LETTER TO THE EDITOR

Response to "A New Scale to Assess Near-Death Experiences"

To the Editor:

We read with interest the letter in the previous issue of this *Journal* in which Robert Mays and Suzanne B. Mays (2020) commented on the recent validation of the Near-Death Experience Content (NDE-C) scale. We would like to thank them for their interest in our newly developed scale.

We are pleased that Mays and Mays (2020) were able to perform a preliminary Rasch analysis on the NDE-C scale, an investigation that we encouraged in our publication. However, because their Rasch scaling was performed on a simulated and, therefore, limited dataset rather than on the raw data, and because their letter did not include either the detailed methodology the authors had used or their results, we cannot comment very much on their findings and conclusions. Indeed, we cannot know whether it has any relevance to a Rasch analysis of the actual data we accumulated. We acknowledge the additional validation of the NDE-C scale that would come from a Rasch analysis of the actual data, as such an analysis was done with the original NDE Scale (Lange et al., 2004). We thus encourage instead the use of the raw dataset to perform a robust and reliable Rasch analysis.

Mays and Mays (2020) reported that their preliminary Rasch analysis on the simulation revealed several shifts in item hierarchy in the NDE-C results, compared to the item hierarchy found in the analysis of the original NDE Scale (Lange et al., 2004). That discrepancy may be due to idiosyncrasies of their data simulation that would not be replicated in a Rasch analysis of

the actual data. Mays and Mays (2020) attributed the discrepancy to changes in the wording of the NDE-C items such that they were no longer equivalent in meaning to the corresponding items in the original NDE Scale. However, those changes in wording were intended as improvements, as they replaced words denoting subjective interpretations (such as “mystical”) with objective phenomenological descriptions (such as “hearing voices”); and we believe that the NDE-C scale does include some improvements over the original NDE scale, such as the inclusion of negative emotions and ineffability. Indeed, we did not seek to preserve the original meaning of the NDE scale items, and we purposely modified the wording of the items in order to get a more psychometrically robust and research-useful assessment tool to quantify NDEs. As stated in our paper, much has been learned about NDEs since Bruce Greyson (1983) published the original NDE Scale 38 years ago, and our NDE-C scale was an attempt to update that instrument in light of these advances (for details, see Martial et al., 2020). In this context, we did not necessarily expect to preserve the item hierarchy shown by Lange and colleagues (2004).

We felt and continue to feel confident in the utility of the NDE-C in studying NDEs. To validate it, we used an approach different in nature from the Rasch model, that is, the Classic Test Theory (CTT). This traditional psychometric approach is a valid and accepted paradigm widely used in research to assess psychometric properties of various self-report measures (Alagumalai & Curtis, 2005). We chose the CTT because it gives overall measures of important aspects of the reliability and validity of a rating scale, such as its factor structure and internal consistency. The analyses performed in our study lend statistical support to our theoretical constructs. Nonetheless, we did include in our paper a warning that “we should stress that the new scale might not reflect the NDE in all its richness and intensity” (Martial et al., 2020, p. 11). The conclusion of our paper stated only that “this newly developed NDE-C scale is a

psychometrically-sound self-report instrument for assessing NDEs [that] will have a broad relevance as a tool in the empirical study of NDEs, particularly for characterizing NDE content" (p. 12). We stand by that modest and uncontroversial conclusion.

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References

Alagumalai, S., & Curtis, D. D. (2005). Classical test theory (CTT). In S. Alagumalai, D. D. Curtis, & N. Hungi (Eds.), Applied Rasch measurement: A book of exemplars (pp. 1–14). Springer.

Greyson, B. (1983). The Near-Death Experience Scale: Construction, reliability, and validity.

Journal of Nervous and Mental Disease, 171, 369–375.

Lange, R., Greyson, B., & Houran, J. (2004). A Rasch scaling validation of a "core" near-death experience. *British Journal of Psychology, 95,* 161–177.

Martial, C., Simon, J., Puttaert, N., Gosseries, O., Charland-Verville, V., Nyssen, A-S., Greyson, B., Laureys, S., & Cassol, H. (2020). The Near-Death Experience Content (NDE-C): Development and psychometric validation. *Consciousness and Cognition, 86,* 103049.

Mays, R. G., & Mays, S. B. (2020). A new scale to assess near-death experiences [Letter to the Editor]. *Journal of Near-Death Studies, 38,* 208–211. https://doi.org/10.17514/JNDS-2020-38-3-p208-211.

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