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Background: Clinical assessment of chronic pain emphasizes intensity, yet pain frequency may independently contribute to psychological burden. We examined whether pain frequency confers psychological risk beyond intensity effects, how this relationship varies across the adult lifespan, and whether observed associations reflect treatment-seeking behavior or independent risk.

Methods: Cross-sectional analysis of 31,216 adults from the 2019 National Health Interview Survey. Pain profiles combined frequency (none, intermittent, frequent) and intensity (mild, moderate-severe) into five categories. Outcomes included dysphoria, anhedonia, somatic symptoms, clinical depression (PHQ-8 ≥ 10), and clinical anxiety (GAD-7 ≥ 10). Survey-weighted quasipoisson regression estimated prevalence risk ratios (RR) stratified by developmental stage (emerging adults 18-29, young adults 30-44, middle-aged 45-64, older adults 65+). Treatment stratification isolated associations among individuals not receiving psychiatric treatment.

Results: Frequent mild pain conferred psychological risk equal to or exceeding intermittent moderate-severe pain, particularly in younger adults. Among emerging adults, frequent mild pain showed higher risk than intermittent moderate-severe pain for all five outcomes, including dysphoria (RR=6.64 vs. 2.62), clinical depression (RR=7.10 vs. 4.25), and clinical anxiety (RR=6.56 vs. 3.13). This pattern attenuated with age; older adults showed comparable risk across these profiles. When analyses were restricted to untreated individuals, the frequent mild pain association strengthened rather than diminished (dysphoria RR=5.84, 95% CI: 3.00-11.37 among untreated emerging adults vs. RR=4.82 overall), ruling out treatment-seeking as an alternative explanation. Despite elevated psychological risk (25.0% dysphoria, 59.6% anxiety), only 15.0% of emerging adults with frequent mild pain received psychiatric treatment—the only pain profile where distress exceeded treatment utilization.

Conclusions: Pain frequency represents an independent dimension of psychological risk that interacts with intensity differently across developmental stages. Frequent mild pain in emerging adults constitutes a clinically under-recognized phenotype: high psychological burden combined with low treatment engagement. Clinical screening should assess pain frequency alongside intensity, as "mild but constant" pain may warrant greater attention than "severe but occasional" pain, particularly in younger adults.

Keywords: chronic pain, depression, anxiety, emerging adulthood, pain frequency, treatment utilization, NHIS