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Differential Impact of COVID-19 on Junior Doctors

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ABSTRACT

The COVID-19 pandemic had a significant impact on the working circumstances for doctors. To cope with increased workload, hospitals had to increase working hours, reallocate vacation and study leaves and rotations. This impacted the physical and mental well-being of all doctors, particularly international medical graduates (IMG). We explored the differential impact on junior doctors working in a district general hospital. In a mixed methods study, we evaluated the experience and perception of junior doctors in a United Kingdom district hospital in the south of England during the first wave of COVID-19 between March 2020 and September 2020. The study was conducted in two phases: creating a questionnaire followed by an evaluation of qualitative and quantitative content. About 83% doctors in non-consultant grades responded and 37.8% were IMG. The study found that IMG were significantly more likely to experience stress when compared to UK medical graduates (p = 0.008). They were also more worried about contracting the virus when compared to UK medical graduates (p = 0.004). Both groups felt that their training and career progression had been adversely affected. Various factors could play a role in increased stress in IMG when compared to UK medical graduates. These factors included: adjusting to a new system, being away from family, exams and interviews being cancelled, and reports suggesting that members of the the Black, Asian and Minority Ethnic (BAME) community were more likely to be affected by serious illness if contracted COVID-19. This highlights the need for additional support for IMG.

Keywords: *COVID-19, Junior doctors, Well-being, International medical graduates*

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INTRODUCTION

The first wave of the global pandemic caused by COVID-19 had a profound effect on the medical work force and delivery of medical education. With no definite cure identified (1), countries were forced to adopt social distancing measures and enforce various stages of lockdown. Working from home was not an option for most health care workers who were needed to work on the front line. Hospitals had to reorganise their work schedules to be well prepared for the expected rise in patient numbers. However, on an individual level, this led to the staff working more unsocial hours and longer shifts, which increased anxiety amongst doctors. Not only did some doctors contract the virus, but the uncertainty also took a deep toll on their

mental well-being especially affecting junior doctors and international medical graduates (IMG) (2). A survey done by the British Medical Association found that 41% of doctors were going through various kinds of stress related to their work, and 29% of them felt that this had exacerbated due to the pandemic (3). With flights being cancelled, and annual leaves being re-allocated, several doctors were unsure of when they would be able to fly back to their home country to see their loved ones. Statistics showed that the mortality rates of COVID-19 were 10% to 50% greater among other ethnic groups in comparison with white British people (4), which led to greater anxiety amongst IMG. To better support junior doctors, we aimed to explore the needs of a cohort of junior doctors working in the UK general hospital.

METHODS

In a mixed methods study we evaluated the experience and perception of junior doctors working in the Royal Bournemouth Hospital, a general hospital in the United Kingdom during the COVID-19 first wave between March 2020 and September 2020. As there were no pre-validated questionnaires, we created our own questionnaire based on areas identified by the junior doctors themselves. Although we did not conduct a formal systematic review, we identified from literature factors affecting the well-being of junior doctors (2–3) to support this discussion. We also reviewed factors that were considered important in improving the experience of hospital doctors in previous research carried out in our department (5).

Phase 1: The questionnaire was created after a series of meetings between the lead investigators (first authors) and various junior doctors individually or in groups exploring areas of importance.

Phase 2: The questionnaire was circulated amongst the junior doctors via Google Forms. There were free text areas for comments and suggestions. More direct questions were designed to examine specific experiences and opinions. To avoid acquiescence bias, we purposefully chose positively and negatively worded questions. Levels of agreement or disagreement were rated using a 5-point Likert scale (1 indicating low agreement and 5 indicating high agreement). The questionnaire concluded by inviting participants to comment on what was done well and what could be improved. Data were stored on an encrypted data drive and are non-identifiable.

We conducted a thematic analysis on the comments based on the Braun and Clarke (6) approach of a six-step process: familiarisation coding, generating themes, reviewing themes, defining themes, naming themes, and writing. For a comment to qualify for being considered as a theme there needed to be at least two similar comments relating to it. Differences in categorical data were analysed using Fisher's exact probability test and continuous data was analysed using the Mann-Whitney U test. For the latter two tests a P-value of ≤ 0.05 was taken as significant. Analysis was carried out using SPSS version 24.0. Consent was taken from each participant and responses were anonymous. The study was approved by the hospital research and development department.

FINDINGS

Response rate was 83% (74/89 doctors in non-consultant grades) with female 38 (51.4%), $P = 0.814$; mean age 29.4 years (SD 4.03). Demographic characteristics are summarised in Table 1. IMGs comprised 37.8% of respondents, with 45% identifying themselves as English, Welsh, Scottish, Northern Irish, British, and the remaining classified as minority ethnicities or mixed race. IMGs were significantly more likely to be employed in stand-alone non-training posts.

Table 1: Demographic characteristics

Demographic characteristics	IMG (*n* = 28)	UK graduate (*n* = 46)	*P*-value
Age			
Mean (SD) Median	31.5 (3.4) 31	28.1 (3.8) 28	0.000
Gender			
Female	15 (53.5%)	23 (50.0%)	0.814
In formal training post	6 (21.4%)	39 (84.7%)	0.000
Time in hospital (months)			
Mean (SD) Median	13.4 (11.8) 11.5	26.2 (26.5) 17.0	0.004
Time in UK since qualification (months)			
Mean (SD) Median	19.6 (18.5) 12.0	35.2 (31.9) 24.0	0.009

Table 2 highlights the responses to the various questions from IMG and UK graduates. International graduates were significantly more likely to report experiencing stress. Other statements that showed significant difference between IMG and UK graduates included "I am worried about contracting the virus", "I feel I received adequate support from colleagues during COVID-19", "I feel anxious in regards to when I will be able to travel to see my loved ones" and "I feel burned out due to the current working hours". Both IMG and UK graduates did not feel that the COVID-19 period benefitted career progression although IMG were significantly more likely to feel that career progression/ training had been adversely affected. Both groups felt marginally optimistic about future career and demonstrated worry about transmitting the infection to family and other people, the impact of different work patterns that resulted in longer shifts and not been able to spend a lot of time with family.

Table 3 highlights free text comments in relation to physical or mental well-being. Themes of importance that had a negative impact on this were, long hours (12 hours compared to usual 8 hours), uncertain shifts, impact of disease, poor nutrition and exercise, career progression uncertainty and family absence including childcare difficulties. Changing protective personal equipment guidance, annual leaves cancellation and not been able to carry over leave to the next rotation and risk assessment delays were areas of concern. On the other hand, good teamwork and additional staffing levels at nights and weekends made the service safer and improved team spirit. More involvement of junior doctors in setting rotas and allocation of staffing as well as continuing teaching were highlighted as could have been done better.

DISCUSSION

This study gives new insights into the needs of junior doctors including common areas of concern but also additional information and how the needs of IMG differ from those of local graduates.

Many IMG were older and in non-training positions (78.6%) compared to UK graduates. They were significantly more likely to feel that career progression and training had been adversely affected due to COVID-19. Many factors can contribute to this including the need to pass exams as well as adjusting to a new culture and style of teaching and learning (7).

Table 2: Differential impact of COVID-19 on IMG vs. local UK graduates

Question	IMG Yes/No	*N*	Mean	SD	*P*-value
I feel more stressed over the last few months	Yes	28	3.86	1.239	0.008
	No	46	3.04	1.299	
I feel I have gained a lot during COVID-19 in terms of career progression	Yes	28	2.36	1.162	0.792
	No	46	2.52	1.362	
I feel very positive in regard to the future of my career	Yes	28	3.04	1.290	0.123
	No	46	3.50	1.006	
I am worried about contracting the virus	Yes	28	3.32	1.307	0.004
	No	46	2.46	1.149	
I am worried about transmitting the infection to my family/other people	Yes	28	3.75	1.555	0.972
	No	46	3.96	1.154	
Due to longer shifts I have not been able to spend a lot of time with family/friends	Yes	28	4.00	1.155	0.948
	No	46	3.89	1.386	
I feel I received adequate support from the hospital during COVID-19	Yes	28	3.18	0.945	0.141
	No	46	3.50	0.983	
I feel I received adequate support from my colleagues during COVID-19	Yes	28	3.89	1.031	0.04
	No	46	4.37	0.711	
I feel anxious in regard to when I will be able to travel to see my loved ones (leave blank if does not apply)	Yes	27	4.67	0.832	0.000
	No	31	3.29	1.039	
I feel my career progression/training has been adversely affected due to COVID-19	Yes	28	3.93	1.052	0.038
	No	46	3.26	1.357	
I feel burned out due to the current working hours	Yes	28	4.00	0.903	0.007
	No	46	3.13	1.343	

Table 3: Factors impacting on mental and physical health

Factors	(Is there anything you would like to add in regards to your physical or mental well-being?)
Long hours and uncertain shifts	The long hours have been mentally and physically exhausting. Even with a few days off after every shift I am still increasing tired and fatigued. It is increasingly difficult to concentrate and feel you are doing a good job when you are so tired. If it were not for the reduction in patient numbers in the early stages of the pandemic. My mental and physical would be far worse if I had to sustain this rota continuously with high acuity such as now for six months. Although I would not say I have burnt out, due to the repetitive long hours trying to accomplish regular specialty work, now services have largely resumed, I have struggled to remain enthusiastic and fully involved in the ward work. Mental health has been adversely affected by constant uncertainty about where I would be working and for how long. Routine change/random shift patterns have adversely affected mental and to some extent physical health.

(*Continued on next page*)

Table 3: (*Continued*)

Factors	(Is there anything you would like to add in regards to your physical or mental well-being?)
	I am always tired and think I live to work.
	COVID-19 rota has made everyone more stressed, on edge. It has also increased team spirit – this however has ebbed over time due to the persistently long shifts.
Nutrition and exercise	Weight loss due to increased hours being unable to cook and eat meals properly.
	The long hours do not allow for consistently of healthy eating/regular exercise.
	It has become more difficult to exercise regularly. I don't have time to exercise during the same day I am working as the shifts are longer.
	Impact of disease.
	A lot of these impacts are related to the pandemic itself, not necessarily the specifics of working.
	I started to see world and life from a different view and got more "spiritual".
Family absence	These last few months have significantly worsened my mental well-being and now I feel demotivated and unkeen to continue in my chosen career especially with the lack of ability to see my family and the unreasonable rota we have been sequestered on unnecessarily for the last few months.
	Mentally has been stressful time and not been able to see family. Difficult with managing childcare.
Career	Due to COVID-19, taster weeks, exams, courses and pretty much all educational opportunities were cancelled which makes me in a hard position now not able to apply for training and stressing me out on how to move forward in my career for the next year to come. It's more of a mental strain rather than a physical one.
	Mental-stressed due to unexpected changes in training programme applications.
Staffing	My mental well-being has been good because of the support provided by colleagues at work.
	I feel the increased teamwork has made me happier.

Uncertainty about recruitment, cancellation of exams, changes in recruitment, disruption of regular teaching as well as contractual uncertainty, as most IMG were in stand-alone posts that did not offer statutory protections as training posts do, were also highlighted. Cancellation of examinations and interviews that are essential for progression into training, further increased anxiety amongst IMG.

The British, Asian and Minority Ethnic (BAME) community was more susceptible to develop serious illness from COVID-19 (8) and inconsistent guidelines on personal protective equipment at the beginning of the pandemic could have contributed to the higher stress levels (9). IMG were significantly more concerned about contracting the virus than UK medical graduates as IMG were more likely to have a BAME background. In the context of international travel restrictions, it is also not surprising that IMG felt anxious in relation to uncertainty when they will be able to travel to see loved ones abroad. Such anxiety would have been compounded however not only by international uncertainty but also by a lack of clarity about leave entitlement and quarantine requirements.

All the above factors as well as unpredictable long and often unsociable hours are likely to have contributed to the overall significantly higher self-reported stress and burnout in IMG. A lack of awareness about these issues

may have contributed to the finding that IMG were less likely to feel supported by colleagues. Our data would be consistent with data on well-being and retention of doctors published by the General Medical Council (10).

In 2019, a precedent was set where the number of IMG who registered for a license to practice exceeded the number of local medical graduates (11). There is also strong ethnic diversity evident in this field as the percentage of BAME doctors joining the register increased by 23% in 2019 relative to a 12% recorded in 2012 (11). This highlights the need for more awareness into the unique issues faced by IMG and the presence of robust support networks. More involvement of junior doctors in setting rotas and allocation of staffing as well as continuing teaching were highlighted as areas for improvement in an event of another wave of COVID-19.

We used our local International Doctor's Support Initiative (IDSI) group to provide support to the junior doctors working at Royal Bournemouth Hospital. This group was created by fellow junior doctors to help IMG settle into the National Health Service (NHS) and the United Kingdom. We ensured regular junior doctor forum meetings were carried out, and support was provided to junior doctors needing support.

Studies carried out in other parts of the world, like United States, revealed similar issues faced by doctors belonging to a minority group. A survey was conducted by the American Medical Association (AMA) in June and July 2020 comprising 747 physicians. This survey showed that highest frequency of burnout was seen in doctors belonging to a multi-racial background (45%), and in African-Americans (37%) (12). Hence, we feel that doctors worldwide would benefit from similar support groups.

CONCLUSION

The results of this study highlight the need for support groups across health systems worldwide to ensure the physical and mental well-being of all doctors. As the pandemic is still not over, it is essential that all junior doctors are looked after, and measures are taken to improve their well-being. Additional support needs to be provided to certain groups of doctors, like IMG.

ETHICAL APPROVAL

Approval was obtained from the Research and Development Department of Royal Bournemouth Hospital in July 2020. Consent taken from each participant and all responses were kept anonymous.

REFERENCES

1. Yavuz SS, Ünal S. Antiviral treatment of COVID-19. Turk J Med Sci. 2020;50(SI-1):611–9. https://doi.org/10.3906/sag-2004-145

2. Rana T, Hackett C, Quezada T, Chaturvedi A, Bakalov V, Leonardo J, et al. Medicine and surgery residents' perspectives on the impact of COVID-19 on graduate medical education. Med Educ Online. 2020;25(1):1818439. https://doi.org/10.1080/10872981.2020.1818439

3. Hospitaltime. 2020 June 1 [cited October 14 2020]. BMA survey reveals the effects of COVID-19 on doctors wellbeing. Available from: https://www.hospitaltimes.co.uk/bma-survey-reveals-the-effects-of-covid-19-on-doctors-wellbeing/

4. Office for National Statistics. 2020 [cited 2020 October 18]. COVID-19 related deaths by ethnic group, England and Wales. Available from: https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/articles/coronavirusrelateddeathsbyethnicgroupenglandandwales/2march2020to10april2020

5. Azhar J, Thomas P, McCarthy KN, Raza T, Vassallo M. 2020. Improving the experience of hospital doctors who are not in training programmes. Br J Healthc Manag. 26(12):1–8. https://doi.org/10.12968/bjhc.2019.0052

6. Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol. 2006;3(2):77–101. https://doi.org/10.1191/1478088706qp063oa

7. Pilotto L, Duncan G, Anderson-Wurf J. Issues for clinicians training international medical graduates: a systematic review. Med J Aust. 2007;187(4):225–8. https://doi.org/10.5694/j.1326-5377.2007.tb01204.x

8. Vepa A, Bae J, Ahmed F, Pareek M, Khunti K. COVID-19 and ethnicity: a novel pathophysiological role for inflammation. Diabetes Metab Syndr: Clin Res Rev. 2020;14(5):1043–51. https://doi.org/10.1016/j.dsx.2020.06.056

9. Thomas JP, Srinivasan A, Wickramarachchi CS, Dhesi PK, Hung YM, Kamath AV. Evaluating the national PPE guidance for NHS healthcare workers during the COVID-19 pandemic. Clin Med. 2020;20(3):242–7. https://doi.org/10.7861/clinmed.2020-0143

10. General Medical Council. 2019 [cited 2020 October 14]. Well-being and retention of doctors. Available from: https://www.gmc-uk.org/-/media/documents/somep-2019---chapter-2_pdf-81119428.pdf?la=en&hash=A72B8007435701A3C33F7622EF15E85473362AFF

11. Gmc-uk.org. United Kingdom: General Medical Council; c2019 [cited 14 October 2020]. The state of medical education and practice in the UK. The workforce report. Available from: https://www.gmc-uk.org/-/media/documents/the-state-of-medical-education-and-practice-in-the-uk---workforce-report_pdf-80449007.pdf

12. American Medical Association. 2020 [cited 2022 August 28]. Experiences of minoritized, marginalized physicians in US during COVID-19. Available from: https://www.ama-assn.org/delivering-care/public-health/experiences-minoritized-marginalized-physicians-us-during-covid-19