# Report on the Correlation Between

# Netflix Viewing and Menstrual Cycle & Comfort Levels

## 1. Introduction

This report investigates the potential correlation between Netflix viewing behavior and the menstrual cycle. It explores whether the type of content consumed (genres, shows) and the self-reported comfort level vary with the menstrual phase. The primary hypothesis is:

- H0: Menstruation does not significantly affect Netflix viewing behavior or comfort.
- Ha: Menstruation has an influence on genre preferences and comfort levels.

## 2. Data Sources and Preparation

- Netflix Data: Titles, genres, and viewing dates, along with comfort levels (1-10).
- Menstrual Cycle Data: Days marked with menstruation ('yes'/'no').
- Merged Dataset: Combined on date, resulting in a unified dataset for analysis.

## 3. Methodology

- Descriptive Analysis: Calculated means, variances, and standard deviations for comfort levels by cycle status.
- Visualization: Bar plots, heatmaps, scatter plots, and genre shift graphs.
- Statistical Tests: Chi-squared test for independence and correlation heatmaps.

## 4. Findings

- Top Shows Watched:
  - During Menstruation: Friends, Gilmore Girls, Young Sheldon
  - Outside Menstruation: Friends, Brooklyn Nine-Nine, Gilmore Girls

- Genre Preference Shifts:
  - Slight increase in Comedy and Romance during menstruation
  - Slight avoidance of Horror and Drama

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- Comfort Levels:

  - Mean comfort level was ~8.35 for both cycle phases

  - No significant correlation between menstruation status and comfort (r ~ 0.00)

- Chi-Squared Test:

  - p-value = 0.31 -> No statistically significant difference in genre preferences based on cycle

- Genre Correlation with Menstruation:

  - Documentary (+0.04), Action (+0.04) had slight positive correlations

  - Horror (-0.06), Drama (-0.04) had slight negative correlations

## 5. Visualizations

- Bar charts of genre frequencies by cycle status
- Normalized genre preference bar plots
- Heatmaps for comfort & menstruation correlation
- Genre vs. menstruation correlation matrix
- Weekly viewing pattern charts

## 6. Conclusion

While genre preferences shift slightly with menstrual cycle phases, no statistically significant patterns were found. Comfort levels remain stable, and the minor changes in genre preference likely reflect personal coping mechanisms rather than systemic behavioral changes.

## 7. Recommendations for Future Work

- Add mood ratings and emotional tone of content for richer analysis.
- Extend tracking over several cycles to identify seasonal patterns.
- Consider sentiment analysis on show content or diary entries.
- Explore machine learning for predictive modeling of mood or comfort.