**Evaluation of the Performance of Prolonged Grief Disorder Diagnostic Criteria for DSM-5-TR**

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**EXECUTIVE SUMMARY**

On June 3, 2019 a DSM-5-TR Workgroup met to review evidence in support of the inclusion of Prolonged Grief Disorder (PGD) in Section II of the DSM-5-TR. Groups of experts made their respective cases to the DSM Taskforce. Diagnostic formulations and considerations regarding criteria for a disorder of pathological grieving were discussed. Provisional criteria for PGD were drafted and shared with the Workgroup. The DSM-5-TR Taskforce requested that the performance of these criteria be evaluated with relevant available datasets and that the findings be submitted to the DSM Workgroup by September 2, 2019. Herein we provide the results generated in response to that request.

Below lies a summary of the findings we obtained to date, followed by our recommendations. We will begin with a brief overview of the datasets used for analysis, then present the results generated, and conclude with brief recommendations. These results are somewhat crude and incomplete and will require further refinement and analysis. [Of note, we have not received the complete set of requested results from the Oxford Study data given a delay caused by restrictions on data access, though we have been working closely with our UK collaborators and these analyses are forthcoming]. That said, we believe that the results presented in this report provide evidence of convergence of results across diverse datasets and empirical validation in support of inclusion of the proposed consensus criteria for PGD in Section II of DSM-5-TR.

**Datasets**

In order to test the performance of the proposed criteria set for PGD, we obtained, accessed, and analyzed data from the following countries: 1) Taiwan (referred to as Taiwan Study; PI: Professor Siew Tzuh Tang); 2) Netherlands (referred to as Dutch Study; PI: Professor Paul Boelen); 3) Turkey (referred to as the Turkish Study; PI: Emrah Keser); 4) United Kingdom (referred to as the Oxford Study; PI: Professor Kirsten Smith); and 5) United States (referred to as the Yale Bereavement Study; PI: Professor Holly Prigerson). The datasets – samples, assessment periods, and measures -- are briefly outlined in the attached Powerpoint slide-deck.

**Statistical Analysis**

The statistical tests conducted to evaluate the performance of the DSM-5-TR criteria for Prolonged Grief Disoder (PGD) focused on the following four psychometric properties: 1) dimensionality; 2) reliability; 3) prevalence; and 4) validity. Results will be presented sequentially with respect to each of these four properties examined using the above five datasets.

***Dimensionality***

Each of the five datasets supported the conclusion that the items included in the PGD criteria set proposed by the DSM-5-TR constitute a single, unidimensional construct. Across the Taiwan, Dutch, Turkish, Oxford, and Yale datasets there emerged a factor whose eigenvalue was substantially larger than the others (which were ~ 1.0 or less). This primary factor explained much more of the variance than any other factor. For example, in the Yale Study data, the first factor explained over 30% of the variance with factor two explaining 11%, and remaining factors declining from there in variance explained.In the Turkish Study data, we found that the PGD DSM-5-TR criteria formed a single factor with an eigenvalue much greater than 1; further, the confirmatory factor analysis which tested the performance of a single factor model found this model to be supported by the data (e.g., RMSEA=.07).

***Reliability***

Reliability was assessed in multiple ways. We examined the internal consistency of the Criterion “B” and “C” items. We found across studies that the items cohered well. For example, in the Taiwan, Turkish, and Dutch studies the items demonstrated high internal consistency (Cronbach’s α ~.90). In the Dutch Study data Cronbach’s α equaled .89-.90. However, this analysis revealed slight improvement with deletion of the avoidance of reminders of the deceased item. Similarly, in the Turkish Study data the item-total correlations were all high (“r”s all > .62), with the exception of the avoidance of reminders of the deceased item which had the lowest item-total correlation of the set (r=.52). And in the Yale Study data the item-total correlations were high, with two exceptions --slight improvement with deletion of “preoccupation with thoughts of the deceased” and the “avoidance of reminders of the deceased” items.

Although we believe future studies should examine how the “avoidance” item performs, we would not recommend deleting it at this juncture for two primary reasons. First, even though we will discuss overlap with competing diagnoses in the section on convergent and divergent validity, it is important to note here that despite apparent similarities to PTSD “avoidance,” this item’s inclusion did not result in much overlap with PTSD. Second, the avoidance item is dissimilar to PTSD avoidance. In PTSD, avoidance refers to not wanting to be exposed to a threat to oneself or significant others. Avoidance in PGD refers to avoiding reminders that the deceased is truly dead, or permanently gone, which appears more a feature of an attachment disturbance and difficulty accepting the loss than an avoidance of threat.

We also found evidence of test-retest reliability. For example, in the Taiwan Study data, we found test-retest reliability comparable to that of our PGD PLoS Medicine (2009) with an Intra-Class Correlation of .56 for requiring 3 of 8 Criterion “C” items.

***Prevalence***

Across datasets we found support for requiring at least 3 of the 8 Criterion “C” items. For example, in the Taiwanese data we found that requiring at least 3 of 8 Criterion “C” items, and Criterion “B” (yearning) and “D” (impairment), resulted in a point prevalence of 7.1% at 13 months post-loss, and a prevalence of 9.2% for any time after 12 months post-loss. In the Dutch data we found that when 3 of 8items were required, and yearning and impairment were required, the point prevalence was 13.5**%** at 12-120 months post-loss; 6.9% at the 1-year follow-up. These data suggest that the very same symptoms may be endorsed more frequently in certain countries (e.g., the Netherlands) than in others (e.g., Taiwan). Similarly, in the Turkish data, in Sample 2 we found that requiring 3 of the 8 Criterion “C” items along with yearning resulted in a prevalence of 13.5% (requiring impairment, the prevalence was 10.2%).

Lastly, and perhaps of most relevance to the DSM, are the US results. In the Yale data we found that requiring 3 of 8 of Criterion “C” items and yearning (“B”) resulted in a point prevalence of 12.4% at 12-24 months post-loss. With 3 of 8 “C” items required, and yearning (“B”) and impairment (“D”), the point prevalence dropped to 4.4% 12-24 months post-loss.

***Validity***

Validity was evaluated in several ways, including concurrent and divergent validity, predictive and incremental validity. In the Taiwan data we found that requiring 3 of 8 Criterion “C” symptoms was statistically significantly (p<.05) associated with impairment in role and social functioning at 18 months post-loss, controlling for impairment at 13 months post-loss. This suggests incremental validity in that the prediction of future impairment was over and above concurrent impairment. Furthermore, construct validity was suggested by differential associations with social and role function over associations with bodily pain and physical functioning. We would expect PGD, as a disorder of bereavement, to result in decrements in one’s social life and alterations in one’s sense of self and place in the world, more so than how it would affect physical functioning, suggesting convergent and divergent validity.

In the Dutch data we found close associations between symptoms of depression and posttraumatic stress when 3 of 8 Criterion “C” items were required in both the cross-sectional and the longitudinal analysis.The Turkish data also found that requiring3-5 of “C” Criteria was statistically significantly (p<.01) positively associated with state and trait anxiety, BDI, functional impairment, and negatively associated with meaning reconstruction, though requiring 5 of 8 was the most closely associated with many of these external validators.

Finally, in the Yale data we found that requiring 3 of 8 Criterion “C” items wasassociated with minimal overlap with PTSD and MDD (divergent validity) φ=.124 (p=.05). Requiring 3 or 4 of 8 items was most associated with rater diagnosis of PGD (convergent validity) (φ=.48); requiring 3 of 8 Criterion “C” items was most closely associated with suicidality (incremental validity)(r=.3;p<.05) and disturbed sleep (r=.22; p<.05), controlling for any DSM diagnosis (MDD, PTSD, GAD). Requiring 3 of 8 Criterion “C” items was alsoassociated with declines in functioning and increases in suicidal ideation between the 9-12 and 12-24 months post-loss assessment (r=.33; p<.05; r=.28; p<.05, respectively).

**Recommendations**

Based on the above analyses of five datasets we conclude that the criteria for Prolonged Grief Disorder (PGD) proposed by the DSM-5-TR Workgroup following the June 3, 2019 meeting are reliable and valid. Results suggest that the items selected for the criteria set constitute a unidimensional, coherent construct. The items are internally consistent, though there is some indication that the preoccupation with thoughts of the deceased and avoidance of reminders of the deceased merit further study. We conclude that in addition to requiring “A” (death of a person close to the bereaved at least 12 months prior), “B” (i.e., yearning or preoccupation) and “D” (impairment), that requiring 3 of 8 of the Criterion “C” items results in prevalence rates that range from 4%-13.5%. Requiring A, B, D and 3 of 8 of Criterion C also demonstrates convergent, divergent, criterion, concurrent, predictive and incremental validity. We, therefore, are confident that the evidence supports the psychometric soundness of these criteria.

The data analysis is, however, far from complete. We will continue to test these criteria in available data. We are available to answer any questions about the findings contained in this report. Thank you very much for your time, dedication, and attention in the service of producing reliable and valid criteria for PGD for inclusion in DSM-5-TR.