

Exploring the Association Between Health Literacy and Depression Prevalence Through Personal Health Record Associated With Health Insurance Claims Data

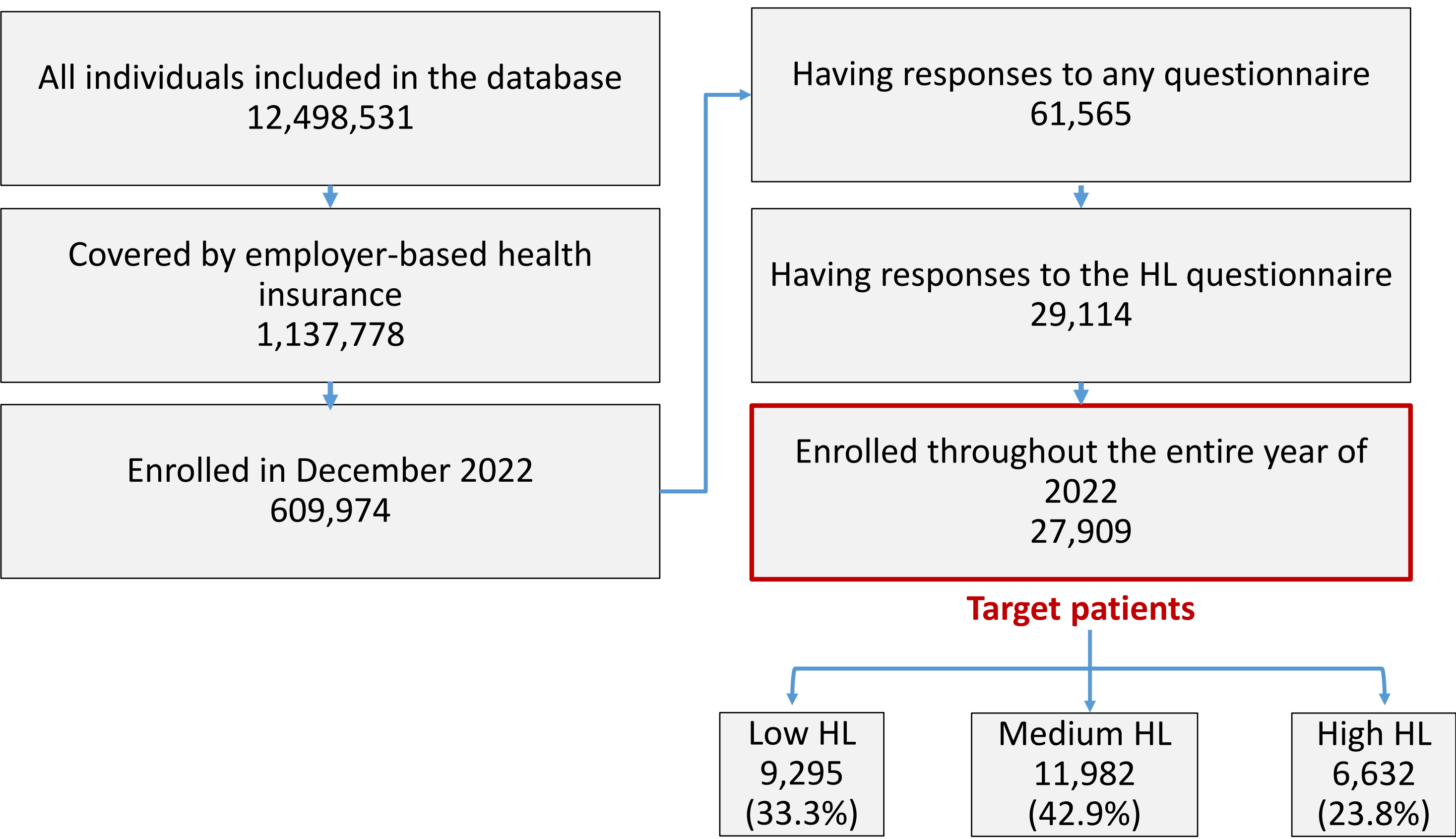
Zhang T, Iwasaki K, Takeshima T, Chida A  
Milliman, Inc., Tokyo, Japan

OBJECTIVES

- Depression has become a prevalent chronic disease worldwide, negatively impacting quality of life. Additionally, it incurs significant economic costs, which encompass direct expenses related to medical services, productivity loss associated with absenteeism and presenteeism, as well as suicide-related costs.
- On the other hand, there is growing recognition of the importance of health literacy (HL) in enabling individuals to make informed health decisions.
- As individuals with high HL generally have a strong understanding of health-promoting behaviors and thus are more likely to engage in actions that benefit their health, the potential effects of HL on improving health outcomes and reducing disease prevalence are promising. This study aims to explore the relationship between HL and the prevalence of depression.

METHODS

- This study utilized a confidential health insurance claims database provided by DeSC Healthcare.
- Individuals diagnosed with depression in 2022 were identified through at least one confirmed diagnosis of ICD-10 codes "F32" or "F33".
- HL was measured through the primary component analysis of responses to the Communicative and Critical Health Literacy Scale, developed by Ishikawa et al.
- Participants were categorized into three HL levels: low (33.3%), medium (42.9%), and high (23.8%).
- The prevalence of depression across these HL levels was calculated and compared after demographic adjustment.



CONCLUSIONS

- The findings indicate that individuals with higher HL levels are less likely to have reported depression.
- More research into the relationship between HL and the prevalence of depression could identify opportunities to reduce the rate of depression.

RESULTS

- The sample consisted of 27,909 insureds with health literacy data, with an average age of 49.8 years, of whom 66.3% were male. Males aged 55 to 64 made up a large portion of the sample. No children under the age of 14 were included. (Figure. 1)
- The overall prevalence of depression was identified at 4.4%.
- After demographic adjustments, the prevalence of depression were found to be 5.0% (95%CI [4.5%, 5.4%]) for the low HL group, 4.2% (95%CI [3.8%, 4.5%]) for the medium HL group, and 3.9% (95%CI [3.5%, 4.4%]) for the high HL group, respectively. (Figure. 2)
- While higher HL is generally associated with a lower prevalence of depression in men, women aged 25-39 with high HL show the same or even higher prevalence of depression. (Figure. 3)

Figure 1: Demographic Distribution of People Under Analysis

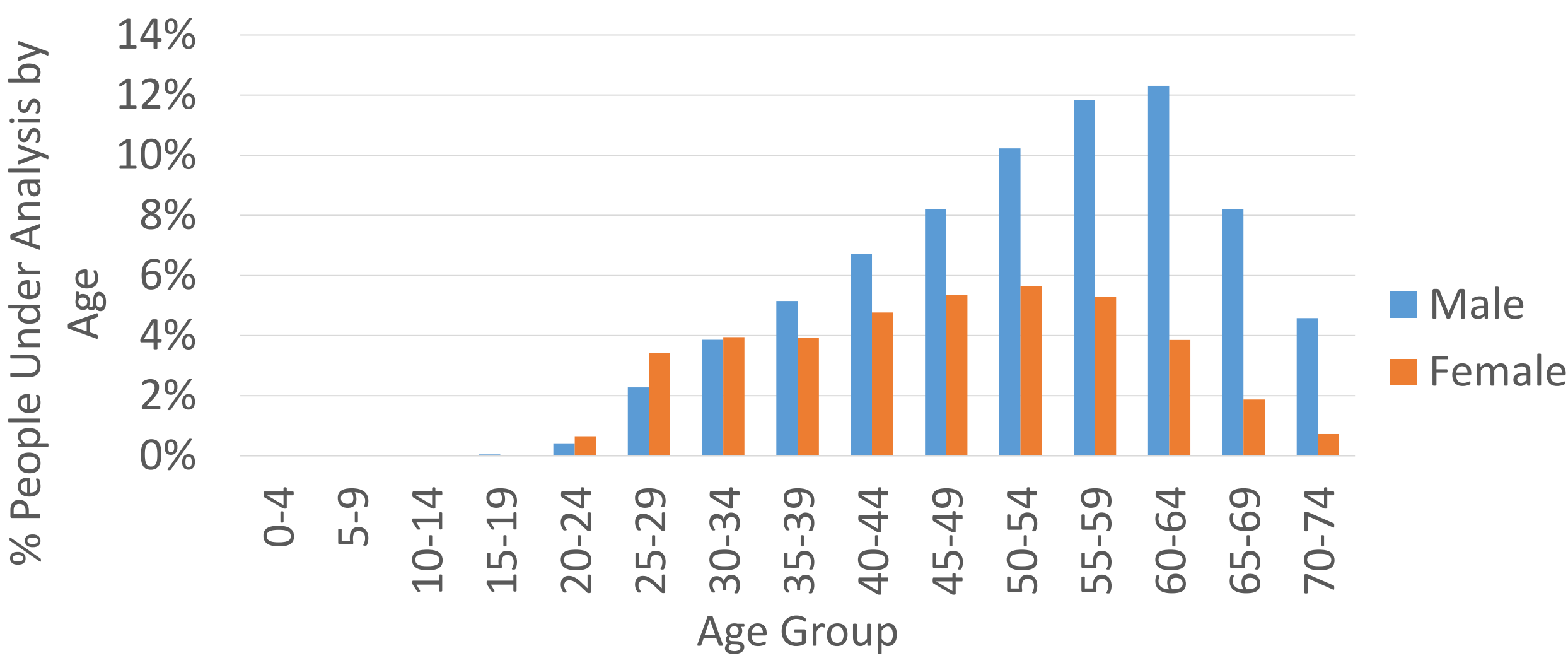


Figure 2: Prevalence of Depression after Demographic Adjustments in Different HL Group

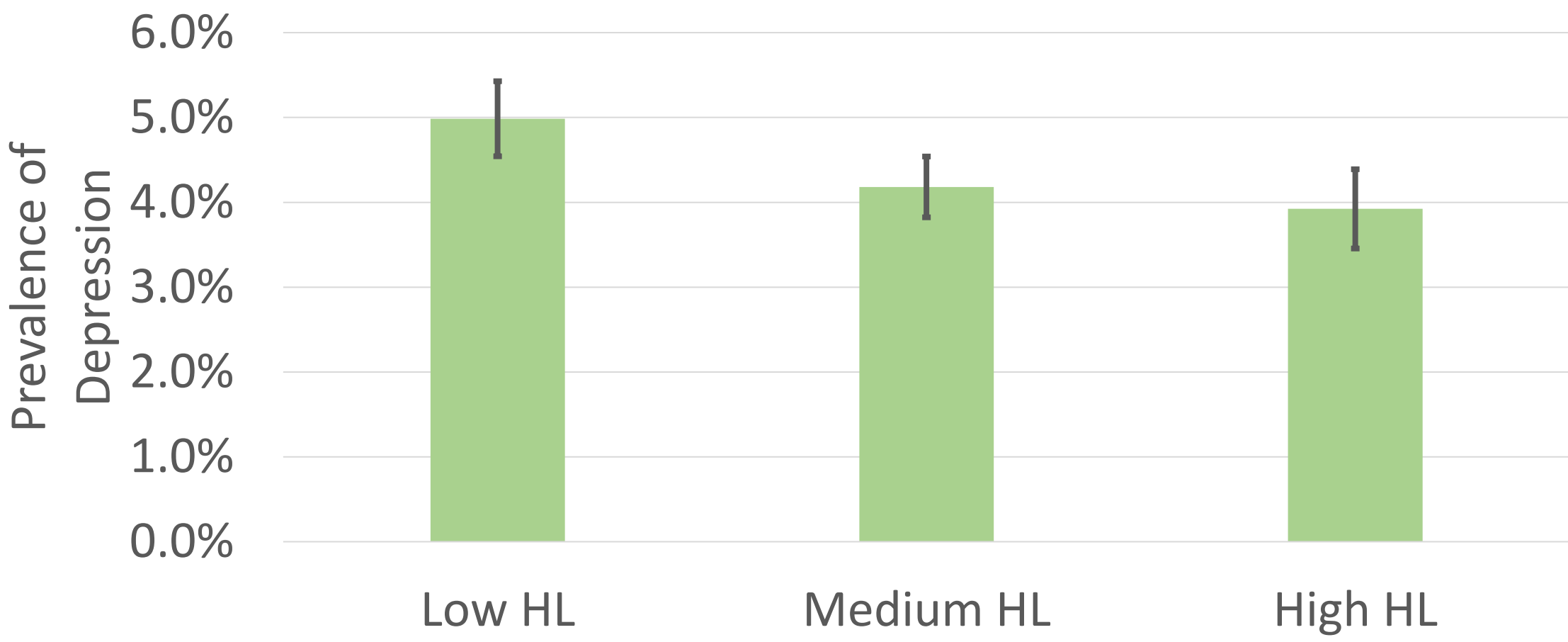


Figure 3: Prevalence of Depression in Low and High HL Group by Gender and Age

