INFLUENCES OF OSTEOARTHRITIS PAIN, INSOMNIA AND DEPRESSION ON HEALTH CARE UTILIZATION IN OLDER ADULTS WITH OSTEOARTHRITIS

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BACKGROUND

- Osteoarthritis (OA) is prevalent and costly
- Pain is the main reason patients with OA seek treatment
- Older adults with OA often report co-occurring insomnia and depression
- OA pain, insomnia and depression increase health care utilization (HCU)
- Effects of these three conditions on HCU are rarely examined

PURPOSE

- Examine the individual effects of OA pain, insomnia and depression on HCU
- Examine the joint effects of OA pain, insomnia and depression on HCU

METHODS

- Design
  - A cross-sectional study with a mailed screening questionnaire which asked about pain, sleep disturbance and depression
  - 3,056 participants gave the permission to access their medical records from Group Health (GH)

- Symptom Measurements
  - Graded Chronic Pain Scale (GCPS)
    - 1: No pain
    - 2 – 4: Positive pain level
  - Insomnia Severity Index (ISI)
    - 0 – 7: No insomnia
    - 8 – 14: Sub-threshold insomnia
    - 15 – 21: Moderate insomnia
    - 22 – 28: Severe insomnia
  - Patient Health Questionnaire depression scale (PHQ-8)
    - 0 – 9: No depression
    - 10 – 19: Major depression
    - 20 – 24: Severe major depression

RESULTS

- Sample (N = 3,056)
  - Mean age: 72 yrs
  - 87.4% Caucasian, 66.3% female & 59.3% married
  - 86.4% completed at least community college
  - 22.3% employed

- Symptoms
  - 46.6% OA pain
  - 55.1% at least clinical insomnia & 15.6% moderate insomnia
  - 17.3% major depression

- Individual Effects on HCU Controlling for Characteristics
  - OA pain, insomnia and depression were associated with office visits (p < 0.001)
  - OA pain, insomnia and depression were not associated with LOS (p > 0.05)
  - OA pain (p < 0.001), insomnia (p = 0.020) and depression (p < 0.001) were associated with outpatient costs

- Correlation among Symptoms
  - Pain & insomnia: moderately correlated (r = 0.43)
  - Pain & depression: moderately correlated (r = 0.45)
  - Insomnia & depression: highly correlated (r = 0.72)

- Joint Effects of Pain & Insomnia
  - Pain was significantly related to office visits and outpatient costs but not LOS
  - Insomnia given pain level contributed to office visits but not for outpatient costs
  - No significant interactions between pain and insomnia were found

- Joint Effects of Pain & Depression
  - Pain was significantly related to office visits and outpatient costs but not LOS
  - Depression given pain level contributed to both office visits and outpatient costs
  - No significant interactions between pain and depression were found

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<th>Variables</th>
<th>Outcomes</th>
<th>Office visits</th>
<th>Outpatient costs</th>
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CONCLUSIONS

- OA pain and depression contribute to office visits and outpatient costs independently in this population
- Insomnia only influences office visits independently in this population
- OA pain, insomnia and depression seem not to influence the LOS in this population
- Joint effects of pain, insomnia and depression are the combination of each independent effect on HCU

Acknowledgments: This project was supported by a de Tornyay Healthy Aging Doctoral Scholarship, a Hester McClews Nursing Scholarship, the China Scholarship Council (CSC) Fellowship and PHS grant R01 AG03126 (SAM, MV and MV). Special thanks to Dr. Ruh Etzioni for her feedback on the data analysis. For Questions: mliu@uw.edu