

Health psychology and climate change: a race against time

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Our daily work, research centers and Universities, our patients, our models or 'outcomes', are or will sooner or later be impacted by climate change with a possible paradigm shift coming for

health systems in the next years (Hensher & Zywert, 2020; Rickards & Watson, 2020). This opinion piece is an invitation to think about how we, as a field, can all contribute to climate change mitigation and adaptation via our research, teaching activity or personal and collective actions.

The number of climate change related initiatives in health psychology is modest or low. This can be explained by several barriers: lack of training (for students, stakeholders and academics) on climate change-related questions and a lack of educational resources bridging climate change and health psychology (Leal Filho et al., 2021); maybe a misunderstanding of the scale of the issues posed by climate change and the urgency of the situation; fear, or shyness, to investigate a topic not traditionally studied in our academic field (particularly for recognized researchers); or lack of funding in health or social sciences to research climate change issues (e.g., only 0.12% of research funding for climate change mitigation is dedicated to social sciences; Overland & Sovacool, 2020). Consequently, there is lack of studies investigating climate change together with psychological and behavioral variables. A recent bibliometric analysis of the literature linking health and climate change highlighted that health behaviours were almost missing among investigated health outcomes. Second, most of the published studies focused on

climate impacts (which are mostly observational studies), and mitigation/adaptation actions (mostly interventional studies) were understudied (Berrang-Ford et al., 2021). More research is needed to link climate change with traditional outcomes from the field of health psychology and mostly interventional efforts helping peoples to mitigate or adapt to climate change through psychological and/or behavioural interventions (Sheeran et al., 2017).

In the last year, we published two reviews on health behaviours and climate change that can help identify the challenges and opportunities for health psychology (Bernard et al., 2021; Chevance et al., 2022). We examined the bidirectional associations between health behaviours with air pollution, heat waves, natural disasters, and greenhouse gases emissions. Figure 1 illustrates our findings for physical activity.

We have learned several lessons from this work:

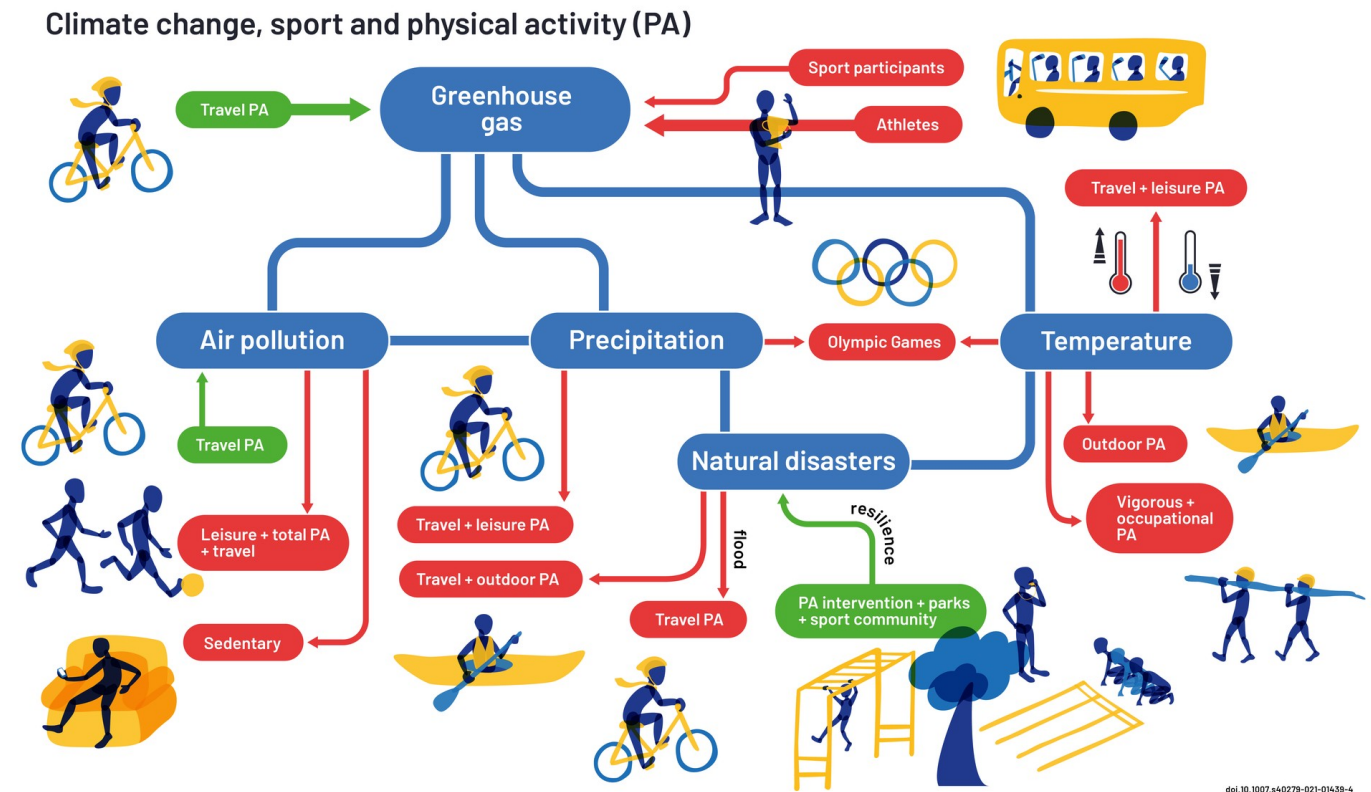
(i) there are bi-directional associations between most health behaviours and most climate change outcomes, in the sense that both are influencing each other;

(ii) health behaviours can have a concurrent adaptation, mitigation or amplification role towards climate change and it is crucial to stop promoting health behaviours that can have a negative impact on climate-related outcomes;

(iii) climate change increases inequity in terms of behaviour change on, at least, four levels: within countries, between countries, at the inter-generational level and between genders; and specific actions at each level are needed;

(iv) health behaviours are the perfect outcomes to understand that the question of individual

Figure 1. Framework of associations between climate change and physical activity- related behaviours (Bernard et al. 2021)



Notes. Green = positive association between climate change variables and physical activity domains; Red = negative association between climate change variables and physical activity domains; Illustrator is Tamara Martel.

behaviour change versus systems change is a false dichotomy (Sniehotta et al., 2017), instead individuals' behaviour change and large scale/ political actions as interdependent and mutually influencing each other;

(iv) climate change is a race against time for health psychologists and actions are strongly needed beyond observational studies;

(v) we have to overcome a paradoxical requirement for our health systems, i.e., to reduce its carbon footprint (e.g., 6% of United-Kingdom

total carbon footprint) while improving its resilience and evidence-based cares.

Below we provide examples of actions for practitioners, students, and academics from the field of health psychology to start dedicating time to climate change.

Foster social and individual changes. Our community has the skills to contribute and accelerate projects accounting simultaneously for health and environmental outcomes (Eichinger,

2019). Unprecedented behavioural transformations are needed to mitigate climate change and the scale of the issue is huge: the average individual carbon footprint of a European is around 7 tonnes of CO₂ per year; if we want to reach the Paris Agreement, individuals' carbon footprint should stay below 2 tonnes of CO₂ per person and per year, which concretely means that we need to radically rethink our lifestyles. Mitigation strategies may be perceived as personal sacrifices or a loss of quality of life but reaching a "1.5°C lifestyle" can also be an opportunity to promote win-win planetary health strategies for all (Inauen et al., 2021). For instance, free public transport, 4-day working week and free school meals can be a good set of examples. The development or transformation of fare free public transport is associated with car frequency decrease (Kebłowski, 2020). Furthermore, public transport development has been associated with higher level of light to moderate physical activity (~35 minutes). A UK report highlighted that 4-day working week without loss of pay may be associated with a lower carbon footprint and better well-being in families (Mompelat, 2021). Free plant-based diet school meals could be associated with (in)direct benefits for diet quality, weight management and family well-being (Cohen et al., 2021). A lot of initiatives are already underway and would greatly benefit from health psychologists' skills in their optimization.

Teach & popularise. In our paper examining climate change from the lens of health psychology, we called to include planetary health and climate change model in our courses (Bernard, 2019). The European Health Psychology Society could be the perfect platform to collectively develop online courses that speak to health psychology students. We provide here for this purpose a set of different type of documents (Podcasts, conferences, blog, and academic articles) about climate change, health, and health psychology ([https://osf.io/](https://osf.io/39nvh)

[39nvh](https://osf.io/39nvh)).

Develop scalable interventions. There is little time left and as advocated elsewhere we need more interventional efforts over observational studies (Sheeran et al., 2017). Replicating previous successful interventions combined with the development of new agile N-of-1 trials could provide us a solid base to efficiently develop and test evidence-based interventions promoting health and sustainability. N-of-1 studies have a lower financial cost, are more flexible in terms of content, personalization, and mode of delivery than randomized controlled trials. These interventions could target individuals but also communities (e.g., collective self-efficacy). Additionally, we believe that relatively simple mode of delivery should be prioritized (face to face, email, SMS) for accelerating their implementation and scalability while not contributing further to the digital divide.

Conclusion. The COVID-19 pandemic shows that our scientific community can quickly generate huge amounts of new practical knowledge in record time on topics that are only partially familiar to us. As argue elsewhere, imagine what could be achieved in one year if, similar to COVID-19, our scientific community shifted to focus on climate mitigation and adaptation (Tonne, 2021). It is important to keep in mind that the COVID-19 episode was only a transitory crisis, while climate change is a long-term game changer for our societies and that actions taken to date to mitigate climate change are insufficient: carbon dioxide emissions continue to rise by about 1% per year worldwide and the 1.5°C global temperature threshold is expected to be exceeded by 2040 under most scenarios. We, as a community, have little time left to meaningfully contribute to climate change mitigation. We content that climate change is among the most urgent issues facing all scientists and should become a central priority for the health psychology community.

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