

ABSTRACT

DIMENSIONAL AND TEMPORAL ASSOCIATIONS BETWEEN EXECUTIVE FUNCTION DOMAINS AND TRICHOTILLOMANIA AND SKIN PICKING DISORDER SYMPTOMS

Kathryn Barber, M.S.

Marquette University, 2026

Trichotillomania (TTM) and skin picking disorder (SPD) are characterized by urge-driven, automatic pulling and picking behaviors. Deficits in executive functioning (EF), particularly inhibitory control, may underlie TTM/SPD symptoms. However, it remains unclear whether inhibition uniquely relates to TTM/SPD or whether other EF domains (shifting, updating) are implicated. Findings are also mixed regarding dimensional EF–symptom associations, and prior cross-sectional research limits conclusions about temporal directionality. This study investigated dimensional associations between EF domains (inhibition, shifting, and updating) and TTM/SPD symptom severity, as well as bidirectional longitudinal relationships between EF and TTM/SPD.

University students completed neurocognitive tasks assessing inhibition, shifting, and updating (3 tasks per domain) and TTM/SPD symptom measures at two time points, 2 to 3 months apart (Time 1 [T1], Time 2 [T2]). Principal component analyses derived domain-level EF scores from tasks. TTM/SPD severity was analyzed as a composite of TTM and SPD measures. Hierarchical regression models tested cross-sectional associations and relative EF domain contributions. Longitudinal analyses examined T1 EF predicting residualized change in TTM/SPD and vice versa, in addition to direct prospective T1 to T2 effects. Covariates included age, gender, and T1–T2 interval length.

Analyses were conducted in the full sample (T1 N=106, T2 n=72) and a symptomatic subgroup (subthreshold-to-severe TTM/SPD; T1 n=53, T2 n=42). In the full sample, EF domains were unrelated to symptom severity. In the symptomatic subgroup, greater inhibition deficits were associated with higher concurrent TTM/SPD severity; effects were null for shifting and updating. Residualized change models were nonsignificant. In direct prospective analyses, greater T1 inhibition deficits predicted greater T2

TTM/SPD symptom severity; the reverse pathway was not significant. Symptom severity and EF domains demonstrated moderate-to-high temporal stability from T1 to T2.

Inhibitory control may function as a cognitive correlate of greater TTM/SPD severity once symptoms are above minimal levels. Results offer preliminary evidence of potential temporal precedence, though interpretation of directionality remains limited given relative symptom stability in this sample. Longer follow-ups and more frequent assessments are needed to clarify temporal dynamics. Together, findings highlight inhibition as a potential underlying process associated with dimensional TTM/SPD severity and a clinically relevant intervention target.

In Process