

# The transdiagnostic relevance of panic attacks and fearful spells – implications for the prevention of mental disorders

## 0 Synopsis

**Background.** Mental disorders are common, burdensome, and costly, what underlines the necessity of preventive interventions. However, as mental disorders develop gradually and etiologic and pathogenic processes are yet insufficiently understood, there is great uncertainty about the optimal time- and target points for effective prevention. Furthermore, as early representations of psychopathology have been found to transcend diagnostic boundaries and are multifinal, a shift from disorder-specific to transdiagnostic prevention research seems reasonable. As panic attacks (PA) and their subthreshold variants (fearful spells, FS) have been identified as transdiagnostic risk factors for a wide range of psychopathological conditions, they constitute promising targets for prevention. In comparison to PA, FS have an earlier onset and are more time-economically assessable. However, preventive intervention research on panic pathology so far was limited to subjects with threshold PA and focused on panic and closely related outcomes. Furthermore, the transdiagnostic relevance of PA has been acknowledged by the latest revision of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), where PA constitute a transdiagnostic specifier. However, to date there has been no systematic assessment of the applicability and diagnostic usefulness of the panic specifier across DSM-5 mental disorders. Thus, this dissertation thesis examines the transdiagnostic relevance of FS and PA for both the prevention and diagnosis of mental disorders.

**Methods.** In an epidemiologic cohort study of N=1180 adolescents and young adults, diagnostic information regarding PA, FS and a wide range of mental disorders was assessed via standardized diagnostic interview. Furthermore, a brief two-session cognitive-behavioral preventive intervention for healthy adult participants with FS and PA was tested in a randomized controlled trial against an assessment-only control group (CG). Outcomes were assessed shortly after the intervention (post) and at a 12 month follow-up (FU) and included panic-related and transdiagnostic symptom measures as well as intolerance of uncertainty (IU) as potential underlying dysfunction.

**Results.** In the epidemiologic cohort study, less than 5% of participants with any mental disorder reported simultaneous PA, thus fulfilled the criteria for the panic specifier. However, applicability of the specifier differed much across disorders and was especially high among individuals with separation anxiety or posttraumatic stress disorder. Furthermore, simultaneous FS and PA were associated with greater mental health impairment and service utilization.

In the RCT, the preventive intervention induced a stable and long-term improvement of panic pathology and most closely related outcomes (anxiety sensitivity, fear of bodily sensations, claustrophobic symptoms) with effect sizes at post ranging between  $d=-0.22$  and  $d=-0.41$  and at FU ranging between  $d=-0.26$  and  $d=-0.39$ . The intervention effect was not moderated by panic status (FS vs. PA), indicating a similar effectiveness for both target groups. Transdiagnostic symptom improvement was only visible for general anxiety, somatic and – close to significance – depressive symptoms and was only short-term. No intervention effect on IU was visible, neither did IU moderate the intervention effect on panic pathology.

**Discussion.** The epidemiologic cohort study provides first time data on the prevalence of simultaneous PA in general population youth showing that the panic specifier overall is a quite rare condition in this type of population. However, due to its association with disorder severity, clinicians should make use of the panic specifier in order to indicate more severe cases. Findings from the RCT confirmed both FS and PA as reasonable targets of indicated prevention and pave the way for dissemination of such intervention and testing efficacy in less controlled, routine environments. A 1-item FS-screen appears feasible as time-economical way for identification of individuals who might profit from the investigated preventive program. Future research on potential mechanisms of action including modification of underlying transdiagnostic dysfunctions might elucidate the relationship between FS/PA and multifinal psychopathological outcomes. Furthermore, the incremental value of additional intervention modules or booster sessions might be tested to enhance the currently limited transdiagnostic effects.