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Reply to Bandara and Carpenter

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Dear Sir,

We thank Bandara and Carpenter for their thoughtful letter and comments on our paper. We agree that the ongoing scientific debate about causal factors in cancer aetiology in relation to some of the items included in our measure [1], including non-ionising radiation/radiofrequency, is contested [2].

However, our scale was not created within a vacuum of prior scientific knowledge or due diligence. The complexities and uncertainties of identifying what constitutes a causal risk factor are discussed in the development paper of this scale, which also highlights the methodology used to arrive at these items [3]. In this instance, we operationalised items to be included as those for which there was no consensus in the academic community that they “cause” cancer despite commonly being cited as being carcinogenic. This lack of consensus is implicit in the classification by IARC of non-ionising radiation, such as extremely low magnetic fields or radiofrequency electromagnetic fields, as possibly carcinogenic to humans (Group 2B) and static electric and magnetic fields and extremely low-frequency electric fields as not classifiable (Group 3). Notwithstanding calls to change these classifications (e.g. [4]), this suggests evidence to establish carcinogenicity is currently either limited or inadequate [5, 6]. It is beyond the scope of a letter to discuss the totality of evidence not supporting an association (e.g. [7, 8]), endorsements of this view by various international agencies (e.g. [9, 10]), nor to discuss methodological shortcomings of work purporting to show causal effects (e.g. [11]). Suffice to say that we do not believe that the items included in our scale are immutable. Indeed, we invite further iterations of items as evidence accumulates and the scientific consensus shifts. While we agree that the term “mythical” may be overreaching, it would also be an overstatement to claim that the opinion expressed by Bandara and Carpenter reflects a consensus in the scientific community, or that it is fully justified by incontrovertible evidence. The aim of our measure is to highlight the levels of endorsement in the general population for risk factors for which the evidence is limited or inadequate, compared with awareness of risk factors that are clearly linked to cancer, such as cigarette smoking, which claims millions of lives each year [12]. This knowledge can help to design public health interventions that encourage behaviour change and improve population wellbeing.

Declaration of interest

We declare no relevant competing interests.

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