Review of: "Toward a comprehensive behavioral model of hurricane preparedness: The Protective Behavior Model"

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This topic is compelling and the text comfortably blends disparate disciplines. The resulting work is well-worded and easy to read. This is an admirable accomplishment given the author's intent to integrate myriad theories into a consolidated model.

The lit review is fairly comprehensive and flows well. I appreciated insights shared regarding 1) the historical 'in-flight' refinements applied to the now widely-accepted PMT (Rogers, R.W., 1975) as it matured to accommodate Bandura's (1977) self-efficacy theory and 2) consideration of E. Rogers' 2003 innovation diffusion work. I would like to encourage the author to consider work subsequent to PMT by Liang and Xue (2010) involving Technology Threat Avoidance Theory. The tech-intensive nature of that work may have compelled the author to ignore it. However, it's PMT-based derivation and the prevalence of citing works pose for strong consideration outside of Information Technology contexts, especially considering TTAT's emergence from prior PMT and HBM-focused works.

I respectfully challenge the author regarding the general nature of the model

The construct count may pose notable challenges for validation: The basic nature of the model is likely to attract interest by multi-disciplinary researchers. However, a low level of 'partitioning' may repel some from embracing it (i.e., three stages may not allow sufficient decomposition to establish validity at the sub-construct level in a very finite period.) I'd like to suggest that the author consider further encapsulating factors at an intermediate level between the construct and stage levels so intermediate groupings can be embraced by researchers. I suggest this so as to support other researchers in defining and aligning their work to be consistent with predefined intermediate concepts as presented by the baseline model. If the author is instead focused on more wholistic aspects of the proposed model, related research may be constrained to machine learning-based techniques. However, any ML-based endeavor will still need supported by data comprising values for the IVs of interest. This could pose even stronger arguments for encapsulation and introduction of intermediate-level groupings of constructs.

I also respectfully challenge the author regarding two more focused aspects of the model:
1. the Background factors depicted in Stage 1 of the model (Figure 1), in particular construct 2 (demographic characteristics). The model may better incorporate demographic attributes as moderators or mediators of self-efficacy, as opposed to IVs of background/experience; please address this possibility. I raise this question based on observations that different socio-economic groups generally demonstrate notably different behaviors in the face of severe weather events;

these behaviors are largely determined by one's ability to take action (e.g., members of less empowered populations are more inclined to take fewer protective actions and attempt to ride out storms due to a lack of resources).

2. the applicability of behavior modification (construct 19 in Stage 3 of the model appears considered separate from Construct 3 (Significant Life Experiences. Intuitively, these constructs appear strongly interlinked if not outright synonymous. Please consider:

    a. clarifying the model by exploring incorporation of an association between constructs 3 and 19,

    b. simplifying the model by considering removal of construct 19 and directly associating construct 3 with construct 16, or

    c. simplifying the model by considering removal of construct 19 and its associations with other constructs.

The paper mentions general PBM validation/testing under the Section 4 (PBM Guidelines and Limitations). I'd like to suggest that sections be separated. Furthermore, consistent with my challenge to the general nature of the model (shared above), the author may wish to consider including ML-based analysis for any particular constructs of interest.

I would not recommend this paper for publication in its current state. However, it represents a notable effort to encompass a wide landscape of research works across varied disciplines. Added refinement and augmentation may eventually set the stage where it can support others in analyzing behaviors of individuals in the path of dangerous weather events.

References

Liang, H. and Xue, Y. (2010) Understanding Security Behaviors in Personal Computer Usage: A Threat Avoidance Perspective. Journal of the Association for Information Systems, 11, 394-413. https://doi.org/10.17705/1jais.00232