

# Identifying Cultural Drivers of Help-Seeking Behavior Using Machine Learning: Stigma Internalization, Norm Salience, and Self-Conceptualization

Mariana Téllez<sup>1</sup>, Olivia Macpherson<sup>2\*</sup>

<sup>1</sup> Department of Psychology, National Autonomous University of Nicaragua, Managua, Nicaragua

<sup>2</sup> Department of Health Psychology, University of Alberta, Edmonton, Canada

\* Corresponding author email address: [olivia.macpherson@ualberta.ca](mailto:olivia.macpherson@ualberta.ca)

## Editor

Sergii Boltivets  
Chief Researcher of the Department of Scientific Support of Social Formation of Youth. Mykhailo Drahomanov University, Ukraine  
[sboltivets@ukr.net](mailto:sboltivets@ukr.net)

## Reviewers

**Reviewer 1:** Manijeh Daneshpour  
Department of Couple and Family therapy, Alliant International University, California, United States of America. [mdaneshpour@alliant.edu](mailto:mdaneshpour@alliant.edu)  
**Reviewer 2:** Nadereh Saadati  
Department of Couple and Family therapy, Alliant International University, California, United States of America. [mdaneshpour@alliant.edu](mailto:mdaneshpour@alliant.edu)

## 1. Round 1

### 1.1. Reviewer 1

Reviewer:

In the Introduction paragraph beginning with “Help-seeking behavior has emerged as a critical determinant of psychological well-being,” the theoretical framing is conceptually rich but lacks a clearly articulated integrative conceptual framework linking stigma internalization, norm salience, and self-construal into a unified predictive model. The authors should explicitly explain whether these variables are assumed to act independently, hierarchically, interactively, or through moderation/mediation pathways before introducing the machine learning approach.

In the paragraph discussing stigma internalization (“One of the most extensively studied barriers to help-seeking is stigma...”), the manuscript appropriately references internalized stigma literature; however, the authors do not sufficiently distinguish between public stigma, perceived stigma, self-stigma, and structural stigma. Given that the ISMI primarily measures self/internalized stigma, the theoretical justification should more carefully delimit the construct boundaries to avoid conceptual conflation.

In the “Study Design and Participants” section, the statement “participants were required to be residents of Canada for a minimum of five years to ensure sufficient cultural exposure and internalization” requires stronger theoretical justification. The

manuscript should explain why five years was selected as the cutoff and whether acculturation level, immigrant generation, or language proficiency were assessed, as these factors may substantially influence self-construal and norm salience.

Response: Revised and uploaded the new document.

### 1.2. Reviewer 2

Reviewer:

The paragraph beginning with “Closely related to stigma is the concept of norm salience” introduces norm salience effectively, yet the manuscript does not adequately explain the psychometric adaptation process for the “Social Norms Salience Scale.” Because the scale is described as “adapted,” the authors should specify the number of items, adaptation procedures, cultural validation process, internal consistency coefficients, and whether confirmatory factor analysis was conducted in the current sample.

In the paragraph discussing self-construal (“Another critical dimension in understanding help-seeking behavior is self-construal...”), the authors refer to independent and interdependent orientations, but the Findings section later reports only a single “Self-Construal” variable. This creates ambiguity regarding whether the two dimensions were aggregated into a composite score. The manuscript should justify the decision to collapse or retain dimensions because combining theoretically distinct constructs may obscure culturally meaningful differences.

The paragraph introducing machine learning (“Despite the growing body of research on stigma, norm salience, and self-construal...”) appropriately justifies computational modeling; however, the manuscript lacks sufficient methodological rationale for selecting the specific algorithms used. The authors should explain why Logistic Regression, Random Forest, SVM, and Gradient Boosting were selected over alternative approaches such as neural networks, Elastic Net models, or Bayesian classifiers, especially given the modest sample size.

Response: Revised and uploaded the new document.

## 2. Revised

Editor’s decision: Accepted.

Editor in Chief’s decision: Accepted.