

1.63—1.65

Conclusions: This M&M curriculum enhanced trainees' capacity for reflective learning, systems thinking, and open discussion of adverse events. Its structure supports emotional engagement and introspection while promoting objective analysis. Given its impact and positive reception, this model is well-suited for broader implementation across psychiatry training programs.

REST, AC, CUL

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1.63 WEARABLES-DEFINED SEDENTARY BEHAVIOR CLUSTERS REVEAL DISTINCT SYMPTOM PROFILES IN YOUTH WITH SEVERE MENTAL ILLNESS: INSIGHTS FROM THE UNWIRED STUDY

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Objectives: Mobile health devices allow continuous recording of biometrics and have potential to objectively monitor symptoms of severe mental illness (SMI). We explore how physical inactivity can be used to identify clusters based on psychiatric symptoms, functional status, and sleep regularity index (SRI) in youth with SMI.

Methods: Wearables (Empatica Embrace2) were integrated into a community mental health (CMH) setting, recording actigraphy (ie, sedentary time, physical activity) for up to 6 months. Clinical status was captured using the Depression Anxiety Stress Scale (DASS) (moderate/severe/extremely severe), Behavior and Symptom Identification Scale (BASIS) (compared to cohort median for each subscale), and Social and Occupational Functioning Assessment Scale (SOFAS; score ≤ 60 , moderate or worse function). Participants were hierarchically clustered by sedentary behavior (SB; sedentary time in minutes), with Kruskal-Wallis and Dunn's tests for comparison between clusters.

Results: There were a total of 46 participants (median age: 19 years [interquartile range 18-21], 69% female, 43% affective, 35% personality +/- affective, 22% psychosis +/- other diagnoses). Three clusters were identified: C1) low SB (average 283 minutes); C2) moderate SB (average 398 minutes); and C3) high SB (average 567 minutes). C1 had the lowest functional impairment (58% SOFAS ≤ 60) but highest symptom burden in all categories of DASS and highest on BASIS self-harm (61%), psychosis (67%), emotional lability (61%), and substance abuse (72%). C2 had an intermediate profile with 71% showing functional impairment (SOFAS ≤ 60) and intermediate scores on DASS and BASIS. C3 had the most functional impairment (100% SOFAS ≤ 60) but lower symptom severity in all categories of DASS and lower symptom severity in all BASIS subscales, except for high relationship difficulties (86%). There was no significant difference in SRI, but C1 showed significantly lower SB compared to C2 ($p < .001$) and C3 ($p < .001$), while C2 had lower SB compared to C3, trending toward significance ($p = .051$).

Conclusions: SB may discriminate functional and symptom severity profiles across clusters and may be an objective measurement for clinical progress. Wearables can offer a feasible, cost-effective method for capturing behavioral data to inform interventions and overcome limitations such as subjective self-reporting due to lack of insight, or time constraints in CMH settings.

CC, DAM

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1.64 BRAIN SIMILARITY AS A MECHANISM FOR THE TRANSMISSION OF MATERNAL DEPRESSION AND PARENTING STRESS

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Objectives: Maternal depression and parenting stress are risk factors for the development of psychopathology in children. This study investigates the neural mechanisms of transmission of maternal depression and parenting stress in: 1) maternal brain; 2) mother-child brain similarity; and 3) child brain.

Methods: Mother participants reported maternal depression, parenting stress, and child depression levels using the Beck Depression Inventory (BDI), Parenting Stress Index (PSI), and Children's Depression Inventory (CDI), respectively. A total of 151 mothers and 119 school-aged children completed neuroimaging. Structural images were submitted to extract 9 features (thickness, surface area, volume, mean curvature, average convexity, sulcal depth, local gyrification index, shape index, shape complexity index) for 68 parcellated cortical regions. Applying the Morphometric Inverse Divergence method to these features, we estimated anatomical brain similarity. Resting-state functional imaging data were used to quantify blood-oxygenation-level-dependent signal fluctuations. Functional brain similarity was the average correlation of time series of blood-oxygenation-level-dependent signals.

Results: Structural equation analysis revealed that: 1) maternal depression influences parenting stress ($\beta = .774, p < .001$), which subsequently affects the maternal brain ($\beta = -.531, p < .001$); 2) maternal depression influences parenting stress ($\beta = .343, p < .001$), which affects mother-child brain similarity ($\beta = -.825, p < .005$); and 3) maternal depression influences parenting stress ($\beta = .541, p < .001$), and then affects the child's brain ($\beta = .445, p < .005$).

Conclusions: Maternal depression and parenting stress similarly affect brain structure and function in mothers and children, particularly in regions linked to emotion and empathy. Understanding these neural mechanisms may reveal therapeutic targets to prevent depression across generations.

DDD, NEURODEV, SAC

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1.65 TRENDS AND REGIONAL VARIATION IN MENTAL, EMOTIONAL, DEVELOPMENTAL, OR BEHAVIORAL PROBLEMS AMONG US CHILDREN, 2018-2023

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Objectives: There is growing public health concern over mental, emotional, developmental, or behavioral (MEDB) problems in children and adolescents. This study aimed to estimate annual US prevalence rates of MEDB issues among youth aged 3-17 years over a 6-year period, examine national trends, and compare prevalence across 10 regions.

Methods: Aggregate counts ($N = 223,297$) were extracted from the National Survey of Children's Health. A case was any child with ≥ 1 of 10 specified conditions or who met the emotional/behavioral criterion of the Children with Special Health Care Needs Screener; records with missing responses ($< 5\%$) were excluded. National prevalence was the yearly proportion of cases nationwide. Regional change was expressed as the percentage-point (pp) difference between 2018 and 2023. A 10×2 Pearson χ^2 assessed 2023 regional heterogeneity; Cochran-Armitage tests evaluated ordered trends within each region ($\alpha = .05$).

Results: A total of 59,037 children (26.4%) met the criteria for an MEDB problem. Weighted national prevalence rose from 22.1% in 2018 to 25.8% in 2023. The sharpest annual increase occurred between 2021 and 2022 (+2.4 pp). In 2023, prevalence differed significantly by region ($\chi^2 = 98.2, df = 9, p < .0001$), ranging from 21.4% in Region IX (Pacific states) to 30.9% in Region I (New England). Absolute 2018 to 2023 increases were largest in Region IV (+6.5 pp, Southeast), Region VIII (+6.3 pp, Mountain West), Region I (+5.2 pp), and Region VII (+4.7 pp); Region VI (South-Central) rose only +0.2 pp.