EACVI Survey on Burnout Amongst Cardiac Imaging Specialists during the COVID-19 Pandemic

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Abstract

Aims

The European Association of Cardiovascular Imaging (EACVI) Scientific Initiatives Committee conducted a global survey to evaluate the impact of COVID-19 pandemic on the mental well-being of cardiac imaging specialists.

Methods and Results

In a prospective international survey performed between 23/06/2021 and 31/08/2021, we assessed the mental well-being of cardiac imaging specialists approximately 18 months into the COVID-19 pandemic. One-hundred-and-twenty-five cardiac imaging specialists from 34 countries responded to the survey. More than half described feeling anxious during the pandemic, 34% felt melancholic, 27% felt fearful, and 23% respondents felt lonely. A quarter of respondents had increased their alcohol intake and more than half reported difficulties in sleeping. Two-thirds of respondents described worsening features of burnout during the past 18 months, 44% considered quitting their job. One in twenty respondents had experienced suicidal ideation during the pandemic. Despite these important issues, the majority of participants (57%) reported having no access to any formal mental health support at work.

Conclusion

The survey has highlighted important issues regarding the mental well-being of cardiac imaging specialists during the COVID-19 pandemic. This is a major issue in our subspeciality, which requires urgent action and prioritisation so that we can improve the mental health of cardiovascular imaging specialists.

Introduction

The 2019 Corona Virus Disease (COVID-19) outbreak was declared an international public health emergency on January 30, 2020 by the World Health Organisation (WHO). The COVID-19 experience over the last 18 months has had an overwhelming impact on hospital systems and personnel. Adverse effects on mental well-being and burnout amongst health care workers have previously been reported in studies during SARS and MERS outbreaks due to the rapidly changing, unpredictable nature of the situation (1).

Burnout is defined in ICD-11 as a syndrome resulting from chronic workplace stress that has not been successfully managed. It is characterised by feelings of energy depletion or exhaustion, increased mental distance from one's job, or work-related feelings of negativism or cynicism; and reduced professional efficacy. Other symptoms include anxiety, depression, low job satisfaction, post-traumatic stress disorder and an increased suicide rate (2,3).

Burnout has been linked to work that demands unrelenting continuous, long-term physical, cognitive or emotional effort(4). Healthcare professionals are particularly susceptible given the demanding nature of our duties, as reported by multiple recent studies (5–7). These demands have only been heightened during the COVID-19 pandemic (8–10). Indeed, the first 18 months have posed significant challenges for health care professionals and a high prevalence of burnout has been reported from various medical communities across the world (11,12).

The European Association of Cardiovascular Imaging (EACVI) conducted an online survey in order to assess the mental well-being of cardiac imaging specialists during the COVID-19 pandemic and this article reports the results of this survey.

Methods

The present survey was conducted by the EACVI Scientific Initiatives Committee from 23/06/2021 to 31/08/2021 according to published criteria (13). Cardiac imaging specialists across all continents were invited to complete the easily accessible online survey to assess the mental health of cardiac imaging specialists during the COVID-19 pandemic.

Results

In total, 125 participants responded to the survey. Respondents were located in: Afghanistan, Austria, Belgium, Brazil, Bulgaria, Croatia, Egypt, Finland, France, Georgia, Germany, Greece, Hungary, Iran, Ireland, Italy, Latvia, Lithuania, Mexico, Myanmar, the Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovenia, Spain, Tanzania, Turkey, United Kingdom of Great Britain and Northern Ireland and United States of America.

There was almost an equal representation of male and female participants in the survey (51% female). The median age of respondents was 39 [interquartile range (IQR) = 32-50)] years. Most of the survey participants were either married or in a civil partnership (70%), 19% were single, 7% divorced, 1% widowed and 2% preferred not to answer this question. We asked the participants regarding their main cardiac imaging modality. Echocardiography was the most common (76%), followed by computed tomography and multi-modality

imaging (both 8%), cardiovascular magnetic resonance imaging (6%) and nuclear imaging (2%).

COVID-19 Prevalence Amongst Cardiovascular Imagers

Only 14% survey participants reported testing positive for COVID-19 over the last 18 months. Out of the participants that tested positive for COVID-19, the majority (87%) only had mild to moderate symptoms and did not require admission to hospital. 2 respondents required admission to the hospital, with one of them needing management in the intensive care unit. Over half of the participants (61%) who tested positive for COVID-19 felt supported both socially and at work, 17% felt supported socially but not at work, and 17% respondents did not receive support socially or at work.

Redeployment during the Pandemic

The majority (73%) of respondents worked full time in the hospital/clinic during the COVID-19 pandemic, however 58% of participants experienced a change in their working environment and circumstances, either being redeployed to a designated COVID-19 area (34% within their own specialty and 21% within a different specialty) or working from home (3%). 2% participants were unable to work during the COVID-19 pandemic.

Mental Health of Cardiac Imaging Specialists During the Pandemic

Overall, the majority of imaging specialists described feeling anxious during the pandemic (54%), 34% felt melancholic, 27% felt fearful and 23% respondents felt lonely (Figure 1). Most of the imaging specialists (61%) described feeling ‘hesitant and scared’ whilst imaging

COVID-19 positive patients during the pandemic although 55% noted that this got easier with time.

The majority of participants reported exercising less or not exercising at all over the last 18 months, with over half of the respondents noticing a change in their weight during that time (Figure 2). A quarter of respondents (26%) reported an increase in their alcohol consumption (Figure 2), whist more than half (57%) had trouble in falling or staying asleep (Figure 2). More than 1 in 20 respondents (6%) experienced suicidal thoughts during the pandemic. Whilst these feelings had been present prior to the pandemic in some of these respondents, the majority felt that they had been exacerbated by COVID-19.

Burnout

Over half (58%) of the survey participants described suffering from burnout. A fifth of the respondents also experienced burnout prior to the pandemic; however, the majority (64%) experienced worsening of during the pandemic. The majority of respondents reported that the impact of burnout on their life was either very important or somewhat important (69%).

Just under half of the respondents reported feeling both physically or emotionally drained during the pandemic (46%), whilst 36% felt less interested and enthusiastic about their work (Figure 3). Approximately 40% felt that they were achieving less than they should and did not feel appreciated by the hospital management, whilst 32% felt overwhelmed and 30% did not think they could meet the demands of their job (Figure 3).

A total of 20% survey participants did not feel appreciated by their colleagues or patients, and approximately 20% respondents felt that they were unable to control their anger at work or they didn't have anyone to talk to. 58% respondents reported that these factors got worse during the COVID-19 pandemic. Over a quarter (29%) of participants also experienced a negative impact on their financial status during the pandemic.

Factors that contributed to burnout

Prior to the pandemic 68% respondents reported that a heavy workload contributed to their stress, whilst 52% reported too many administrative tasks, 24% reported gender discrimination, 20% reported fears of slowing down, 14% reported a lack of autonomy and 9% respondents reported age discrimination as contributing factors (Figure 4).

During the COVID-19 pandemic, respondents identified the following additional factors as contributing to their stress: the fear of transmitting COVID-19 to family and friends (70%), the fear of contracting COVID-19 themselves (50%), a lack of flexible working arrangements (28%), colleagues not taking appropriate safety measures at work (28%), a lack of appropriate personal protective equipment (30%), and a fear of treating COVID-19 patients (23%).

Factors to combat burnout

When asked regarding what factors made the respondents feel better, 63% reported spending more time with friends and family was helpful, 62% reported listening to music, 60% reported exercising, 59% felt that taking a vacation helped, 56% reported watching a

film made them feel better. Forty-three percent felt better after reading a book, 40% reported either eating junk food or drinking alcohol as helpful, 14% found binging television shows helpful, and 11% reported smoking or taking sedatives and painkillers to make them feel better.

73% respondents did not take their full annual leave allowance over the last year, out of which 46% respondents took either no annual leave or less than half of their allocated annual leave. Only 27% respondents managed to take all of their allotted annual leave over the last year.

Similarly, the survey also enquired about other factors that could potentially improve wellbeing amongst cardiac imagers (Figure 4). Sixty-seven percent of imaging specialists suggested greater support from employers (e.g.: flexible working hours), 60% reported a more reasonable workload, 51% suggested access to workplace wellbeing activities (like gym, yoga classes at work), 28% recommended easy access to mental health support services. 5% respondents proposed their own ideas for reducing stress at work during the pandemic. These ideas included tackling gender discrimination, the option to work from home, less administrative tasks, using appropriate personal protective equipment, improved management of staffing levels and allowing access to Gmail and Zoom at work.

Mental Health Support at Work

The survey enquired if the respondents had access to any support at work for issues relating to their mental well-being. Fifty-seven percent of the respondents reported that there was no support available, 25% reported having informal support from colleagues but there was

no one specifically designated to raise these concerns to. Only 18% respondents reported having a designated person at work to help with any mental health issues arising due to the COVID-19 pandemic.

Discussion

This survey demonstrates high levels of stress, anxiety and burnout amongst cardiovascular imaging specialists during the COVID-19 pandemic. It highlights the psychological burden that these healthcare professionals have faced and the urgent need to improve the working environment so that we can continue to deliver high quality care to patients.

The majority of respondents described symptoms of burnout at work. In many, this was present even before the pandemic, with COVID-19 further exacerbating these feelings. There is a clear link between burnout and suboptimal patient care and safety (14,15). Moreover, strong associations have been found between burnout and mental illness, substance abuse and suicide rates amongst physicians (16). In this survey, the majority of imaging specialists described feeling anxious during the pandemic (54%), 34% felt melancholic, 27% felt fearful, and 23% respondents felt lonely. These psychological issues were frequently severe enough to cause physical symptoms in particular disturbances in sleep as well as increases in alcohol intake and reductions in exercise. Of most concern, 1 in 20 respondents reported suicidal ideation during the COVID-19 pandemic. The scale and severity of this problem cannot be dismissed or overlooked, indeed we as a community need to urgently consider how we can improve the mental health and well-being of imaging

specialists as the COVID pandemic continues and emotional reserves continue to be depleted.

What can be done? Various interventions to mitigate burnout amongst physicians have been tested in previous studies. These can be divided into approaches undertaken at the individual and organisational levels. Individual-focused interventions include mindfulness, stress-management programmes, discussion groups (e.g.: reflection and small group learning) and physical exercise programmes (17–20). Key organisational interventions include teamwork building exercises, provisions to facilitate greater flexibility at work and promoting a culture of mentorship and support (21).

Our survey respondents provided similar suggestions when asked what action could be taken to combat burnout and improve their psychological health. Ensuring access to professional mental health support at work would seem an important place to start, as this was only available to less than a fifth of respondents. Similarly access to work-based well-being programs and counselling regarding alcohol use would seem high-value and low-cost interventions, as would greater flexibility in working times, appropriate provision of personal protective equipment (including adequate masks), reductions in unnecessary administrative tasks and appropriate prioritisation of work. However, ultimately tackling burnout might require additional measures including better organization, reductions in workload and better streamlining of cardiovascular imaging services and training at an institutional level.

Perhaps most importantly, there is a clear imperative for the imaging community to come together, to check in with one another and to offer the mental and physical support that many of our colleagues require. The EACVI will continue to support all its members and to advocate for high quality working conditions to maximise patient care. A task force will be created to specifically address some of the issues raised in this survey and to consider what further steps the EACVI can take to support the cardiac imaging community.

Limitations

There are certain limitations of this survey which are worth highlighting. Firstly, the overall number of survey respondents is relatively low and there may have been a bias of unknown direction in respondents who chose to respond to our survey. Secondly, the survey participants were cardiac imaging specialists so these findings might not be generalizable to other healthcare professionals. Lastly, the survey reflects self-reported burnout symptoms amongst the participants and hence this is not an objective assessment of the mental health of respondents.

Conclusions

The survey has highlighted important issues regarding the mental well-being of cardiac imaging specialists during the first phase of the COVID-19 pandemic and has identified important institutional and COVID-related factors that may have contributed to burnout. This is a call for action and significant improvements in our working environments to facilitate improved mental health and patient care.

DECLARATIONS

Conflict of interests

None to Disclose

Author Contributions

SSJ, IS compiled the original manuscript. MRD, AH, KH, PMH, BAP, TE, SEP, RFC and MC contributed to revision and criticial appraisal of the final manuscript. All authors approved the final manuscript submitted.

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Figure Legends

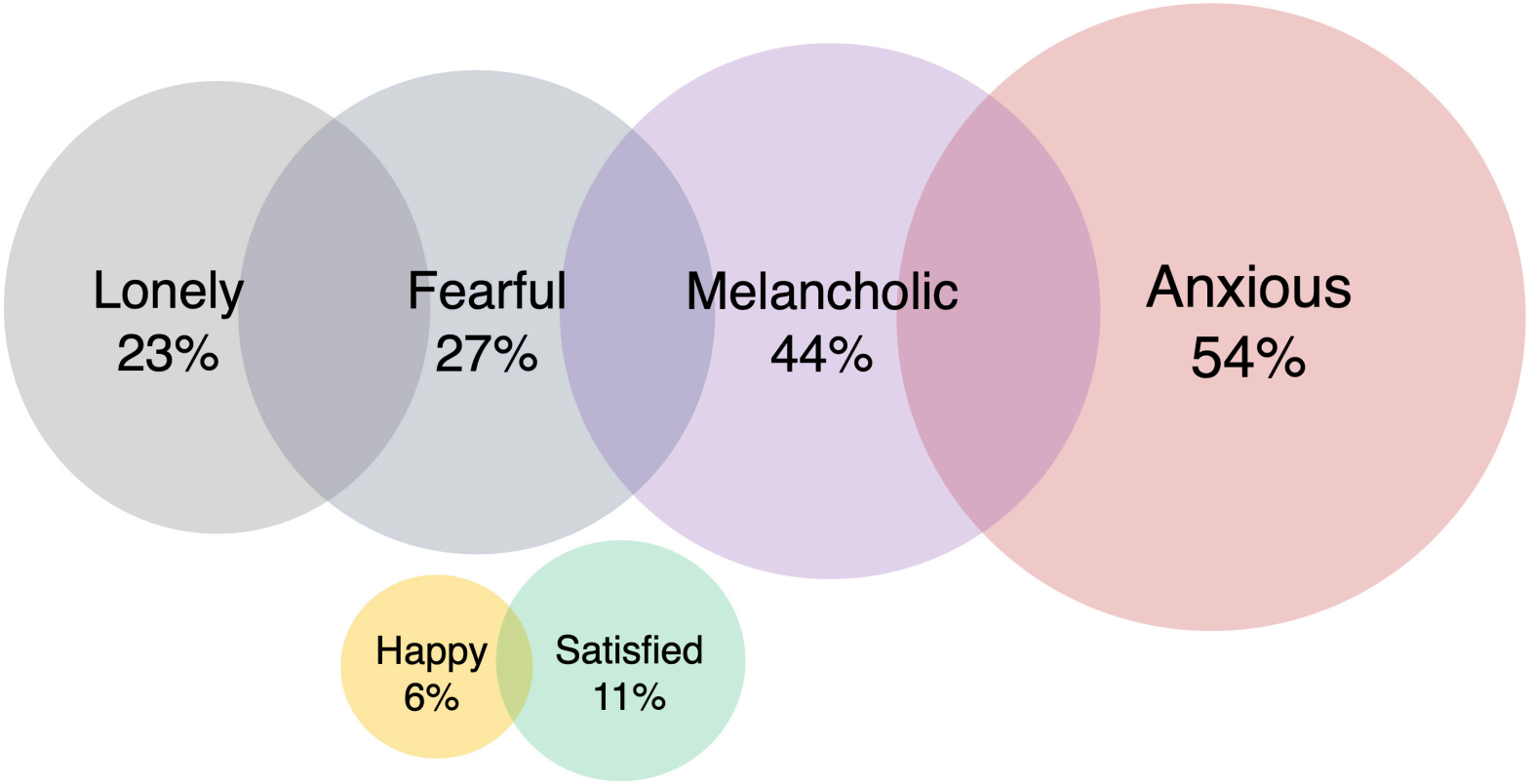
Figure 1. Mental Health of Survey Respondents during the COVID-19 Pandemic

Figure 2. Changes in Lifestyle of the Survey Respondents over the last 18 months

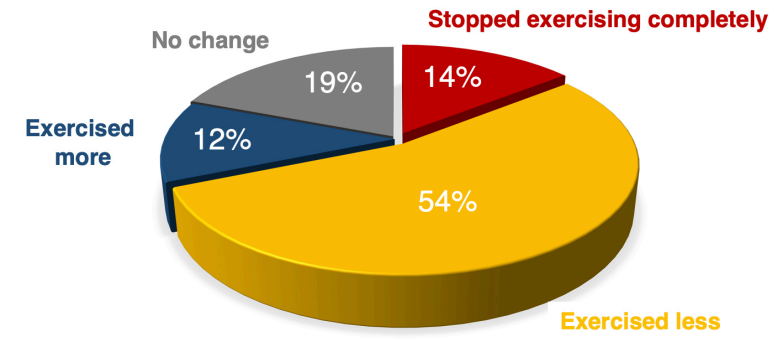
Figure 3. Emotional Impact of Burnout on Survey Respondents

Figure 4. Factors contributing to burnout (Panel A) and Measures to combat burnout (Panel B).

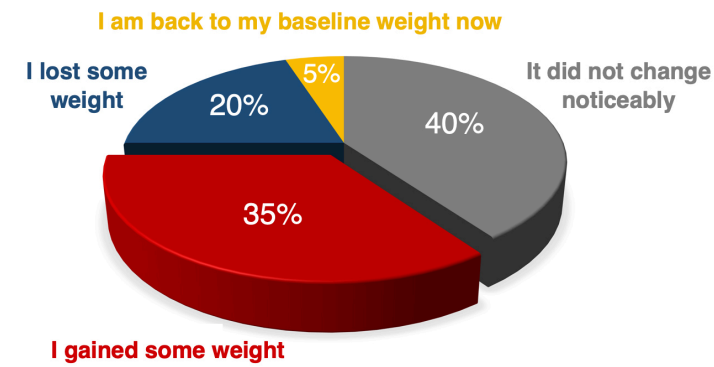
How would you describe your general mood during the pandemic?



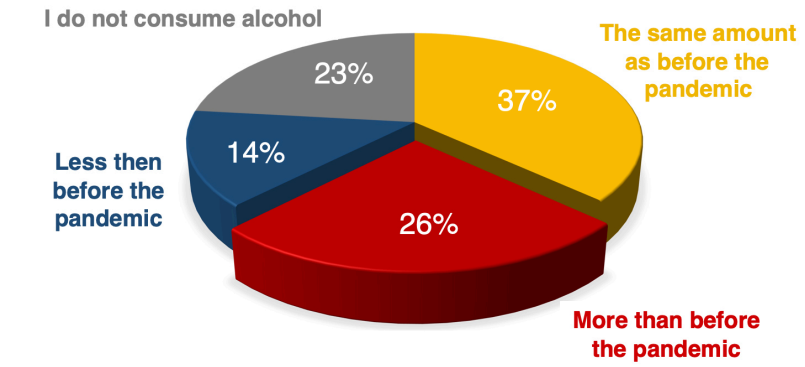
Did your exercise pattern change during the pandemic?



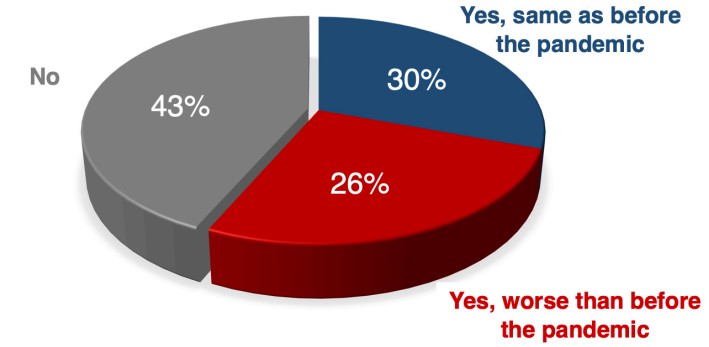
How did your weight change during the pandemic?



Did your alcohol consumption change during the pandemic?



Did you experience sleep disturbances?



I was not appreciated by my colleagues and patients (10%)

I felt physically or emotionally drained (46%)

I felt less interested and enthusiastic about my work (36%)

I was doubtful of the significance of my work (18%)

I was achieving less than I should (21%)

I was no longer satisfied with my job (19%)

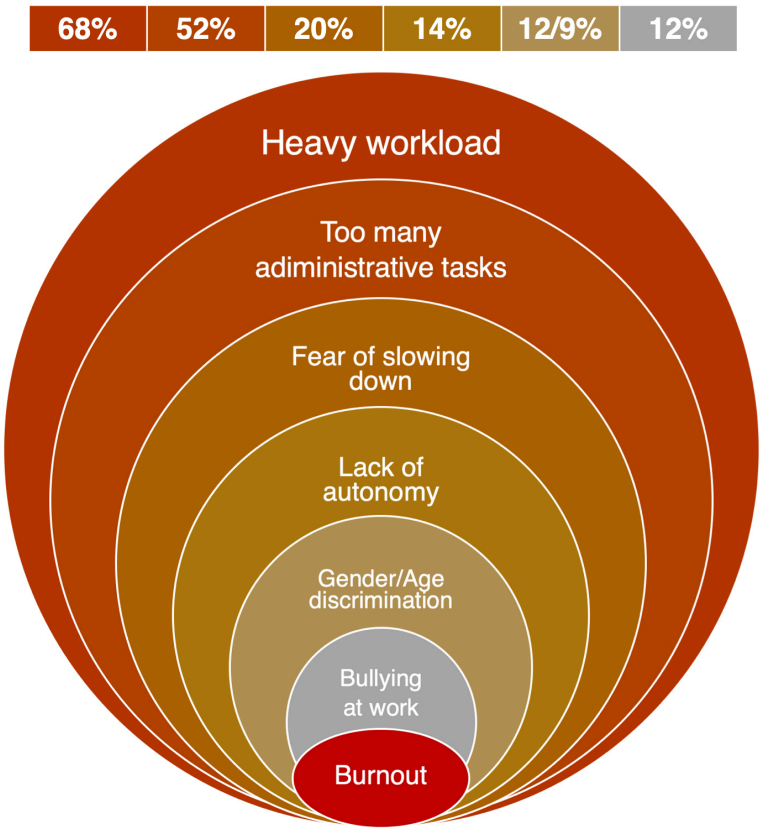
I was not appreciated by hospital management (20%)

I could not meet the demands of my job (12%)

I felt overwhelmed (32%)

I was unable to control my anger (10%)

I didn't have anyone I can talk to (9%)


68%
52%
20%
14%
12/9%
12%
Heavy workload
Too many adiministrative tasks
Fear of slowing down
Lack of autonomy
Gender/Age discrimination
Bullying at work
Burnout


67%
60%
51%
28%
A greater support from employers
A more reasonable workload
Access to workplace wellbeing activities
Easy access to mental health support services
Wellbeing