

Experiences from Mental Health Workshops for LHC Scientists

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The topic of mental health and well-being has received increasing awareness over the past years in the scientific community at the LHC. This contribution presents experiences and results from several workshops dealing with different aspects of mental health and well-being which have been conducted in CERN's ALICE, ATLAS, CMS, and LHCb Collaborations over the past three years. The workshops' impact was evaluated with a broad survey among LHC researchers of all career levels gauging the general state and level of awareness of mental health and well-being among the polled researchers. A summary of the survey results is also shown and discussed in this contribution.

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1. Introduction

The World Health Organization (WHO) defines mental health as: “a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community” [1]. From the WHO’s definition of health [2], it is evident that good health requires good mental health, which strongly determines the quality of life. Risks to mental health and well-being can arise from a number of interrelated factors, workplace-related stress and uncertainties being among them.

A survey among ALICE members (nearly 2000 at the time of the survey) in May 2022 revealed that for many of the 58 respondents, mental well-being is connected to the work environment and specifically to good relations with colleagues, the absence of pressure and stress, and a stable job situation. They reported to be facing several mental health challenges at the time of the survey, such as increased stress levels, burnout, and a disturbed work-life balance. In addition to work-related challenges, the respondents were also facing mental health challenges related to other life situations that often cause anxiety, mental exhaustion, depression, phobia, fear of the future, and fears caused by wars and crises. Furthermore, a self-assessment survey among LHCb scientists in December 2020 [3] showed that the Covid-19 pandemic has negatively affected many people’s mental health. A general decline in the mental well-being of all LHCb members was observed, with the largest negative impact found for graduate students, postdocs, and especially those living abroad.

As part of a continuous effort to tackle these challenges, four mental health workshops were offered to LHC scientists of the ALICE, ATLAS, CMS, and LHCb Collaborations since 2021. The workshops aimed at informing and sensitising the participants about the subject in question and were conducted by Sarah Speziali, an experienced psychologist and life coach [4].

2. Mental Health Workshops for LHC Scientists

The contents of the workshops were partly based on the outcome of the above-mentioned survey conducted among 58 ALICE scientists of all career levels prior to the first workshop to assess their needs. The respondents had a strong desire to learn how to improve their work-life balance, increase productivity, and cope with self-doubt, work-induced stress, depression, career-related anxiety, and a competitive environment. They also expressed their interest in promoting mental health, helping people struggling with mental health issues, and discussing these subjects with colleagues to create a safe working environment in a large collaboration. Additionally, a general interest in understanding the importance of mental health and therapy, and reducing the impact of national or global crises and wars on the mental health state could be observed. This feedback indicates that the polled ALICE members recognise the importance of mental health and well-being.

In an attempt to meet these desires, the LHC Early Career Scientists Representatives of the ALICE, ATLAS, CMS, and LHCb Collaborations have organised four “Healthy Minds for Master Minds” workshops [5–8]¹ over the course of the past three years. Each workshop focused on a unique objective based on the evaluated needs and desires of the collaborations’ members. In general, the events were aimed at raising awareness of mental health, highlighting the importance of investing in mental and physical health, and reducing the stigma associated with mental health problems among

¹ The access may be restricted to registered users and collaboration members.

the collaborations' members. The main objectives were to help the members to understand the difference between good and poor mental health, identify factors that can influence mental health, and spot signs of mental health issues. Furthermore, the first workshop for ALICE researchers in June 2022 [6] focused on building mental resilience and well-being routines, integrating coping strategies for stress, anxiety, as well as depression, discovering inner resources, practising self-care, and improving work-life balance.

Following their participation in the workshops, 75 out of 257 participants provided anonymous feedback. Figure 1 shows that the participants' knowledge about the subject improved significantly after attending the workshops. Nearly 90% of the participants agreed or strongly agreed that the workshop content was relevant to them, both for their personal and professional life. About 75% of the survey participants expressed their interest in taking part in a similar workshop in the future and 89% would recommend this type of workshop to a colleague.

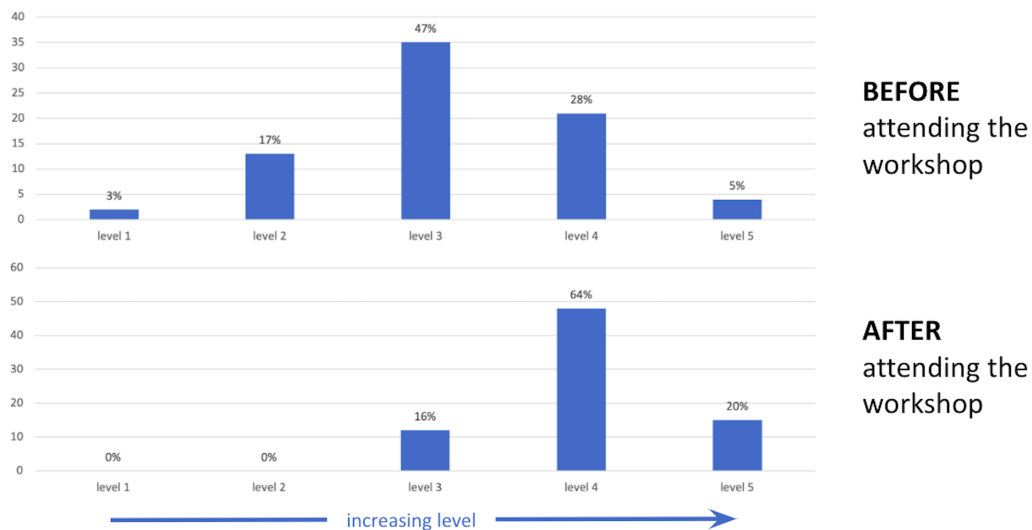


Figure 1: Participants' knowledge about mental health and well-being before and after attending one of the mental health workshops as obtained by an anonymous survey in February 2023 (75 responses).

3. General Mental Health State of LHC Scientists

The outcome of the workshops served as strong feedback towards continuing the efforts to raise awareness and create community values around mental health. To follow up on this, the ALICE Junior Representatives, on behalf of the LHC Early Career Scientists Fora (LHC ECSF), launched a mental health check-in survey in May 2023 to assess the general state of mind and mental health of ALICE, ATLAS, and LHCb Collaboration² members of all career levels. The anonymous survey aimed at painting a more complete picture of the current status and was crafted in collaboration with Sarah Speziali. The survey was completed by 152 researchers and the majority of the responses were given by ALICE and LHCb members.

²The survey was launched in the ALICE, ATLAS, CMS, and LHCb Collaborations. However, at the time of the conference, no replies from the members of the CMS Collaboration could be gathered.

The respondents were asked to rate their knowledge about mental health. The survey found that workshop attendees had a better understanding of mental health than non-attendees. Most respondents reported work and study as their main stress triggers, followed by relationships and life events, as shown in Figure 2. A majority of the respondents face a periodical or usually high level of stress at work. This work-related stress is caused by both short- and long-term stress triggers. A usually high workload often leads to the fact that the respondents neglect tasks because they have too much to do (43%). About 43% of the respondents indicated that it is considered normal to work on weekends and about 61% find it hard to maintain a sufficient work-life balance. The high workload of the polled scientists is paired with a pronounced uncertainty about their careers. More than half of the respondents fully agree that they are uncertain about achieving their career goals. Lastly, respondents were asked to identify symptoms of depression, anxiety and stress they experienced in the two weeks before the survey. The most common symptoms are difficulty to relax for over 60% of the respondents, lack of initiative to do things for more than 50% and overreacting to situations for 43% of them. In addition, a fraction of the respondents reported facing truly severe symptoms, such as increased heartbeat (32%), being close to panic (35%), or feeling scared without a good reason (16%). About 21% of the respondents felt like life was meaningless and nearly a third felt they were not worth much as a person. A positive development was observed in the willingness to openly talk about work-related problems and mental health challenges among colleagues.

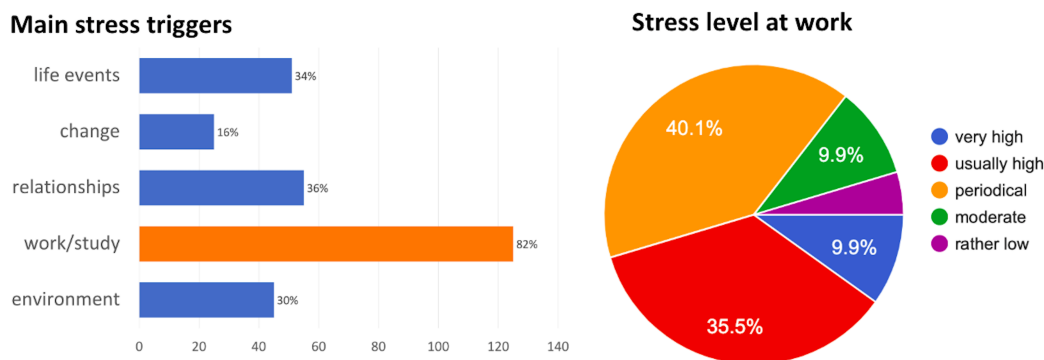


Figure 2: Stress triggers and stress levels at work in ALICE, ATLAS, and LHCb scientists² as assessed by the anonymous follow-up survey in May 2023 (152 respondents).

4. Conclusions

The experiences from mental health workshops for LHC scientists revealed that there is a large desire to establish mental healthcare as a community value and the conducted workshops are a good way to move in this direction. Creating an organisational culture that supports mental health should be a priority for individuals and collaborations alike, as it significantly impacts their productivity. Mental and physical health are mutually conditioned and form a whole; *Mens sana in corpore sano*.

Acknowledgements

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References

- [1] WHO, [Mental health](#), Accessed: May 2023.
- [2] WHO, [Health and Well-Being](#), Accessed: May 2023.
- [3] F. Dordei et al., Results of the survey on the effects of the Covid-19 pandemic on LHCb scientists, [LHCb-PUB-2021-004](#).
- [4] Psychologist and life coach [Sarah Speziali](#), Accessed: May 2023.
- [5] [Healthy Minds for Master Minds: Mental Health event for early-career scientists](#), organised by LHC Early Career Scientists Fora, May 2021.
- [6] [ALICE Mental Health Workshop](#), organised by ALICE Junior Representatives, June 2022.
- [7] [Mental Health Workshop #2](#), organised by ATLAS Early Career Scientist Board, Feb 2023.
- [8] [Healthy Minds for Master Minds Workshop](#), organised by ALICE Junior Representatives, Feb 2023.