

The relationship between physical activity levels and symptoms of depression, anxiety and stress in individuals with Alopecia Areata



Rajoo Y,¹ Wong J,² Cooper G,² Raj IS,¹ Castle DJ,³ Chong AH,³ Green J⁴ and Kennedy GA¹.

¹School of Health and Biomedical Science,²School of Education, RMIT University, Melbourne, Australia

³St Vincent's Hospital Melbourne, Australia

⁴Western Dermatology, Victoria, Australia

Correspondence: yamuna.rajoo@rmit.edu.au

Introduction and Aim

Alopecia Areata (AA) is an autoimmune condition that is characterised by non-scarring hair loss [1,2]. In the general population, the prevalence of AA is estimated at 0.1-0.2% with a lifetime risk of 1.7% [1]. There is currently no effective treatment and AA individuals often describe feelings of trauma, social rejection and disrupted mental health due to cosmetic repercussions [3,4]. Although physical activity (PA) participation has been associated with better mental health outcomes in diverse populations, the association in individuals with AA has not been established. The aim of this study was to examine the association between levels of PA and symptoms depression, anxiety and stress in Australian population diagnosed with AA.



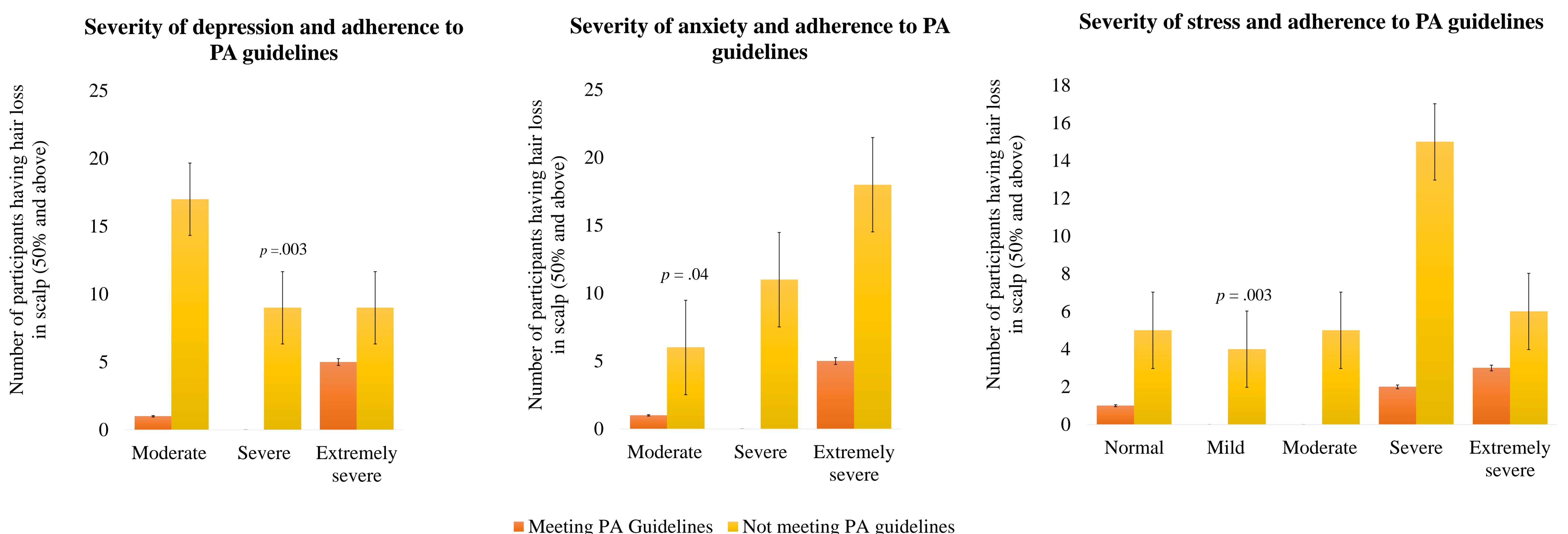
Methods

Study design: A cross-sectional study was conducted among individuals who were diagnosed with AA in Australia. A total of 83 respondents (40.95 ± 13.24 years) completed a self-report questionnaire consisting of International Physical Activity Questionnaire-Short Form (IPAQ-SF) which quantifies PA levels and Depression and Anxiety Stress Scale (DASS-21) which measures symptoms of depression, anxiety and stress.

Data analyses: Statistical analyses were carried out using the SPSS software (IBM Statistical Package for the Social Sciences) program for windows version 24 (IBM SPSS Statistics). Three-way contingency Chi-square analyses were used to determine the associations between physical activity and mental health in individuals with AA experiencing hair loss. A p value < .05 was used to evaluate statistical significance.

Results

Overall, 49.4% of the participants had hair loss in the scalp (50% and above) and 81.9% of the them did not meet PA guidelines. Severity of distress was categorised as normal, mild, moderate, severe and extremely severe. Participants with hair loss of more than 50% on the scalp and did not meet PA guidelines were significantly more likely to experience symptoms of severe depression ($p = .003$), moderate anxiety ($p = .04$) and mild stress ($p = .003$) than those who met guidelines.



Conclusion and Implications

Scalp involvement (50% and above) was a significant predictor for symptomatic depression, anxiety, stress and not meeting the recommended PA guidelines. These associations will lead to explore the barriers and enablers to PA participation in these individuals. Understanding barriers and enablers to PA participation will inform in implementing evidence based PA intervention to maximise PA participation and to improve mental health status in these individuals.

Acknowledgements

We gratefully acknowledge Australia Alopecia Areata Foundation (AAAF) and RMIT for the travel grant, President of AAAF, Chel Campbell and Secretary of AAAF, Georgia for constant support throughout the study.

References

- [1] Tan E, Tay YK, Goh CL, Chin Giam Y. The pattern and profile of alopecia areata in Singapore--a study of 219 Asians. *International journal of dermatology*. 2002;41(11):748-53.
- [2] Rencz F, Gulacsi L, Pentek M, Wikonkal N, Baji P, Brodsky V. Alopecia areata and health-related quality of life: a systematic review and meta-analysis. *The British journal of dermatology*. 2016;175(3):561-71.
- [3] Ghanizadeh A, Ayoobzadehshirazi A. A review of psychiatric disorders comorbidities in patients with alopecia areata. *International journal of trichology*. 2014;6(1):2-4.
- [4] Gilhar A, Etzioni A, Paus R. Alopecia areata. *N Engl J Med*. 2012;366(16):1515-25.

