Original Article

One Health: A holistic perspective on the health and wellbeing of humans, animals, and our shared environment

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How closely human health is linked to that of animals and our environment has been more than clearly stressed by the Covid-19 pandemic. With intensive livestock farming, wildlife trading, and human expansion into untouched ecosystems, zoonotic pathogens emerge and spread more rapidly. The One Health approach is a concept recognising the systemic relations between human, animal, and environmental health. This holistic and transdisciplinary approach aims at promoting a healthy co-existence of humans, animals, and the ecosystem, to be achieved through a collaboration of different sectors and disciplines at global, regional, and local levels. Key issues of the One Health approach are for example food security, prevention of antimicrobial resistance, and the control of infectious diseases transmitting from animals to humans (zoonoses). Human behaviour plays a major role for reaching these aims. While certain behaviours can have negative impacts on the shared environment (e.g. littering or burning fossil fuel), others can be beneficial (e.g. active transport or reduced meat consumption). Many renowned organisations such as the World Health Organization, the Centres for Disease Control and Prevention, and the Food and Agriculture Organization of the United Nations have included the One Health approach in their programmes (see, for example: www.cdc.gov/onehealth). One Health is further reflected in the UN Sustainable Development Goals (SDGs) that promote human health (SDG 3) and climate action (SDG 13) as well as in the interconnectedness of the goals (SDG 17).

The impact of climate change on One Health

Tackling climate change is central in ensuring and promoting One Health. Human activities such as increasing mobility that relies on fossil fuels or industrial agriculture have been shown to negatively affect the environment and, consequently, the climate. Climate change in turn affects our planetary life support systems such as clean air and water, tolerable temperatures, and healthy and nutritious food. The mounting pressure on these environmental systems puts the health of humans and animals at risk. Climate change affects health either directly, for example by floods, heatwaves, fires, or water shortages, or indirectly, for instance through the spread of vector-borne diseases or food insecurity (so-called system-mediated impacts). Negative health consequences of climate change can also evolve through social, economic, or demographic disruptions. Examples are impacts on physical and mental health which arise from decreasing farming incomes through a climate-change-induced reduction in agricultural productivity or the emergence of armed conflicts.

What action should be taken to promote a healthy and sustainable future?

The One Health approach should be adopted in global, regional, and local policies, i.e. regarding urban housing, transport systems, energy systems, and food production. In designing and implementing developmental activities for these areas, impacts on human, animal, and environmental health need to be considered. In many areas, we can learn from nature when looking for solutions. One example is the multifunctionality that can be seen in nature, such as the waste-free natural cycle, which could serve as a model for the way we produce food. Most importantly, in all sectors, human development needs to be decoupled from environmental degradation. To ensure this, the impact on health and the environment needs to be taken into account when measuring development. The Australian National Development Index – an integrative and holistic measure of progress and wellbeing – may here serve as an encouraging example, as it showcases that such holistic measurements are feasible.

How can Health Psychology contribute to promoting One Health?

As the One Health approach puts special emphasis on human activities, Health Psychology can contribute by researching determinants of individual behaviour and behaviour change. Several behaviours can contribute to mitigating climate change while at the same time – directly or indirectly – promoting human health (Bain et al., 2016). These include, for example, an active mobility, a plant-based diet, recycling, or a safe sanitation. Next to these mitigation behaviours, adaptation behaviours can reduce negative environmental impacts on human health – for example, wearing face masks or flood-proofing one's home (Inauen et al., 2021; van Valkengoed & Steg, 2019). Consequently, several scholars have called for incorporating environmental health when researching human health in order to meet the complexity of environmental health issues (Bernard, 2019; Inauen et al., 2021; PCUN, 2021). For example, our diet has not only direct but also indirect effects on our health, as it impacts the environment, which, in turn, affects human health.

Yet, behaviour should not only be considered on the individual level but also from a systemic point of view. Taking into account the determining living conditions (e.g. infrastructure, policies, economic factors) should thus be of great importance. For example, integrated measures for health and wellbeing need to be developed and implemented that take into account the impact of climate change as well as mitigation and adaptation behaviours. Inter- and transdisciplinary research and the exchange of data is therefore crucial. In addition to the expertise found in universities, the knowhow of professionals, policy makers, or indigenous people should be considered. When expertise from different sectors and actors is combined in a joint force, health threats can be encountered best.

From a One Health perspective, important next steps should be using the recovery from the Covid-19 pandemic to accelerate sustainable change. The pandemic has forced us to rethink and adjust the way we travel, work, and design our economies. We should use this opportunity to place a stronger emphasis on One Health. Only when the interdependence between human health and that of animals and our ecosystem is acknowledged can we take on responsibility for our shared environment and build back better.

The article is based in part on the panel discussion „Climate Change and One Health: Critical Action for a Sustainable Planet" conducted at the World Health Summit, on October 26, 2020. The session was chaired by Prof. Dr. Andrea Winkler, Co-Chair of the Lancet One Health Commission, Germany. Speakers were: Dr. John Amuasi, Co-Chair of The Lancet One Health Commission, Ghana; Prof. Dr. Tony Capon, Director of the Monash Sustainable Development Institute, Australia; Prof. Dr. Sabine Gabrysch, Professor for Climate Change and Health at the Charité Berlin, Germany; Dr. Benjamin Roche, Research Director at the Research Institute for Development (IRD), France. The panel discussion can be accessed via this link: https://www.youtube.com/watch?v=HT3trDYTkBY

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