

# Sociodemographic Indicators and Quality of Life Impact of Major Depressive Disorder in the United States Using the Medical Expenditure Panel Survey

#PCR14

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## Introduction

- Major depressive disorder (MDD) is a common mental health disorder characterized by a period of depressive symptoms that persists for at least 2 weeks and affects cognition and functioning<sup>1</sup>
- Based on the National Survey on Drug Use and Health 2020, an estimated 21 million adults (8.4%) experienced at least one major depressive episode in 2020<sup>2</sup>
- MDD may impact multiple aspects of individuals' lives, such as work and healthcare outcomes, but evidence is limited on other aspects such as household composition<sup>3</sup>

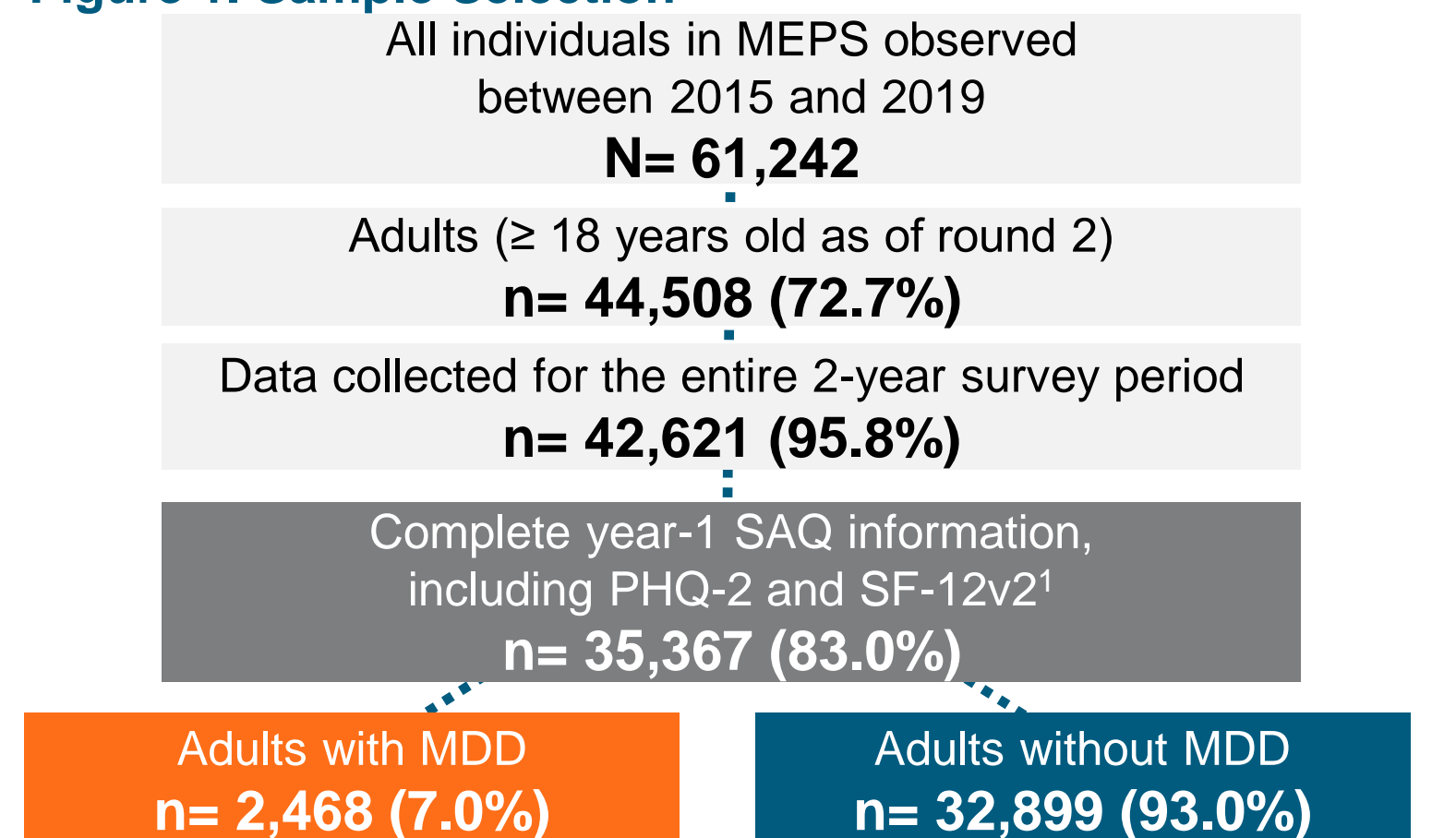
## Objective

- To compare sociodemographic indicators and quality-of-life outcomes between adults with and without MDD in the United States (US)

## Methods

- Adults (≥18 years) were identified from Medical Expenditure Panel Survey (MEPS) data (2015-2019; panels 20-23; **Figure 1**)
- Adults with a score of ≥3 on the Patient Health Questionnaire-2 (PHQ-2; self-report) were classified into the Adults with MDD cohort<sup>4</sup>; remaining adults were classified into the Adults without MDD cohort
- Sociodemographic indicators (household composition, marital status, employment, household poverty, education) and quality-of-life outcomes (12-item short form survey version 2 [SF-12v2] mental component score [MCS] and physical component score [PCS], 6-dimension short form survey [SF-6D] utility score) were compared
- Results were weighted using MEPS nationally representative person-level weights and adjusted for selected characteristics (e.g., gender, age, race). 95% Wald interval error bars are presented for binary variables (proportions), and 95% confidence error bars are presented for continuous variables (means)
- Adjusted weighted generalized linear models with a binomial distribution and logit link (proportion variables), negative binomial distribution and log link (count variables), and gaussian distribution and identity link (continuous variables) were used to obtain odds ratios [OR], incidence rate ratios [IRR], and mean differences between cohorts, alongside p-values

### Figure 1. Sample Selection



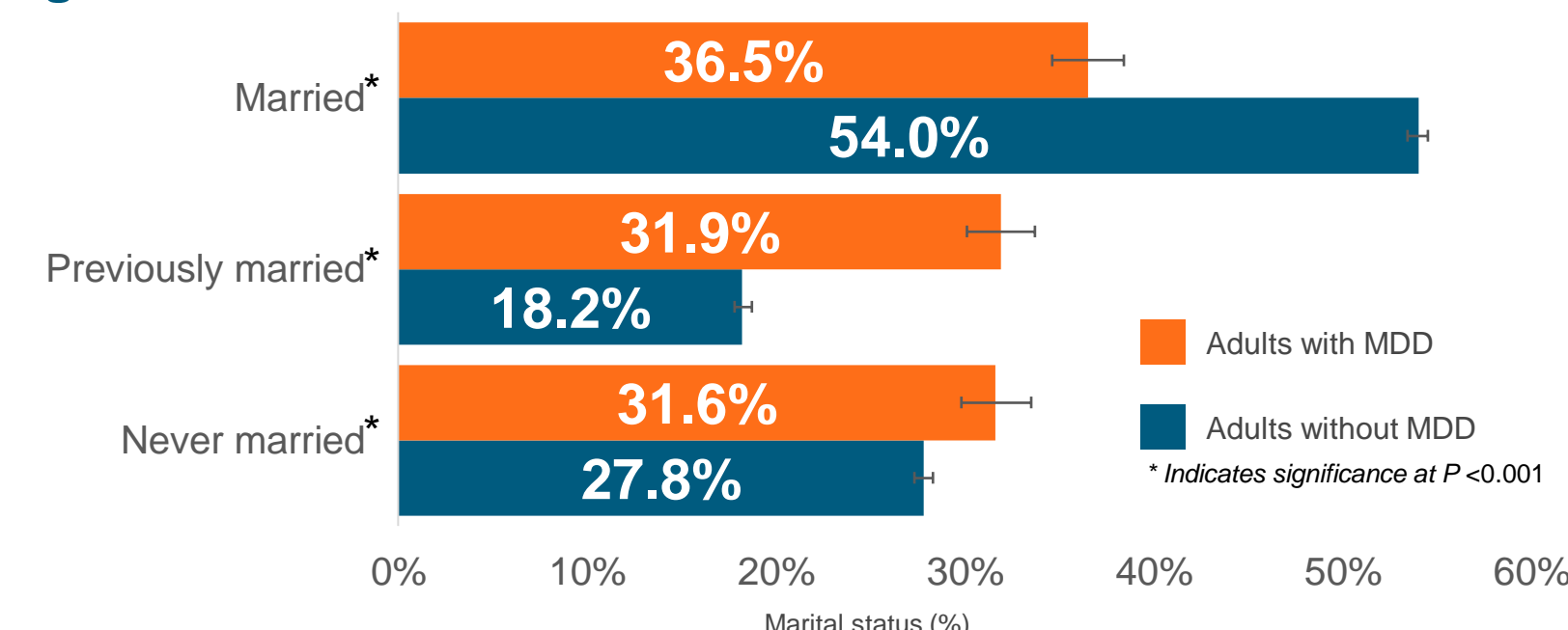
1. The Self-Administered Questionnaire (SAQ) is administered by MEPS on rounds 2 and 4 of the respective panel for each adult respondent and contains the 2-item Patient Health Questionnaire (PHQ-2) and 12-item Short Form Survey version 2 (SF-12v2).

## Results

Table 1. Demographic Characteristics

	Adults with MDD n = 2,468	Adults without MDD n = 32,899	Standardized difference
<b>Age, mean ± SD [median]</b>	47.5 ± 17.0 [48.0]	47.2 ± 17.8 [47.0]	0.02
18-24, n (%)	248 (10.1%)	3,715 (11.3%)	0.04
25-44, n (%)	831 (33.7%)	11,603 (35.3%)	0.03
45-64, n (%)	969 (39.3%)	11,163 (33.9%)	0.11
≥65, n (%)	420 (17.0%)	6,418 (19.5%)	0.06
<b>Female, n (%)</b>	1,474 (59.7%)	16,964 (51.6%)	0.17
<b>Race, n (%)</b>			
White	1,879 (76.1%)	25,969 (78.9%)	0.07
Black	363 (14.7%)	3,771 (11.5%)	0.10
Native American	32 (1.3%)	218 (0.7%)	0.06
Asian & Pacific Islander	93 (3.8%)	2,106 (6.4%)	0.12
Multiple	101 (4.1%)	834 (2.5%)	0.09
<b>Ethnicity, n (%)</b>			
Hispanic	361 (14.6%)	5,156 (15.7%)	0.03
Not Hispanic	2,107 (85.4%)	27,743 (84.3%)	0.03

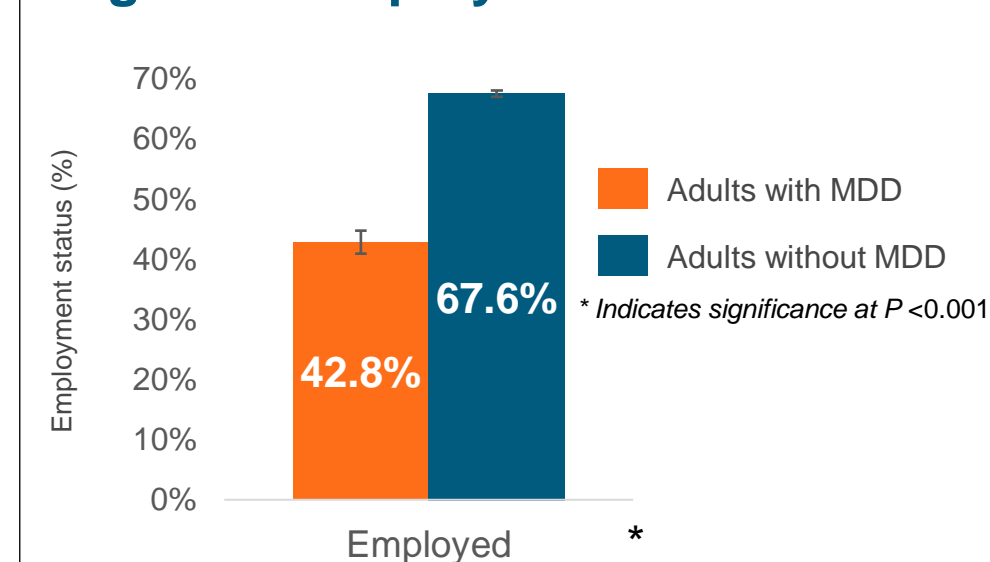
Figure 2. Marital Status



- Adults with MDD were **less likely to be married** versus adults without MDD (OR: 0.49; p<0.001; **Figure 2**)

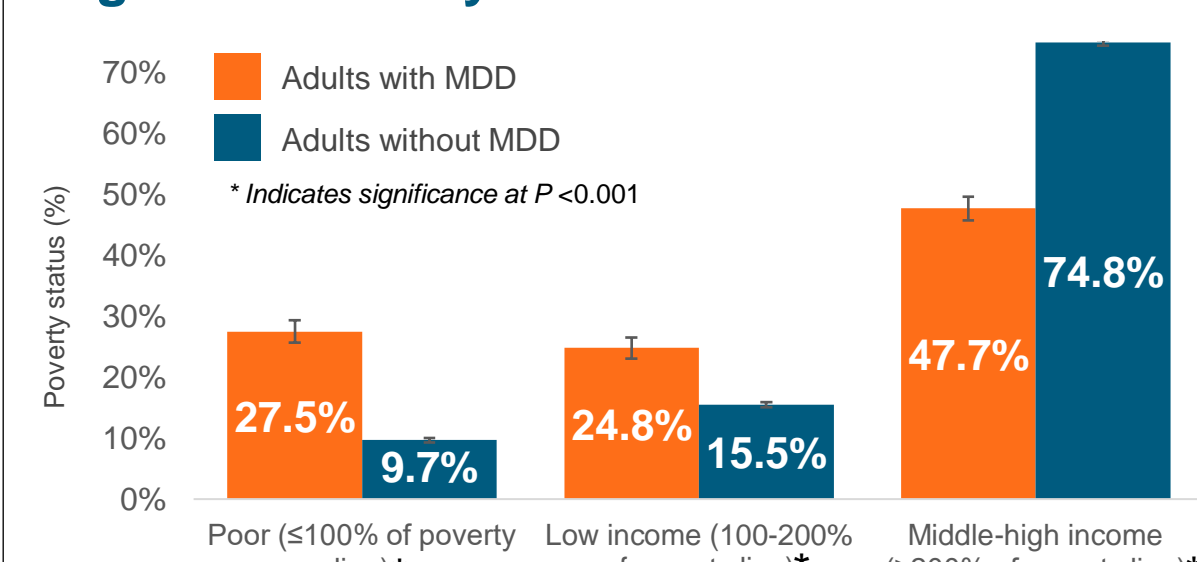
## HUMAN CAPITAL

Figure 3. Employment Status



- Adults with MDD were **less likely to be employed** versus adults without MDD (OR: 0.32; p<0.001; **Figure 3**)

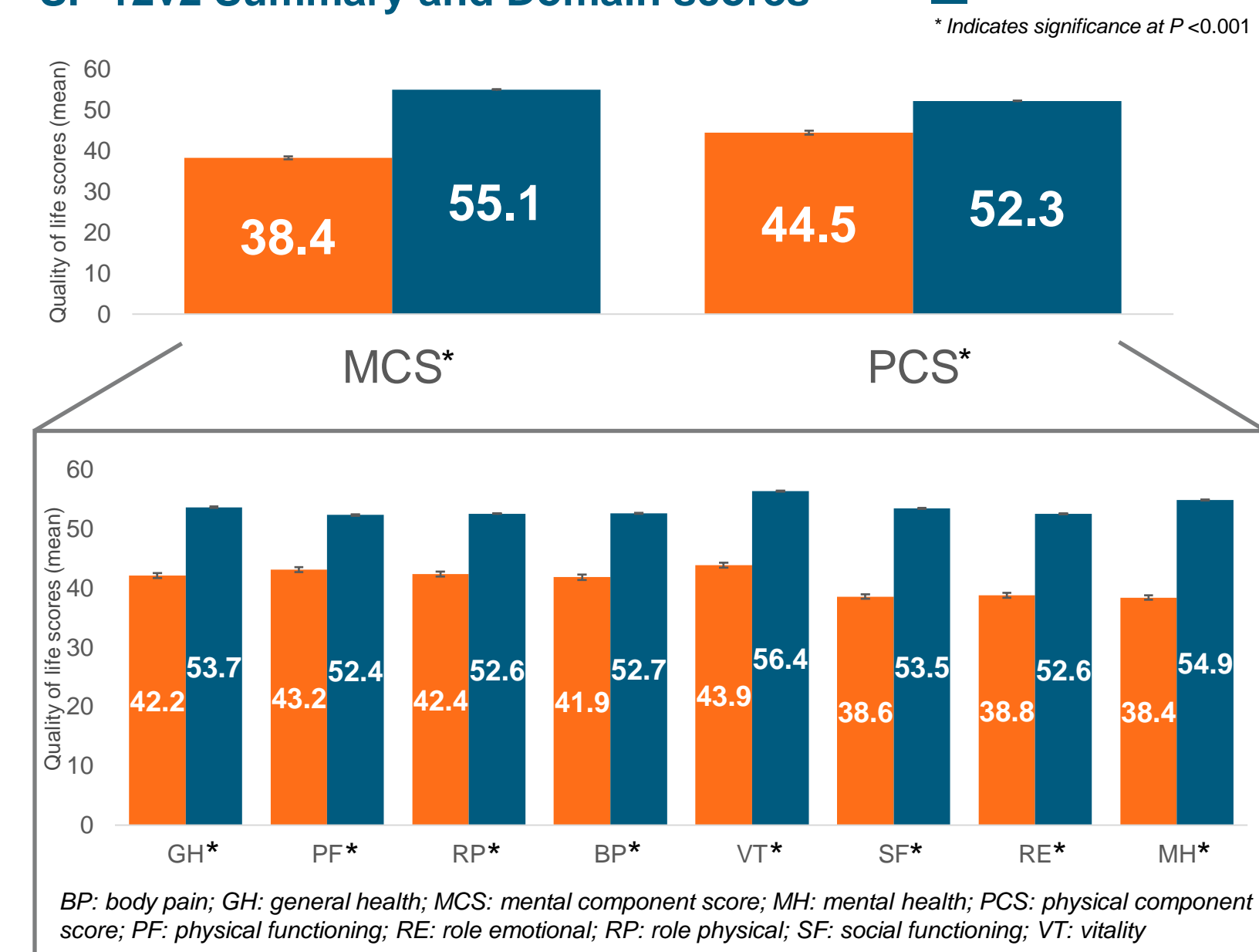
Figure 4. Poverty Status



- Adults with MDD were **more likely to be living below the poverty line** versus adults without MDD (OR: 3.52; p<0.001; **Figure 4**)

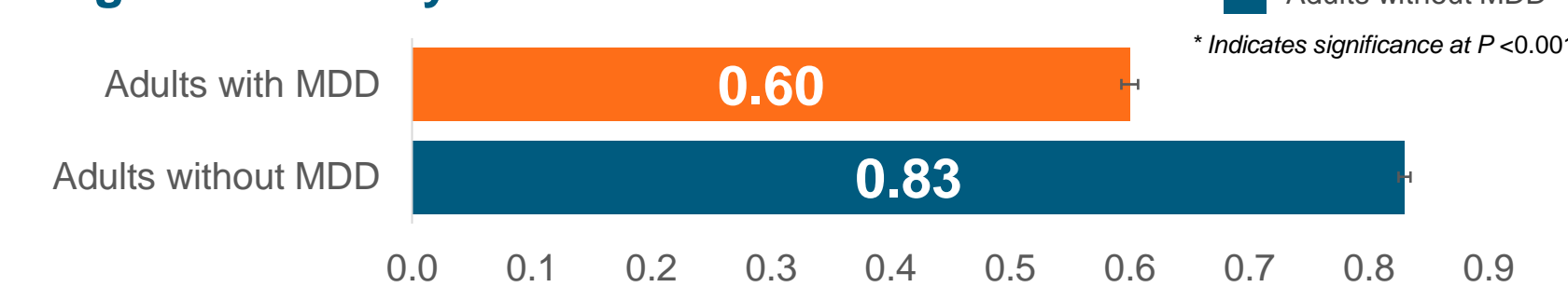
## OVERALL WELLBEING

Figure 6. Average Quality of Life Score – SF-12v2 Summary and Domain scores



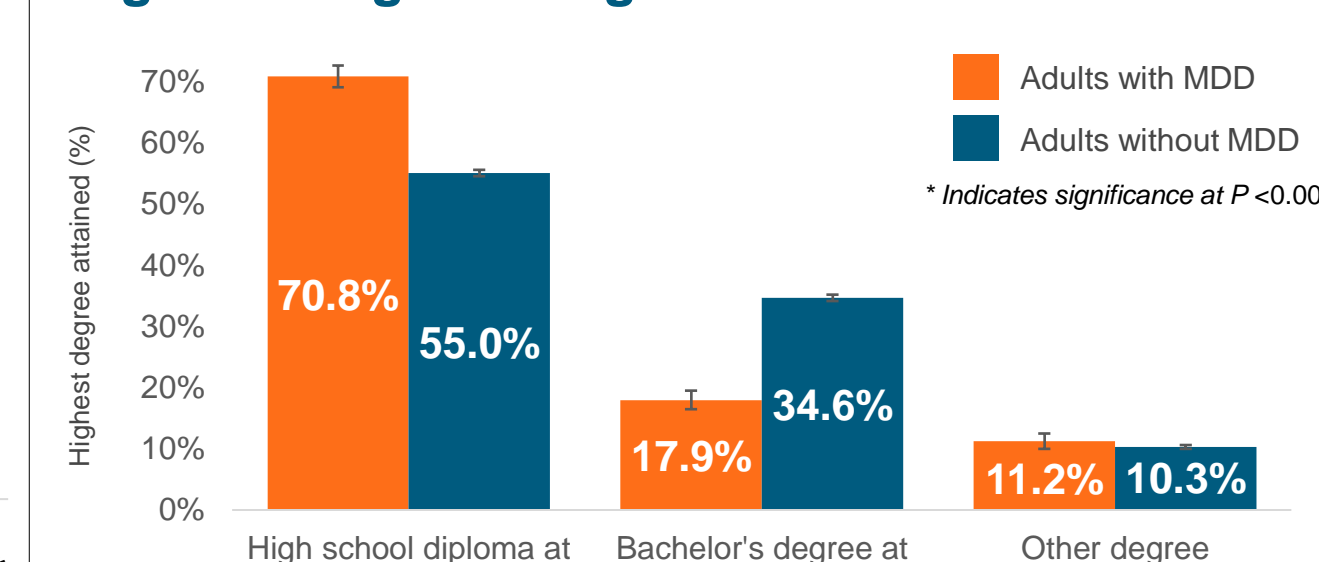
- Adults with MDD had **lower SF-12v2 MCS and PCS scores** and **lower SFv12 domain scores** versus adults without MDD (mean differences; all p<0.001; **Figure 6**)

Figure 7. Quality of Life – SF-6D\*



- Adults with MDD had a **lower SF-6D score** versus adults without MDD (mean difference 0.23; p<0.001; **Figure 7**)

Figure 5. Highest Degree of Education Attained



- Adults with MDD were **less likely to have completed at least a bachelor's degree** versus adults without MDD (OR: 0.42; p<0.001; **Figure 5**)

Table 2. Household Composition<sup>1</sup>

	Adults with MDD	Adults without MDD	OR/IRR <sup>2</sup> [95% CI]
Proportion of adults living with ≥1 other individual in household (%)	72.5%	81.3%	0.61 [0.54, 0.69]*
Number of others in the household (Mean ± SD [median])	1.5 ± 1.5 [1.0]	1.9 ± 1.6 [1.0]	0.86 [0.82, 0.90]*
Number of other adults in the household (Mean ± SD [median])	1.0 ± 0.9 [1.0]	1.2 ± 1.0 [1.0]	0.87 [0.83, 0.91]*

P values were \*P<0.001  
1. Other individuals living with Adults with/without MDD may have MDD. When including other individuals without MDD only: 66.8% of Adults with MDD live with another individual without MDD (mean 2.1 others; 1.3 adults) vs 79.5% for Adults without MDD (mean 2.3 others; 1.4 adults).

2. Odds ratios (OR) and incidence rate ratios (IRR) are calculated for Adults with MDD versus Adults without MDD

- Adults with MDD were **less likely to live with someone else** (OR: 0.61; p<0.001) versus adults without MDD (**Table 2**)

## Conclusions

- This real-world analysis highlights that **MDD may be associated with burdens in multiple aspects of one's life**, including household composition, marital status, human capital, and overall wellbeing
- Future studies are needed to better understand the natural history and longitudinal nature of the impact of MDD throughout the life of individuals

## Abbreviations

BP: body pain; GH: general health; GLM: generalized linear model; MCS: mental component score; MDD: major depressive disorder; MEPS: Medical Expenditure Panel Survey; MH: mental health; N: number; OR: odds ratio; PCS: physical component score; PF: physical functioning; PHQ-2: 2-item patient health questionnaire; RE: role emotional; RP: role physical; SAQ: self-administered questionnaire; SF: social functioning; SF-12v2: 12-item short form health survey, version 2; SD: standard deviation; US: United States; USD: United States dollar; VT: vitality

## Acknowledgements

This study was sponsored by Biogen, Inc (Cambridge, MA, USA) and Sage Therapeutics, Inc. (Cambridge, MA, USA). Writing and editorial support for the preparation of this poster was provided by Stinson Design (Toronto, ON, CAN); funding was provided by Biogen, Inc. and Sage Therapeutics, Inc. **Disclosures:** AC is an employee of Biogen, Inc and may hold stock. LO is an employee of Sage Therapeutics, Inc., and may hold stock or stock options. AAF, MC, PGS, JM, PG are employees of Analysis Group, inc., a consulting company that has provided paid consulting to Biogen, Inc. and Sage Therapeutics, Inc., which funded the development and conduct of this study.

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