

Covid Concerns: A Radiological Perspective

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Abstract

Aims

The aim of this study was to assess and quantify current staff attitudes and experiences of the Covid-19 pandemic in relation to training, research, education, patient care and staff morale.

Methods

An anonymised survey was carried out across the radiology departments of two university teaching hospitals over a 10-day period in December 2020.

Results

There was a total of 90 participants and 73% (66/90), 69% (62/90) and 86% (77/90) of participants either agreed or strongly agreed that the pandemic is having a negative effect on training, research and continued professional development respectively. A total of 63% (57/90) of participants either agreed or strongly agreed that the pandemic is having a negative effect on patient care and 88% (79/90) of participants either agreed or strongly agreed that the pandemic is having a negative effect on staff morale.

Conclusion

The Covid-19 pandemic has and continues to pose enormous challenges for the delivery of patient care, training, education and staff well-being with various novel and innovative solutions available to healthcare managers and providers.

Introduction

The World Health Organization (WHO) declared the Covid-19 global pandemic on March 11, 2020, and at the time of writing (20:31, 10/01/2021) there are a total number of 90,005,787 cases of Covid-19 worldwide and 1,931,382 recorded deaths^{1, 2}. This international health crisis has and continues to pose enormous challenges resulting in profound adjustments and transformation in the delivery of health care, training and education³⁻⁵.

Numerous specialities have shifted towards a virtualised model of patient assessment and management to insure a safe and continued high standard of care with multidisciplinary team (MDT) discussion moving to online-based platforms^{3,6}. The need for physical distancing to reduce infection transmission rates coupled with the redeployment of health care workers to areas of more crucial need has resulted in significant staffing, training and teaching concerns⁷⁻⁹. Furthermore, the cancellation and / or postponement of medical conferences and examinations have necessitated education providers to adapt quickly and modify their delivery of content and evaluation to web-based modalities^{10,11}.

The pandemic also presents substantial psychological impacts for healthcare workers and research following the SARS epidemic highlighted the two key areas of social isolation (due to physical distancing and infection control) and lack of support (due to reduced interaction with family and friends) as being major contributors, both of which have been particularly heightened in the current circumstances¹².

The aim of this study is to assess and quantify current staff attitudes and experiences of the Covid-19 pandemic in relation to training, research, education, patient care and staff morale. In doing so the authors seek to identify any trend or outcomes that may be useful for healthcare managers, policy makers and training bodies with regard to future planning, provision of services and training.

Methods

The authors invited radiology staff members (radiographers, nurses, consultant radiologists, radiology specialist registrars) from two university teaching hospitals to undertake a voluntary anonymised survey during a 10-day period from 13/12/2020 to 23/12/2020. The survey was a Likert-scale based anonymous questionnaire which is an extensively utilised, recognised and validated means of scientifically measuring attitudes^{13,14}. The survey captured the basic demographics of gender and discipline and contained 5 questions regarding the effect of the pandemic on training, research, continued professional development, patient care and staff morale. Approval was granted by the local Research Ethics Committee prior to commencement and all data was password protected and processed using Microsoft Excel.

Results

A total of 92 participants took part in the survey. Of these, two surveys were incomplete leaving a total of 90 participants included in the final analysis. There were 64 female and 26 male participants, and the discipline breakdown was as follows: 19 consultant radiologists; 11 nurses; 47 radiographers; 13 radiology specialist registrars.

A total of 73% (66/90) of participants either agreed or strongly agreed that the pandemic is having a negative effect on training, with 16% (14/90) stating they either disagreed or strongly disagreed and 11% (10/90) stating they neither agreed nor disagreed (Figure 1).

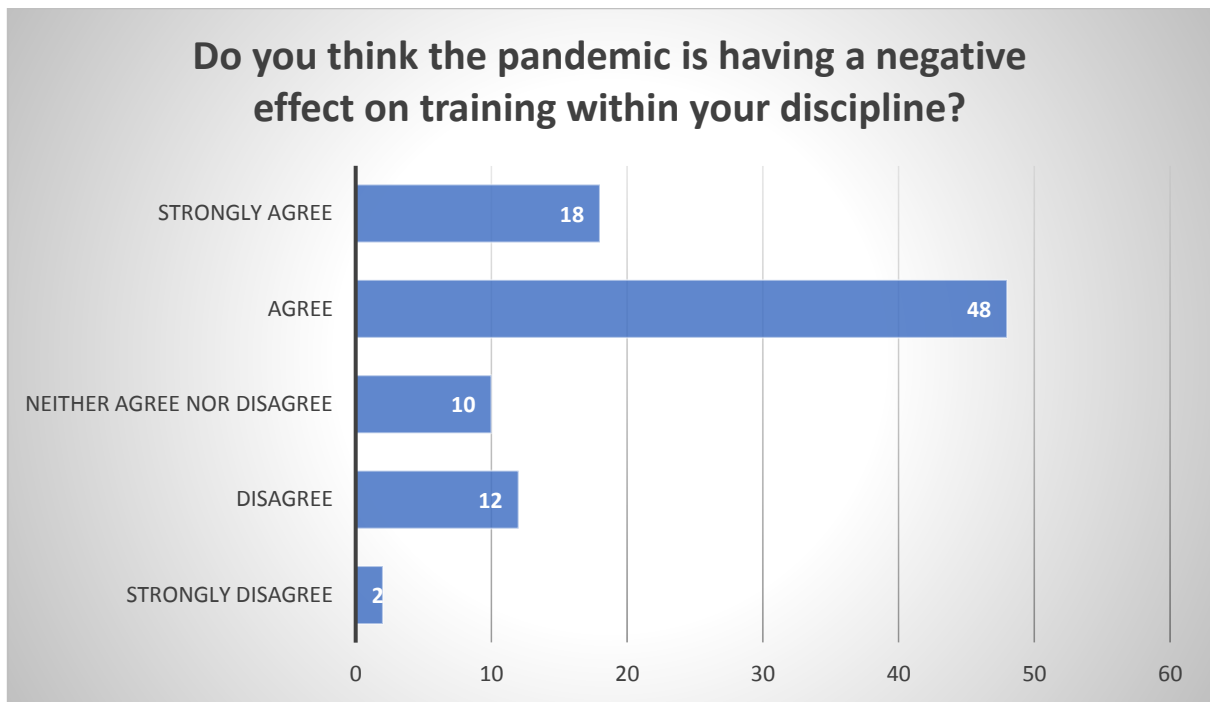


Figure 1: Participant response to question – Do you think the pandemic is having a negative effect on training in your discipline?

In relation to research, 69% (62/90) of participants either agreed or strongly agreed that the pandemic is having a negative effect on research, with 9% (8/90) stating they disagreed and 22% (20/90) stating they neither agreed nor disagreed (Figure 2).

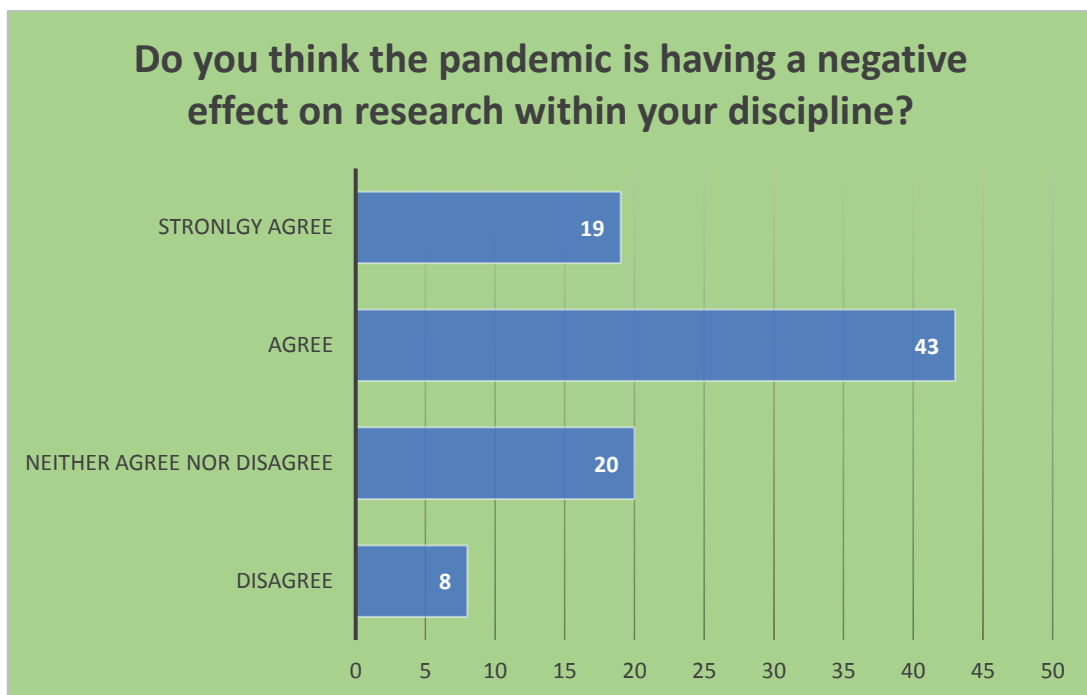


Figure 2: Participant response to question – Do you think the pandemic is having a negative effect on research in your discipline?

Regarding continued professional development, 86% (77/90) of participants either agreed or strongly agreed that the pandemic is having a negative effect on continued professional development, with 9% (8/90) stating they disagreed and 5% (5/90) stating they neither agreed nor disagreed (Figure 3).

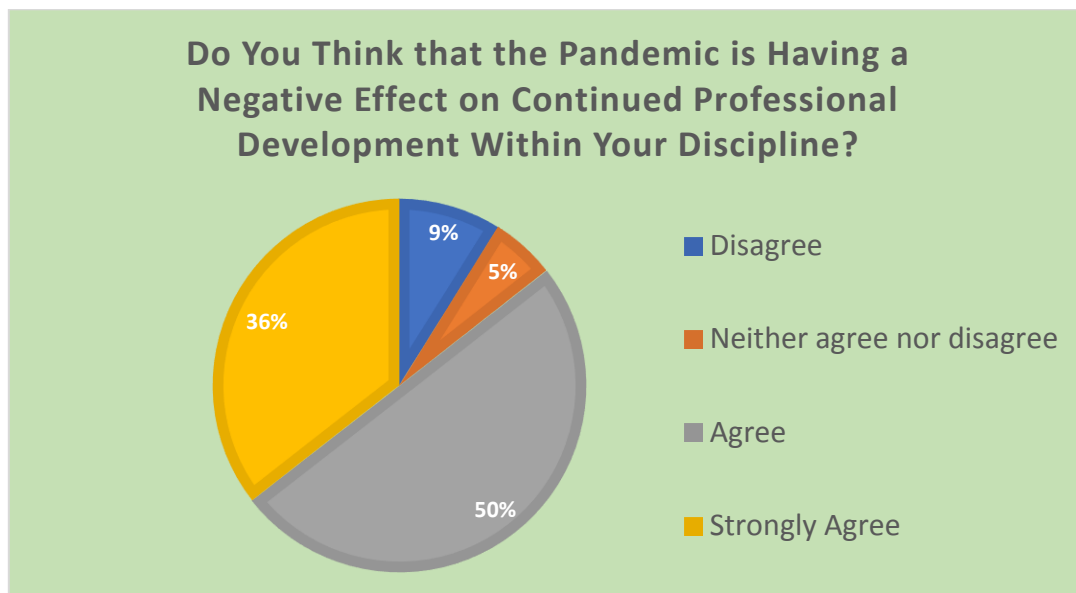


Figure 3: Participant response to question – Do you think the pandemic is having a negative effect on continued professional development in your discipline?

A total of 63% (57/90) of participants either agreed or strongly agreed that the pandemic is having a negative effect on patient care, with 27% (24/90) stating they either disagreed or strongly disagreed and 10% (9/90) stating they neither agreed nor disagreed (Figure 4).

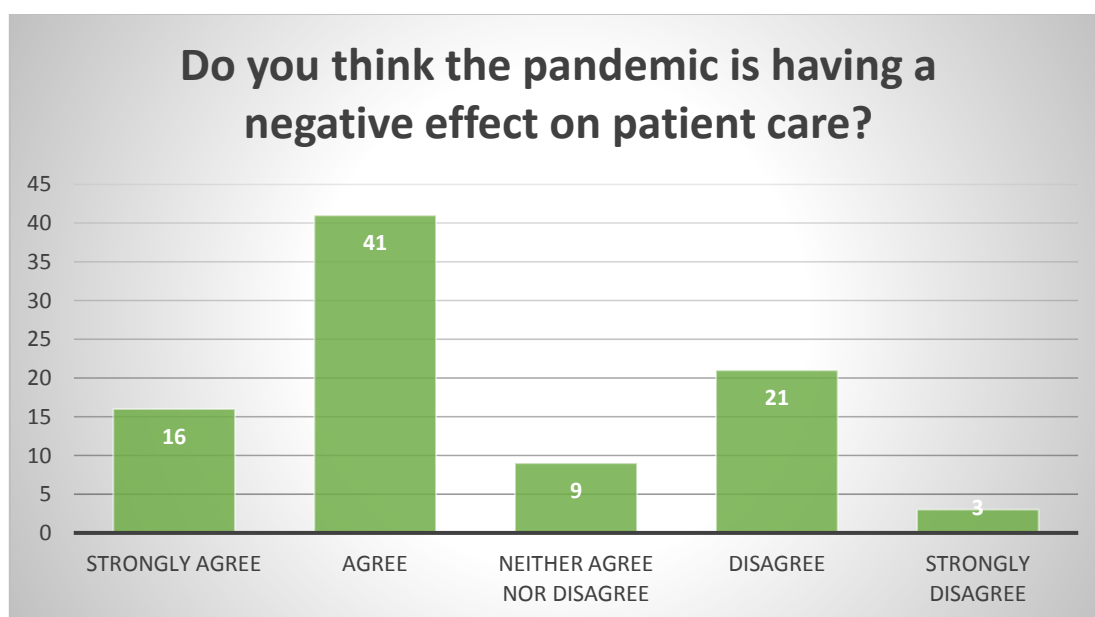


Figure 4: Participant response to question – Do you think the pandemic is having a negative effect on patient care?

As to staff morale, 88% (79/90) of participants either agreed or strongly agreed that the pandemic is having a negative effect on staff morale, with 8% (7/90) stating they disagreed and 4% (4/90) stating they neither agreed nor disagreed (Figure 7).

Discussion

At the time of writing, Ireland is experiencing a significant “third wave” with a full national “lockdown” currently in place and the Covid-19 pandemic continues to present major obstacles to the delivery of health care and to the normal workings of society at large. The central ethos of all health services is the provision of safe, adequate care for all patients and data from previous epidemics has revealed that when health systems become overwhelmed the indirect mortality rate from vaccine-preventable and treatable illnesses also increases along with the direct mortality from the epidemic-specific disease¹⁵. This was recently illustrated in the Ebola crisis of 2014-2015 whereby inundated system failures resulted in more deaths from tuberculosis, measles, malaria and HIV/AIDS than Ebola related deaths¹⁵. It is therefore essential that health managers and providers remain cognisant of this potential scenario to avoid excessive mortality levels and it is brought sharply into focus by the two-thirds of participants in our study who stated that they either agreed or strongly agreed that the pandemic is having a negative effect on patient care. As previously mentioned, one of the early recognisable solutions, albeit speciality and illness dependent, has been the implantation of virtualised care models and MDT’s that afford compliance with physical distancing and governmental confinement policies without compromising patient outcomes^{3, 6, 16, 17}. The fluid and fast changing nature of the pandemic means rapidly evolving data and practices and it is paramount that all specialities endeavour to learn from each other. For example, some specialities have sanctioned the policy of allowing trainees in their final six months of specialist training to step up to consultant level should there be a staff shortage thereby allowing for a maintenance of senior clinician led patient care⁴.

Our study revealed that 73% (66/90), 69% (62/90) and 86% (77/90) of participants either agreed or strongly agreed that the pandemic is having a negative effect on training, research and continued professional development respectively. This is in line with figures quoted by other researchers for example Hoegger et al found that 59% (51/86) of surveyed radiology residents reported fewer educational activities with Poyiadji et al finding that there was an almost two thirds overall decline in resident imaging interpretation volume from pre to intra pandemic time periods^{18, 19}. Similarly, Robbins et al found that 70% (75/107) and 83% (89/107) of radiology residents reported a marked or moderate marked negative impact on educational and clinical activities respectively. Despite these alarming figures many innovative proposals exist and have been employed across a number of radiology departments and programs. Firstly, a natural transition has been the adoption of online-based solutions with Hoegger et al finding that 94% (81/86) of participants stated this was the new and alternative method of educational activity¹⁸. Some programs have suggested a dedicated virtual core curriculum of lectures for residents and daily virtual didactic teaching sessions coupled with virtual rounds to insure continued workflow and patient management^{10, 17, 19, 20}.

The use of a virtual “townhall” template as a means to debrief, voice concerns and suggest efficiencies along with virtual conferencing platforms and simulation-based training have been among the many propositions advocated and utilised ^{11, 20-22}. Another novel approach reported by Chong et al is the division of trainees into clinical and remote groups that alternate weekly thereby complying with physical distancing and reduced staff exposure but allowing for continued education and clinical experience ⁵.

A difficult and stark reality of the Covid-19 crisis is the psychological impact on healthcare workers with early pandemic data by Lai et al revealing that frontline health care workers reported experiencing high rates of depression, anxiety, insomnia and distress ²³. One study by Foley et al found that 40% (106/266) of radiographers reported burnout symptoms due to the pandemic with 30% (80/266) stating they considered changing career or retiring since the crisis began ²⁴. Moreover, Hoegger et al found that 59% (51/86) of radiology residents reported increased pandemic-related stress levels with Robbins et al finding that three quarters (80/107) of radiology residents perceive a moderate or marked moderate decrease sense of morale ^{8, 18}. Our study findings are consistent with these results and 88% (79/90) of participants agreed or strongly agreed that the pandemic is having a negative effect on staff morale. It therefore behoves all health care managers, clinical leads, departmental heads and all healthcare staff in general to be acutely aware of this actuality to ensure adequate systems and processes are in place for identification and appropriate management. It is imperative that there is regular promotion of mental health resources, endorsement of online staff networking and engagement with services to prevent adverse psychological outcomes ^{5, 24, 25}.

Whilst there can be no doubt about the huge challenges being encountered during this global pandemic there also lies significant opportunity for trainers and trainees alike. It offers the chance to explore, develop and hone all aspects of virtual learning as well as providing an opening for grant proposals and review articles ^{17, 19}. Additionally, active onsite involvement by trainees, where feasible, provides a unique opportunity to gain exposure to leadership, teamwork and crisis management ⁵.

The limitations of this study include the non-randomisation of survey participants and small sample size.

The Covid-19 pandemic has and continues to pose enormous challenges for the delivery of patient care, training, education and staff well-being with various novel and innovative solutions available to healthcare managers and providers.

Acknowledgments:

The authors would like to thank all the participants who took part in this study and wish to acknowledge all healthcare staff who have worked and continue to work during the Covid-19 pandemic.

Declaration of Conflicts of Interest:

The authors do not have any conflict of interest to declare.

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