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Alexithymia, Interoceptive Awareness, and Autonomic Indices: A Machine-Learning Approach to Psychosomatic Vulnerability

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E d i t o r	R e v i e w e r s
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1. Round 1

1.1. Reviewer 1

Reviewer:

The narrative review of the literature on alexithymia is theoretically solid and clinically meaningful, yet the flow sometimes feels more like an encyclopedic listing of associated conditions rather than a structured argument; grouping the cited findings into clearer subthemes (e.g., developmental antecedents, transdiagnostic mechanisms, treatment implications) would improve coherence and readability.

The paper makes frequent reference to autonomic indices and a “machine-learning approach to psychosomatic vulnerability” in the title, but in the available sections the conceptual linkage between the psychological constructs (alexithymia, interoception) and specific autonomic features (e.g., HRV parameters, sympathetic vs. parasympathetic markers) is only implicit; a short integrative subsection that clearly hypothesizes which autonomic patterns correspond to which psychological profiles would greatly enhance theoretical integration.

The literature review draws on a wide range of studies in psychosomatic medicine, eating disorders, chronic pain, and occupational stress, which is a clear strength; however, some references appear to be taken at face value without critical appraisal of methodological limitations (e.g., small samples, self-report bias, cross-sectional design), and a more critical tone

would help position the current study as addressing some of these weaknesses rather than simply adding another layer of association.

Authors revised the manuscript and uploaded the document.

1.2. Reviewer 2

Reviewer:

The paper repeatedly suggests that alexithymia is a “key” or “central” factor in psychosomatic vulnerability, but this claim currently rests largely on narrative synthesis and cross-sectional associations; the authors should either moderate the strength of this causal language or more clearly justify it (e.g., with longitudinal, mechanistic, or experimental evidence) and state how their own data will test it.

The discussion of interoceptive awareness is conceptually sophisticated and correctly highlights its multidimensional nature, but it remains unclear which specific dimensions (e.g., interoceptive accuracy, sensibility, metacognitive awareness, regulatory use of bodily signals) are targeted in the empirical part of the study, and how these map onto the measures and features ultimately used in the machine-learning models.

The manuscript very convincingly links childhood trauma, dysfunctional family environments, and broader sociocultural stressors (including pandemics) to the development and maintenance of alexithymia, but the argument would be strengthened by distinguishing between risk factors, maintaining factors, and moderators, and by clarifying which of these the current study is capable of assessing given its presumed cross-sectional design.

The sections on eating disorders, obesity, and the experience of the body as alien or untrustworthy are compelling and clinically resonant, yet the manuscript currently blurs the line between qualitatively described phenomenology and quantitatively measured constructs; the authors should specify whether their own study assesses these phenomena directly or whether they are presented only as illustrative background.

While the emphasis on female adolescents and young women as a particularly vulnerable group is well supported by the cited evidence, the manuscript does not yet clarify whether the sample in this study is gender-balanced or focused on this population; the authors should explicitly state their sampling frame and discuss the implications for generalizability and potential sex/gender-specific modeling in the machine-learning approach.

Authors revised the manuscript and uploaded the document.

2. Revised

Editor’s decision: Accepted.

Editor in Chief’s decision: Accepted.