

CI: 1.3–1.9), but less likely to have a fracture (HR 0.5; CI: 0.4–0.7). Increased age was associated with increased screening, risk of osteoporosis, and risk of fracture. Higher BMI was associated with decreased likelihood of screening, osteoporosis diagnosis, and fracture.

Conclusions: Characteristics of RA patients screened for osteoporosis reflected those of the general population. Given the increased risk of bone loss in RA, this represents a missed opportunity for early detection of osteoporotic changes and the initiation of preventative treatment.

Occurrence of fall injury in relation to degenerative spinal conditions: a case-control study of adults from Southern California



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Purpose: Back pain is a risk factor for accidental falls among older adults. Degenerative spinal conditions can cause back pain. We hypothesized that diagnosed degenerative spinal conditions and occurrence of injurious falls would be positively associated.

Methods: We conducted a case-control study among 46,666 pairs of Kaiser Permanente Southern California (KPSC) members ages 50–85 years who were continuously enrolled at least one year in the period 1/1/2009 – 9/30/2015. Cases were members who received a first diagnosis of a fall-related injury within the study period. One control was selected at random from members who matched the case on age, gender, and KPSC medical center on the fall injury (index) date. A validated coding algorithm was used to classify the presence or absence of a spinal diagnosis among cases and controls in the year prior to index date. Multiple conditional logistic regression was used to estimate adjusted odds ratios (aOR) and 95% confidence intervals (CI) controlling for race/ethnicity, depression, psychotropic medication use, and other factors. Stratified analyses were used to estimate gender-specific aOR.

Results: In the year before index date, 29% of cases and 21% of controls had a diagnosed spinal condition. Axial back pain, disc herniation, and spinal stenosis were the most common diagnoses. There was a weak, positive association of spinal diagnosis and fall injury among women (aOR = 1.14, 95% CI: 1.09, 1.18), among men (aOR = 1.13, 95% CI: 1.06, 1.20), and overall (aOR = 1.13, 95% CI: 1.10, 1.17).

Conclusions: Injurious fall occurrence is not strongly associated with degenerative spinal conditions.

The impact of opioid treatment on co-occurring substance use: a systematic review



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Background: The number of opioid-related deaths involving combined substance use is on the rise, yet few researchers report how opioid-treatment is related to co-occurring substance use. This review aims to synthesize studies reporting changes in co-occurring substance use following opioid-treatment in the United States.

Methods: We searched MEDLINE/PubMed, EMBASE, PsychINFO, and Cumulative Index to Nursing and Allied Health Literature to identify eligible publications through November 2018. A standardized protocol was used to extract data on the study design, treatment, and co-occurring substance use. Article quality was assessed using the Quality in Prognosis Studies tool.

Results: Of the 3,219 titles screened, 614 abstracts and 231 full-text original publications were assessed, resulting in 24 eligible articles. Changes in co-occurring substance use post-treatment were most often reported for cocaine, alcohol, cannabis, and sedatives. Nearly half reported changes in “polydrug” or “polysubstance” use, yet inconsistent definitions and metrics used to measure poly-use made these results difficult to compare. Of nine opioid-treatments reporting a statistically significant decrease in co-occurring substance use, eight and three

reported decreased cocaine and alcohol use, respectively. Studies reporting these decreases in co-occurring substance use most often described treatment using methadone or Levacetylmethadol, although one reported decreased co-occurring use of cocaine following buprenorphine treatment.

Conclusion: Understanding the relationship between opioid-treatment and co-occurring substance use is crucial for developing opioid-interventions that can be tailored to individuals who misuse multiple substances. Future researchers should develop a standardized definition for poly-use and consensus around measurement metrics for assessing co-occurring substance use.

Mental Health

Allostatic load, unhealthy behaviors, and depressive symptoms in the Hispanic Community Health Study/Study of Latinos (HCHS/SOL)



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Purpose: The study purpose was to determine whether unhealthy behaviors moderated the relationship between allostatic load (AL) and future significant depressive symptoms (SDS) among Hispanic Community Health Study/Study of Latinos participants. We hypothesized that Hispanics/Latinos who engage in more unhealthy behaviors will exhibit a weaker relationship between AL and SDS.

Methods: Longitudinal data (2008–2011 and 2013–2018) from 11,187 participants were analyzed. The exposure of interest was an index of twelve established biomarkers (categorized using clinically-relevant cut points) of AL at Visit 1. The main outcome was significant (≥ 10 out of 30) depressive symptoms at Visit 2. An index of cigarette smoking, excessive/binge drinking, sedentary behavior, and poor diet quality at Visit 1 was an effect modifier. Multivariable logistic regression; adjusted for age, gender, education, birthplace, and Visit 1 SDS; was used to model AL, the unhealthy behavior index (UBI, range: 0–4), and their interaction on Visit 2 SDS, stratified by national background.

Results: Puerto Ricans engaged in more unhealthy behaviors and had higher Visit 1 SDS while Mexicans engaged in fewer unhealthy behaviors (11.1% and 1.7% ≥ 3 behaviors) and had lower Visit 1 SDS (38.2% and 22.7%). Puerto Rican participants who had greater AL and UBI had significantly lower odds of future SDS (AL and UBI=1: OR=0.90, 95% CI=0.80, 0.99).

Conclusions: By linking the cumulative physiologic sequelae of stress and behavior to SDS, our findings do not support previous research among Latinos overall or Mexicans specifically using self-reported chronic stress. Instead, our findings show that these relationships differ by national background.

Sex disparities in adverse childhood experiences and cognition among young adults: results from a nationally representative sample



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Purpose: One in seven children has experienced abuse and/or neglect in the US. These adverse childhood experiences (ACEs) reportedly increase cancer, HIV/AIDS, and depression risk. Sex differences exist in ACEs and cognitive function. However, research examining the association between ACEs and cognition is limited. This study examined the association between ACEs and cognition; and assessed sex differences.

Methods: Data were obtained from Waves III (18–28) and IV (24–34) of the National Longitudinal Study of Adolescent to Adult Health from 2,511 men and 3,144 women. Type and number of ACEs were based on reports at Wave III of sexual, physical abuse or neglect before 6th Grade. Cognition was operationalized by summing verbal and numerical recall scores (Wave IV), which measure memory – a key cognition process. Multiple