

COMPARISON OF BASELINE RESPIRATORY PARAMETERS BETWEEN PANIC DISORDER AND OTHER ANXIETY DISORDERS: A META-ANALYSIS

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Introduction: A recent meta-analyses by our team found baseline respiratory abnormalities in subjects with Panic Disorder (PD) compared to subjects without PD. However, it is still open the question whether these abnormalities are intrinsic to pathophysiology of PD or may be shared with other psychiatric populations with high trait and state anxiety levels, such as subjects suffering from other anxiety disorders.

Objectives: To meta-analyze the results from all of the studies that compared baseline respiratory parameters between subjects with PD and subjects with other anxiety disorders.

Methods: A literature research in bibliographic databases was performed. Only fixed-effects models were applied due to the small number of studies available for each parameter. Several moderator analyses and publication bias diagnostics were performed.

Results: Subjects with PD showed a lower end-tidal CO₂ pressure and a higher mean respiration rate at baseline compared to patients with both Generalized Anxiety Disorders and Social Phobia. Furthermore, also a significantly lower venous CO₂ pressure and a higher venous HCO₃⁻ (bicarbonate ion) concentrations in PD than Social Phobia was found. Moderator analyses suggested that these differences between groups are not explained by differences in the state anxiety levels experienced during the assessment procedure. No evidence of publication bias was found.

Conclusions: Results suggest that peculiar baseline respiratory abnormalities and particularly a chronic hyperventilation may be specific of PD pathophysiology also when compared to other anxiety disorders.