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# Emerging public health challenge in UK: perception and belief on increased COVID19 death among BAME healthcare workers

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## ABSTRACT

**Background** Coronavirus infection Disease 19 impacted every part of the world and routine life. Recent report from the Office of national statistics in UK reported disproportionate death among Black Asian and minority ethnic (BAME) population. NHS is heavily relied on the BAME work force both in front line and in the community. We attempted to explore the beliefs and perception about reported worrying issue among BAME health work force in a Diverse city of Leicester.

**Methods** This is a cross-sectional survey using 20 questions in an electronic format. The target population was identified through Leicester Asian Doctors Society and Leicester Asian Nurses Society. The questionnaire was then distributed electronically to the members. Survey questionnaire was accessed by 372, incomplete response (172) were excluded and 200 completed responses were analysed.

**Results** Majority of BAME workforce are routinely involved in front line duties. More than 70% were anxious about their role during this pandemic. The Personal Protective Equipment (PPE) supply was adequate, and the support received from the local healthcare providers was more than satisfactory. The work force perceived co-morbidity, lack of PPE and testing were one of the few reasons for increased death in BAME. BAME group felt adequate provision of PPE, increased testing and improving mental health well-being is required to alleviate concerns and improve BAME working life in NHS.

**Conclusion** BAME workforce are routinely involved in front line work and current anxiety level is very high. Adequate provision of mental health support with clear risk stratification for return to work is required urgently.

**Keywords** BAME group, BAME health workers, COVID 19, death, healthcare workers

## Background

Corona virus infection disease 19 (COVID-19) first case was reported from Wuhan, China, in the later part of 2019. COVID-19 rapidly infected other parts of the world, subsequently the World Health Organisation declared a Pandemic in March 2020.[1] Most of the developed and developing countries went into lockdown measures to avoid morbidity and high mortality rates.[2]

In UK, COVID19 peaked in April 2020. The Office of National Statistics (ONS) data analysed the initial mortality data and reported worryingly disproportionate death among Black, Asian and Minority Ethnicity group (BAME).[3] Ethnicity and disproportionate death rate was reported particularly in Black males are 4.2 times and Black females are 4.3 times higher than white ethnicity. However, the adjusted risk for Black Ethnicity is 1.9 for both sexes. This reduction was due to living mainly in London which doubled the risk of anyone living in London. The ONS data also reported people of Bangladeshi, Pakistani, Indian and Mixed ethnicities also had statistically significant raised risk of death involving COVID-19 compared with those of White ethnicity. Intensive care audit data reported increase admission of BAME patients in intensive care unit with COVID-19.[3] It is also reported local authorities such as London and Birmingham with increased

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proportion of BAME residents and lower income group had increased COVID-19 mortality.[13,15]

Each percentage point increase in the proportion of the population experiencing income deprivation associated with 2% increase mortality rate [IRR = 1.02, 95% CI 1.01–1.04].

UK government swiftly ordered a committee to investigate the reasons for increased death among BAME population and we are now awaiting the report. Several factors were linked with the increased mortality[7–10] which includes lower socio-economic status, social deprivation, Vitamin D Deficiency, Genetics, co-morbid medical conditions and obesity.[4,11,12] Urbanization is also linked to the disparity in risk and death among BAME workers.[28]

It is interesting to note the disproportionate death is also high in BAME population in USA.[16] The death rate is high in Black Americans and Asians when compared to white population.[17,18] Different fatality rate reported due to COVID-19 in developing countries when compared to developed countries.[19] Various factors linked to increased death in the developing countries are prevalent, particularly co-morbidity, poor socio-economic status and housing, however case fatality rate is low.[19] Health inequality and ethnic variation in certain chronic diseases may be another reason and it is one of the public health challenges currently emerging in UK.[20]

NHS manpower is hugely relying on international work force particularly from developing countries. Data from NHS (In June 2019) 13.3% of NHS staff in hospitals and community services in UK reported a non-British nationality.[6] BAME health work force is obviously concerned with disproportionate mortality among BAME healthcare workers as some of the factors already linked such as social deprivation, low social economic class, poor housing do not apply. Recent surveys among NHS workforce on COVID including a recent survey by Royal College of Physicians London, among their members also reported 48% were very much concerned and this is raised to 76% of those from BAME members.[14]

## Methodology

We conducted a cross-sectional survey among BAME health work force in a diverse city, Leicester. Leicester hospitals is one of the few trusts employed more BAME health work force in UK. Leicester Hospitals BAME work force comprised medical and dental staff group 55.5% and nurses 33.4% among the total local health work force. This may reflect the diverse population of this historic city in the UK. We focused on BAME work force in Leicester, a multi culture, diverse city. This is a cross-sectional survey among the BAME health workforce committed to local health sectors in Leicestershire. We piloted our initial questionnaire, developed and redesigned the questionnaire before circulated the anonymized survey electronically. Our questionnaire particularly focused on COVID-19 among BAME health work force particularly in front line duties and their concerns and beliefs. We also attempted to explore the availability of personal protective equipment and support received from place of work. Another aspect we explored is about the mental health well-being of BAME work force during the COVID-19 pandemic working life. Various factors are linked to disproportionate death recently; and we asked the respondents about their perception for the possible causes such as co-morbidity, PPE, lack of testing, etc.

The survey was then circulated electronically to BAME healthcare workers through Leicester Asian Doctors Society (LADS). The LADS was established in 2015 by a group of Asian Doctors working in and around Leicester to support and celebrate with a moto of together we care. LADS established a subgroup for nurses belong to BAME group known as Leicester Asian Nurses. The study period was from 2 May to 17 May, selected few weeks just after the peak of the epidemic in UK. The study period was selected such a way to get a reasonable immediate reflection from the BAME work force following the peak of COVID19 Epidemic in UK. The results were analysed using online software smart survey for statistical purposes.

## Results

The response rate for the survey was impressive, with response rate of 60%, when compared to our previous survey experience. In total, 374 members accessed our online survey and 200 completed responses for the analysis ($N = 200$), 172 incomplete responses were excluded. The analysis was carried out using smart survey online software. Our respondents are equally distributed with male and female workers in Leicestershire (Figure 1). A total of 78% of BAME workers were born outside of the UK and 22% were born in the UK, with the majority, 64% of workers, being born in India, 11.5% from Black Africans and few from Malaysia and Singapore. Our workforce data from our survey reflects the current NHS workforce.[5,6] The age group ranges from 30 to 70 with average age of 40–50 years (47%). Our respondent split of 70% doctors and 30% from nursing group. Most of the respondent are in full-time employment (85.5%) at local NHS trust with University Hospitals of Leicester being the main trust. Few respondents are from district general hospital at Kettering and Northampton. A total of 30% respondents are from primary care, and 58% from secondary care. In secondary care, there was a spilt of 41% doctors, and 16% nurses. It is interesting to note most of the BAME work force (80.5%) are already routinely in front line role. Only 5% were

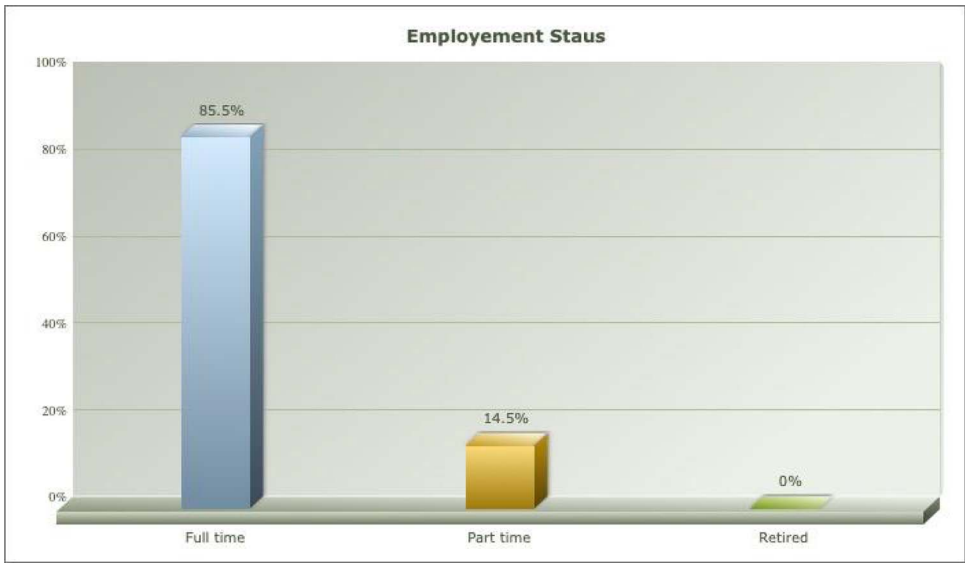


**Fig. 1** Employment status.

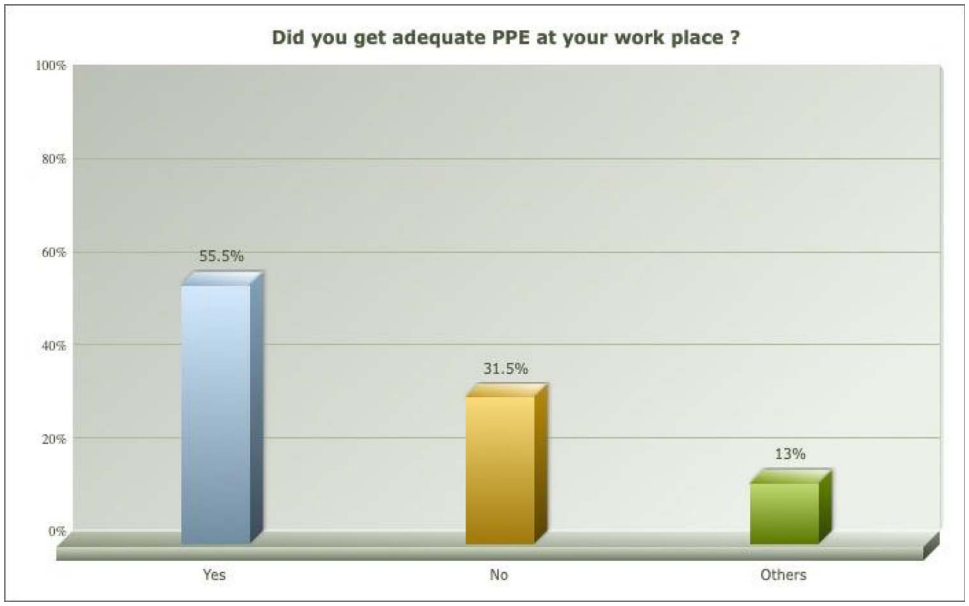


**Fig. 2** PPE availability at work place.

deployed to the front line from routine workplace contrary to previous survey reported in the media. The exposure to front line work varies from every day (60.1%) to once every week (11.5%). The current pandemic 66.6% BAME workforce worry, anxious about front line, which is a cause of concern and this public health issue was highlighted in previous studies.[21,22]

## PPE and support from NHS

Regarding availability and accessibility of PPE 55.5% had no issues in getting one (Figure 2); however, 31.5% had issues with PPE from their workplace. We also asked about any difficulty in getting PPE from the managers and noted 66.6% responded that they had good support from their senior management team at their workplace (Figure 3), and only 16.5% need to request or demand PPE at their workplace. In total, 62.5% of BAME work force are very satisfied. Regarding support from Local NHS providers, (Figure 5) only 27.5% were not satisfied with support from the employers. However, 70.5% respondents are satisfied with the trust. In total, 80.5% respondents were satisfied with the overall support received during the pandemic and were satisfied with the

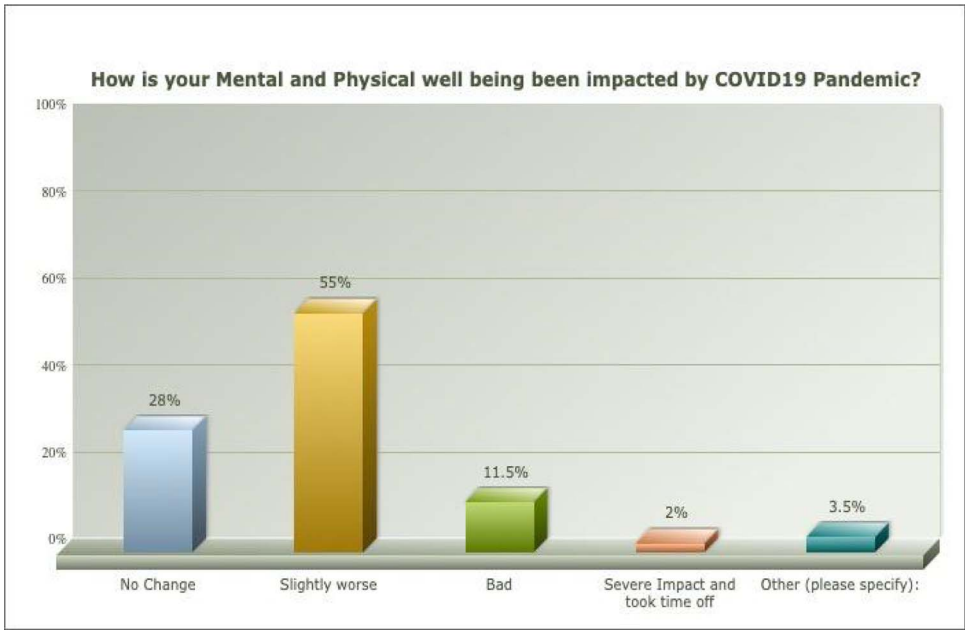


**Fig. 3** BAME workforce Impact on mental well-being.

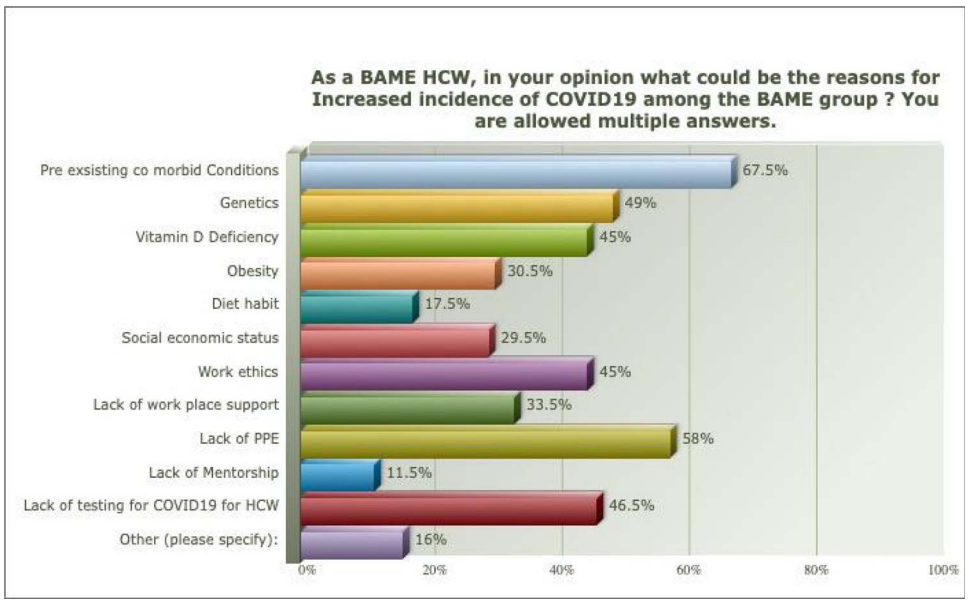


**Fig. 4** Beliefs for the reasons for increased COVID 19 death.

support received from the college and national society. This demonstrates how best the UK NHS workforce collectively geared up to face the unprecedented public health medical emergency in UK.

## Mental health well-being

Previous studies highlighted the healthcare workers faced anxiety and other mental health issues during COVID19 Pandemic.[23,24] Recent studies also emphasized the issue with the mental health well-being of workers during the current pandemic.[25] Front line workers are anxious about their role; however, these workers are self-reliant. There may be a cultural component in handling the uncertainty during pandemic among healthcare workers living and working in isolation in a different country. We explored mental health aspects in our survey. It is interesting to note our respondents (figure 4) reported that this pandemic had an impact with their mental health. In total, 72% had some form of mental

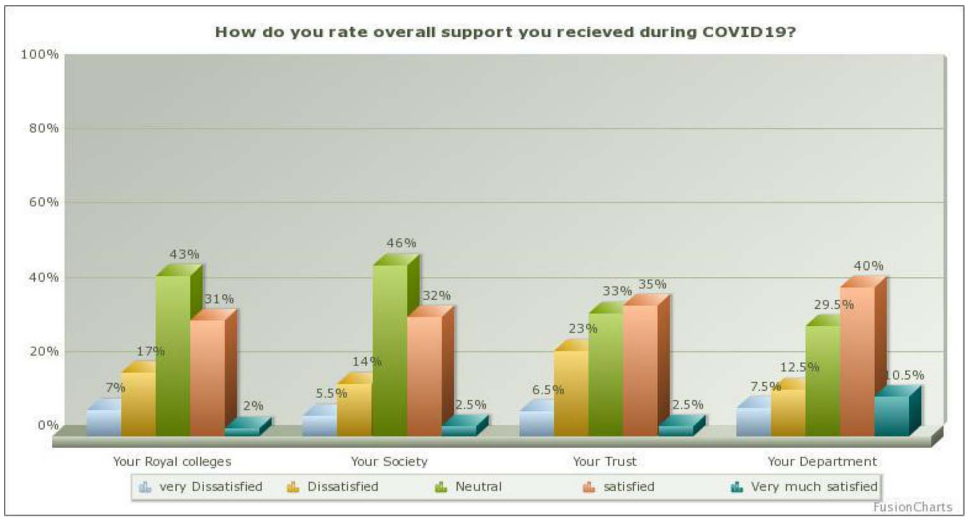


**Fig. 5** Support at work place.

health impact, 55% had mild form, worryingly 11% had a bad impact and out of the 11%, 2% took time-off work due to the mental health impact in this pandemic. Only 28% reported no change in their mental health well-being. Our study clearly emphasized more work need to be done urgently to protect the BAME group from mental health issues and offer coping strategies at workplace.

### BAME COVID 19 death rate beliefs

Various factors and studies were linked to the disproportionate death among BAME group, such as pre-existing co-morbidity, vitamin D deficiency, genetics, lack of PPE and obesity. We asked the respondents about their perception and belief for the disproportionate death among BAME in our survey. It is reported that (Figure 5) pre-existing co-morbidity (67.5%), lack of PPE (58.5%), lack of testing (46.5%), vitamin D deficiency (45%), obesity –30.5%) and socio economic status (29.5%) in our survey.

We asked in our survey what changes would help to improve the work environments and BAME workforce reported Increasing PPE (71%,) testing (66%) and most importantly providing adequate mentorship (70.5%) during this pandemic at workplace needed urgently.

## Discussion

Our survey identified the fact most of the BAME Health workers are routinely on front line duties irrespective of COVID19 pandemic period. BAME workers are in front line work therefore increased risk of infection with COVID 19. It is also highlighted in the report from Public health England as clear disparity of risk among BAME group with COVID19.[28] These factors lead on to increase level of anxiety among BAME of health workers in UK.

This study also highlighted the increased level of anxiety among BAME health workers and clear impact on the work force mental well-being during this pandemic. Anxiety level may also lead on performance issues at workplace in period of uncertainty and unprecedented pandemic. We acknowledge the limitation of the study as it is conducted in a diverse city not widely across UK. The survey was conducted among BAME health work force study group; however, Asians are predominately responded with limited response rate from Black African Health work force.

## Conclusion

From our survey, it is evident that the clear majority of the BAME healthcare workers are on the front line in their routine work, therefore they are at higher risk of contracting COVID-19.

It may be one of the reasons for increased death. Our study respondents perceived BAME doctor's disproportionate death may be due to co-morbidity and lack of PPE and testing. With limitation in our study, we are unable to draw a conclusion based on this. Majority of the BAME work force is anxious about the working condition and family particularly living in a social isolation during COVID-19 and reported had significant impact in their mental health. There were no studies comparing the difference of mental health impact in NHS health work force with different ethnicity in a pandemic, clear research is needed exploring the mental health issues in BAME workforce.[23,24]

Lack of PPE and lack of testing is one of the reasons highlighted for increased death in BAME work force in our survey. It is important to have these issues investigated seriously and clear consistent risks stratification guide for BAME workforce is implemented in workplace urgently. The risk stratification needs to be consistent and should be culturally competent for BAME workforce.[25] Culturally competent mental health support for BAME health work force need to be organized by the local healthcare providers to alleviate the anxiety among BAME workforce.[26,27] NHS five plan is a welcoming move to reduce the risk and improve the working life of BAME work force in NHS. Evaluation of the newly developed risk stratification framework in real life and implement any innovative measures to improve the confidence of BAME workforce in NHS.[23]

## Key messages

1. Disproportionate COVID 19 Death among BAME group is a public health challenge.
2. BAME health workers mental well-being is Impacted with high level of anxiety and uncertainty.
3. Culturally competent risk stratification and return to work plan is the need for the hour.

## Conflicts of interest

None to declare.

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## Acknowledgements

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