

Research Article:

The Influence of Happiness on the Balance of Positive and Negative Emotions among Indonesian University Students: Implications for Educators

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ABSTRACT

This study aims to evaluate the impact of happiness on the balance between positive and negative emotions among Indonesian university students. A total of 619 university students participated in this research, and data were collected using the Indonesian version of the Oxford Happiness Questionnaire (OHQ-I) and the Positive and Negative Affect Schedule (PANAS). Partial Least Squares Structural Equation Modelling (PLS-SEM) was employed to evaluate the measurement and structural models. The measurement model demonstrated acceptable psychometric properties, indicating that the instruments yielded reliable and valid measurements in this study. The findings showed that happiness positively predicted positive affect ($\beta = .714, p < .001$) and negatively predicted negative affect ($\beta = -.494, p < .001$). The model explained a substantial amount of variance in both constructs ($R^2 = .51$ and $.22$, respectively). These results suggest that higher levels of happiness are associated with a more favourable affective balance among students. While this study contributes to our understanding of emotional well-being in higher education, its interpretation should consider several limitations. These include gender imbalance in the sample, reliance on purposive sampling from only two faculties, and exclusive use of self-report measures. Future research could address these limitations by using more diverse samples and longitudinal designs to clarify the dynamics of happiness and affective balance in different cultural and academic contexts.

Keywords: Happiness, positive affect, negative affect, university students, structural equation modelling

Accepted: 23 October 2025; **Published:** 31 December 2025

To cite this article: Rahmawati, E., Khairani, A. Z., Razak, N. A., & Andriani, F. (2025). The influence of happiness on the balance of positive and negative emotions among Indonesian university students: Implications for educators. *Asia Pacific Journal of Educators and Education*, 40(3), 567–583. <https://doi.org/10.21315/apjee2025.40.3.22>

INTRODUCTION

The affective aspect is an integral part of psychological well-being that influences how individuals respond to the world around them. In emotional psychology, the range of emotional experiences is typically described by two primary components: Positive and negative affect. Positive affect (PA) and negative affect (NA) are relatively independent dimensions of human emotion (Watson et al., 1988; King et al., 2024). PA denotes enthusiasm, activity, and alertness, whereas low PA is marked by fatigue and sadness. NA, in contrast, encompasses a range of unpleasant emotions such as fear, anger, guilt, and anxiety. These two dimensions are not mutually exclusive, but rather coexist and can be experienced simultaneously at varying intensities (Ong et al., 2017; Vaccaro et al., 2020).

During the critical developmental stage of higher education, which is characterised by academic, social, and emotional pressures, it is imperative for students to maintain balanced levels of PA and NA. This period involves increased autonomy, demanding academic tasks, identity exploration, and major life transitions, all of which heighten vulnerability to stress and emotional dysregulation (Conley et al., 2014; Eisenberg et al., 2007). Students with balanced affective states are more resilient to campus stressors, enhancing their academic productivity, social functioning, and psychological well-being (Shaigerova et al., 2022). Therefore, understanding how students achieve and maintain affective balance is critical for their academic and personal development.

Students' ability to regulate their emotions directly affects their ability to achieve affective balance (Nazar-Biesman & Matevosyan, 2024). Unmanaged emotions, such as anxiety and frustration, can impair focus, working memory, and the efficiency of information processing (Berggren & Derakshan, 2013; Berggren et al., 2017; Cécillon et al., 2024). Effective emotional regulation enables students to remain composed under stress, which facilitates critical thinking, problem-solving, and adaptive coping (Pekrun et al., 2002; Tyng et al., 2017). Therefore, emotional regulation is a valuable personal resource and an essential academic skill that supports comprehensive student development.

Prolonged exposure to negative emotions, such as stress and anxiety, can deplete cognitive resources, leading to exhaustion, decreased motivation, and academic burnout (Eisenberg et al., 2020; Owens et al., 2014; Schaufeli et al., 2002). Therefore, it is necessary to provide students with appropriate support and interventions to help them manage negative emotions constructively and prevent adverse academic and psychological outcomes. On the other hand, positive emotions serve as psychological resources that bolster students' resilience and ability to overcome academic challenges. According to the broaden-and-build theory (Fredrickson, 2001), positive emotions such as enthusiasm, hope, and gratitude broaden cognitive and social resources, enhance

adaptive coping strategies, and foster empathy and collaboration. Consequently, students who frequently experience positive emotions demonstrate greater motivation, participate more actively in class, and employ more effective strategies for dealing with stressors.

Happiness is one of the psychological states most strongly associated with positive emotions. From a positive psychology perspective, happiness encompasses not only pleasurable feelings but also life satisfaction, optimism, self-control, and rewarding social interactions (Argyle, 2001). Students who experience happiness tend to be more optimistic, engaged, and satisfied with their academic life (Suldo et al., 2008; Seligman et al., 2009). Happiness facilitates emotional regulation, protects against chronic stress, and contributes to sustained well-being in higher education.

Previous psychological studies have often examined the relationship between happiness, well-being, and academic performance. However, much of this research has been conducted in Western contexts, where cultural attitudes towards happiness may differ substantially from those in collectivist societies. In Indonesia, prior research has examined happiness and well-being as well as the roles of positive and negative affect. However, few studies have explicitly modelled happiness as a direct structural predictor of affective balance, i.e., the interplay between positive and negative affect. Furthermore, existing studies have rarely focused on university students, despite their increased exposure to academic and developmental challenges, which makes maintaining affective balance particularly important. This study addresses these gaps by specifying and testing a model in which happiness predicts PA and NA. This provides context-specific evidence for Indonesian university students. In doing so, the study contributes to the theoretical understanding of happiness in academic settings and offers practical implications for educators to foster emotional balance and resilience.

Building on this rationale, the present study aims to evaluate the impact of happiness on the balance between PA and NA in Indonesian university students. Specifically, it investigates how happiness influences the frequency and intensity of positive emotions, as well as its role in reducing negative emotional experiences. The findings are expected to extend the literature on emotional well-being in higher education and provide practical insights into promoting emotionally supportive and academically engaging educational environments.

LITERATURE REVIEW

The balance between positive and negative affect is foundational to emotional well-being, and it is widely accepted that happiness has a profound influence on affective processes. An Indonesian adolescent and youth population study by Purborini et al. (2021) showed that happiness and life satisfaction strongly predicted affective balance;

subjects with increased levels of happiness experienced a greater positive affect and diminished negative affect. However, the study's reliance on self-report measures and its focus on a general youth population limit its direct applicability to university students, who face unique academic and social pressures. These findings underscore the dual role of happiness in regulating emotional responses, functioning as both an outcome and a factor.

The impact of happiness on stress management has been well-documented, particularly in university settings. Shaigerova et al. (2022) examined the effects of the pandemic on students, focusing on affective stability and global stressors. Their study reported a significant decline in positive emotions after one year into the pandemic, while negative emotions remained largely unchanged. While these findings offer valuable insights, the extraordinary circumstances of a global crisis limit their generalisability beyond the pandemic. The results suggest that environmental stressors can reduce positive emotions, underscoring the importance of protective factors, such as happiness, for maintaining emotional balance.

In addition to studies conducted during crises, Firdaus et al. (2022) examined positive emotions among secondary school students in Surabaya, Indonesia. They found that positive emotions were positively related to academic engagement, as mediated by psychological capital (PsyCap). Although the study focused on secondary school students, it provides evidence of a mechanism through which happiness can facilitate motivation and engagement, which is potentially relevant to university students as well.

Moreover, beyond age-group differences, cross-cultural research further enriches the picture, from a cross-cultural perspective, happiness must be understood within psychological and cultural frameworks. Kotera et al. (2022) compared British and Indonesian university students and found that the Indonesian students displayed self-compassion and relational engagement. These behaviours reflect the socio-relational values characteristic of collectivist cultures. Though the study was limited to two cultural groups, it highlights the importance of considering cultural context when examining happiness and emotional balance, particularly in Indonesia, where collectivist values influence emotional regulation.

Extending this cultural lens to intervention research, evidence from intervention studies also suggests that happiness is a malleable concept. Positive psychology programs have been shown to increase positive emotions and reduce negative emotions among university students. For instance, interventions focusing on gratitude and self-reflection have demonstrated measurable improvements in emotional balance (Goodmon et al., 2016; Smith et al., 2021; 2023). However, most of these interventions have been conducted in Western contexts, which may not fully reflect cultural variations in the expression and regulation of happiness. This underscores the need for similar studies in collectivist societies, such as Indonesia.

Alongside psychological interventions, technological advances have made innovative assessments of student happiness possible. For example, Jacques et al. (2015) used machine learning to predict happiness levels based on physiological sensors, location tracking, mobile phone usage, and daily surveys. While this study did not directly measure affect, the results suggested that supportive campus environments enhance emotional well-being. However, in developing countries such as Indonesia, these technology-intensive methods have not yet been widely adopted, and traditional self-report measures remain predominant. While technological approaches offer valuable insights, it is equally important to consider culturally embedded practices that may play a critical role in supporting emotional balance.

Consistent with this cultural orientation, Hamsyah and Subandi (2017) examined an Indonesian Muslim Sufi group and found that spiritual practices, particularly *dzikir*, were positively associated with subjective well-being. These activities increased positive emotions, decreased negative emotions, and promoted long-lasting emotional equilibrium. Although this study was not conducted in an academic setting, it highlights culturally embedded practices that influence happiness, making it relevant for understanding emotional balance among Indonesian university students.

Complementing these cultural and spiritual perspectives, the investigation by Salavera et al. (2020) provides additional insight into the relationship between happiness and various affective states, although the authors interpret the relationship differently. This study considered positive and negative affect to be key mediating factors in the relationship between self-esteem and happiness. Their findings showed that people with higher self-esteem report greater happiness. This relationship is strengthened by positive affect but weakened by negative affect. However, since happiness was treated as an outcome rather than a predictor, the study leaves open the question of how happiness itself influences affective balance, a question that the present research directly addresses. These results illustrate that affective conditions determine the cognitive appraisal and emotional response that constitute subjective well-being.

In summary, the existing literature consistently shows that happiness is associated with stronger positive emotions and weaker negative emotions. However, the evidence is fragmented across populations, methods, and cultural contexts. It often relies on non-university samples or self-report measures. Therefore, a comprehensive investigation of happiness as a predictor of affective balance among Indonesian university students, taking into account academic pressures and collectivist cultural values, is necessary.

Based on the reviewed literature, this study proposes the following hypotheses:

H1: Happiness significantly affects the affective balance of university students in Indonesia by increasing positive emotions (Positive affect).

H2: Happiness significantly affects the affective balance of university students in Indonesia by decreasing negative emotions (Negative affect).

METHODOLOGY

Research Design

This study used a correlational research design to examine the relationship between emotional balance and happiness among university students, focusing on the presence of positive and negative emotions. The study examined whether greater happiness is associated with higher positive affect and lower negative affect, as suggested by previous studies conducted outside of the Indonesian context. This design allows for the assessment of naturally occurring relationships among variables without experimental manipulation, which aligns with the exploratory nature of this research.

Sampling

The sample consisted of 619 Indonesian undergraduate students (125 males, 20.2%; 494 females, 79.8%) aged 18 to 24 years (mean = 19, SD = 1.045). It should be noted that the sample is heavily skewed toward female participants, which may limit its generalisability. Participants were selected using purposive sampling from two faculties, education and psychology. Undergraduates in these faculties are more familiar with psychological constructs, such as happiness and emotional balance. However, purposive sampling from only two faculties restricts representativeness because students from other faculties may have different experiences or cultural norms that affect emotional balance. This limitation should be considered when interpreting the results. The sample consisted of undergraduates who attended five lectures that were conducted. The researcher obtained permission from the lecturers to collect data during the lectures to ensure a good response. Before participation, students received a clear explanation of the study's purpose and instructions on completing the questionnaire.

Instrument

We employed two widely used instruments were employed to gauge the responses in this study. Ten items from the OHQ (Hill & Argyle, 2002) were adapted to measure happiness. Meanwhile, 14 items from the PANAS scale (Watson et al., 1988) were employed, where seven items measure positive emotions and another seven measure negative emotions. The instruments were translated into Indonesian using a forward translation approach. To ensure cultural and semantic equivalence, an independent bilingual expert back-translated the translated items, and a panel of psychology lecturers reviewed them for content validity. A summary of the instruments and their properties is provided in Table 1.

Table 1. Instruments

| Variable | Questionnaire | No. of items | Sample of items |
|-------------------|------------------------------------|--------------|--|
| Happiness | The Oxford Happiness Questionnaire | 10 | My life is very satisfying. |
| Positive emotions | PANAS scale | 7 | Indicate the extent you have felt this way over the past week... interested. |
| Negative emotions | PANAS scale | 7 | Indicate the extent you have felt this way over the past week... distressed. |

Procedure and Ethical Considerations

Participants completed the instruments through a structured survey conducted during class sessions. Before participating, all students were informed of the study's objectives, assured of confidentiality, and asked to provide written informed consent. Participation was voluntary, and students could withdraw at any time without penalty. Ethical approval was obtained from the Jawatankuasa Etika Penyelidikan Manusia, Universiti Sains Malaysia (JEPeM-USM; Protocol Code: USM/JEPeM/22010071). All responses were anonymised and handled confidentially to ensure data privacy.

Data Analysis

To analyse the hypothesised relationships, Partial Least Squares Structural Equation Modelling (PLS-SEM) was conducted using SmartPLS 4.0 (Ringle et al., 2022). PLS-SEM was selected due to its robustness in handling complex models, predictive focus, and minimal assumptions regarding data normality (Goller & Hilkenmeier, 2022; Richter & Tudoran, 2024). Although the sample size is relatively large, PLS-SEM allows for simultaneous assessment of measurement and structural models and is suitable for exploratory research objectives (Lin et al., 2020).

Following the two-stage analytical processes suggested by Anderson and Gerbing (1988), we examined the measurement model (validity and reliability of the measures) before evaluating the structural model (testing the hypothesised relationships) (Hair et al., 2014). The measurement model uses convergent and discriminant validity to evaluate construct validity (Hair et al., 2014). Important measures of validity and reliability for the assessed constructs include Cronbach's alpha (α), average variance extracted (AVE) values, factor loading (l), and composite reliability (CR). The following are the desired values for each statistic: $\alpha > .60$, $l > .50$, AVE $> .50$, and CR $> .60$ (Bagozzi & Yi, 2011; Hair et al., 2014).

Through correlation analysis, discriminant validity evaluates the extent to which a construct's indicators differ from those of other constructs, demonstrating the

construct’s uniqueness (Hair et al., 2014; Ramayah et al., 2018). According to Henseler et al. (2015), the Heterotrait-Monotrait ratio (HTMT) serves as another criterion, with values less than .90 indicating discriminant validity. The HTMT compares correlations between items measuring distinct constructs and those assessing the same construct. Discriminant validity is established when an HTMT value is less than .90 (Gold et al., 2001).

RESULTS

Measurement Model

The measurement model demonstrated satisfactory reliability and validity. Indicator loadings ranged from .534 to .834. Some items with moderate loadings (.534 to .682) were retained after confirming that removing them would not improve the AVE or CR beyond the recommended thresholds (Hair et al., 2017). Internal consistency was confirmed, with Cronbach’s alpha (α) and CR values for all constructs exceeding .60. Convergent validity was supported with AVE values ranging from .534 to .556. AVE values slightly above the minimum criterion of .50 were considered acceptable, given the strong loadings and high internal consistency.

Discriminant validity was also established as all HTMT values were below .90 (from .503 to .792), indicating that the constructs were distinct enough. We assessed multicollinearity and found it to be inconsequential, as all variance inflation factor (VIF) values were below 5 (see Table 3).

Table 2. λ , AVE, CR, and α

| Variable | Item | λ | AVE | CR | α |
|-----------|-------|-----------|------|------|----------|
| Happiness | OHQ1 | .699 | .556 | .916 | .910 |
| | OHQ2 | .815 | | | |
| | OHQ3 | .677 | | | |
| | OHQ4 | .701 | | | |
| | OHQ5 | .813 | | | |
| | OHQ6 | .834 | | | |
| | OHQ7 | .717 | | | |
| | OHQ8 | .696 | | | |
| | OHQ9 | .649 | | | |
| | OHQ10 | .829 | | | |

(continued on next page)

Table 2: (Continued)

| Variable | Item | λ | AVE | CR | α |
|------------------|---------|-----------|------|------|----------|
| Positive emotion | PANAS1 | .534 | .537 | .865 | .856 |
| | PANAS2 | .670 | | | |
| | PANAS3 | .762 | | | |
| | PANAS4 | .834 | | | |
| | PANAS5 | .781 | | | |
| | PANAS6 | .798 | | | |
| | PANAS7 | .691 | | | |
| Negative emotion | PANAS8 | .742 | .534 | .872 | .851 |
| | PANAS9 | .643 | | | |
| | PANAS10 | .679 | | | |
| | PANAS11 | .726 | | | |
| | PANAS12 | .788 | | | |
| | PANAS13 | .756 | | | |
| | PANAS14 | .782 | | | |

Table 3. HTMT ratio

| | Happiness | Positive emotion | Negative emotion |
|------------------|-----------|------------------|------------------|
| Happiness | | | |
| Positive emotion | .792 | | |
| Negative emotion | .548 | .503 | |

Structural Model and Hypothesis Testing

A bootstrapping method using 5,000 samples was used to conduct hypothesis testing. As shown in Table 4, both relationships hypothesised in this study were significant, with a t -value exceeding 1.65, at a 5% significance level. The relationship between happiness and positive affect was strong ($\beta = .714$, $t = 36.648$), indicating that students with higher happiness scores experienced substantially higher positive emotions. The relationship between happiness and negative affect was moderately negative ($\beta = -.494$, $t = 14.569$), showing that increased happiness was associated with a meaningful reduction in negative emotions. However, the effect on negative affect was smaller than the effect on positive affect, highlighting differential influence.

The model explained 51.0% of the variance in positive affect ($R^2 = .510$) and 22.4% of the variance in negative affect ($R^2 = .224$). These results demonstrate that happiness has a stronger predictive effect on positive affect than negative affect. Together, these results support H1 and H2, confirming that happiness is a significant psychological resource that shapes the emotional balance of university students. The combination

of β coefficients, effect sizes, and variance explained provides a comprehensive understanding of the magnitude and practical implications of these relationships.

Table 4. Hypothesis testing

| | Relationship | Std. β | Std. error | <i>t</i> -value | Decision | BCI LL | BCI UL | <i>R</i> ² |
|----|-------------------------------|--------------|------------|-----------------|-----------|--------|--------|-----------------------|
| H1 | Happiness → Positive emotions | .714 | .019 | 36.648 | Supported | .674 | .751 | .510 |
| H2 | Happiness → Negative emotions | -.494 | .034 | 14.569 | Supported | -.561 | -.430 | .224 |

DISCUSSION

This study examined the relationship between happiness and emotional balance among Indonesian university students. Although the instruments demonstrated adequate reliability, the moderate convergent validity indicates that happiness and emotions may manifest uniquely in this collectivist context. Despite these psychometric considerations, the findings consistently showed that happiness significantly increases positive emotions and decreases negative emotions among Indonesian students, consistent with previous studies (Diener et al., 2018; Sirgy, 2019; Veilleux, 2020).

The observed relationship between happiness and emotional balance is consistent with Fredrickson’s (2001) Broaden-and-Build Theory. This theory posits that positive emotions broaden cognitive capacities and build psychological resources. Even with moderate psychometric limitations, the strong relationship between happiness and positive emotions suggests happier students develop greater cognitive flexibility and resilience. The comparatively weaker yet significant negative relationship between happiness and negative emotions indicates that cultural and contextual factors, including the collectivist nature of Indonesian society, may influence how happiness manifests in emotional experiences.

In the collectivist Indonesian context, happiness seems more closely linked to fulfilling social roles and maintaining group harmony than to individual achievement (Rahayu & Harmadi, 2016; Sohn, 2013). Consequently, threats to social belonging, such as peer conflict or failing to meet family expectations, could have a disproportionately negative impact on emotional balance, even for students who are generally happy. This cultural nuance may explain why academic obligations, family expectations regarding achievement, and communal peer practices influence how happiness translates into emotional balance in this context (Ford et al., 2015; Shin et al., 2021).

These cultural insights suggest that interventions aimed at enhancing happiness should be designed with local social norms in mind. Theoretically, the findings imply that positive emotions fostered by happiness can improve individual well-being and encourage social and academic engagement. Previous research shows that mindfulness-based interventions can effectively increase happiness by promoting mindfulness, emotional regulation, and resilience (Khoury, 2023; Zandi et al., 2021; Hermawan et al., 2024). Therefore, interventions aimed at enhancing happiness should align with communal values by considering cultural and social norms. Examples of such interventions include mindfulness training, gratitude journaling, and stress-management workshops integrated into the university environment. Supportive learning environments are crucial because they strengthen positive emotions and social resources through peer interactions and collaborative activities at Indonesian universities, thereby reinforcing emotional balance. This aligns with previous research indicating that positive and respectful classroom environments enhance student well-being and engagement (Patrick et al., 2007; Monteiro et al., 2021).

Emotional literacy programs can help students recognise and regulate their emotions, thereby fostering academic engagement and interpersonal competence. These programs have also been shown to strengthen academic engagement and interpersonal competence (Hoyos, 2021; Nurul Wahida et al., 2014; Bezzina & Camilleri, 2020). Culturally informed emotional literacy programs help students navigate social obligations and collectivist expectations without compromising emotional regulation. Finally, it is crucial to address students' emotional distress by providing counseling or mentoring services. Proactive, culturally sensitive support mitigates negative emotions, promotes resilience, and enhances social resources, helping students maintain emotional equilibrium. Prior studies have also highlighted the importance of early intervention, counseling, and mentoring as strategies for reducing student distress and promoting well-being (Pitzer & Skinner, 2017; Romano et al., 2021).

In conclusion, this study demonstrates that happiness is an important predictor of emotional balance among Indonesian university students. By integrating theoretical frameworks with cultural context, the study provides a foundation for designing interventions that promote individual and collective well-being and support student engagement and adaptive functioning in higher education.

LIMITATIONS AND FUTURE RESEARCH

Despite its contributions, this study has several limitations. First, the sample was predominantly female and limited to two faculties (Education and Psychology), which may restrict the generalisability of the findings. Second, relying exclusively on self-report questionnaires could introduce response biases that might inflate the association between happiness and emotional balance. Third, the cross-sectional design prevents causal inferences about the relationship between happiness and emotional balance.

Based on these limitations, future research should adopt several methodological improvements. For example, researchers could recruit more gender-balanced samples across multiple faculties and universities to enhance representativeness. Using longitudinal designs would clarify the directionality and causality of the relationship between happiness and emotional balance. Additionally, incorporating mixed-methods approaches or peer/observer reports.

CONCLUSION

This study examined the relationship between happiness and emotional balance among Indonesian university students. The study used instruments that demonstrated strong reliability but modest convergent validity. While these instruments consistently measured the constructs, they may be limited in their ability to fully capture the nuanced manifestations of happiness and emotions in this cultural context. Nevertheless, the findings align with previous research, showing that happiness significantly predicts an increase in positive emotions and a decrease in negative emotions. This robust relationship emerged despite the limitations of the measurements, highlighting the fundamental connection between happiness and emotional balance.

The findings provide a robust rationale for the incorporation of well-being initiatives, including mindfulness training, gratitude practices, fostering supportive classroom environments, implementing emotional literacy programs, and implementing proactive mentoring or counselling, into pragmatic applications. When implemented thoughtfully, these strategies have the potential to foster emotional regulation, resilience, and overall psychological well-being among students.

In summary, this study underscores happiness as a key determinant of emotional balance among Indonesian university students and highlights the importance of robust, culturally and methodologically informed research to guide theory and practice. The findings provide a foundation for educators, psychologists, and policymakers to design interventions that promote student well-being in higher education contexts.

CONFLICT OF INTEREST

The authors declare no potential conflicts of interest concerning this article's research, authorship, and/or publication.

DATA AVAILABILITY

Research data are available upon request from the corresponding author.

ACKNOWLEDGEMENTS

The researcher wishes to extend sincere gratitude to all participants, institutions, and colleagues whose support and cooperation made this study possible.

CONTRIBUTIONS OF AUTHORS

Etti Rahmawati: Contributed to data collection and formal analysis, Reviewing and editing the manuscript, Visualisations.

Ahmad Zamri Khairani: Conceptualising and designing the study methodology, Writing the original draft, Preparing the initial manuscript for submission.

Nordin Abd Razak: Supervised the research process, Contributed in the literature review and discussion sections.

Fitri Andriani: Conceptualisation of the study, Reviewing and editing the manuscript.

STATEMENT OF ARTIFICIAL INTELLIGENCE (AI) USE

Artificial intelligence tools were used only to improve language clarity, sentence structure, and overall readability. The conceptualisation, data analysis, interpretation, and synthesis were entirely human-authored.

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