

Predicting Psychological Distress Based on Psychological Flexibility, Attachment Needs, and Alexithymia in Infertile Women Following Unsuccessful IVF

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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 manuscript should more precisely define what constitutes “unsuccessful IVF.” The Methods state that participants “had experienced at least one unsuccessful IVF cycle,” but no operational criterion or temporal window is provided. It is unclear whether unsuccessful IVF refers to failure to achieve biochemical pregnancy, failure to establish clinical pregnancy, implantation failure, biochemical pregnancy loss, or another outcome. Furthermore, the psychological response may differ substantially between a woman assessed several days after a negative pregnancy test and one assessed months after a failed cycle. The authors should report the clinical definition of treatment failure, how it was verified, the interval between the most recent unsuccessful cycle and psychological assessment, and preferably the distribution or mean number of previous failed IVF cycles.

Participant recruitment and sampling procedures require considerably greater methodological detail. The Methods report that “280 eligible women were recruited using purposive non-probability sampling” from infertility centers in Shiraz during 2025–2026. However, the number and type of infertility centers, recruitment period, number of potentially eligible women approached, number declining participation, number excluded, and number of incomplete questionnaires are not reported.

These omissions make it difficult to evaluate selection bias and the representativeness of the final sample. A participant-flow description should be added, ideally reporting the number screened, excluded with reasons, consenting, completing questionnaires, and ultimately included in analysis.

The reported descriptive values for the DASS-21 require clarification because the subscale means appear high relative to the possible raw-score range of 0–21. Anxiety is reported as $M = 17.95$, stress as $M = 16.64$, and depression as $M = 15.98$. If these are raw DASS-21 subscale scores, they indicate very substantial symptom severity across the sample and should be clinically contextualized. If scores were multiplied by two to correspond with DASS-42 severity norms, this must be explicitly stated. The Methods currently say that scores “may be multiplied by two,” but do not specify whether this transformation was actually performed in the present study. The authors should report the exact scoring procedure used and, if appropriate, provide severity-category distributions.

Authors revised the manuscript and uploaded the document.

1.2. Reviewer 2

Reviewer:

The manuscript does not provide an a priori or post hoc justification for the sample size of 280 participants, despite using structural equation modeling. The Methods should report how sample adequacy was determined, preferably through an a priori power analysis based on the expected effect size, number of predictors or free parameters, desired statistical power, and alpha level. Simply achieving a commonly recommended participant-to-parameter ratio is not sufficient justification. Because the study estimates measurement models as well as structural paths, the authors should demonstrate that $N = 280$ was adequate for the complexity of the SEM and for detecting the smallest theoretically meaningful standardized effect.

The reported demographic finding that “63.57% reported a history of psychological problems” deserves much greater attention because it may materially affect the primary outcome of psychological distress. This proportion is remarkably high and creates a potentially important confounding issue. The manuscript does not define “psychological problems,” indicate whether these were formally diagnosed conditions or self-reported symptoms, identify whether they preceded infertility, or specify whether participants were receiving psychiatric medication or psychotherapy. Because prior psychopathology is likely to be strongly related to current DASS-21 scores, the authors should define this variable precisely and consider controlling for it statistically. At minimum, sensitivity analyses comparing participants with and without prior psychological problems would strengthen confidence that the reported predictor effects are not primarily attributable to pre-existing mental health differences.

The exclusion criterion concerning medication is insufficiently operationalized. The Methods refer to participants “receiving medications considered likely to substantially interfere with psychological assessment,” but neither the medication classes nor the decision rule are specified. This wording introduces investigator discretion and reduces reproducibility. The authors should state explicitly whether antidepressants, anxiolytics, mood stabilizers, antipsychotics, hormonal medications used in fertility treatment, corticosteroids, or other drugs were considered exclusionary. This is especially important because nearly all IVF patients receive hormonal treatment that may influence mood and somatic symptoms.

The use of the DASS-21 as a measure of a unitary construct labeled “psychological distress” needs stronger psychometric justification. In Table 2, depression, anxiety, and stress are treated as dimensions of psychological distress, while the structural model apparently uses psychological distress as a higher-order or latent outcome. The authors should clearly state whether the SEM modeled a second-order distress factor, a first-order latent factor indicated by depression, anxiety, and stress subscale scores, or a total observed DASS score. If a latent construct was used, its specification should be illustrated in the model and supported by factor loadings, factor correlations, and model-fit statistics. If a total score was used, the manuscript should justify aggregation across the three DASS domains.

Authors revised the manuscript and uploaded the document.



2. Revised

Editor's decision: Accepted.

Editor in Chief's decision: Accepted.