Understanding the Impact of COVID-19 on Health and Wellbeing: Capturing Perspectives from Computer Science Practitioners

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From March 2020, the COVID-19 pandemic imposed "emergency remote teaching" across education globally, leading to the closure of institutions across all settings. The resulting shift to online learning, teaching and assessment (LT&A) has placed significant challenges on practitioners, especially their mental health and wellbeing. Building on previous work, this poster presents preliminary results drawn from international computer science practitioners (n=779) extracted from a wider sample of higher education academics (N=2,628). We highlight widespread concerns relating to transitioning to remote online working; deprioritisation of research; and wider impact on marginalised communities within the discipline. These preliminary results offers valuable insight into the impact of COVID-19 on the health and wellbeing of computer science practitioners, especially as we start to move towards a new post-COVID (ab)normal.

CCS Concepts: • **Social and professional topics** → **Computing education**; **User characteristics**; • **General and reference** → **Empirical studies**.

Additional Key Words and Phrases: COVID-19, emergency remote teaching, practitioner perceptions, pedagogy, assessment, curriculum, computer science education

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1 INTRODUCTION

The impact of the COVID-19 pandemic on education systems globally – across all settings and contexts – has been profound [8], presenting significant challenges for learning, teaching and assessment (LT&A) [2]. It is clear that the academic discipline of computer science has much to offer to address the breadth of societal challenges resulting from the COVID-19 pandemic [1]; however, there has been less focus to date on what this means for CS education, and especially on the impact on CS practitioners.

2 RELATED WORK

Our current research builds on previous work looking at CS education practitioners, conducted in the immediate aftermath of"lockdowns" and closures of educational institutions, both in the UK and internationally [3–5, 7]. This

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CS-specific work has resulted from larger empirical studies looking at the wider impact of COVID-19 on education and practitioners, especially in higher education, and the "digital disruption" from the shift to online [6, 9, 10].

3 HEALTH AND WELLBEING OF COMPUTER SCIENCE PRACTITIONERS

The ongoing consequences for practitioner wellbeing, work-life balance and the wider risks associated with educational establishments "returning to normal" after COVID-19 [11] are only just starting to be addressed and evaluated in the academic trade and policy literature. There have been few studies examining the experiences of academic practitioners vis-à-vis mental health and wellbeing, their hopes and concerns for the future, or on their experiences of academic leadership during the pandemic.

We introduce preliminary results drawn from international computer science practitioners (n=779) extracted from a wider international survey of higher education academics (N=2,628). It examines the COVID-19 pandemic in educational establishments, encompassing teaching, research, physical and emotional wellbeing, as well as their perceptions of the response of their leaders. An online survey was designed and distributed via Qualtrics; it was launched on 19 June 2020 and remained open for two months. The survey consisted of demographic questions to determine relevant information apropos respondents' educational setting, role and individual characteristics, and a series of Likert scale closed-ended questions designed to identify the impact of COVID-19 on their professional lives. Respondents were also asked open-ended questions designed to capture more in-depth accounts of their personal experiences, which were coded and thematically analysed.

4 INITIAL FINDINGS

Analysis from this work is ongoing, but preliminary results from the international sample of computer science practitioners highlight widespread concerns relating to transitioning to remote online working; research productivity and deprioritisation of research; and work intensification. Related concerns around changes to academics' working conditions and renewed managerialism; longer-term impacts of changes in the organisation and structure of the academic role (for example, the unevenly distributed impact on early-career, female and ethnic minority academics); as well as acknowledging the policy prominence of computer science as a discipline (especially for post-COVID economic recovery). Our survey indicates a consensus of the adverse effects of universities' response to the COVID-19 pandemic – what we have called "pandemia" – enacted on the professional and personal wellbeing of academic communities.

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