Discrimination, feeling undervalued, and health-care workforce attrition: an analysis from the UK-REACH study

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There are increasing concerns about healthcare staff leaving the workforce, and the significant adverse knock-on effects attrition has for patient care, which the COVID-19 pandemic is likely to have exacerbated. In July 2022, a report by the Health and Social Care Committee stated that "The National Health Service (NHS) and the social care sector are facing the greatest workforce crisis in their history"[1] with estimated shortages of 12,000 hospital doctors and over 50,000 nurses and midwives[1], meanwhile demand for services increases and waiting lists grow.

NHS staff data indicate that the numbers of staff leaving since 2021 vary across region, professional group, gender, age, and country of professional qualification;[2,3] however there is limited information on the reasons staff from different groups are leaving. Furthermore, data from the 2021 NHS Staff Survey found that over half of respondents were considering changing jobs, but it is uncertain why, and, crucially, what would encourage and enable them to stay.[4] The General Medical Council workforce report published in October 2022 called for "workforce planners [to] consider the data regarding leaving rates and what lies behind them so that methods for improving retention can be found."[5]

A previous study conducted in the USA early in the pandemic found that healthcare workers (HCWs) who feel valued by their organisation are less likely to reduce their working hours or leave their jobs than those that do not.[6] A pre-pandemic systematic review identified feeling undervalued by an employer and experiencing discrimination at work were negatively associated with job satisfaction and retention in the NHS.[7]

Considering the current staffing crisis facing the NHS, and to inform interventions, we sought to identify the proportion of HCWs who are considering or have acted on intentions to change or leave their health-care role as a result of the COVID-19 pandemic. We also sought to investigate whether such intentions are associated with feeling undervalued (ie, by the UK Government, the general public, and their employer), experiences of discrimination at work, and some sociodemographic and occupational parameters.

We conducted a cross-sectional analysis using questionnaire data from the third wave (Oct – Dec 2021) of The United Kingdom Research study into Ethnicity and COVID-19 outcomes in Healthcare workers (UK-REACH) longitudinal cohort study (for details on inclusion criteria and recruitment, see supplementary text).[8] Our outcome was binary and derived from the questionnaire item *"Has the COVID-19 pandemic made you consider or act upon any of the following in relation to your work? (select all that apply)"*. Participants could select *"No", "Yes, considered" or "Yes, acted upon"* in relation to the following options: *1. Reducing the hours you work in your current job; 2., Changing the field in which you work (e.g. changing speciality); 3. Leaving your healthcare role entirely; 4. Reducing clinical duties; 5. Taking early retirement; 6. Other (please specify); 0, None of the above.* Responses to the questionnaire item allowed participants to be coded as either having considered or acted upon making any changes to their role in response to the COVID-19 pandemic (1) or not (0).

Our primary exposures of interest were answers to questions about whether an HCW felt their work was valued (ie, by the Government, by their employer, and by the public) and experiences of discrimination at work (ie, from colleagues, patients, or both). We used multivariable logistic regression to establish the association between our outcome and these exposures. We constructed a base model of age, sex, ethnicity, and occupation and added each of our primary exposures separately to the model. We present results as adjusted odds ratios (aORs) and 95% CIs. We investigated interactions between demographic or occupational covariates with each of our primary exposures of interest by fitting models with and without the interaction and comparing model fit by use of likelihood ratio tests (for detailed methodology see appendix – Supplementary Text).

We excluded those who did not provide information on the outcome and primary exposures of interest. As questions about whether a HCW felt their work was valued were only asked to those who indicated they were currently working, this meant excluding those who indicated they were not working in any capacity from the main analysis. We determined the reasons given for not currently working in this group and also stratified the group by our outcome measure. Finally, because those

who left the healthcare workforce and took up a role outside of healthcare could have answered questions about whether they felt their work was valued with respect to their current role (rather than their healthcare role), we undertook a sensitivity analysis excluding those that indicated they had acted upon leaving their healthcare role or taking early retirement (for details see Supplementary Text).

Formation of the analysed sample is shown in Supplementary Figure 1. Recruitment began on Dec 4, 2020, and continued until Feb 28, 2021. In total, 17 891 HCWs were recruited into the study, and 15 199 responded to the baseline questionnaire. 5892 of 15 199 HCWs who had completed the baseline questionnaire also completed the third questionnaire. 4916 respondents provided information on the primary exposures and outcome of interest and were included in the main analysis. A description of the analysed sample is presented in the appendix (Supplementary Table 1). Overall, 2358 (48·0%) of 4916 staff considered or acted on changing or leaving their role (1668 [33·9%] considered and 690 [14·0%] acted on). After adjustment for age, sex, ethnicity, and job role, the groups most likely to report making changes to, or leaving, their health-care role were women versus men (aOR 1·45, 95% CI 1·25–1·67; p<0·0001); people who self-categorised as being from mixed or multiple ethnic groups of White and Black Caribbean, White and Black African, White and Asian, and any other mixed or multiple ethnic backgrounds versus people who self-categorised as White (1·47, 1·09–1·98; p=0·011); people aged 50–59 years versus those aged 40–49 years (1·32, 1·13–1·54; p=0·0004); and those in nursing or midwifery roles versus those in medical roles (1·25, 1·03–1·50; p=0·022). Health-care scientists were less likely than medical staff to report attrition intentions (aOR 0·61, 95% CI 0·46–0·82; p=0·0010), as were allied health professionals (0·84, 0·70–0·99; p=0·041; (Figure 1).

Overall, 1041 (21·2%) of 4916 staff reported having experienced discrimination in the past 6 months (403 [8·2%] participants reported discrimination from patients, 449 [9·1%] from colleagues, and 189 [3·8%] from both patients and colleagues). 2338 (47·6%) staff strongly disagreed or disagreed that their work was valued by the Government, 1009 (20·5%) strongly disagreed or disagreed their work

was valued by their employer, and 869 (17·7%) strongly disagreed or disagreed that their work was valued by the public (Supplementary Table 1). After adjustment for demographics and job role, attrition intentions or actions were strongly associated with experiencing discrimination, with higher odds of attrition intentions if an HCW had experienced discrimination from colleagues (aOR 2·84, 95% CI 2·29–3·51; p<0·0001), patients (2·06, 1·66–2·56; p<0·0001), and colleagues and patients (2·96, 2·14–4·08; p<0·0001) than if an HCW had experienced no discrimination. Compared with people who neither agreed nor disagreed, participants were far more likely to report attrition intentions or actions if they strongly disagreed that their work was valued by the Government (aOR 2·49, 95% CI 2·10–2·95; p<0·0001), their employer (1·83, 1·39–2·42; p<0·0001), or the public (2·07, 1·52–2·81; p<0·0001). The only interaction that improved model fit was between age and feeling valued by the public (for details see Supplementary Tables 2 and 3). Reasons given by those not working at the time of data collection are given in Supplementary Table 4. Proportions of those who were considering or had acted on changing or leaving their role were similar when those not working at the time of data collection were included (Supplementary Table 5).

Nearly half of the HCWs in this study reported intentions to change or leave their healthcare role. This is highly concerning given the NHS is already short of 103 000 Full Time Equivalent staff, with shortages projected to grow to 179 000 in two years' time.[10] Such staff shortages will put increasing burden on remaining staff, likely exacerbating attrition and ultimately risking patient safety. Additionally, we have identified several important factors associated with intentions to change or leave a healthcare role as a result of the COVID-19 pandemic. These include feeling undervalued, experiencing discrimination at work by colleagues and/or patients, and belonging to particular demographic and occupational groups.

Our study has several limitations. This is a cross-sectional analysis and some of the associations reported could be bidirectional. The analysis may be affected by selection bias but, given that the study was not advertised as specifically relating to workforce attrition, it avoids the framing effects that might be seen in studies specifically investigating this topic. As questions used to derive

information on whether HCWs felt their work was valued (by Government/employer/public) were only asked to those currently working we could have underestimated the proportion of those acting on attrition intentions (as those who had left the healthcare workforce entirely and not taken on another role would have been excluded), however the proportions of those who had considered/acted upon changing their role were similar when the non-working cohort were included.

This study adds significantly to the limited information in the literature concerning healthcare workforce attrition during the pandemic. Our results are concerning and suggest that policymakers must find and implement solutions at both national and organisational levels to reduce discrimination, improve staff satisfaction and well-being, and improve retention to prevent the workforce crisis from worsening.

Acknowledgements

UK-REACH is supported by a grant from the MRC-UK Research and Innovation (MR/V027549/1) and the Department of Health and Social Care through the National Institute for Health Research (NIHR) rapid response panel to tackle COVID-19. Core funding was also provided by NIHR Biomedical Research Centres. JN is an NIHR Academic Clinical Fellow. DP is an NIHR Doctoral Fellow (NIHR302338). KW is funded through an NIHR Career Development Fellowship (CDF-2017-10-008). LBN is supported by an Academy of Medical Sciences Springboard Award (SBF005\1047). KK is supported by the National Institute for Health Research (NIHR) Applied Research Collaboration East Midlands (ARC EM). KK and MP are supported by the NIHR Leicester Biomedical Research Centre (BRC). MP is funded by an NIHR Development and Skills Enhancement Award. This work is carried out with the support of BREATHE-The Health Data Research Hub for Respiratory Health [MC_PC_19004] in partnership with SAIL Databank. BREATHE is funded through the UK Research and Innovation Industrial Strategy Challenge Fund and delivered through Health Data Research UK.

Contributors statement

MP conceived of the idea for UK-REACH and led the application for funding with input from KW, LBN, KK and the study collaborative group. The questionnaire was designed by CAM, KW, LBN, KK, MP and the study collaborative group. CAM, KW, and MP formulated the idea for the analysis and contributed to the analysis plan with input from AM, MG, LT and LBN. CAM analysed the data with input from LT, KW and MP. CAM and MP have accessed and verified the underlying data. CAM and KW drafted the manuscript with input from MP. CAM, AM, MG, LT, JN, DP, SC, KK, KW and MP edited and approved the final version of the manuscript for publication.

Competing interests

KK is Director of the University of Leicester Centre for Black Minority Ethnic Health, Trustee of the South Asian Health Foundation and Chair of the Ethnicity Subgroup of the UK Government Scientific Advisory Group for Emergencies (SAGE). MP reports grants from Sanofi, grants and personal fees from Gilead Sciences and personal fees from QIAGEN, outside the submitted work.

Data sharing statement

Availability of data and materials

To access data or samples produced by the UK-REACH study, the working group representative must first submit a request to the Core Management Group by contacting the UK-REACH Project Manager in the first instance (uk-reach@leicester.ac.uk). For ancillary studies outside of the core deliverables, the Steering Committee will make final decisions once they have been approved by the Core Management Group. Decisions on granting the access to data/materials will be made within eight weeks.

Third party requests from outside the project will require explicit approval of the Steering Committee once approved by the Core Management Group. Note that should there be significant numbers of requests to access data and/or samples then a separate Data Access Committee will be convened to appraise requests in the first instance.

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