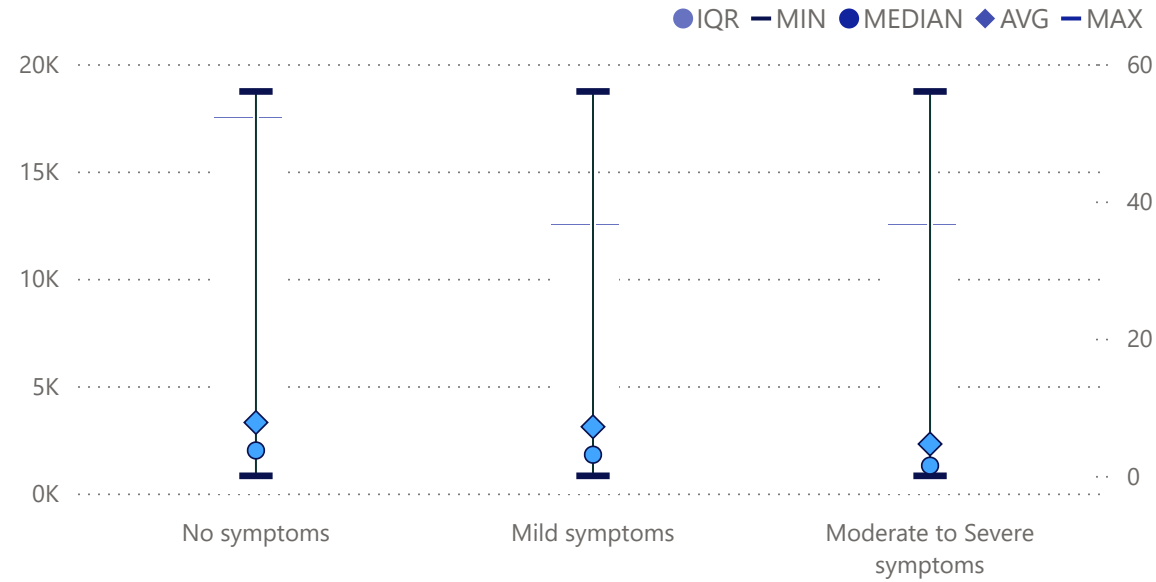# Analysis of the NHANES from 2005 - 2026

Activity and Income Analysis

Gender and Ethnicity Analysis
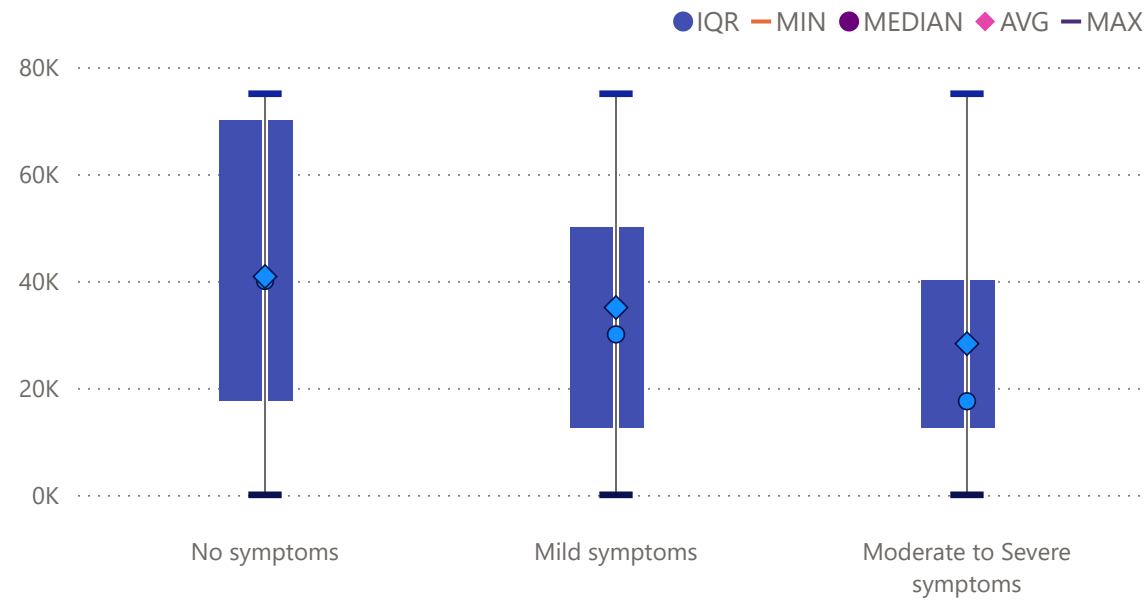
Education level and Adherence to the Physical Activity Guideline Analysis

Statistical Analysis

Average weekly activity by symptom group

●IQR ━MIN ●MEDIAN ◆AVG ━MAX

No symptoms   Mild symptoms   Moderate to Severe symptoms

Average house annual income by symptom group

●IQR ━MIN ●MEDIAN ◆AVG ━MAX

No symptoms   Mild symptoms   Moderate to Severe symptoms

Gender count for each symptom group

42.86% 42.11%

5.70% 3.62%

3.43% 2.29%

No symptoms   Mild symptoms   Moderate to Severe symptoms

Genders
- Female
- Male

% of people in each group

Count of symptom groups

0.5K (9.32%)
0.31K (5.72%)
4.53K (84.96%)

- No symptoms
- Mild symptoms
- Moderate to Severe symptoms

Gender count for each symptom group

40.51%

2.47% 17.98% 20.55% 3.45%

4.33% 0.43% 2.01% 2.04% 0.51%

2.32% 0.17% 1.26% 1.78% 0.19%

No symptoms   Mild symptoms   Moderate to Severe symptoms

% of people in each group

Ethnicities
- Mexican-american
- Non-Hispanic Black
- Non-Hispanic White
- Other
- Other-Hispanic

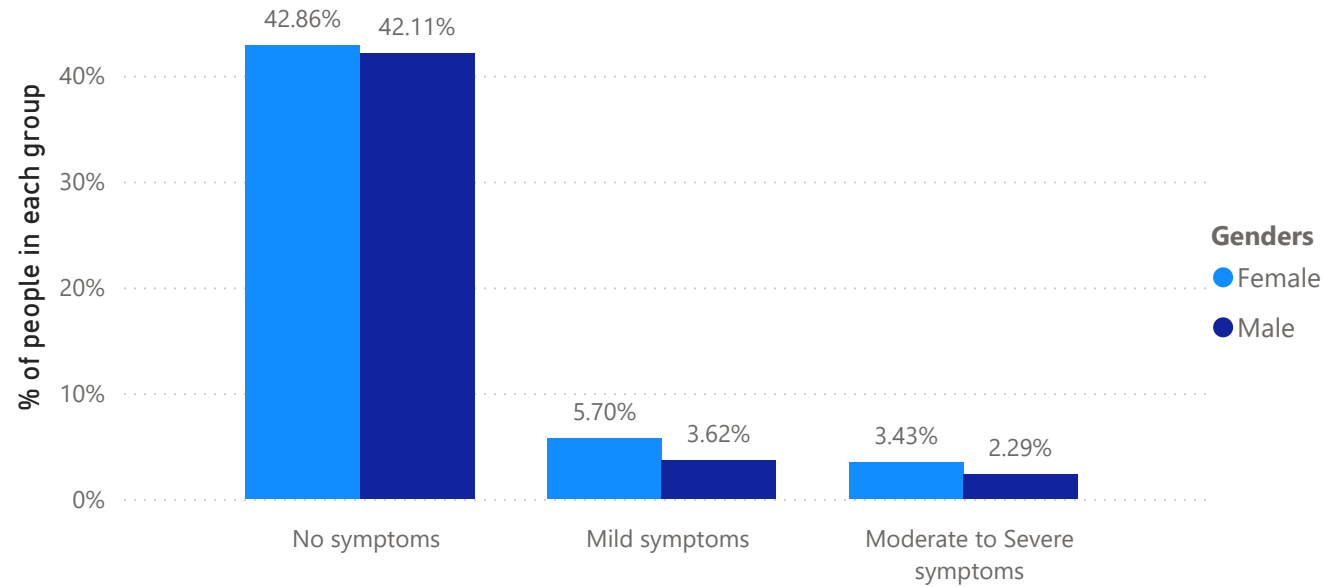Analysis of the NHANES from 2005 - 2026
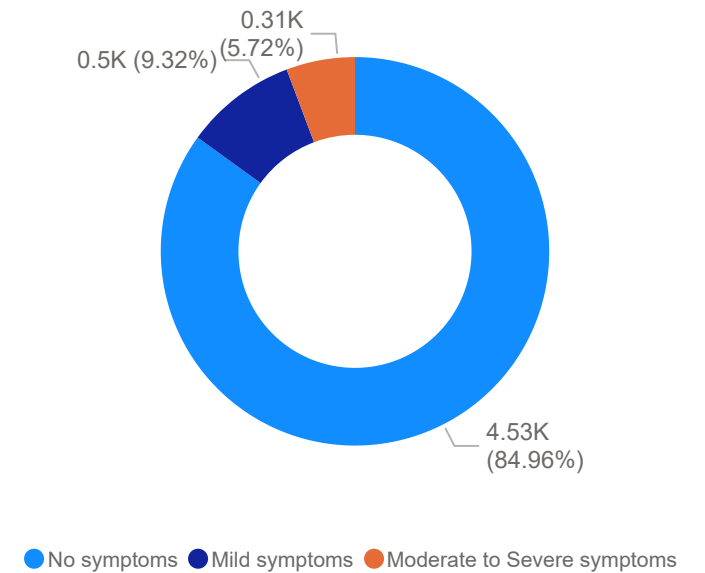
Activity and Income Analysis

Gender and Ethnicity Analysis

Education level and Adherence to the Physical Activity Guideline Analysis
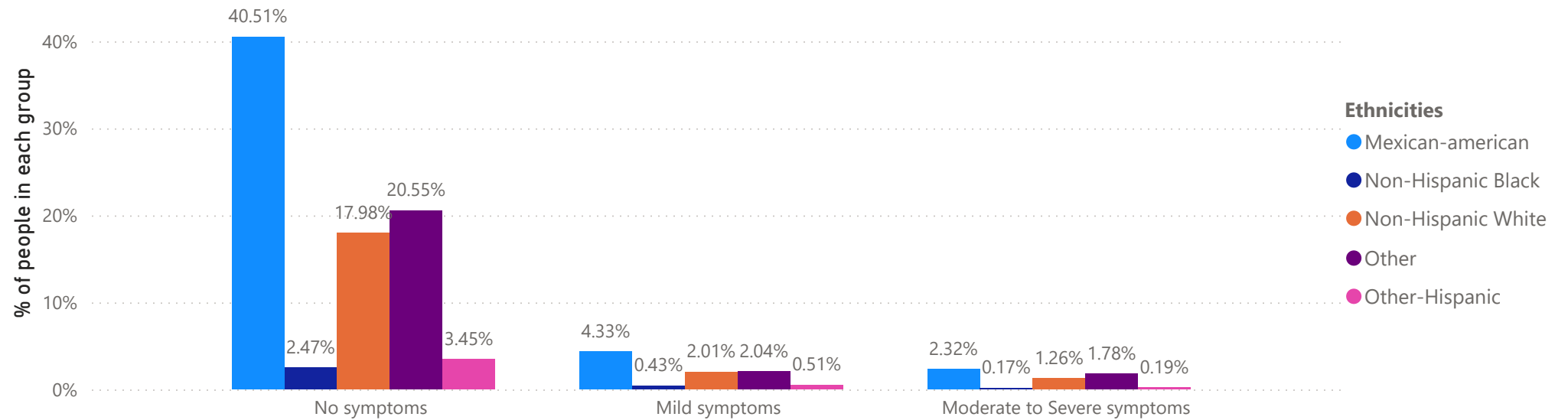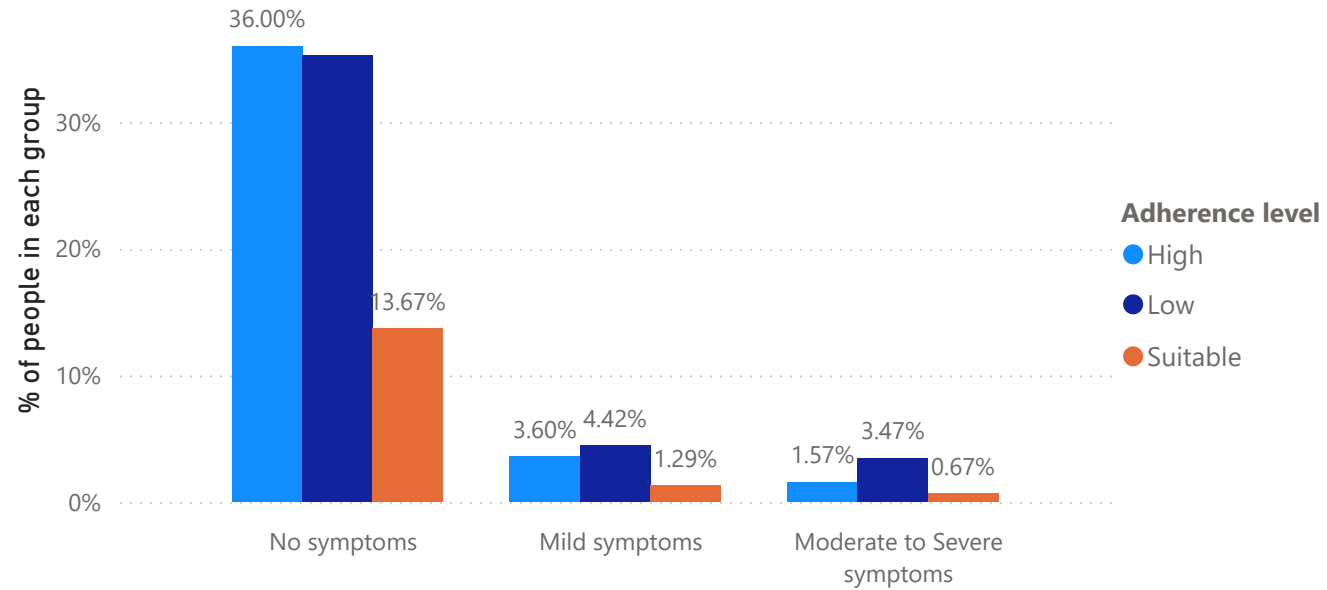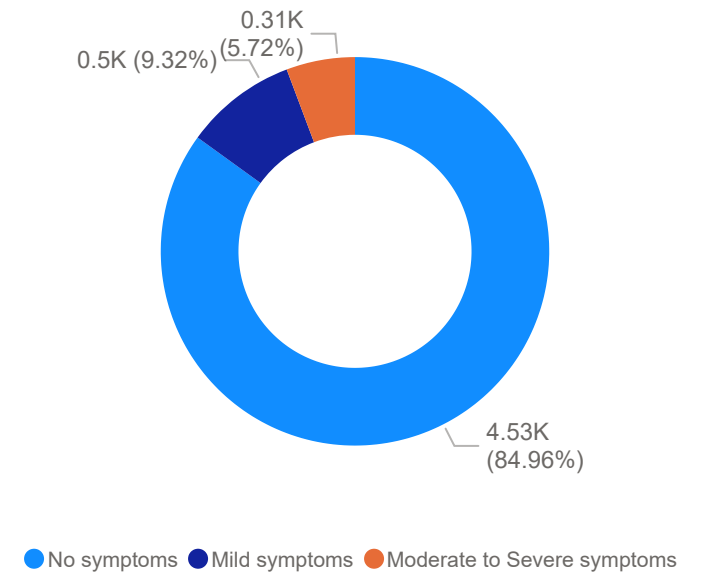
Statistical Analysis

Gender count for each symptom group

% of people in each group

No symptoms: 36.00% (High), 13.67% (Suitable)
Mild symptoms: 3.60% (High), 4.42% (Low), 1.29% (Suitable)
Moderate to Severe symptoms: 1.57% (High), 3.47% (Low), 0.67% (Suitable)

Adherence level
- High
- Low
- Suitable

Count of symptom groups

0.5K (9.32%)
0.31K (5.72%)
4.53K (84.96%)

- No symptoms
- Mild symptoms
- Moderate to Severe symptoms

Gender count for each symptom group

% of people in each group

No symptoms: 0.15%, 9.51%, 14.34%, 16.03%, 21.17%, 23.77%
Mild symptoms: 1.14%, 1.22%, 2.64%
Moderate to Severe symptoms: 0.94%, 0.36%, 1.52%

Education level
- < 9th grade
- 9-12th grade
- College graduate or above
- High school graduate
- Some college or AA degree

Analysis of the NHANES from 2005 - 2026

- Activity and Income Analysis
- Gender and Ethnicity Analysis
- Education level and Adherence to the Physical Activity Guideline Analysis
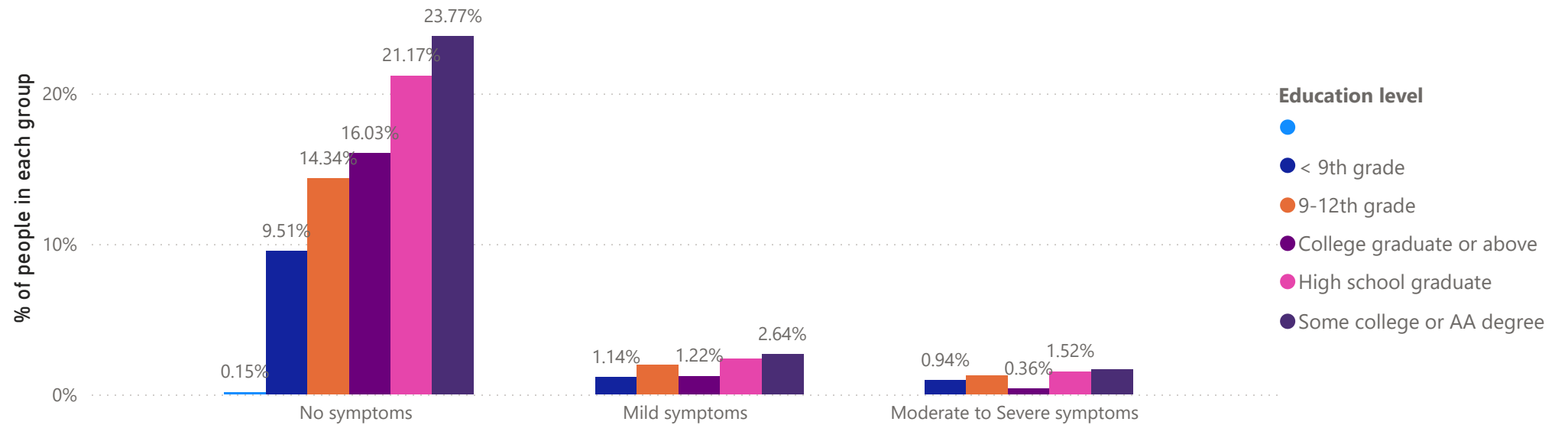- Statistical Analysis

Statistical Test Results: Depression Symptom Groups

Comparison of Variables Across PHQ-9 Depression Categories
(α = 0.05)

Anova Test with Post-hoc Tukey HSD

Variable	p-value	Result	Post-hoc Tukey HSD
Total Fruit (HEI2015C3)	0.007	Significant	Moderate-Severe vs No Symptoms (p=0.0423)
HEI Total Score	0.001	Significant	Moderate-Severe vs No Symptoms (p=0.0025)
Physical Activity (PAG_HW)	< 0.001	Significant	Moderate-Severe vs No Symptoms (p=0.0000) Mild vs No Symptoms (p=0.0040)
Added Sugar (HEI2015C13)	< 0.001	Significant	Moderate-Severe vs No Symptoms (p=0.0000)
Family Income (INDFMINC)	< 0.001	Significant	Moderate-Severe vs Mild (p=0.0000) Moderate-Severe vs No Symptoms (p=0.0000) Mild vs No Symptoms (p=0.0000)
Age (RIDAGEYR)	0.498	Not Significant	-
Saturated Fat (HEI2015C12)	0.463	Not Significant	-
Total Dairy (HEI2015C6)	0.687	Not Significant	-
Total Protein (HEI2015C7)	0.056	Not Significant	-

Chi-Square Test

Variable	χ² Statistic	p-value	df	Result
Education (DMDEDUC)	47.31	< 0.001	8	Significant Association
Ethnicity (RIDRETH1)	17.10	0.029	8	Significant Association
Gender (RIAGENDR)	28.96	< 0.001	2	Significant Association
Physical Activity Adherence	47.03	< 0.001	4	Significant Association