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432 - MAPPING SEVERE CHILD NOMOPHOBIA WITH HIERARCHICAL CLUSTERING AND ROC

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Resumen

Background/Objectives: Nomophobia, the anxiety associated with smartphone separation, is well-studied in adolescents and adults, but less so in younger children. This study aimed to evaluate nomophobia severity among Spanish children aged 9-13 in urban settings and establish a data-driven cutoff for identifying severe risk.

Methods: A sample of 1,153 children with weekly smartphone use from seven urban schools (populations > 50,000) completed the 32- item Nomophobia Questionnaire for Children (NQC) and the STAIC State Anxiety measure. Data were collected from February to April 2024. Hierarchical clustering grouped NQC scores into severity categories, followed by Receiver Operating Characteristic (ROC) analysis to determine a severe-risk threshold.

Results: Hierarchical clustering identified two groups: a “Low-to-Moderate Nomophobia” cluster (96.88%; n = 1,117) and a “Severe Nomophobia” cluster (3.12%; n = 36). ROC analysis established a cutoff of 101.5 (AUC = 0.993, sensitivity = 0.889, specificity = 0.979), with 4.86% (n = 56) exceeding this threshold. Children above the cutoff showed higher state anxiety (p = 0.019), with no significant sex differences.

Conclusions/Recommendations: Most children exhibited mild to moderate nomophobia, but ~ 5% displayed severe levels associated with increased state anxiety and phone use duration. The NQC ≥ 101.5 cutoff effectively identifies this at-risk minority without overestimating prevalence, offering a practical screening tool. Combining hierarchical clustering and ROC analysis yielded a robust threshold (NQC ≥ 101.5) for detecting

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severe nomophobia in urban Spanish children, highlighting a small subgroup at elevated psychological risk. Future studies should validate this cutoff cross-culturally and longitudinally to guide early interventions.

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