

A Cross-Cultural Structural Equation Model of Social Anxiety: The Roles of Intolerance of Uncertainty, Fear of Negative Evaluation, and Self-Compassion


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1. Round 1

1.1. Reviewer 1

Reviewer:

In the Introduction paragraph on fear of negative evaluation, the discussion appropriately identifies evaluative fear as a core feature of social anxiety; however, the manuscript also introduces fear of positive evaluation through the phrase “bivalent fears of evaluation.” Since the study measures only fear of negative evaluation, this section should more clearly explain why fear of negative evaluation was selected over fear of positive evaluation for the structural model. The authors might state that fear of positive evaluation is theoretically adjacent but outside the scope of the present analysis, or alternatively acknowledge that excluding it is a limitation. Without this clarification, readers may wonder why a broader evaluative fear framework is discussed but not empirically tested.

In the Introduction paragraph discussing digital single-session interventions for fear of negative evaluation, the intervention evidence is interesting but somewhat detached from the cross-sectional SEM design. The paragraph would be improved by explicitly linking intervention evidence to mediation logic. For instance, the authors could argue that if fear of negative evaluation is modifiable and mediates the association between intolerance of uncertainty and social anxiety, then identifying

this pathway has practical relevance for intervention development. As currently written, the paragraph reads partly like a treatment review rather than a direct rationale for the proposed model.

In the Introduction paragraph introducing self-compassion, the construct is described clearly, but its dimensional structure requires more precision. The sentence “Self-compassion involves responding to personal distress, failure, inadequacy, or perceived imperfection with kindness, mindfulness, and recognition of common humanity rather than harsh self-criticism, isolation, and over-identification” is theoretically accurate, but the manuscript later uses a short-form total score. The authors should explain why self-compassion was modeled as a global construct rather than as six subcomponents or as compassionate versus uncompassionate self-responding. This is particularly important because the factor structure of self-compassion scales has been debated, and SEM-based manuscripts should justify the measurement specification.

In the Introduction paragraph on cross-cultural context, the sentence “Cross-cultural context is essential for understanding social anxiety because the meaning of evaluation, self-criticism, emotional expression, and compassion may vary across cultural backgrounds” is central to the manuscript’s title and rationale. However, the introduction does not sufficiently define what “cross-cultural” means in this study. Since all participants were residents of Canada, the study appears to be multicultural rather than cross-national. The authors should clarify whether “cross-cultural” refers to ethnic-cultural background within Canada, immigrant versus Canadian-born status, language group, or another grouping variable. This clarification is essential because the title promises a cross-cultural model, but the operational definition of culture is not yet explicit enough.

In the final Introduction paragraph, the aim sentence is clear, but the manuscript should add explicit hypotheses immediately before or after the aim. At minimum, the authors should specify that intolerance of uncertainty is expected to positively predict social anxiety, fear of negative evaluation is expected to mediate this association positively, and self-compassion is expected to mediate it negatively as a protective factor. Stating hypotheses would improve transparency and make the transition from theory to analysis more rigorous. This is especially important for SEM research, where model specification should be theory-driven rather than purely data-driven.

In the Data Analysis paragraph, the authors mention “multi-group structural equation modeling” but the Findings section does not present measurement invariance results across cultural groups. This is a major issue because the title emphasizes a cross-cultural structural equation model. The manuscript should include configural, metric, scalar, and structural invariance testing, with changes in CFI, RMSEA, and SRMR reported across nested models. Without invariance evidence, comparisons across cultural groups are not sufficiently justified, and the manuscript cannot fully support cross-cultural claims.

In the Findings section, the demographic paragraph provides useful sample information, but it would benefit from clearer linkage to the cross-cultural purpose of the study. The paragraph states that “approximately 61.3% of participants were born outside Canada,” but it does not report years of residence, generational status, language background, or immigrant status distribution in sufficient detail. Since these variables were reportedly collected, the authors should provide a more complete demographic account or explain why these variables were not used analytically. Cultural diversity should not be treated only descriptively if it is central to the study’s conceptual framing.

Authors revised and uploaded the document.

1.2. Reviewer 2

Reviewer:

In the Methods and Materials section, the paragraph “This study employed a cross-sectional correlational design using structural equation modeling (SEM)” accurately describes the design, but the phrase “cross-cultural framework” requires further operational detail. The manuscript should specify the cultural groups used in the multi-group SEM, the minimum sample size within each group, and the rationale for grouping participants into those categories. Broad labels such as European Canadian, South Asian, Middle Eastern, or African can include highly heterogeneous populations, and the authors should explain how these categories were defined, whether they were self-identified, and whether any groups were combined for statistical power.

In the Study Design and Participants paragraph, the manuscript states that participants were recruited “from universities, community organizations, and online research platforms across several provinces.” This recruitment description is useful but insufficient for replication. The authors should identify the sampling method more precisely, such as convenience sampling, purposive sampling, snowball sampling, or panel-based recruitment. It would also be helpful to state whether participants received compensation, whether recruitment materials targeted specific cultural communities, and whether any attention-check items were embedded in the survey. These details are necessary to evaluate selection bias and the representativeness of the sample.

In the participant screening paragraph, the sentence “After eliminating questionnaires with excessive missing values, response inconsistencies, duplicate submissions, or evidence of careless responding, 701 complete questionnaires were retained for the final analysis” requires more methodological transparency. The authors should define “excessive missing values,” specify the threshold used for exclusion, describe how duplicate submissions were detected, and explain what constituted careless responding. For example, were long-string responses, implausibly short completion times, failed attention checks, or Mahalanobis distance used? These criteria should be reported explicitly to strengthen confidence in the final analytic sample.

In the Data Collection Tools section, the manuscript presents the SIAS, IUS-12, BFNE, and SCS-SF as established instruments, but it does not report whether the exact English versions were used for all participants or whether translated versions were offered. Because the study is described as cross-cultural and includes participants from diverse linguistic backgrounds, this is a critical omission. If all participants completed the survey in English, the authors should justify this choice and discuss English proficiency as an inclusion criterion. If translated instruments were used, translation, back-translation, cultural adaptation, and measurement equivalence procedures should be reported.

In the Data Collection Tools section, each instrument is described in general psychometric terms, but the manuscript should report reliability values from the present sample in the methods or findings more consistently. Although Table 1 reports Cronbach’s alpha, CR, and AVE, the tools section could briefly indicate that reliability was re-evaluated in the current sample rather than relying only on previous studies. In addition, the authors should specify scoring procedures for each scale, including possible score ranges, treatment of reverse-coded items, and whether total scores or latent variables based on item parcels/items were used in SEM.

In the Data Analysis paragraph, the authors state that “multicollinearity, and homoscedasticity” were assessed, but the findings section does not report the results of these assumptions. The manuscript should include specific diagnostic evidence, such as variance inflation factors, tolerance values, residual plots, Mardia’s coefficient for multivariate normality, or the method used to address non-normality if present. Since SEM is sensitive to distributional assumptions and model estimation methods, the authors should also report whether maximum likelihood estimation was used and whether robust corrections were applied.

Authors revised and uploaded the document.

2. Revised

Editor’s decision after revisions: Accepted.

Editor in Chief’s decision: Accepted.