

Feature Contribution Analysis of Youth Life Satisfaction Using Psychological Capital and Social Connectedness

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1. Round 1

1.1. Reviewer 1

Reviewer:

You argue that psychological capital buffers the adverse effects of academic pressure and environmental uncertainty; however, these stressors are not explicitly measured in the study. Please provide a clearer theoretical justification for this claim in relation to your actual measured variables.

The stated aim is clear, but it would be strengthened by explicitly naming the machine learning and explainable AI framework in the aim sentence to enhance alignment with the methodological contribution of the paper.

The synergistic interaction between social connectedness and self-efficacy is discussed conceptually, but no quantitative interaction indices are provided. Including such metrics would strengthen this argument.

The statement that demographic variables have “comparatively weaker predictive value” should be supported by explicit numerical contrasts from the feature contribution results.

Authors uploaded the revised manuscript.

1.2. Reviewer 2

Reviewer:

Although skewness and kurtosis values are reported, the manuscript does not define the criteria used to judge acceptable normality. These criteria should be explicitly stated.

Given the high correlations among psychological capital components, please report multicollinearity diagnostics and discuss their implications for model stability.

The superiority of the Gradient Boosting Machine is asserted, but the manuscript does not indicate whether performance differences across models were statistically evaluated.

Please clarify whether SHAP values were computed on a single trained model or averaged across cross-validation folds, as this affects the reliability of feature importance rankings.

The SHAP visualization is referenced but insufficiently interpreted. A more detailed narrative explanation of the most salient nonlinear patterns would strengthen the results section.

The claim that the model demonstrates the “robustness” of psychosocial determinants would be more convincing if explicitly tied to specific performance metrics reported earlier.

When stating that hope occupies a “structurally central position,” please clarify whether this conclusion is theoretical or empirically derived from your own model outputs.

Authors uploaded the revised manuscript.

2. Revised

Editor's decision after revisions: Accepted.

Editor in Chief's decision: Accepted.