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## Reply to the Letter to the Editor: “Limited Health Literacy in Portugal Assessed with the Newest Vital Sign”

### Resposta à Carta ao Editor: “Prevalência de Literacia em Saúde Inadequada em Portugal Medida com o Newest Vital Sign”

**Keywords:** Health Literacy; Portugal; Prevalence; Validation Studies**Palavras-chave:** Estudos de Validação; Literacia em Saúde; Portugal; Prevalência

Dear Editor,

We thank the authors for their interest in our paper. Teresa Salgado and Fernando Fernandez-Llimos suggest that the Portuguese version of the Newest Vital Sign (NVS) should not be used to assess older adults in clinical practice because of a floor effect. We disagree. A floor effect is a problem when the performance on the test does not reflect the true performance in the domain being assessed.<sup>1</sup> This is not the case here. We are not classifying older people incorrectly by using the NVS. Another study using a different health literacy instrument, one that asks people questions about their perceived difficulty performing health-related tasks, has also documented a very high proportion of limited health literacy in the older Portuguese population.<sup>2</sup>

In addition, it is also not the case that the educational level of the population used to validate the instrument was very different from that of the Portuguese population. The subgroup of 101 people from the general population in our study included 30.7% of participants with less than five years of schooling (the oldest of whom was 86 years old). This figure is close to schooling estimates from the Portuguese population near the time the study was conducted.<sup>3</sup> Furthermore, when we compared this subgroup with the other more literate groups (physicians, health researchers, engineering researchers) we were not testing divergent validity (i.e. assessing whether constructs

that are not supposed to be related are actually unrelated) but known-groups validity, which relies on administering the instrument to different groups that logically should have different levels of the construct to confirm whether the hypothesised difference was reflected in the scores of the groups.<sup>4</sup>

We do agree with the authors in that the NVS should not be used as a proxy for poor health outcomes or poor medication self-management capacity. Concerning outcomes, the NVS can and has been used successfully to study the association between health literacy and health outcomes in studies that included older persons, but as a determinant and not as a proxy.<sup>5</sup> Moreover, the study by Schillinger *et al*<sup>6</sup> cited by the authors to illustrate this point used the short version of the TOFHLA,<sup>7</sup> an instrument composed of two short cloze passages (an exercise where key words are deleted from a text and respondents are asked to fill in the blanks) and four very easy numeracy questions, which is quite unlike the NVS, as findings from studies using both the instruments can confirm.<sup>8,9</sup> Regarding self-management capacity, we also agree that it should not be used alone in samples with very low expected health literacy. If it is important to assess the numeracy component of health literacy (to assess skills related to timing, scheduling, and dosing of medications as well as numeric concepts needed to understand and act upon directions and recommendations, such as in the assessment of risk perception of an intervention)<sup>10</sup> in elderly samples, the NVS could be used in combination with another very brief instrument such as the Medical Term Recognition Test (METER), which has not displayed a floor effect.<sup>11</sup> Nevertheless we argue that when studying self-management capacity, one must necessarily take into account the distributed nature of health literacy, i.e. how people rely on formal and informal mediators (e.g. health professionals, family members, friends and media) for support performing health related tasks, such as managing medications,<sup>12,13</sup> as well as how the medication information is presented.<sup>14</sup>

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## Letter to the Editor - Predatory Journals: Bad for All But Especially Authors from Low and Middle Income Countries

### Carta ao Editor - Predatory Journals: Prejudiciais para Todos Mas Sobretudo para os Autores de Países de Baixo e Médio Rendimento

**Keywords:** Open Access Publishing; Publishing

**Palavras-chave:** Publicação; Publicação em Acesso Livre

In this issue, Joana Revés and colleagues<sup>1</sup> describe the rapid growth in so-called predatory journals (fake or fraudulent journals offering publication for payment without peer review or publishing services) and advise students on how to avoid the trap of publishing in them. Predatory journals are a blight on science, and something needs to be done to curtail these unethical publishers.

I became aware of predatory journals in 2014 while working in Bangladesh with scientists and doctors to enhance their capacity for writing and publishing in journals. The scientists and doctors were doing important global health research that needed to be disseminated, but some of their studies were being published in predatory journals. It is perhaps unsurprising that these relatively inexperienced researchers working in less developed research environments in low and middle-income countries (LMICs) are easy targets for the phishing emails that come from predatory publishers asking for submissions. I subsequently wrote two blogs in *BMJ* sharing my experience and offering tips on how to avoid predatory journals<sup>2,3</sup> and co-wrote an editorial highlighting the problem and arguing that LMIC researchers and institutions are disproportionately affected.<sup>4</sup> Since then we have come to understand much more about predatory publishing, which is now estimated to have an annual income of \$75 million.<sup>5</sup>

David Moher and colleagues<sup>6</sup> scrutinised over 200 biomedical predatory journals and found that they included data from more than 2 million individuals and 8000 animals.

Some 15% of the corresponding authors of the 1907 articles in their sample were from the USA, showing that predatory journals are a global, not just an isolated, problem. And although the numbers are small – 9 articles from Harvard University, 11 from the Mayo Clinic – Moher's analysis shows how the most prestigious institutions are affected. Indeed, 41 of the articles reported funding from the US National Institutes of Health.

But the analysis of Moher and colleagues confirms that predatory journals are mainly affecting LMICs: a third of the predatory journals that gave their location were from India; and 61.5% of the 1881 articles that gave the institutions of their authors were from LMICs, with India, Nigeria, and Iran leading. An earlier analysis by Xia and colleagues showed that most authors in predatory journals were from India, Nigeria, and Pakistan<sup>7</sup>; similarly, Shen and Bjork's analysis of predatory journals found a predominance of authors and publishers from South Asia.<sup>8</sup> India, with its growing research output and rank in legitimate journals publishing, is nevertheless a hotspot for predatory publishing.<sup>8</sup>

These reports outline the scale and geography of the problem but don't provide evidence on the motives of authors. Researchers may be unaware they are publishing in predatory journals, or they may be deliberately seeking easy publication for cash, padding their CVs, and knowing that they are unlikely to face censure. It's likely that researchers' motives include both ignorance and guile as they are under great pressure to publish, the numbers of predatory journals are growing (Moher and colleagues estimate there are 18 000), and institutions and funders often do not recognise the journals as predatory.

Because of my interest in promoting the work of individuals and institutions in LMICs, I want to consider the problem of predatory journals particularly from their point of view.

Global health is booming – between 1990 and 2010 donor funding to global health increased from US\$5.6 billion to \$26.9 billion.<sup>9</sup> This has fuelled the development of research institutions across LMICs and the growth of their research output, which funders and donors are increasingly