Research question: How do the subjective perceptions of quality of life among individuals with ADHD align with objective measurements of grade achievement and subjective measurements of academic satisfaction?

Hypothesis: Individuals with ADHD will tend to report lower subjective quality of life compared to those without ADHD. This difference will be more pronounced when compared to objective and subjective measurements of academic achievements.

Alternate Hypothesis: There will be no significant difference in subjective quality of life between individuals with ADHD and those without ADHD. Additionally, there will be no significant difference in the relationship between subjective quality of life and objective and subjective measurements of academic achievements between these two groups. In other words, the presence of ADHD will not impact self-reported quality of life, and academic achievements will not moderate this relationship.

Independent Variables:
• Presence of ADHD (Categorical: ADHD group vs. Non-ADHD group)
• Academic Achievements

Dependent Variables:
• Subjective Quality of Life (Continuous: Self-reported quality of life scale scores)
• Subjective academic achievements

Confounding Variables:
• Age: Older participants might have different perceptions of quality of life.
• Gender: Gender might influence both perceptions of quality of life and achievement measures.
• Coexisting Conditions: Presence of other mental health conditions could affect quality of life.
• Socioeconomic Status: Socioeconomic factors might impact both academic/occupational achievements and quality of life.
• Treatment: Medication or therapy might influence perceptions of quality of life.
• Social Support: Availability of a strong support system could affect perceptions of quality of life.
• Severity of ADHD Symptoms: More severe symptoms might contribute to a larger difference in quality of life.

Objective measurement has furthermore confounding variables:

- Educational System Variation: Different countries and regions have diverse educational systems with varying grading scales, course structures, and curriculum rigor. GPA might not be directly comparable between countries due to these differences.

- Language Barriers: For international students, language proficiency can impact GPA. Non-native speakers may face challenges in coursework and exams that native speakers do not.

- Educational Policies: Government policies, such as standardized testing requirements or grading practices, can differ between countries and influence GPA calculations.

- Teacher Grading Variability: Teacher grading standards and practices may not be consistent worldwide. Variability in grading can affect GPA, as some teachers may be more lenient or strict in their assessments.

Potential Hypothetical Findings:
• Individuals with ADHD are likely to report lower subjective quality of life scores compared to those without ADHD.

• The difference in self-reported quality of life between the ADHD and non-ADHD groups will be more pronounced among those with lower academic achievements.

• ADHD individuals with higher academic achievements might still report lower subjective quality of life, suggesting that their achievements do not fully alleviate their perceived difficulties.

• Participants with ADHD who are receiving treatment (medication, therapy) might show slightly higher subjective quality of life scores compared to untreated individuals.

• Coexisting conditions (such as anxiety or depression) could significantly impact both subjective quality of life and academic achievements, potentially confounding the relationship between ADHD and quality of life.

Assessment tools:
Conducting a one-time online research survey using the Academic Life Satisfaction Scale (ALSS) and the World Health Organization Quality of Life (WHOQOL-BREF) to provide valuable insights into the relationship between objective measurements and subjective feelings of quality of life among individuals with ADHD.
Link:
WHOQOL-BREF: https://apps.who.int/iris/rest/bitstreams/110129/retrieve
ALSS: https://files.eric.ed.gov/fulltext/ED491869.pdf

World Health Organization Quality of Life (WHOQOL) has 100 questions in it, so maybe we could work only on 1 out of the 5 domains, second domain on psychological aspects is preferred.
Or we could use WHOQOL-BREF with approx 27 questions

Sample Population: College students aged 17 to 24 years.

Methodology:
Distribute an online survey accessible to all individuals within the specified age range.
Categorize the collected data into three groups: those who self-report having ADHD, those with

a medically diagnosed ADHD, and those without ADHD. Analyze the data to uncover various statistical insights and trends.

1. Name:
2. Age:

3. Gender:

Male
Female
Other

4. Education:

Undergraduate
Postgraduate
Other (Specify)

5. Country:

6. Diagnosis for ADHD:

Medically diagnosed
Self-reported
I don't have ADHD

7. Coexisting Conditions:

A) I don't have ADHD but I have:

Anxiety
Depression
Other (Specify)
No other conditions

B) I have ADHD and along with it I have:

Anxiety
Depression
Other (Specify)
No coexisting conditions

8. Medications:

A) I am medically diagnosed with ADHD, and I:

Take medications and undergo therapy
Take medications only
Undergo therapy only
Don't take medications or therapy

B) I am self-diagnosed with ADHD, and I:

Take medications and undergo therapy
Take medications only
Undergo therapy only
Don't take medications or therapy

C) I don't have ADHD.

9. Years Since Diagnosis:

ADHD diagnosed less than 5 years ago
ADHD diagnosed more than 5 years ago
ADHD diagnosed more than 5 to 10 years ago
ADHD diagnosed more than 10 years ago
I don't have ADHD

10. Family History:

Do you have a family history of ADHD or related conditions? (Yes/No/I don't have adhd)

11. If you are currently in your first semester, please provide your expected GPA for this semester. If you are not in your first semester, please provide your last semester GPA.

Followed by
ALSS questionnaire and WHOQOL-BREF/ WHOQOL domain 2 questionnaire

Statistical analysis

1. Descriptive Statistics:

• Calculate means, standard deviations, and ranges for GPA,ALSS and WHOQOL-BREF scores to provide an overview of the data.
• Examine the distribution of scores for both scales.

2. Correlation Analysis:

• Use Pearson's correlation coefficient to assess the strength and direction of the relationship between GPA, ALSS scores and WHOQOL-BREF scores. This can provide insights into the association between objective impairment and subjective quality of life.

3. Regression Analysis:

• Conduct linear regression analysis to investigate whether ALSS scores predict WHOQOL-BREF scores. This can help determine if ALSS and GPA is a significant predictor of subjective quality of life.
• Include covariates (e.g., age, gender, treatment status) in multiple regression to control for potential confounding variables.
• Consider moderation analysis to examine whether academic achievements moderate the relationship between ALSS and WHOQOL-BREF scores.

4. Group Comparisons:

• Compare the GPA and WHOQOL-BREF scores between groups (e.g., individuals with ADHD vs. without ADHD) using t-tests or analysis of variance (ANOVA).
This can highlight differences in objective impairment and subjective quality of life between groups.
• Compare the ALSS and GPA between groups (e.g., individuals with ADHD vs. without ADHD) using t-tests or analysis of variance (ANOVA).
This can highlight differences in objective impairment and subjective satisfaction in academic achievements between groups.

5. Mediation Analysis:
• Explore whether the relationship between GPA, ALSS scores and WHOQOL-BREF scores is mediated by other variables (e.g., treatment status, coexisting conditions). Mediation analysis can help identify mechanisms underlying the relationship.

6. Factor Analysis:
• Conduct factor analysis separately for GPA, ALSS and WHOQOL-BREF to examine the underlying structure of these scales and identify distinct factors within them.

7. Non-parametric Tests:
• If the data is not normally distributed, consider non-parametric tests like Spearman's rank correlation or Mann-Whitney U tests for group comparisons.

8. Chi-Square Tests:
• If applicable, use chi-square tests to analyze categorical data, such as the relationship between ADHD diagnosis and treatment status.

9.Effect Size Calculation:
• Calculate effect sizes (e.g., Cohen's d, eta-squared) to determine the practical significance of any significant findings.

10. Multiple Comparison Corrections:
• If conducting multiple tests, consider applying correction methods like Bonferroni or False Discovery Rate (FDR) to control for Type I errors.

11. Post-hoc Analyses:
• Perform post-hoc analyses if ANOVA reveals significant group differences to identify which specific groups differ from each other.

12. Subgroup Analyses:
• Explore whether the relationships identified vary among subgroups (e.g., by gender, age, treatment type).