



RECOMMENDED ACADEMIC READING

The Value of a Dimensional Nosology of Psychiatric Illness: Current Progress and New Research

Dr. John D. Haltigan, Dr. Thomas M. Olino, Dr. Madison Aitken, Dr. Brendan Andrade

Considerable quantitative evidence has now been amassed suggesting that mental disorders are more accurately understood as continuously distributed dimensions of psychopathology rather than categorical constructs. The result has been an increasing shift towards a dimensional organization of psychopathology in contemporary psychiatry. Data-driven (i.e., factor model-based) modeling of numerous measures of mental disorders and psychopathology has provided robust empirical support for evidence of a *transdiagnostic* general factor model of psychopathology. The general psychopathology, or “p” factor, reflects both the common variation among all symptoms of psychopathology, as well as low to high psychopathology severity, thus cutting across diverse mental disorder categories and/or symptoms (i.e., those included as input for empirical modeling). This shared variation is consistent with the high rates of comorbidity commonly observed across most classic mental disorder categories. Current methodological work is now addressing important questions concerning the empirical definition of the “p” factor and plausible mechanisms that give rise to the observed interrelationships amongst mental illness (or symptom) indicators (see Watts et al., 2020). As we begin to integrate dimensional symptom measures in clinical practice, it is important to examine the significance of dimensionally-measured constructs, as well as their trajectories across development and across treatment. Such evidence will support an evidence-based approach to identifying children and youth at risk and will inform the timing and nature of prevention and intervention efforts.

Reference

Watts, A. L., Lane, S. P., Bonifay, W., Steinley, D., & Meyer, F. A. C. (2020). Building theories on top of, and not independent of, statistical models: The case of the p-factor. Preprint available at: <https://psyarxiv.com/3vsey/>

1. Dimensional Models of Common Clinical and Personality Psychopathology

Dr. John D. Haltigan recommends:

The p Factor and Dimensional Structural Models of Youth Personality Pathology and Psychopathology by Shields, Giljen, España, & Tackett (2021). This very recent article reviews the empirical logic of dimensional structural models of common clinical psychopathology, the concept of an overarching ‘transdiagnostic’ dimension of psychopathology, and recent efforts to integrate personality psychopathology into this dimensional nosological framework. Notable also is that the article briefly introduces the Hierarchical Taxonomy of Psychopathology (HiTOP) framework and the clinical applications of hierarchical dimensional models of personality and psychopathology which evidence suggests likely capture illness course, functional impairment, and treatment efficacy better than categorical diagnoses given their high degree of comorbidity and within-disorder heterogeneity. For psychiatrists and clinical psychologists who may not yet be aware of the ascendancy of this approach, particularly within the United States, the article is a short, yet highly-informative entry point, and key references in the broader research literature are provided.

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Reference

Shields, A. N., Giljen, M., España, R. A., & Tackett, J. L. (2021). The p Factor and Dimensional Structural Models of Youth Personality Pathology and Psychopathology. *Current Opinion in Psychology*, 37, 1-5. doi: <https://doi.org/10.1016/j.copsyc.2020.06.005>

See also: Kotov et al., (2017). The hierarchical taxonomy of psychopathology (HiTOP): A dimensional alternative to traditional nosologies. *Journal of Abnormal Psychology*, 126, 454-477. doi: <https://doi.org/10.1037/abn0000258>

Dr. Thomas M. Olinio recommends:

Riskier Tests of the Validity of the Bifactor Model of Psychopathology by Watts, Poore, and Waldman (2019). This paper presents comprehensive arguments about evidence supporting and refuting the general factor of psychopathology (i.e., the ‘p’ factor). Their major point is that substantive conclusions about the preferred models should not be solely based on global model fit. In evaluating models, the authors emphasize indices beyond measures of goodness of fit and argue for the added value of examining indices of latent variable reliability. These indices quantify the proportion of variance explained by the latent factors. Moreover, Watts, Poore, and Waldman (2019) take critical next steps of examining whether the ‘p’ factor enhances the prediction of outcomes. In their analyses, the authors found only minimal evidence for the ‘p’ factor to increase prediction of a wide array of criteria. Overall, this is an exemplar model of clear, strong arguments to identify dimensional models of psychopathology and raise the stakes in the interpretation of the data. Although this study relies on sophisticated statistical methods, the arguments and explanations of the principles are very clearly articulated. Readers of this work will be introduced to many cutting-edge issues in the literature on dimensional models of psychopathology.

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Reference

Watts, A. L., Poore, H. E., & Waldman, I. D. (2019). Riskier Tests of the Validity of the Bifactor Model of Psychopathology. *Clinical Psychological Science*, 7(6), 1285-1303. <https://doi.org/10.1177/2167702619855035>

2. Patterns and Significance of Internalizing and Externalizing Comorbidity Across Childhood

Dr. Madison Aitken recommends:

The Relationship between Profiles and Transitions of Internalizing and Externalizing Symptoms in Children and Suicidal Thoughts in Early Adolescence by Johnson, McLennan, Heron, & Colman (2019). This study uses data from a representative sample of Canadian children followed longitudinally to identify profiles of co-occurring internalizing, externalizing, and hyperactivity-inattention across childhood and examine their association with suicidal ideation in early adolescence. The use of person-oriented analyses allowed the authors to identify subgroups of children using objective, statistical methods. The results have important implications for early identification of mental health difficulties, suggesting that such efforts may be best directed at those who experience symptoms in middle childhood. However, a substantial proportion of early adolescents (11%) endorsed suicidal ideation, despite not having a history of elevated internalizing or externalizing symptoms, supporting the value of monitoring mental health across development. Consistent with accumulating evidence of co-occurring symptoms across domains of psychopathology, this data-driven analysis identified only comorbid profiles of internalizing and externalizing, suggesting that early intervention efforts may need to address shared factors underlying psychopathology, or address multiple aspects of psychopathology using modular or other approaches.

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Reference

Johnson, D., McLennan, J. D., Heron, J., & Colman, I. (2019). The relationship between profiles and transitions of internalizing and externalizing symptoms in children and suicidal thoughts in early adolescence. *Psychological Medicine*, 1-9. <http://doi.org/10.1017/s0033291719002733>

3. General Psychopathology Factor and Treatment Outcomes

Dr. Brendan Andrade recommends:

Toward precision therapeutics: general and specific factors differentiate symptom change in depressed adolescents by Aitken and colleagues (2020). The study uses data from 465 youth with major depressive disorders who participated in the IMPACT trial, a randomized and controlled trial comparing cognitive behavioral therapy, short-term psychoanalytic psychotherapy, and brief psychosocial intervention. The study investigated the impact of interventions on the temporal course of general and specific psychopathology factors. The authors used a data driven, bifactor modelling approach to identify a general psychopathology ‘p’ factor and five specific factors that included melancholic features, depressive cognitions, anxiety, obsessions-compulsions, and conduct problems. As hypothesized, and consistent with IMPACT trial findings, the general factor scores decreased significantly between baseline and follow-up periods. Although melancholic features, depressive cognitions and conduct problems significantly decreased from baseline to 6 weeks, only conduct problems significantly further decreased to follow-up. Anxiety scores, however, initially increased and returned to baseline at post-treatment. Findings from this study are the first to investigate outcomes related to the general psychopathology factor in youth

with depressive disorders and are important because they suggest that transdiagnostic processes, possibly aspects of youth emotion regulation and negative affectivity, that may underlie the general psychopathology factor, continue to improve across treatment and follow-up. Findings from the study suggest that interventions, such as those used in the IMPACT trial, may have more generalized effects that extend beyond the core symptoms for which they were developed. The paper is an important step towards re-conceptualizing intervention and outcome measurement in youth with mental health.

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References

- Aitken, M., Haltigan, J. D., Szatmari, P., et al. (2020). Toward precision therapeutics: General and specific factors differentiate symptom change in depressed adolescents [published online ahead of print, 2020 Jan 12]. *Journal of Child Psychology and Psychiatry*, 10.1111/jcpp.13194. doi:10.1111/jcpp.13194