



Northeastern University

Department of Psychology

October 9, 2025

Dear Health Professional School Admissions Committee,

I am writing this letter to clarify the statistical topics covered in the course PSYC 2320 - Statistics in Psychological Research. This course instructs students in the following topics:

- Data Classification and Descriptive Statistics (Qualitative and Quantitative Data; Measures of Central Tendency - Mean, Median, Mode; Measures of Variability - Range, Variance, Standard Deviation)
- Data Presentation and Visualization (Tables, Histograms, Bar Graphs, Scatter Plots)
- Probability Distributions (Normal Distribution; Sampling Distributions; Central Limit Theorem; z-scores and Standardization)
- Probability Theory (Sample Space; Joint and Independent Events; Conditional Probability)
- Statistical Inference and Estimation (Random Sampling; Point Estimation; Confidence Intervals)
- Hypothesis Testing (z-tests; Student's t-tests for One Sample, Correlated Samples, and Independent Samples; Type I and Type II Errors; Statistical Significance)
- Correlation and Regression (Pearson Correlation Coefficient; Linear Regression with Slope and Intercept Computation; Causality versus Correlation)
- Analysis of Variance (One-way ANOVA; Two-way ANOVA with Main Effects and Interactions; F-ratio and F-distribution; Multiple Comparisons using Tukey HSD)
- Nonparametric Statistics (Chi-squared Test of Association)
- Research Methods and Experimental Design (Introduction to Experimental Design; Data Collection Methods)
- Statistical Software Applications (Excel and SPSS for Data Analysis)

This is a rigorous, **math-based course** that will prepare health professionals to thrive in an environment that requires evidence-based decision making.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. Shansky'.

Rebecca Shansky, Ph.D.
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