026$).

**Discussion**

Black, Asian and Minority Ethnic nurses and midwives had spent longer working at the entry-level grade over the previous 10 years and less time working at more senior grades. Ethnicity was significantly associated with time spent working at each grade once a range of relevant variables had been controlled for, including age, years qualified, highest level of qualification and aspirations. When barriers to progression were explored, we found that Black, Asian and Minority Ethnic nurses and midwives were significantly less likely to have received professional training in the previous year. They also had to apply for a higher number of posts before gaining their first post at their current grade. However, they perceived no difference in their level of managerial support for progression and were
as likely to have applied for promotion in the previous year as White nurses and midwives. For those who had applied for promotion in the previous year, there was no significant difference in their success rate.

These findings reflect patterns which have been identified broadly within UK healthcare which suggest that Black, Asian and Minority Ethnic healthcare staff are disadvantaged in relation to appointment procedures and the receipt of professional training (WRES, 2019a). Similarly, they are consistent with both international studies of nursing groups (Moore & Continelli, 2016; Pittman et al., 2014) and employment reports across occupational groups (ENAR, 2017; Zschirnt & Ruedin, 2016), which suggest that Black, Asian, Minority Ethnic and immigrant groups are disadvantaged regarding employment and promotion.

This is the first quantitative research evidence of the presence of a career delay for Black, Asian and Minority Ethnic nurses and midwives. This extends the literature by demonstrating that the resulting career delay is significant, with Black, Asian and Minority Ethnic nurses and midwives working on average over 2 years longer at the entry-level grade. Interestingly, we found that while Black, Asian and Minority Ethnic nurses and midwives had experienced a career delay over the previous 10 years and needed to apply for more jobs to gain their first post on their current pay band, those who had applied for promotion within the previous year were not at a significant disadvantage. One possible explanation for this finding is that historical recruitment biases may be reducing. However, national evidence suggests that while these biases could in decline, they are still present (WRES, 2019a). An alternative explanation is that this finding is the result of lower bias within the organisation where the research was conducted during this time period. If this explanation is correct, it suggests that bias reduction is possible and would highlight the potential usefulness of a “positive deviance” approach, where “good” organisations are identified and investigated to understanding what they are doing well, which other organisations may be able to learn from (Baxter et al., 2016).

This is also the first quantitative evidence which contravenes misperceptions that this delay can be attributed to other factors which do not involve racial inequalities. This is important given that perceptions that Black, Asian and Minority Ethnic nurses are less motivated to progress persist in managers (Deegan & Simkin, 2010). In particular, our findings demonstrate that ethnicity continued to be a significant factor contributing to length of time at each grade even when age, years qualified, qualifications, gender and aspirations were accounted for. These findings underline the need for equality-focused interventions in relation to nursing and midwifery appointment and career progression practices which actively combat the biases of managers and those responsible for recruitment.

Furthermore, this is the first quantitative research evidence identifying lack of access to professional training as a significant barrier for nurses and midwives. UK national surveys have indicated a similar pattern (WRES, 2019a), but this data is reported across disciplines and at the organisation level, which is likely to introduce some reporting inaccuracies. Our findings suggest that this barrier is present for nurses and midwives when the data is gathered directly from individuals. This finding supports previous qualitative studies which suggest that Black, Asian and Minority Ethnic nurses perceive favouritism towards White nurses when allocating training opportunities (Alexis et al., 2006); it suggests that access to training opportunities should be made fair and that parity of access should be monitored. We found there was no evidence of significant barriers at the managerial support and application submission likelihood phases. This is the first study to investigate whether application likelihood may be a barrier; by finding no evidence to support this possibility, we highlight the need to focus upon other aspects of the career development and recruitment pathway.
Limitations
The study was limited by an inability to distinguish between Black, Asian and Minority Ethnic nurses who had migrated to the UK and those who were UK natives. There is reason to believe that migrant nurses, particularly those educated overseas, may be particularly disadvantaged. However, we were unable to investigate whether there were differences due to migration status. We were also limited by our recruitment pool; while we recruited nurses and midwives from four hospitals, all of these were part of one large NHS organisation. However, the trends we identified were broadly consistent with national trends, suggesting the experience of nurses and midwives in our sample reflected wider patterns.

Implications
Our study identified two key areas for equality interventions to target, (1) parity of access to professional training and (2) fairness of recruitment procedures. One suggestion for tackling discrimination has been “unconscious bias training” which aims to address underlying biases which may lead to unintentional racism, subtle acts which those who perpetrate it are not aware of. However, the appropriateness of this has been disputed, with the implication that if biases are “unconscious”, they are outside of individual’s control (Noon, 2018). Alternative suggestions including making managers more accountable for their actions; monitoring their decisions and ensuring they are fair and free of discrimination (WRES, 2019b). In the current context, this may be closer monitoring of the allocation of professional training opportunities and appointment procedures, with managers being called to account in the event of unequal behaviour. It has also been suggested that opportunity for biases should be removed wherever possible, for example by having applications anonymised and screened for stigmatising information before they are delivered to decision makers (Lindsey et al., 2013). Using highly structured interviews with diverse panels may also be beneficial (Lindsey et al., 2013; WRES, 2019b).

Conclusions
Black, Asian and Minority Ethnic nurses and midwives are disadvantaged regarding career development opportunities and the resulting career delay they experience is significant. Interventions to address this should focus on improving their access to professional training opportunities and reducing bias in recruitment procedures.

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