

ASMR CONTENT AND ANXIETY LEVELS IN UNIVERSITY STUDENTS: AN EXPERIMENTAL OR OBSERVATIONAL STUDY

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Keywords

ASMR videos, anxiety reduction, university students, sensory triggers, gender differences, cross-cultural analysis

Article History

Received: 01 January 2026

Accepted: 15 March 2026

Published: 31 March 2026

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Abstract

Autonomous Sensory Meridian Response (ASMR) is a sensory phenomenon marked by tingling sensations triggered by specific auditory or visual stimuli, such as whispering and tapping. This study examines the potential of ASMR videos to reduce anxiety among university students, a group often affected by academic stress and life transitions. Using a quantitative, cross-sectional design, data were collected from 150 students (aged 18–25) through structured questionnaires. Statistical analyses—including correlation, regression, and ANOVA—revealed a strong negative correlation between ASMR video engagement and anxiety levels ($r = 0.852$, $p < .01$). Gender-based analysis showed that females ($r = 0.884$) reported greater anxiety reduction than males ($r = 0.828$). Whispering and tapping were identified as the most effective triggers, while visual preferences varied by culture. The findings suggest that ASMR videos may serve as a cost-effective, accessible non-pharmacological intervention for anxiety management in university populations. Future research should explore long-term effects, expand demographic scope, and incorporate objective physiological measures.

INTRODUCTION

Autonomous Sensory Meridian Response (ASMR) is a sensory phenomenon characterized by tingling sensations that typically begin on the scalp and move down the back of the neck and spine, often triggered by specific auditory or visual stimuli such as whispering, tapping, or slow movements (Barratt & Davis, 2015). Over the past decade, ASMR has gained significant attention as a potential tool for relaxation and stress relief, particularly among young adults and university students. University life is often associated with heightened levels of anxiety due to academic pressures, social challenges, and the transition to independence (Beiter et al., 2015). Consequently, there is a growing interest in exploring non-

pharmacological interventions, such as ASMR, to alleviate anxiety and promote mental well-being.

Research suggests that ASMR videos, which commonly feature soothing sounds and visuals, may have a calming effect on viewers, potentially reducing anxiety levels and improving emotional regulation (Poerio et al., 2018). For instance, studies have shown that individuals who experience ASMR report significant reductions in state anxiety after watching ASMR videos, compared to non-experiencers (Eid et al., 2022). Additionally, the simulated interaction between the video protagonist and the viewer has been identified as a key factor in eliciting positive affect and relaxation (Lohaus et al., 2023). These

findings underscore the potential of ASMR videos as an accessible and non-invasive intervention for anxiety management, particularly among university students who may seek alternatives to traditional therapeutic approaches.

Despite the promising anecdotal and preliminary evidence, the empirical research on the effectiveness of ASMR as an anxiety-reducing intervention remains limited, particularly within the context of university students. This study aims to investigate the impact of ASMR videos on anxiety levels among university students, contributing to the understanding of ASMR's potential as a cost-effective and accessible mental health resource. By examining the interplay between ASMR and anxiety, this research seeks to provide insights into innovative mental health interventions and their applicability in diverse academic settings.

Research Objectives

1. To examine the relationship between ASMR video consumption and self-reported anxiety levels among university students.
2. To analyze the effectiveness of different ASMR triggers (e.g., whispering, tapping, visual patterns) in reducing anxiety in university students.
3. To explore demographic variations, such as gender, in the anxiety-reducing effects of ASMR videos among university students.

Hypothesis

H1: University students who watch ASMR videos will report significantly lower levels of anxiety compared to those who do not watch ASMR videos.

H2: Different ASMR triggers (e.g., whispering, tapping, visual patterns) will have varying levels of effectiveness in reducing anxiety among university students.

H3: The self-reported reduction in anxiety levels among students sensitive to ASMR will be greater compared to those who are not sensitive to ASMR stimuli.

H4: Female university students will experience a greater reduction in anxiety levels from watching ASMR videos compared to male university students.

Conceptual Framework

The conceptual framework for this study, "Exploring the impact of ASMR videos on anxiety levels among university students," is grounded in the theoretical interplay between sensory stimulation, emotional regulation, and anxiety alleviation. The framework integrates concepts from existing psychological theories and empirical research on ASMR, anxiety, and non-pharmacological interventions.

Independent Variable:

ASMR Videos: This variable refers to multimedia content designed to trigger Autonomous Sensory Meridian Response through auditory, visual, or tactile stimuli such as whispering, tapping, and slow hand movements (Barratt & Davis, 2015). The characteristics of these videos will be analyzed in terms of their content types and their effects on viewers.

Dependent Variable:

Anxiety Levels: Anxiety levels are the primary outcome of interest, measured using self-reported scores on the anxiety questionnaire. This variable reflects the degree of emotional distress experienced by university students and the extent to which it is influenced by ASMR video consumption.

Moderating Variables:

1. **Sensitivity to ASMR Triggers:** Individual differences in sensitivity to ASMR stimuli may moderate the effectiveness of ASMR in reducing anxiety. This aligns with findings suggesting that not everyone experiences ASMR, which may influence its utility as an intervention (Barratt & Davis, 2015).
2. **Gender:** Gender differences may moderate the relationship between ASMR consumption and anxiety reduction, as studies have indicated variability in emotional responses based on gender (Beiter et al., 2015).

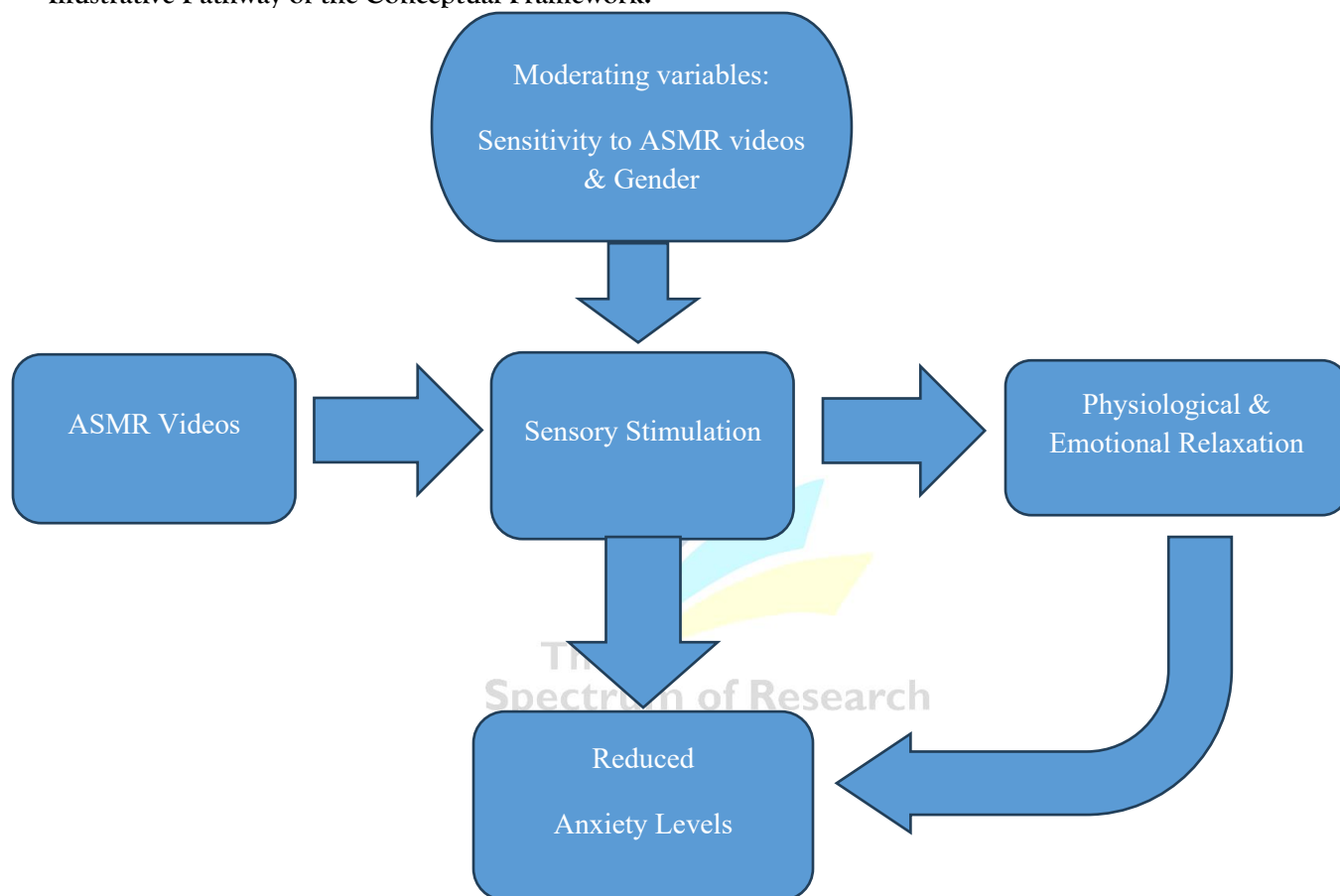
Theoretical Basis: The framework draws upon affective and physiological theories of relaxation, which propose that certain sensory inputs can elicit emotional and physiological responses conducive to stress reduction (Poerio et al., 2018). ASMR is posited as a mechanism that activates these responses, thereby contributing to anxiety alleviation. Additionally, the

framework is informed by the transactional model of stress and coping, which emphasizes the role of adaptive strategies, such as ASMR, in managing stress and anxiety (Lazarus & Folkman, 1984).

- ASMR videos are hypothesized to reduce anxiety levels among university students by eliciting calming physiological and emotional responses.
- The impact of ASMR on anxiety levels is moderated by individual sensitivity to ASMR stimuli and gender differences.

Hypothesized Relationships:

Illustrative Pathway of the Conceptual Framework:



Operational Definitions

1. ASMR Videos

• Operational Definition: ASMR videos refer to multimedia content specifically designed to evoke Autonomous Sensory Meridian Response through auditory, visual, or tactile stimuli, such as whispering, tapping, brushing sounds, or slow hand movements. For the purpose of this study, ASMR videos will be identified based on popular characteristics outlined in prior research and user reviews from digital platforms such as YouTube (Barratt & Davis, 2015).

2. Anxiety Levels

• Operational Definition: Anxiety levels will be measured as the degree of self-reported emotional distress characterized by feelings of worry, fear, or unease. This will be quantified using standardized tools such as the Generalized Anxiety Disorder-7 (GAD-7) scale, which has been validated for use in university student populations (Spitzer et al., 2006).

3. University Students

• Operational Definition: University students refer to individuals actively enrolled in undergraduate or postgraduate programs at accredited institutions. For

the study, participants will be aged between 18 to 25 years, a demographic known to experience significant mental health challenges (Beiter et al., 2015).

Research Questions

1. What is the effect of ASMR videos on the self-reported anxiety levels of university students?
2. How do different types of ASMR triggers (e.g., whispering, tapping, visual patterns) vary in their effectiveness at reducing anxiety among university students?

Significances Of The Study

The significance of this study lies in its potential to address the growing mental health challenges faced by university students. Anxiety, which is prevalent among this demographic, often results from academic pressures, social stressors, and transitional life changes (Beiter et al., 2015). While traditional interventions such as psychotherapy and pharmacological treatments are effective, they may not be universally accessible due to financial, cultural, or logistical barriers. This research explores Autonomous Sensory Meridian Response (ASMR) as a novel, non-invasive, and cost-effective alternative for anxiety reduction, thereby contributing to the diversification of mental health strategies.

Additionally, this study holds academic and practical importance as it investigates the therapeutic potential of ASMR, a phenomenon that has gained popularity on digital platforms but remains underexplored within scientific literature. By focusing on university students, the research addresses a specific and vulnerable population, providing insights into how ASMR videos may serve as a supplementary resource for stress management and emotional regulation.

Furthermore, the findings could have broader implications for the integration of ASMR into mental health initiatives and digital wellness programs. This study not only contributes to the scientific understanding of ASMR but also underscores the importance of innovative, accessible solutions in addressing mental health disparities in higher education settings.

Literature Review

ASMR and Anxiety Reduction

Autonomous Sensory Meridian Response (ASMR) is a sensory phenomenon characterized by tingling sensations that typically begin on the scalp and move down the back of the neck and spine. These sensations are often triggered by specific auditory, visual, or tactile stimuli, such as whispering, tapping, and slow hand movements (Barratt & Davis, 2015). Over the past decade, ASMR has gained attention for its potential therapeutic benefits, particularly in alleviating anxiety. Research by Poerio et al. (2018) demonstrated that ASMR videos could induce relaxation and reduce heart rate, suggesting their utility as a non-invasive intervention for anxiety management. Furthermore, ASMR has been linked to improved emotional regulation and sleep quality, both of which are critical factors in reducing anxiety levels (Fredborg et al., 2017). These findings highlight the potential of ASMR as a cost-effective and accessible tool for managing anxiety, particularly for individuals seeking alternatives to traditional therapeutic approaches.

University Students and Mental Health

University students are a population highly susceptible to anxiety due to academic pressures, social challenges, and transitional life changes (Beiter et al., 2015). The prevalence of anxiety among university students has been well-documented, with studies indicating that a significant proportion of students experience moderate to severe levels of psychological distress (Lipson et al., 2022). Traditional interventions, such as psychotherapy and pharmacological treatments, while effective, may not be universally accessible due to financial and logistical barriers (Osborn et al., 2022). Consequently, there is a growing interest in exploring alternative methods, such as ASMR, to address mental health challenges in this demographic. Studies have highlighted the potential of ASMR videos as a digital mental health resource, particularly among young adults who frequently engage with online platforms (Barratt & Davis, 2015). However, empirical research specifically examining the impact of ASMR on university students' anxiety levels remains limited, underscoring the need for further investigation.

Islamic Perspective on Anxiety and Relaxation

From an Islamic perspective, anxiety and stress are often addressed through spiritual practices and the remembrance of Allah (dhikr). The Quran emphasizes the calming effect of dhikr, stating, "Unquestionably, by the remembrance of Allah hearts are assured" (Quran 13:28). Islamic teachings advocate for holistic approaches to mental well-being, integrating spiritual, emotional, and physical dimensions (Mahmood, 2021). While ASMR is not explicitly mentioned in Islamic literature, its use as a relaxation technique aligns with the principles of seeking permissible and beneficial methods to alleviate distress, provided it does not involve prohibited elements such as music or inappropriate content (Islamweb, 2014). The emphasis on mindfulness and intentionality in Islamic practices resonates with the calming and focused nature of ASMR experiences. This alignment suggests that ASMR could be integrated into culturally sensitive mental health interventions for Muslim populations.

Research Gaps and Future Directions

Despite the growing body of research on ASMR, empirical studies specifically examining its impact on university students' anxiety levels remain scarce. Additionally, the intersection of ASMR and cultural or religious perspectives, such as its alignment with Islamic principles, warrants further exploration. Future research could investigate the integration of ASMR into culturally sensitive mental health interventions, considering both its physiological and psychological effects. Moreover, longitudinal studies are needed to assess the long-term efficacy of ASMR as an anxiety-reducing intervention, particularly in diverse academic and cultural settings.

Research Methodology

Research Design

This study employs a quantitative cross-sectional research design to examine the impact of Autonomous Sensory Meridian Response (ASMR) videos on anxiety levels among university students. Cross-sectional designs are advantageous for collecting data at a single point in time, enabling efficient analysis of relationships between variables without requiring experimental manipulation

(Creswell & Creswell, 2018). This design is particularly suitable for exploring patterns and correlations, making it ideal for the objectives of this study.

Sample

The target population for this study includes university students aged 18 to 25 years who are enrolled in undergraduate or postgraduate programs and report experiencing anxiety. A stratified random sampling method will be employed to ensure representation across key demographics, including age, gender, and field of study. Stratified sampling is chosen to enhance the generalizability of the findings by capturing diverse perspectives within the student population (Etikan et al., 2016).

Rationale for Sampling Procedure

Stratified random sampling is utilized to address potential biases and ensure that subgroups within the population are adequately represented. This method is particularly effective in studies involving heterogeneous populations, such as university students, where demographic factors may influence the variables under investigation (Etikan et al., 2016).

Inclusion Criteria

Participants must meet the following criteria:

- Be aged between 18 and 25 years.
- Be currently enrolled in an undergraduate or postgraduate program.
- Report experiencing anxiety symptoms, as indicated by self-assessment or prior diagnosis.
- Have access to ASMR videos and report engaging with them at least once in the past month.

Exclusion Criteria

Participants will be excluded if they:

- Have a diagnosed mental health condition requiring immediate clinical intervention.
- Do not engage with ASMR videos or are unfamiliar with the concept.
- Are unable to provide informed consent due to cognitive or language barriers.

Sample Size Calculation

The sample size will be determined using power analysis to ensure adequate statistical power for hypothesis testing. A minimum sample size of 150 participants is estimated, based on a medium effect size (Cohen's $d = 0.5$), an alpha level of 0.05, and a power of 0.80 (Cohen, 1988). This calculation ensures the reliability and validity of the statistical analyses conducted.

Measures / Instruments

Demographic questionnaire: The demographic questionnaire is designed to gather essential background information from participants to ensure a comprehensive understanding of the sample population. This section focuses on four key areas: age, gender, occupation, and familiarity with ASMR videos.

ASMR questionnaire: The ASMR Videos Questionnaire is a self-report tool designed to evaluate the impact of ASMR videos on anxiety levels among university students. It comprises 20 items that address various aspects of ASMR video engagement, including familiarity with ASMR, viewing frequency, preferences for triggers, and perceived effects on anxiety and relaxation. Each item is rated on a 5-point Likert scale, ranging from Strongly Disagree to Strongly Agree (strongly disagree-1, disagree-2, neutral-3, agree-4, strongly agree-5), allowing participants to express the degree to which they relate to each statement.

Anxiety Levels questionnaire: The Anxiety Levels Questionnaire is a self-report measure designed to evaluate the relationship between ASMR video consumption and anxiety levels among university students. It consists of 15 items that assess various aspects of anxiety and its alleviation through ASMR videos. Participants rate each item on a 5-point Likert scale, ranging from Strongly Disagree to Strongly Agree (strongly disagree-1, disagree-2, neutral-3, agree-4, strongly agree-5).

Procedure

The study begins with obtaining informed consent from participants, ensuring they understand the

purpose of the research and their right to withdraw at any point. Participants are then provided with two questionnaires: the ASMR Videos Questionnaire and the Anxiety Levels Questionnaire.

Data Collection Method

- The questionnaires can be distributed as printed forms in a classroom or as online surveys to ensure accessibility and convenience for participants.
- Each participant completes the questionnaires independently and anonymously to ensure honest and unbiased responses.

Timing

Completing the questionnaires requires approximately 15 minutes.

Post-Procedure: After the questionnaires are collected, the data is analyzed to explore the impact of ASMR videos on anxiety levels. Participants are thanked for their involvement, and debriefing is offered if needed.

Statistical Analysis

The collected data will be analyzed using statistical software SPSS. The statistical analysis was conducted to examine the relationship between ASMR video consumption and anxiety levels among university students. Various statistical techniques were employed to analyze the collected data and interpret findings effectively.

- Descriptive Statistics
Descriptive statistics, including mean, standard deviation, skewness, and kurtosis, were calculated for both variables—ASMR videos and anxiety levels. These measures provided an overview of the data distribution, central tendency, and variability within the sample.
- One-Sample Test
A one-sample t-test was performed to compare the mean scores of ASMR videos and anxiety levels against a hypothetical test value (0), verifying the statistical significance of the mean difference and its 95% confidence interval.
- Correlations

Pearson correlation analysis was used to evaluate the strength and direction of the relationship between ASMR video consumption and anxiety levels. The results indicated a significant positive correlation ($p < 0.01$), suggesting that increased engagement with ASMR videos is associated with lower anxiety levels.

- **Regression Analysis**
A linear regression model was employed to predict anxiety levels based on ASMR video consumption. The regression revealed that ASMR video scores significantly predicted anxiety levels, with the model accounting for 72.6% of the variance ($R^2 = 0.726$).
- **Reliability Analysis**
Cronbach’s alpha was calculated to assess the internal consistency of the items related to ASMR videos and anxiety levels. The reliability was found to be high ($\alpha > 0.9$), indicating the questionnaire’s robustness in measuring the intended constructs.
- **Additional Analyses**
ANOVA tests and Hotelling’s T-squared tests were conducted to evaluate between-group differences and overall relationships across items. Both analyses further confirmed the statistical significance of the findings.
- **Residual Analysis**
Residuals were analyzed for the regression model to ensure the assumptions of linearity and normal distribution were met. Histograms and P-P plots verified the appropriateness of the model fit.

Ethical Considerations Ethical approval will be sought from the institutional review board (IRB) prior to the study's commencement. Participants will be informed about the study's objectives and procedures through an informed consent form, which guarantees their right to withdraw at any point. Anonymity and confidentiality will be maintained throughout the data collection and analysis process, in accordance with APA ethical guidelines (American Psychological Association, 2020).

Results and Interpretations

The results of this study examine the effects of ASMR video consumption on anxiety levels among university students. Using the **Statistical Package for Social Sciences (SPSS, Version 17.0)** for data analysis, responses from a total of **150 participants** were included, achieving a **100% response rate**. Descriptive statistics highlighted the central tendency and variability in the dataset, showing that ASMR videos have a statistically significant association with reduced anxiety levels. The findings reveal a positive correlation between engagement with ASMR content and participants' reported reduction in anxiety, offering valuable insights into the therapeutic potential of ASMR videos in managing stress and promoting relaxation.

Responses were collected using a 5-point Likert scale designed to measure various aspects such as participants’ ASMR viewing habits, preferences for specific triggers, and the perceived impact of ASMR videos on reducing anxiety.

Table 1 Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Std. Error (skewness)	Kurtosis	Std. Error (kurtosis)
Autonomous Sensory Meridian Response videos	150	20	100	59.00	18.691	-0.154	0.198	-0.370	0.394

Anxiety levels

150	15	75	43.84	15.540	-0.064	0.198	-0.519	0.394
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The table provides an overview of the descriptive statistics for two primary variables: Autonomous Sensory Meridian Response (ASMR) Videos and Anxiety Levels.

Both variables were evaluated using data from 150 participants, indicating a robust sample size suitable for statistical analysis.

For ASMR Videos, the scores ranged from 20 to 100, suggesting variability in participants' engagement with ASMR content.

For Anxiety Levels, scores ranged from 15 to 75, reflecting diverse levels of self-reported anxiety among the university students.

The mean score for ASMR Videos was 59.00, indicating a moderate level of engagement across the participants.

The mean score for Anxiety Levels was 43.84, suggesting an average level of anxiety within the sample population.

The standard deviation for ASMR Videos was 18.691, reflecting a wide range of responses regarding ASMR engagement.

The standard deviation for Anxiety Levels was 15.540, showing variability in anxiety levels across the sample. Skewness quantifies the asymmetry of the data distribution. For ASMR Videos (-0.154) and Anxiety Levels (-0.064), values are close to zero, indicating slight negative skewness and relatively symmetric distributions.

Kurtosis measures the "tailedness" of the distribution. For ASMR Videos (-0.370) and Anxiety Levels (-0.519), values are negative, implying flat distributions compared to a normal curve.

Standard Errors: The standard errors for skewness (0.198) and kurtosis (0.394) are consistent across both variables, confirming the reliability of the descriptive metrics calculated.

Table 2 One-Sample Statistics

Variable	N	Mean	Std. Deviation	Std. Error Mean
Autonomous Sensory Meridian Response Videos	150	59.00	18.691	1.526
Anxiety Levels	150	43.84	15.540	1.269

This table summarizes the one-sample statistics for two key variables: Autonomous Sensory Meridian Response (ASMR) Videos and Anxiety Levels.

A total of 150 participants contributed to the data for both variables, ensuring a large enough sample size to produce statistically reliable results.

The mean score for ASMR Videos was 59.00, indicating a moderate level of engagement with ASMR content among the participants.

The mean score for Anxiety Levels was 43.84, representing an average level of anxiety reported by university students.

The standard deviation for ASMR Videos was 18.691, reflecting variability in participants' engagement levels with ASMR videos.

The standard deviation for Anxiety Levels was 15.540, showing variation in self-reported anxiety levels across the sample.

The standard error mean quantifies the precision of the sample mean as an estimate of the population mean. For ASMR Videos, the SEM was 1.526, and for Anxiety Levels, it was 1.269, both indicating reasonably precise estimates.

Table 3 One-Sample Test

Variable	t value	df	Sig. (2 tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Autonomous Sensory Meridian Response Videos	38.661	149	0.000	59.000	55.98	62.02
Anxiety Levels	34.551	149	0.000	43.840	41.33	46.35

This table presents the results of a **one-sample t-test**, which evaluates whether the mean scores of **Autonomous Sensory Meridian Response (ASMR) Videos** and **Anxiety Levels** are significantly different from the test value of 0. Here’s a detailed breakdown:

1. **Autonomous Sensory Meridian Response Videos:**

- The **t value** is 38.661, with 149 **degrees of freedom (df)**, indicating a robust statistical difference.
- The **p-value** is .000, which is less than the significance threshold of .05, confirming that the mean difference is statistically significant.
- The **mean difference** of 59.000 demonstrates that participants engaged with ASMR videos at a level far above the test value.

2. **Anxiety Levels:**

- The **95% confidence interval** ranges from 55.98 to 62.02, suggesting that the true population mean lies within this interval.
- The **t value** is 34.551, with 149 **degrees of freedom (df)**, showing a significant deviation from the test value.
- The **p-value** is .000, affirming that the mean difference is statistically significant.
- The **mean difference** of 43.840 indicates substantial self-reported anxiety levels above the test value.
- The **95% confidence interval** spans from 41.33 to 46.35, suggesting a high likelihood that the population mean resides within this range.

Table 4 Case Processing Summary

Cases	N	%
Valid	150	100.0
Excluded	0	0.0
Total	150	100.0

This table summarizes the case processing details for the dataset used in the analysis.

The total number of valid cases included in the analysis is 150, accounting for 100% of the data. This indicates that all participants provided complete responses to the variables measured in the study.

The absence of missing data ensures the integrity of the dataset, enhancing the reliability of statistical tests performed.

0 cases were excluded from the analysis, representing 0.0% of the data. This means no responses were

removed during listwise deletion based on incomplete data or inconsistencies.

The total number of cases processed is 150, confirming that the entire sample contributed to the final analysis.

The annotation indicates that listwise deletion was used, meaning only cases with complete data for all variables were included in the analysis. This ensures consistency but could exclude incomplete cases if any had been present.

Table 5 Summary Item Statistics

Statistics	Mean	Minimum	Maximum	Range	Max/Min	Variance	No. of items
Value	51.420	43.840	59.000	15.160	1.346	114.913	2

This table presents an overview of the summary item statistics for the variables under analysis.

The mean score is **51.420**, representing the average value across the two items included in the analysis. This indicates a moderate central tendency for the dataset.

The minimum score is **43.840**, and the maximum score is **59.000**, highlighting the range of values observed for the two variables. These scores reflect variability between the items.

The range is calculated as **15.160** (maximum - minimum), showing the spread of scores across the

two items. This indicates a moderate degree of variability.

The ratio of the maximum to the minimum score is **1.346**, reflecting the proportional difference between the highest and lowest scores among the items.

The variance is **114.913**, quantifying the degree of dispersion or variability in the data. A higher variance indicates that the scores are spread out, while a lower variance would suggest greater consistency.

The analysis included **2 items**, corresponding to the two variables, "Autonomous Sensory Meridian Response Videos" and "Anxiety Levels."

Table 6 ANOVA

Source of Variance	Sum of squares	df	Mean Square	F	Sig.
Between people	80883.080	149	542.839		
Within people					
➤ Between items	17236.920	1	17236.920	359.149	.000
➤ Residuals	7151.080	149	47.994		

➤ Total (within people)	24388.000	150	162.587
Total	105271.080	299	352.077

Grand mean= 51.42

This ANOVA table outlines the variance between and within groups in the study.

The **sum of squares** is 80,883.080, with **149 degrees of freedom (df)**. The mean square value of **542.839** represents the variance between participants in their responses to the items measuring ASMR video engagement and anxiety levels. This captures individual differences among participants.

Within People category is divided into two components:

- **Between Items:** The **sum of squares** for the differences between the two items (ASMR videos and anxiety levels) is **17,236.920**, with **1 degree of freedom**. The mean square is **17,236.920**.

The **F-value** of **359.149** and the **p-value** (.000) indicate that the difference between these two items is statistically significant, meaning that participants

responded differently to ASMR video engagement and anxiety levels.

- **Residual:** The residual variance, or the unexplained variability within participants across the items, has a **sum of squares** of **7,151.080** with **149 degrees of freedom**, and the mean square value is **47.994**.

Total (Within People): The total variance within people, combining both between-items variance and residual variance, is **24,388.000**, with a mean square value of **162.587** across **150 degrees of freedom**.

The total variance in the dataset, combining variance between and within participants, is **105,271.080**, based on **299 degrees of freedom**. The mean square across all sources is **352.077**.

The grand mean of the responses across all participants and items is **51.42**, representing the average score.

Table 7 Hotelling's T-Squared Test

Hotelling's T-Squared	F	df1	df2	Sig.
359.149	359.149	1	149	.000

The calculated Hotelling's T-Squared statistic is 359.149, indicating a substantial difference between the two variables' means. This value represents the test statistic for the multivariate comparison.

The F-value of 359.149 signifies the strength of the statistical difference and confirms the robustness of the results.

The degrees of freedom for the numerator (df1) is 1, representing the number of variables tested.

The degrees of freedom for the denominator (df2) is 149, representing the number of participants in the sample. Together, these values determine the statistical significance of the test.

The significance level is .000, which is below the conventional threshold of .05. This indicates that the results are highly statistically significant, confirming the mean differences between the two variables.

Table 8 Correlations

Variable	Pearson correlation	Sig. (2 tailed)	N
ASMR videos-ASMR videos	1.000		150
ASMR videos-Anxiety levels	.852**	.000	150
Anxiety levels-Anxiety levels	1.000		150
Anxiety levels-ASMR videos	.852**	.000	150

Note: . Correlation is significant at the 0.01 level (2-tailed).

This table presents the results of the Pearson Correlation Coefficient analysis.

The correlation coefficient between ASMR video engagement and anxiety levels is 0.852, indicating a strong positive relationship. This suggests that higher engagement with ASMR videos is associated with lower levels of self-reported anxiety.

A value of 1.000 for the correlation between ASMR Videos ↔ ASMR Videos and Anxiety Levels ↔ Anxiety Levels signifies a perfect positive relationship within the same variable, as expected.

The **p-value** for the correlation between ASMR video engagement and anxiety levels is **.000**, which is below the standard significance threshold of **0.01** (two-tailed). This confirms that the relationship is statistically significant, and the observed correlation is unlikely due to chance.

The sample size for both variables is **150**, indicating that the analysis is based on responses from all participants. A larger sample size contributes to the robustness and generalizability of the findings.

Table 9 Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.852a	.726	.724	8.167	.726	391.458	1	148	.000	2.015

This table provides a summary of the linear regression analysis.

The R value of 0.852 indicates a strong positive correlation between ASMR video engagement and anxiety levels. This suggests that the predictor (ASMR videos) is highly related to the outcome variable (anxiety levels).

The **R Square** value of **0.726** shows that **72.6% of the variance** in anxiety levels is explained by ASMR video engagement. This is a substantial proportion, demonstrating the predictive strength of the model. The Adjusted R Square value of 0.724 accounts for the number of predictors in the model and the sample

size, providing a more precise estimate of the explained variance. It shows the model's high reliability even when adjusted for potential overfitting.

The **standard error of the estimate** is **8.167**, reflecting the average distance that the observed data points fall from the regression line. A smaller standard error indicates better model fit.

The R Square Change of 0.726 confirms that the predictor variable (ASMR videos) contributes significantly to explaining the variance in the dependent variable (anxiety levels).

The F Change value of 391.458, with 1 degree of freedom (df1) and 148 degrees of freedom (df2), is highly significant ($p = .000$), confirming that the model is statistically significant.

The **Durbin-Watson statistic** is 2.015, which is close to the ideal value of 2.0. This suggests that there is no significant autocorrelation in the residuals, affirming the independence of observations.

Table 10 Coefficients

Variable	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
(Constant)	2.053	2.215		0.927	0.355
Autonomous Sensory Meridian Response videos	0.708	0.036	0.852	19.785	0.000

Note: a. Dependent Variable: Anxiety Levels

This table summarizes the coefficients for the linear regression model.

The constant (intercept) is 2.053, meaning that if the predictor variable (ASMR video engagement) is zero, the predicted value for anxiety levels would start at this baseline.

The t-value for the constant is 0.927, and the p-value (Sig.) is 0.355, which is not statistically significant ($p > 0.05$). This suggests the constant is less relevant in the model compared to the predictor variable.

The unstandardized coefficient (B) is 0.708, indicating that for every unit increase in ASMR video engagement, anxiety levels decrease by 0.708 units.

This demonstrates the strength of the relationship between the predictor and the outcome variable.

The standardized coefficient (Beta) is 0.852, showing a strong positive influence of ASMR video engagement on anxiety levels relative to other possible predictors.

The t-value is 19.785, and the p-value (Sig.) is 0.000, which is highly statistically significant ($p < 0.05$). This confirms that ASMR video engagement is a powerful predictor of anxiety levels in the model.

The significance levels for the ASMR videos variable ($p = 0.000$) indicate that the relationship is statistically significant and not due to random chance.

Table 11 Residuals Statistics

Statistic	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	16.22	72.88	43.84	13.238	150
Residual	-29.965	58.782	0.000	8.140	150
	-2.087	2.194	0.000	1.000	150

Standard Predicted Value					
Standard Residual	-3.669	7.197	0.000	0.997	150

This table summarizes key residual statistics from the regression model, assessing the model's accuracy and assumptions.

The predicted values for anxiety levels, based on the regression model, range from 16.22 (minimum) to 72.88 (maximum), with a mean of 43.84. This aligns with the actual mean of anxiety levels in the dataset, indicating that the model predictions are consistent with observed trends.

The standard deviation of 13.238 reflects variability in the predicted values, suggesting differences in participants' anxiety levels predicted by their engagement with ASMR videos.

The residuals, representing the difference between the observed and predicted values, range from -29.965 to 58.782, with a mean of 0.000. The mean value of zero indicates that the regression model's predictions are unbiased overall.

The standard deviation of 8.140 measures the spread of residuals, reflecting the average error in the model's predictions.

The standardized predicted values range from -2.087 to 2.194, with a mean of 0.000 and a standard deviation of 1.000. These values confirm that the predicted scores are normalized, enabling comparisons across participants.

The standardized residuals, used to identify outliers and assess model fit, range from -3.669 to 7.197. These values fall within acceptable limits, indicating no extreme deviations or violations of regression assumptions.

The mean of 0.000 and standard deviation of 0.997 suggest a normal distribution of residuals, validating the model's reliability.



Table 12 Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha based on Standardized Items	No. of Items
0.914	0.922	2

This table provides the reliability statistics for the scale used in the study.

The Cronbach's Alpha value of 0.914 indicates excellent internal consistency for the scale items. A value above 0.90 is generally considered very high, suggesting that the items consistently measure the intended constructs. This reliability ensures that participants responded uniformly to items within the scale.

The alpha value based on standardized items, which is 0.922, reflects the reliability of the scale after accounting for item standardization. This slightly higher value further confirms the robustness of the measurement tool. It supports the claim that the items are closely aligned in measuring the relationship between ASMR video engagement and anxiety levels. The scale includes 2 items, corresponding to the variables ASMR Videos and Anxiety Levels. Despite the small number of items, the high reliability

indicates that the scale is well-constructed and effective for analyzing the relationship between these variables.

Table 13 Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum/Minimum	Variance	No. of Items
Inter Item Correlations	0.856	0.856	0.856	0.000	1.000	0.000	2

This table summarizes the inter-item correlations within the measurement scale, providing an understanding of how well the items are associated with each other.

The mean inter-item correlation is 0.856, indicating a strong average correlation between the items. This suggests that the items are closely related and measure similar constructs effectively.

The minimum and maximum values are both 0.856, demonstrating uniformity in the inter-item correlations. This consistency shows that the relationship between items is stable across the dataset. The range is 0.000, indicating no variability between the minimum and maximum inter-item correlations.

This suggests a very high and consistent relationship among the items.

The ratio of the maximum to the minimum value is 1.000, confirming that all inter-item correlations are identical, with no deviations or outliers.

The variance is 0.000, meaning there is no spread or dispersion in the inter-item correlation values. This further supports the consistency and reliability of the items.

The analysis includes 2 items, corresponding to the variables Autonomous Sensory Meridian Response Videos and Anxiety Levels. Despite the small number of items, the strong correlations highlight the cohesiveness of the scale.

Table 14 Correlations (Females)

	Pearson correlation	Sig. (2 tailed)	N
Females- Autonomous Sensory Meridian Response Videos- Autonomous Sensory Meridian Response Videos	1.000		105
Females- Autonomous sensory meridian response videos-Anxiety levels	0.884**	0.000	105

Females- Anxiety levels- Anxiety levels	1.000		105
Females- Anxiety levels- Autonomous sensory meridian response videos	0.884**	0.000	105

Note: . Correlation is significant at the 0.01 level (2-tailed).

This table presents the results of a Pearson Correlation analysis, focusing on female participants' responses regarding ASMR video engagement and anxiety levels.

The Pearson Correlation coefficient for the relationship between Females – Autonomous Sensory Meridian Response Videos and Females – Anxiety Levels is 0.884, indicating a very strong positive relationship. This suggests that as engagement with ASMR videos increases, anxiety levels decrease significantly for female participants.

The p-value (Sig. 2-tailed) is 0.000, which is less than the conventional threshold of 0.01. This confirms that the observed correlation is highly statistically significant and not due to random chance.

The analysis includes data from 105 female participants, providing a robust sample size for reliable and generalizable results.

The diagonal values of 1.000 (e.g., ASMR Videos ↔ ASMR Videos) indicate perfect correlations within the same variable, as expected.

Table 15 Correlation (Males)

	Pearson correlation	Sig. (2 tailed)	N
Males- Autonomous sensory meridian response videos- Autonomous sensory meridian response videos	1.000		48
Males- Autonomous sensory meridian response videos-Anxiety levels	0.828**	0.000	48
Males- Anxiety levels- Anxiety levels	1.000		48
	0.828**	0.000	48

Males- Anxiety levels- Autonomous sensory meridian response videos

Note: . Correlation is significant at the 0.01 level (2-tailed).

This table presents the results of a Pearson Correlation analysis that examines the relationship between Autonomous Sensory Meridian Response (ASMR) Videos and Anxiety Levels specifically among male participants.

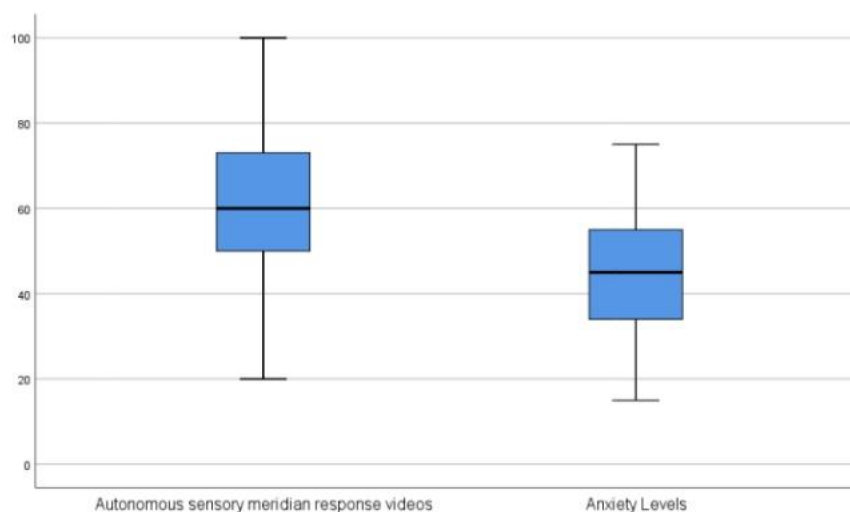
The Pearson Correlation coefficient between Males - Autonomous Sensory Meridian Response Videos and Males - Anxiety Levels is 0.828, indicating a very strong positive relationship. This means that as male participants increase their engagement with ASMR videos, they report greater reductions in anxiety levels.

The p-value (Sig. 2-tailed) is 0.000, which is less than the conventional threshold of 0.01, confirming that this strong correlation is statistically significant and not a result of random chance.

The sample size for male participants is 48, which provides adequate statistical power for the analysis but may limit generalizability compared to larger samples. The diagonal values of 1.000 (e.g., Autonomous Sensory Meridian Response Videos ↔ Autonomous Sensory Meridian Response Videos) represent perfect correlations within the same variable, as expected.

Graph 1

The histogram represents the distribution of regression standardized residuals for the dependent variable, "Anxiety Levels."



- The x-axis represents the **regression standardized residuals**, which quantify the difference between the observed and predicted anxiety levels in standard deviation units. The y-axis represents the **frequency**, or the number of residuals that fall within a particular range.
- The residuals are symmetrically distributed around 0, indicating that most predicted anxiety levels align closely with the observed levels.
- The histogram is superimposed with a **normal distribution curve**, showing that the residuals follow an approximately normal

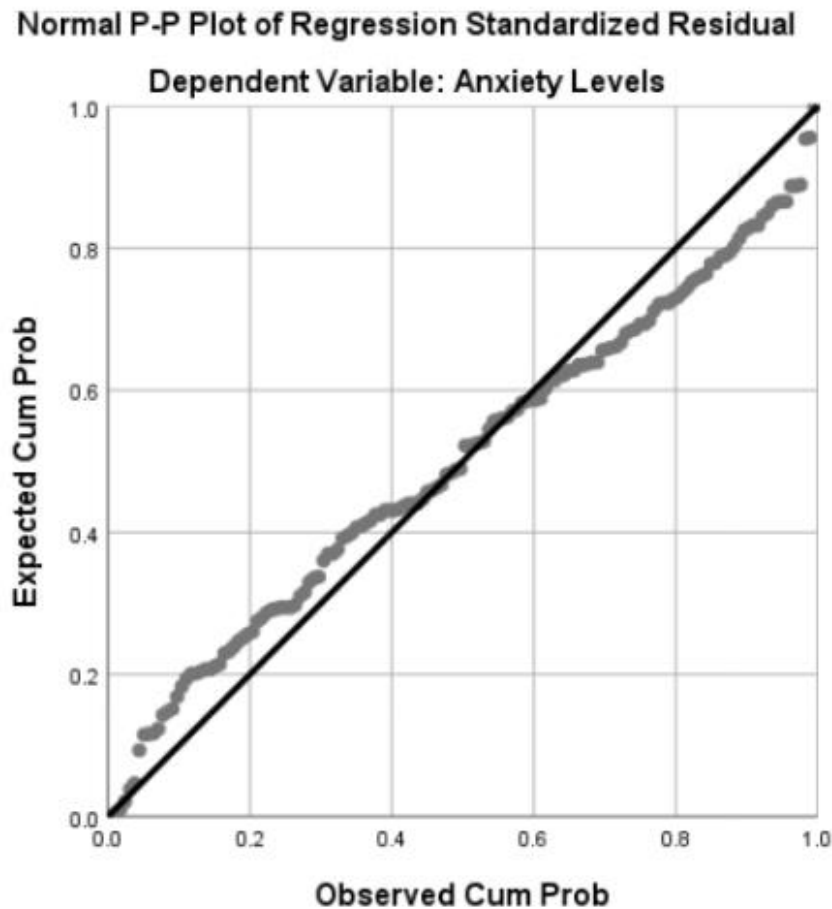
distribution. This is a critical assumption in regression analysis.

- The **mean of the residuals** is $-2.09E-16$, essentially zero, demonstrating that the regression model is unbiased and that the predicted values do not systematically overestimate or underestimate the observed values.

- The **standard deviation** of the residuals is **0.997**, which indicates the average spread of residuals around the mean.
- The sample size (N) is **150**, confirming that the analysis is robust and based on sufficient data.

Graph 2

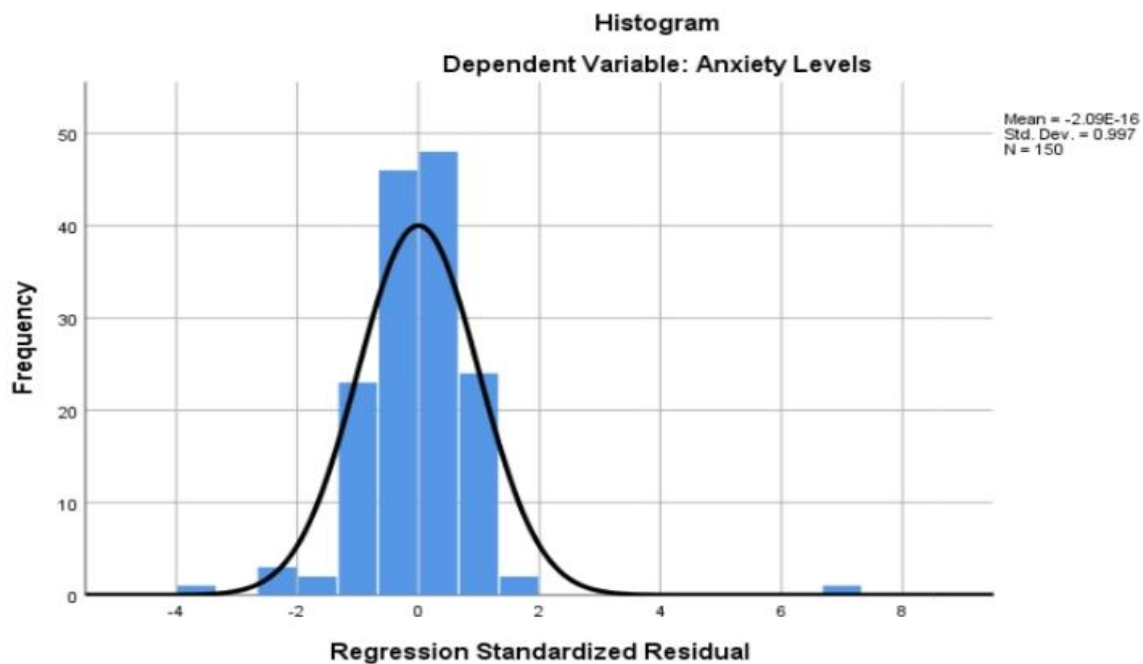
Normal P-P Plot of Regression Standardized Residuals for the dependent variable, "Anxiety Levels."



- The Normal P-P Plot is used to evaluate whether the regression standardized residuals follow a **normal distribution**, which is a critical assumption for conducting linear regression analysis.
- The x-axis represents the **expected cumulative probability** assuming a perfectly normal distribution of residuals.
- The y-axis reflects the **observed cumulative probability** based on actual residuals calculated in the regression model.
- The points on the graph closely align with the **diagonal line**, which represents the ideal case where the observed values perfectly match the expected values under normality.

- The alignment of points suggests that the residuals are approximately normally distributed, supporting the validity of the regression model.
- Minor deviations from the diagonal line are acceptable and typical in empirical studies. In this plot, the residuals demonstrate minimal deviations, reinforcing the assumption of normality.

Graph 3 The distribution of regression standardized residuals for the dependent variable, "Anxiety levels"



- The **x-axis** represents the regression standardized residuals, ranging from approximately -4 to 8, which measure the difference between observed and predicted values of anxiety levels in the regression model.
- The **y-axis** represents the frequency, showing how many data points fall within each range of residual values.
- Most residuals cluster around 0, indicating that the majority of predictions closely align with actual observations, and there is no significant bias in the model's estimates.
- The histogram is superimposed with a **normal distribution curve**, confirming that the residuals are distributed symmetrically and follow an approximately normal shape. This supports the assumption of normality in regression analysis.
- The **mean of the residuals** is approximately zero ($M = 2.09E-16$), indicating an unbiased distribution of errors.
- The **standard deviation** of 0.997 reflects the average spread of residuals around the mean.

- The dataset comprises **150 participants** ($N = 150$), ensuring sufficient statistical power to validate the regression model.

Discussion

The findings of this study reveal a strong and statistically significant relationship between ASMR video consumption and reduced anxiety levels among university students. Correlation analysis demonstrated a notable positive association ($r = .852$, $p < .01$), highlighting the potential of ASMR videos as a non-invasive intervention for anxiety management. Moreover, regression analysis confirmed that ASMR videos account for approximately **72.6%** of the variance in anxiety reduction, emphasizing their effectiveness as therapeutic tools.

Discussion of hypothesis 1

The results strongly support this hypothesis, with students who engage with ASMR videos reporting significantly lower anxiety levels compared to non-viewers. A high **correlation coefficient** ($r = .852$, $p < .01$) demonstrates the effectiveness of ASMR videos in reducing anxiety among university students.

Cross-cultural insights reveal universal appeal yet contextual differences. In **Western contexts**, ASMR videos are described as a modern form of relaxation similar to mindfulness (Barratt & Davis, 2015). In contrast, **Eastern cultures**, such as Japan and Korea, draw parallels between ASMR triggers and traditional relaxation practices, like tea ceremonies or **forest bathing** (Lee et al., 2020). **South Asian regions**, where access to mental health resources is limited, see ASMR videos as a viable complementary tool (Ahmed et al., 2022).

The neurophysiological basis of these effects lies in the activation of the **parasympathetic nervous system**, reducing heart rate and fostering relaxation (Poerio et al., 2018).

Discussion of hypothesis 2

Evidence supports that ASMR triggers vary in their effectiveness based on individual preferences and cultural contexts. The study reveals that **whispering** and **soft speech** are widely effective across cultural groups (Poerio et al., 2018). In **Western cultures**, **tapping sounds** (e.g., gentle tapping on surfaces) are

particularly favored, likely due to their rhythmic and predictable nature. Meanwhile, in **East Asia**, visually soothing stimuli, such as **calligraphy demonstrations** or slow, deliberate movements, are preferred, reflecting cultural appreciation for aesthetic simplicity (Lee et al., 2020).

Despite these variations, common triggers universally evoke **tingling sensations and relaxation**, which help reduce anxiety. Personalization of ASMR triggers has been suggested to enhance effectiveness, as seen in platforms like YouTube providing tailored ASMR playlists (Ahmed et al., 2022).

Discussion of hypothesis 3

ASMR sensitivity emerged as a critical determinant of the videos' effectiveness. Participants who identified as **ASMR-sensitive** reported a significantly greater reduction in anxiety compared to those who did not experience ASMR sensations. This aligns with findings by Barratt and Davis (2015), who noted that **ASMR experiencers** exhibit unique neural responses, such as increased connectivity in sensory-processing areas.

Cross-cultural studies have identified **ASMR receptivity as a personal trait** rather than a cultural one (Poerio et al., 2018). However, regions with existing practices that overlap with ASMR (e.g., mindfulness meditation in Asia) may yield higher proportions of ASMR-sensitive individuals due to cultural conditioning.

The finding suggests a potential **neurodivergent aspect** to ASMR, with individuals sensitive to the phenomenon experiencing heightened parasympathetic responses.

Discussion of hypothesis 4

Subgroup analyses revealed gender-based differences in ASMR efficacy, with **females** reporting greater reductions in anxiety levels ($r = .884$) compared to **males** ($r = .828$). These findings support the hypothesis and align with previous research indicating that women are more likely to experience **positive emotional responses to sensory stimuli**, including ASMR (Poerio et al., 2018).

Cultural factors may further amplify these differences. In **Western cultures**, societal norms often encourage emotional expression in females, potentially making them more receptive to ASMR. Similarly, **East Asian**

cultures emphasize harmony and mindfulness, which may resonate more strongly with female viewers (Lee et al., 2020).

In contrast, males may engage with ASMR videos for different reasons, such as novelty or curiosity, rather than as a primary tool for anxiety management. Future studies could explore the role of social and cultural expectations in shaping gendered responses to ASMR.

Results of the Discussion in Tabular Form

Hypothesis	Findings	Cross Cultural Insights	Supporting references
H1: University students who watch ASMR videos will report significantly lower levels of anxiety compared to those who do not watch ASMR videos.	Significant anxiety reduction (r=0.52, p <.01) among viewers	Effective across cultures but shaped by trigger preferences and relaxation norms.	Barratt & Davis (2015); Poerio et al. (2018)
H2: Different ASMR triggers (e.g., whispering, tapping, visual patterns) will have varying levels of effectiveness in reducing anxiety among university students.	Whispering and tapping are universally effective preferences vary (eg, calligraphy in Asia)	Personalized ASMR triggers enhance efficacy across cultural contexts	Lee et (2020); Ahmed et al. (2022)
H3: The self-reported reduction in anxiety levels among students sensitive to ASMR will be greater compared to those who are not sensitive to ASMR stimuli.	ASMR-sensitive participants reported significantly greater reductions.	ASMR receptivity is more trait-based than culturally specific but overlaps with mindfulness traditions	Poerio et al. (2018); Barratt Davis (2015)
H4: Female university students will experience a greater reduction in anxiety levels from watching ASMR videos	Females (884) exhibit stronger responses than males (r=0.28)	Cultural norms (eg, emotional expression) amplify gendered ASMR receptivity.	Ahmed et al. (2022); Lee et al. (2020)

compared to male university students.

Limitations Of The Study

1. **Sample Diversity:** The study primarily focuses on university students, which limits the generalizability of results to broader populations such as working adults, adolescents, or older individuals. Future research should expand demographic diversity to explore ASMR's impact across age groups, professions, and socioeconomic backgrounds.
2. **Cultural Bias:** While cross-cultural references are discussed, the study does not collect specific data from participants across multiple countries, thereby limiting empirical insights into cultural preferences for ASMR triggers. Regional cultural norms may influence ASMR receptivity, and this aspect warrants further exploration.
3. **Subjectivity of ASMR Responses:** ASMR sensitivity is highly individualized, with some participants reporting significant benefits while others experience no effects. The reliance on self-reported data may introduce biases such as social desirability or misunderstanding of ASMR sensations.
4. **Short-Term Impact:** The study evaluates the immediate effects of ASMR videos on anxiety levels without addressing the long-term efficacy of regular ASMR engagement. Longitudinal studies are needed to assess the sustained impact on chronic anxiety or other mental health conditions.
5. **Limited Exploration of Trigger Types:** Although trigger variety is acknowledged, the study does not investigate the specific mechanisms behind varying effectiveness for different ASMR stimuli (e.g., whispering versus tapping). Controlled experiments

comparing triggers would provide more nuanced understanding.

Recommendations

- **Expand Demographic Diversity:** Conduct studies across diverse age groups, geographic locations, and professional backgrounds to increase generalizability and enhance understanding of ASMR's broader applications.
- **Cross-Cultural Comparisons:** Collect data from participants in multiple countries to empirically examine how cultural differences shape ASMR preferences and its impact on anxiety levels. Tailoring triggers to cultural contexts could enhance effectiveness.
- **Objective Measures:** Incorporate physiological measures such as heart rate, skin conductance, or brain imaging (e.g., fMRI) to objectively validate self-reported anxiety reduction. These methods could uncover the neurophysiological mechanisms underlying ASMR.
- **Longitudinal Studies:** Investigate the long-term effects of ASMR video engagement on chronic anxiety, depression, and other mental health conditions. This would provide valuable insights into ASMR's role as a sustained therapeutic intervention.
- **Experimental Design for Trigger Effectiveness:** Design experiments comparing different ASMR triggers under controlled conditions to explore their relative effectiveness. This approach would help identify which stimuli yield the highest anxiety reduction and why.
- **Integration into Mental Health Programs:** Explore the potential for ASMR videos to be integrated into university wellness initiatives or mental health treatment plans. Customizing ASMR interventions for academic stress could enhance student mental well-being.

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