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## Comparison of algorithm-based versus single-item phenotyping measures of anxiety and depression disorders

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### ABSTRACT:

Research to understand the complex etiology of anxiety and depressive disorders often requires large sample sizes, but this comes at a cost. Large-scale studies are typically unable to utilise “gold standard” phenotyping methods, instead relying on remote, self-report measures. Our aim was to assess the comparability of two commonly used phenotyping methods for anxiety and depression disorders. Participants from the GLAD and COPING studies (N = 58,622) received a lifetime algorithm-based diagnosis for five common anxiety disorders and major depressive disorder (MDD). Any anxiety disorder included participants with at least one anxiety disorder. Participants also responded to single-item questions about prior diagnoses by health professionals. Agreement for

algorithm-based and single-item diagnoses was high for any anxiety disorder and MDD but low for the individual anxiety disorders. For generalized anxiety disorder (GAD), many participants with a single-item diagnosis did not receive an algorithm-based diagnosis, whereas algorithm-based diagnoses of the other anxiety disorders were more common than the single-item diagnoses. The phenotyping methods were moderately comparable for any anxiety disorder and MDD cases. Frequencies of specific anxiety disorders varied depending on the method. Future investigations of specific anxiety disorders should use algorithm-based or other robust phenotyping methods.

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