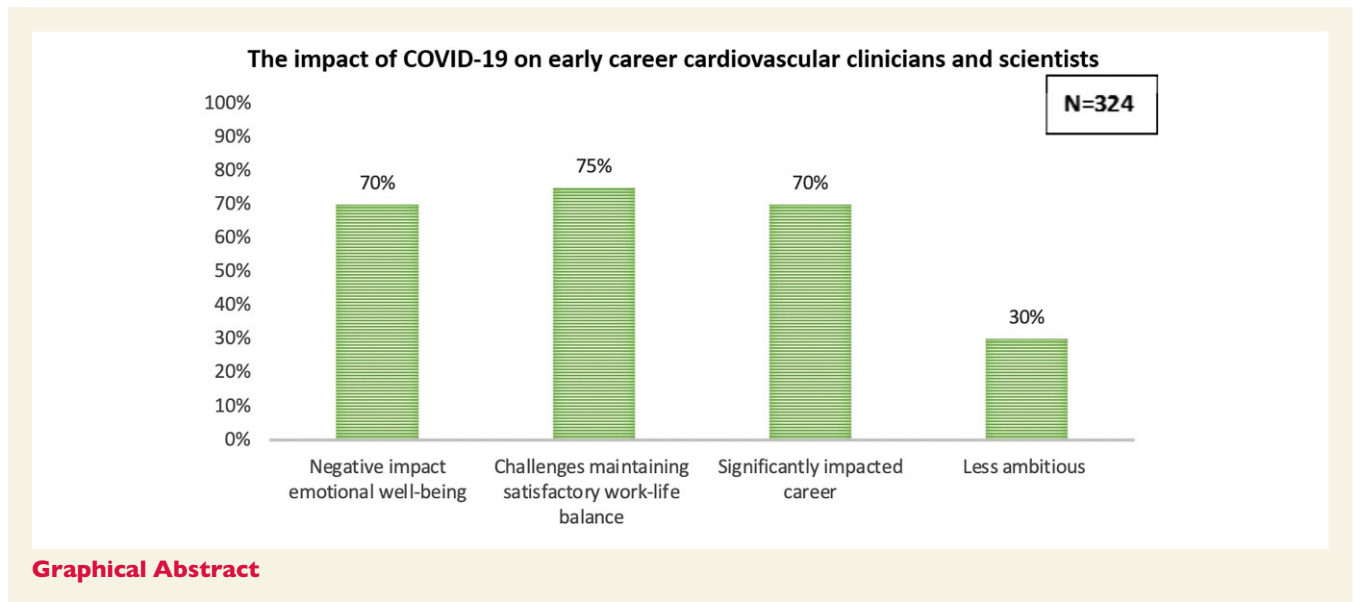


Impact of COVID-19 on young healthcare professionals

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The ongoing new coronavirus pandemic has impacted and continues to impact daily life and work worldwide. In this context, young health care professionals face a number of unique challenges: they are often at early and vulnerable stages of their clinical and scientific careers, they are frequently intensively involved in the care of patients with COVID-19, and they have yet to establish international networks within their fields of expertise. The European Association of Preventive Cardiology (EAPC) Young Community therefore performed a survey to assess the influence of the pandemic on the daily

life and ambitions of early career clinicians and researchers in preventive cardiology.

Between June and August 2021, an online survey with a total of 26 questions was distributed to individuals aged ≤ 40 years via ESC Communication channels. Questions comprised multiple-choice questions and statements with a Likert scale. Our primary aim was to assess the present career status as well as future career plans of young professionals in preventive cardiology, in the context of the coronavirus pandemic. The questions furthermore

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focused on the current state of research projects, clinical duties, and mental health.

In total, 324 participants, with a mean age range of 30–39 years and 90% of respondents between 26 and 39 years, completed the survey. The majority of responses came from Europe (54%) and India (8.5%), with 47% female respondents. About one third of survey participants were medical doctors (M.D.) in practice, nearly 20% cardiologists in training. Researchers were represented with approximately 8%.

Overall, 90% of respondents stated that the COVID-19 pandemic changed their day-to-day work. A total of 70% reported increased work-loads and a negative impact on emotional well-being, with 75% stating serious challenges to maintain a satisfactory work-life balance. Nearly three quarters of respondents reported that their mental health was adversely effected.

Two thirds of respondents reported an important negative impact on their careers due to the pandemic. At the time of the survey, the average delay in clinical training was 14 months. More than half stated that their career plans changed due to the pandemic, while only 45% reported that their future career ambitions were not influenced by the pandemic. Alarming, 30% reported to be less ambitious about their future careers.

Scientific career tracks of early career scientists were also impacted by the pandemic. A total of 70% of respondents reported that patient recruitment and the progress of lab experiments were delayed. In 70% international career opportunities were halted, and 60% reported considerably reduced to absent opportunities to expand their international network. Conversely, for a number of young professionals, the pandemic also provided new opportunities, particularly in research. More than half of respondents reported that the COVID-19 pandemic led to new research opportunities, potentially related to the increased number of funding opportunities for COVID-19-related research.

In conclusion, our survey shows that the COVID-19 pandemic continues to severely impact both the personal and work-life of early career clinicians and researchers. Professional careers and training trajectories are seriously hampered, or even put on hold. Networking opportunities across the whole spectrum of young professionals are severely limited, and potential collaborations remain unexplored. Finally, the impact of the pandemic on emotional well-being for early career clinicians and researchers should not be overlooked. Considering the marked impact on the vast majority of young professionals, not only continued monitoring of detrimental effects but also remedial initiatives seem warranted.

Future implications

Our findings constitute a call to action to not leave the current generation of young professionals alone to deal with the serious, negative implications of the ongoing pandemic. Not only the young community but also the community of preventive cardiology as a whole faces the risk of diminishing the potential of half a generation of highly motivated, well-educated, and trained cardiovascular medical professionals. In a group where rates of burn-out and depression were already alarming pre-pandemic,¹ the considerable impact of the COVID-19 pandemic on young health professionals' mental wellbeing should not be underestimated. Therefore, specific post-pandemic initiatives to support young professionals warrant consideration on local, national, and international levels. Re-initiation of physical or hybrid congresses with opportunities to exchange experiences, to research, and to network should be prioritized. Further optimization of fully digital events including young professionals also warrants priority; a highly successful example of such an activity includes the 2021 and 2022 EAPC Preventive Cardiology congresses. Peer-support or mentoring initiatives may be considered for young individuals with mental well-being or work-life balance challenges. Finally, COVID-19 'stimulation' funding could be made available both for young clinicians training in their own countries or wishing to train abroad or for research programs that can be re-initiated with additional funding instead of being put permanently on hold. Such initiatives will not only assist the professional careers of the young community but also contribute to their well-being and work-life balance. Young professionals in preventive cardiology comprise the future generation not only of the European Association of Preventive Cardiology and the European Society of Cardiology but are also needed to fulfill a pivotal role in promoting cardiovascular prevention on a broad, societal level. Investing in young professionals therefore equals investing in the future of preventive cardiology.

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