

Psychological Wellbeing among Individuals Living with Autoimmune Conditions: A Cross-Sectional Study

Reena Behera

Centre for Distance and Online Education, JAIN (Deemed-to-be University), Bengaluru, India

Corresponding Author Email: [reena.behera10\[at\]gmail.com](mailto:reena.behera10[at]gmail.com)

Abstract: Autoimmune conditions may affect wellbeing through symptoms, treatment demands, uncertainty and disruption to daily activities. This cross-sectional study examined subjective psychological wellbeing among adults living with autoimmune conditions and its association with illness-related factors. The project reports data from 21 participants. Wellbeing was measured using the World Health Organization Five Well-Being Index (WHO-5), scored from 0 to 100, alongside a researcher-developed illness-impact questionnaire. The reported mean WHO-5 score was 31.05 (SD = 21.61; median = 32; range = 0–88). Illness duration was not significantly associated with wellbeing ($r = .043$, $p = .857$; $n = 20$). Greater perceived severity ($p = -.587$, $p = .005$), treatment burden ($p = -.519$, $p = .016$) and interference with daily activities ($p = -.754$, $p < .001$) were associated with lower wellbeing. The gender comparison was not statistically significant ($U = 53.0$, $p = .299$). These preliminary results require verification against the anonymized dataset. The small, mixed-diagnosis sample and cross-sectional design limit generalizability and causal interpretation.

Keywords: autoimmune conditions; psychological wellbeing; WHO-5; treatment burden

1. Introduction

Autoimmune conditions include disorders in which immune processes target the body's own tissues. Examples include systemic lupus erythematosus (SLE), rheumatoid arthritis, multiple sclerosis, autoimmune thyroid disease and type 1 diabetes. Although these conditions differ clinically, many involve long-term treatment, fluctuating symptoms, uncertainty and changes to everyday life.

A biopsychosocial perspective recognizes that physical symptoms, emotional responses and social circumstances interact. Pain, fatigue, sleep disturbance and functional limitations may affect daily participation. Treatment routines, repeated investigations, financial pressures and uncertainty may add demands, while coping strategies and social support may aid adjustment.

Psychological wellbeing is broader than the absence of a mental disorder. The World Health Organization Five Well-Being Index (WHO-5) is a brief self-report measure of wellbeing over the previous two weeks. Five items are scored from 0 to 5; the total raw score (0–25) is multiplied by four to yield a percentage score (0–100), with higher scores indicating better wellbeing [1, 2].

Research has found associations between autoimmune conditions and psychological difficulties, although outcomes vary across conditions and individuals. A systematic review and meta-analysis of longitudinal cohort studies reported an increased risk of subsequent depression among people with autoimmune diseases [3]. Reviews in SLE and multiple sclerosis also describe psychological difficulties [4–6]. These findings support assessing wellbeing alongside physical health without assuming that all individuals experience poor wellbeing.

The present study assessed psychological wellbeing among adults living with autoimmune conditions and examined its associations with illness duration, perceived severity, treatment burden and interference with daily functioning.

2. Objectives

The primary objective was to assess psychological wellbeing among adults living with autoimmune conditions. Secondary objectives were to examine associations between wellbeing and illness duration, perceived severity, treatment burden and interference with daily functioning, and to explore differences by gender.

3. Materials and Methods

3.1 Design and participants

A quantitative, cross-sectional, descriptive-correlational design was used. The project reports a final sample of 21 adults with autoimmune conditions. The dissertation protocol specified adults aged 18 years or older with a medically diagnosed condition, diagnosis duration of at least six months, ability to understand the study information and voluntary informed consent. The final manuscript should accurately state the recruitment channels, sampling approach and data-collection dates.

3.2 Measures

The WHO-5 was the primary outcome measure. Scores range from 0 to 100 after conversion from the raw score, with higher scores reflecting better subjective wellbeing [1, 2]. A researcher-developed demographic and illness-impact questionnaire captured illness-related experiences including perceived severity, treatment burden and interference with daily activities. This supplementary questionnaire is not presented as a validated psychological scale.

3.3 Procedure, ethics and analysis

The project protocol describes voluntary participation, informed consent, confidentiality, secure data storage and reporting in aggregate form. The actual ethics review/approval status and consent process must be stated accurately before submission. Descriptive statistics were reported for participant characteristics and WHO-5 scores. Pearson correlation was reported for illness duration; Spearman rank correlations were reported for perceived severity, treatment burden and functional impact. A Mann–Whitney U test was reported for gender comparison. Statistical significance was set at $p < .05$. As the study is cross-sectional, associations cannot establish causality.

4. Results

The numerical results below reproduce values presented in the submitted project document. The source document also describes the results chapter as a framework to be completed after data collection. Accordingly, each value must be checked against the anonymized raw dataset and final analysis before submission.

4.1 Participant characteristics

The project reports 21 participants with a mean age of 34.00 years ($SD = 7.96$; range = 20–50). Sixteen participants (76.2%) were female and five (23.8%) were male. Sixteen participants (76.2%) reported SLE/lupus-related conditions; other reported diagnoses included Sjögren's syndrome, autoimmune encephalitis and other conditions. Median illness duration was nine years (range = 0.5–27 years).

4.2 Wellbeing and associations

The reported mean WHO-5 percentage score was 31.05 ($SD = 21.61$), with a median of 32 and range of 0–88. Illness duration was not significantly correlated with wellbeing ($r = .043$, $p = .857$; $n = 20$). Perceived severity was negatively associated with wellbeing ($p = -.587$, $p = .005$; $n = 21$), as was treatment burden ($p = -.519$, $p = .016$; $n = 21$). Greater interference with daily activities showed the strongest reported negative association with wellbeing ($p = -.754$, $p < .001$; $n = 21$). The gender comparison was not statistically significant ($U = 53.0$, $p = .299$; $n = 21$).

5. Discussion

The project-reported findings suggest that perceived illness severity, treatment burden and interference with daily activities were associated with lower subjective wellbeing. In contrast, illness duration was not significantly associated with wellbeing. The pattern may suggest that current disruption and perceived burden are relevant to wellbeing, but this interpretation is tentative and cannot establish cause and effect.

The reported association between functional interference and wellbeing is consistent with a biopsychosocial perspective: difficulties with everyday activities may affect independence, work or study, family responsibilities and social participation. The association with treatment burden

may reflect the time and effort involved in treatment and monitoring; it does not establish that treatment itself causes lower wellbeing. The non-significant duration result should not be interpreted as proof of no relationship, particularly in a small sample.

The reported mean WHO-5 score suggests relatively low subjective wellbeing in this sample. WHO-5 is not a diagnostic tool; a low score may indicate a need for further assessment rather than a confirmed mental health condition [1, 2]. Any wellbeing screening should complement medical care and be accompanied by suitable referral options. Comparisons with earlier studies should be cautious because the present sample is small and predominantly reports lupus-related conditions.

6. Limitations

The cross-sectional design cannot establish temporal or causal relationships. The sample of 21 is small and may not represent adults with autoimmune conditions more broadly. The sample includes different diagnoses, and some diagnostic groups are too small for meaningful comparison. Self-reported diagnosis and illness-impact ratings may be affected by recall or reporting bias. The researcher-developed illness-impact questionnaire is not a validated scale. Finally, the source project contains an inconsistency between its description of the results chapter as a results-ready framework and its inclusion of numerical findings; all results must be verified against the original dataset.

7. Conclusion

In the project-reported sample of 21 adults living with autoimmune conditions, lower wellbeing was associated with greater perceived illness severity, treatment burden and interference with daily activities. Illness duration and gender were not significantly associated with wellbeing in the reported analyses. These preliminary results highlight the potential value of considering subjective wellbeing alongside physical health. Larger studies with transparent recruitment procedures, verified analyses and adequate representation of different diagnoses are needed.

Acknowledgements

The author acknowledges the academic guidance of Dr R. Hemanth Babu and thanks the individuals who participated in the study. Retain this wording only if it accurately reflects the completed research.

Declarations

Ethics approval and consent to participate: The submitted project describes voluntary informed consent and confidentiality procedures but does not identify an ethics committee, approval number or approval date. Insert the verified approval details, or accurately state the institution's formal determination regarding review/exemption. Do not submit until this is resolved.

Funding: The author indicated that the study was self-funded. Confirm that no university or external funding was received.

Conflict of interest: The author declares no competing interests.

Author contributions: Reena Behera personally collected participant responses and prepared the manuscript. Confirm who conducted the statistical analysis before submission. Dr R. Hemanth Babu provided academic supervision; include him as an author only if he meets the journal's authorship criteria and has approved the manuscript.

Data availability: Data are not included in the manuscript. Any sharing of anonymized data must be consistent with participant consent and institutional requirements.

References

- [1] World Health Organization. (2024). The World Health Organization-Five Well-Being Index (WHO-5). <https://www.who.int/publications/m/item/WHO-UCN-MSD-MHE-2024.01>
- [2] Topp, C. W., Østergaard, S. D., Søndergaard, S., & Bech, P. (2015). The WHO-5 Well-Being Index: A systematic review of the literature. *Psychotherapy and Psychosomatics*, 84(3), 167–176. <https://doi.org/10.1159/000376585>
- [3] Li, Y., Zhao, C., Sun, S., Mi, G., Liu, C., Ding, G., Wang, C., & Tang, F. (2024). Elucidating the bidirectional association between autoimmune diseases and depression: A systematic review and meta-analysis. *BMJ Mental Health*, 27(1), e301252. <https://doi.org/10.1136/bmjment-2024-301252>
- [4] Shen, B., Bian, J., et al. (2017). Prevalence of depression and anxiety in systemic lupus erythematosus: A systematic review and meta-analysis. *BMC Psychiatry*, 17, 70. <https://doi.org/10.1186/s12888-017-1234-1>
- [5] Peres, D. S., Rodrigues, P., Viero, F. T., Frare, J. M., Kudsi, S. Q., Meira, G. M., & Trevisan, G. (2022). Prevalence of depression and anxiety in the different clinical forms of multiple sclerosis and associations with disability: A systematic review and meta-analysis. *Brain, Behavior, & Immunity–Health*, 24, 100484. <https://doi.org/10.1016/j.bbih.2022.100484>
- [6] Singh, G., Mahajan, N., Abrol, S., & Raina, A. (2021/2022). Anxiety and depression are common in rheumatoid arthritis and correlate with poor quality of life in Indian patients. *Reumatologia*, 59(6), 386–393. <https://doi.org/10.5114/reum.2021.112351>