

The Effect of a Gratitude Journaling Intervention on Psychological Wellbeing and Depressive Symptoms Among University Students: A Randomized Controlled Trial

Lijiya Manju

Assistant Professor, Department of Psychology, Providence Women's College (Autonomous), Calicut, India

Article information

Received: 2nd May 2026

Received in revised form: 6th May 2026

Accepted: 15th June 2026

Available online: 16th July 2026

Volume: 1

Issue: 2

DOI: <https://doi.org/10.5281/zenodo.21702195>

Abstract

This study examined the effect of a gratitude journaling intervention on psychological wellbeing and depressive symptoms among university students. A total of 150 students aged 18–25 years were recruited and randomly assigned to three groups: a gratitude journaling group, an active control group that recorded daily events, and a waitlist control group, over a six-week intervention period. Psychological outcomes were assessed using the Depression Anxiety Stress Scales (DASS-21), the Satisfaction with Life Scale (SWLS), and the Gratitude Questionnaire (GQ-6) at baseline, mid-intervention (Week 3), and post-intervention (Week 6). Mixed-design analyses of variance revealed significant Group $\times$ Time interactions for life satisfaction ($p < .001$), gratitude ($p < .001$), and depressive symptoms ($p < .001$). Simple effects analyses indicated that the gratitude journaling group showed significant improvements from baseline to Week 6 across all outcomes, whereas the two control groups showed little change. A strong positive correlation ($r = .62, p < .001$) was found between change in gratitude and change in life satisfaction, and change in gratitude was negatively correlated with change in depressive symptoms ($r = -.55, p < .001$). These findings suggest that a brief, low-cost gratitude journaling practice can yield meaningful improvements in wellbeing and reductions in depressive symptoms among university students, with implications for campus mental health services and positive psychology interventions.

Keywords:- Gratitude, Positive Psychology, Psychological Wellbeing, Depression, Life Satisfaction, University Students, Randomized Controlled Trial, Gratitude Journaling, Subjective Wellbeing, Mental Health.

I. INTRODUCTION

The promotion of psychological wellbeing has become a central concern of contemporary psychology, complementing the discipline's longstanding focus on the treatment of distress. Within the positive psychology tradition, researchers have sought to identify the character strengths, practices, and states that enable individuals not merely to avoid illness but to flourish (Seligman et al., 2005). Among the constructs studied within this tradition, gratitude, the disposition and practice of noticing and appreciating the positive in one's life and the benefits one receives from others, has attracted particular attention for its robust associations with wellbeing (McCullough et al., 2002; Wood et al., 2010).

A substantial body of evidence links gratitude to a range of favourable psychological outcomes, including greater life satisfaction, more frequent positive affect, stronger social relationships, and lower levels of depression (Emmons & McCullough, 2003; Wood et al., 2008). These associations are theoretically intelligible: within the broaden-and-build framework, positive emotions such as gratitude widen momentary thought-action repertoires and, over time, build enduring personal and social resources (Fredrickson, 2001). Gratitude may also counter the tendency toward rumination and negative self-focus that characterises depressive states (Nolen-Hoeksema et al., 2008), and it may support the eudaimonic as well as the hedonic dimensions of wellbeing (Ryan & Deci, 2001; Kashdan et al., 2006).

Beyond its correlates, gratitude has been investigated as an intervention. Practices such as counting one's blessings, writing gratitude letters, and keeping gratitude journals have been shown to enhance wellbeing in experimental and applied

studies (Emmons & McCullough, 2003; Seligman et al., 2005). Meta-analytic syntheses indicate that positive psychology interventions in general, and gratitude interventions in particular, produce small-to-moderate improvements in wellbeing and reductions in depressive symptoms (Sin & Lyubomirsky, 2009; Davis et al., 2016; Cregg & Cheavens, 2021). Nonetheless, the magnitude of effects varies, and questions remain about the conditions under which such practices are most beneficial and about their applicability to specific populations.

University students represent a population for whom these questions are especially pressing. The transition to and progression through higher education are frequently accompanied by academic pressure, social adjustment, and elevated rates of depression and anxiety, yet students often face barriers to accessing formal mental health services. Brief, low-cost, self-administered practices such as gratitude journaling may therefore hold particular value as accessible means of supporting student wellbeing. However, rigorous experimental evidence on gratitude journaling among university students, particularly in the Indian context, remains limited.

This study addresses this gap by examining, through a randomized controlled trial, whether a six-week gratitude journaling intervention improves psychological wellbeing and reduces depressive symptoms among university students relative to active and waitlist control conditions. It was hypothesised that participants in the gratitude journaling group would demonstrate significantly greater improvements in life satisfaction, gratitude, and depressive symptoms than participants in the control groups, and that the magnitude of improvement in wellbeing would be associated with the magnitude of increase in gratitude.

II. LITERATURE REVIEW

2.1. Gratitude and Psychological Wellbeing

Gratitude has been conceptualised both as a dispositional trait, the general tendency to recognise and respond with grateful emotion to the benevolence of others and the goodness in one's life, and as a state that can be cultivated through practice (McCullough et al., 2002; Watkins et al., 2003). A consistent finding across studies is that dispositional gratitude is positively associated with life satisfaction, positive affect, optimism, and vitality, and negatively associated with negative affect (Wood et al., 2010). These relationships hold across diverse samples and remain after controlling for related traits, suggesting that gratitude contributes uniquely to wellbeing rather than merely reflecting general positivity (Wood et al., 2008). Within self-determination and eudaimonic perspectives, gratitude is thought to nourish wellbeing partly by strengthening social bonds and fostering a sense of meaning (Ryan & Deci, 2001; Kashdan et al., 2006).

2.2. Gratitude and Depressive Symptoms

Beyond its links to positive functioning, gratitude has been associated with reduced vulnerability to depression. Longitudinal evidence indicates that gratitude predicts lower subsequent depressive symptoms, an effect thought to operate through the promotion of perceived social support and the reduction of stress (Wood et al., 2008). Gratitude may be incompatible with the self-focused, comparison-driven cognition that sustains depression, and by directing attention toward benefits received and positive aspects of experience, it may interrupt the ruminative processes implicated in the maintenance of depressive states (Nolen-Hoeksema et al., 2008). Meta-analytic evidence, while noting heterogeneity, supports a modest beneficial effect of gratitude interventions on symptoms of depression and anxiety (Cregg & Cheavens, 2021).

2.3. Gratitude Interventions

The translation of gratitude research into practice has centred on a family of brief interventions. In a foundational study, participants who recorded things for which they were grateful reported higher wellbeing than those who recorded hassles or neutral events (Emmons & McCullough, 2003). Subsequent trials of gratitude letters and journaling have reported improvements in happiness and reductions in depressive symptoms, some persisting for months (Seligman et al., 2005). Reviews and syntheses have sought to characterise the average effect and its moderators, concluding that gratitude interventions are generally beneficial but that effects depend on factors such as the comparison condition, the population, and the intensity and duration of the practice (Davis et al., 2016; Sin & Lyubomirsky, 2009). Practical accounts emphasise that gratitude practices are most effective when they are engaged with genuinely rather than mechanically (Bono et al., 2004; Lyubomirsky et al., 2005).

2.4. The Present Study

Although the evidence base is substantial, several gaps motivate the present study. Many gratitude intervention studies employ passive or no-treatment comparison conditions, leaving open the possibility that observed effects reflect expectancy or the mere act of writing rather than gratitude specifically; the inclusion of an active control that involves comparable writing addresses this concern. In addition, evidence from university student populations, and from the Indian context in particular, remains limited relative to the practical interest in accessible campus interventions. The present randomized controlled trial therefore evaluated a six-week gratitude journaling intervention against both an active control and a waitlist control, using validated measures of wellbeing, gratitude, and depressive symptoms.

III. METHODS

3.1. Participants

A total of 150 university students (Mage = 20.8 years, SD = 2.1; 62% female, 37% male, 1% other) were recruited from a university community through campus notices and online announcements. Inclusion criteria required participants to be currently enrolled students aged 18–25 years with no current diagnosis of, or treatment for, a major depressive or anxiety

disorder. Participants provided written informed consent, and the study protocol was approved by the institutional review committee. Participation was voluntary, and confidentiality was assured.

3.2. Design and Procedure

The study employed a randomized controlled trial design with three parallel groups: a gratitude journaling group ($n = 50$), an active control group ($n = 50$), and a waitlist control group ($n = 50$). Following baseline assessment, participants were randomly assigned to conditions using computer-generated random numbers. The intervention period lasted six weeks, with assessments conducted at baseline (Week 0), mid-intervention (Week 3), and post-intervention (Week 6). Participants in the gratitude journaling group were asked to write, on most days, a short list of things for which they felt grateful. Participants in the active control group were asked to record, with comparable frequency, a list of daily events or activities, without an evaluative or grateful focus. Waitlist control participants completed the assessments only and were offered the intervention materials after the study. Brief weekly prompts supported adherence in the two writing conditions.

3.3. Measures

3.3.1. Depression Anxiety Stress Scales (DASS-21).

The DASS-21 (Lovibond & Lovibond, 1995) is a widely used 21-item self-report instrument assessing depression, anxiety, and stress over the preceding week, with items rated on a four-point scale. The depression subscale served as the primary index of depressive symptoms, with higher scores indicating greater symptom severity. The subscale demonstrated good internal consistency in the current sample (Cronbach's $\alpha = .90$).

3.3.2. Satisfaction With Life Scale (SWLS).

The SWLS (Diener et al., 1985) is a five-item self-report measure of global life satisfaction, the cognitive component of subjective wellbeing, with items rated on a seven-point scale and total scores ranging from 5 to 35. Higher scores indicate greater life satisfaction. The scale demonstrated good internal consistency in the current sample ($\alpha = .87$).

3.3.3. Gratitude Questionnaire (GQ-6).

The GQ-6 (McCullough et al., 2002) is a six-item self-report measure of dispositional gratitude, with items rated on a seven-point scale. Higher scores indicate a stronger grateful disposition. The measure demonstrated acceptable internal consistency in the current sample ($\alpha = .82$).

3.4. Statistical Analysis

Data were analysed using standard statistical software. Preliminary analyses examined baseline equivalence across groups using one-way analyses of variance for continuous variables and chi-square tests for categorical variables. Primary analyses employed 3 (Group: gratitude, active control, waitlist) $\times$ 3 (Time: baseline, Week 3, Week 6) mixed-design analyses of variance for each outcome measure. Significant interactions were followed up with simple effects analyses and post-hoc pairwise comparisons using Bonferroni corrections. Pearson correlations examined relationships among change scores. Statistical significance was set at $\alpha = .05$ for all analyses.

IV. RESULTS

4.1. Preliminary Analyses

Baseline analyses revealed no significant differences between groups on demographic variables or outcome measures (all p values $> .10$), confirming successful randomization. Attrition was minimal, with 146 participants (97.3%) completing all assessments. Adherence to the writing tasks was high in both the gratitude and active control groups, with participants completing entries on the majority of days.

4.2. Primary Outcomes

Descriptive statistics for all outcome measures at each time point are presented in Table 1. Mixed-design analyses of variance revealed significant Group $\times$ Time interactions for life satisfaction, $F(4, 294) = 19.44$, $p < .001$, $\eta^2 = .21$; gratitude, $F(4, 294) = 16.10$, $p < .001$, $\eta^2 = .18$; and depressive symptoms, $F(4, 294) = 14.28$, $p < .001$, $\eta^2 = .16$.

Table 1. Descriptive Statistics for Outcome Measures Across Time Points and Groups

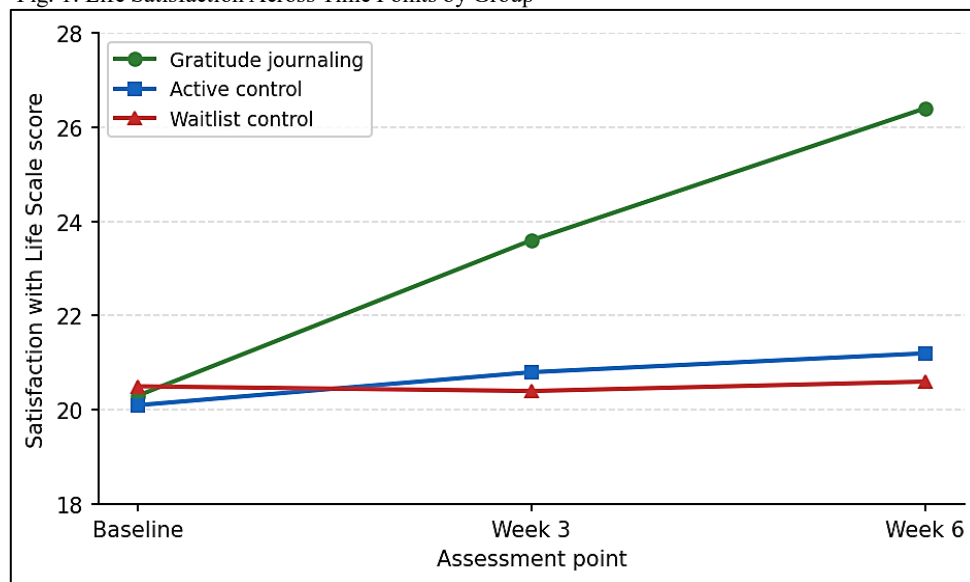
Measure	Group	Baseline	Week 3	Week 6
Depression (DASS-21)	Gratitude	14.2 (5.1)	10.6 (4.6)	7.9 (4.2)
	Active control	14.0 (5.3)	13.4 (5.0)	13.1 (4.8)
	Waitlist	14.4 (5.2)	14.1 (5.1)	13.9 (5.0)
Life satisfaction (SWLS)	Gratitude	20.3 (5.4)	23.6 (5.1)	26.4 (4.8)

	Active control	20.1 (5.6)	20.8 (5.3)	21.2 (5.2)
	Waitlist	20.5 (5.5)	20.4 (5.4)	20.6 (5.3)
Gratitude (GQ-6)	Gratitude	30.1 (5.8)	33.4 (5.4)	36.2 (5.0)
	Active control	29.8 (6.0)	30.3 (5.7)	30.6 (5.6)
	Waitlist	30.3 (5.9)	30.1 (5.8)	30.2 (5.7)

Note. Values represent M (SD). DASS-21 = Depression Anxiety Stress Scales; SWLS = Satisfaction With Life Scale; GQ-6 = Gratitude Questionnaire. Higher DASS-21 scores indicate greater symptoms; higher SWLS and GQ-6 scores indicate greater wellbeing and gratitude.

Simple effects analyses indicated that the gratitude journaling group showed significant improvements from baseline to Week 6 across all outcome measures (all p values $< .001$), whereas the active control and waitlist groups showed no significant changes (all p values $> .05$). Post-hoc comparisons revealed that at Week 6 the gratitude group scored significantly better than both control groups on life satisfaction, gratitude, and depressive symptoms (all p values $< .001$), while the two control groups did not differ significantly from one another. The trajectory of life satisfaction across the three assessment points is displayed in Fig 1.

Fig. 1: Life Satisfaction Across Time Points by Group



Note. Higher scores indicate greater life satisfaction. The gratitude journaling group showed steady gains across the intervention, whereas the control groups remained stable.

4.3. Correlational Analyses

Pearson correlation analyses examined relationships among change scores (Week 6 minus baseline). A strong positive correlation was found between change in gratitude and change in life satisfaction ($r = .62$, $p < .001$), indicating that larger increases in gratitude were associated with larger gains in life satisfaction. Change in gratitude was negatively correlated with change in depressive symptoms ($r = -.55$, $p < .001$), and change in life satisfaction was likewise negatively correlated with change in depressive symptoms ($r = -.58$, $p < .001$), such that greater increases in wellbeing were associated with greater reductions in symptoms. These patterns are consistent with the proposition that the cultivation of gratitude underlies the observed improvements in wellbeing and mood.

V. DISCUSSION

This randomized controlled trial provides evidence that a brief gratitude journaling intervention yields meaningful psychological benefits for university students. Relative to both an active control condition involving comparable writing and a waitlist control, the gratitude journaling group showed significant improvements in life satisfaction, dispositional gratitude, and depressive symptoms over a six-week period. Because the active control involved a similar writing task without a grateful focus, the findings suggest that the benefits are attributable to the cultivation of gratitude specifically rather than to expectancy or the act of writing alone, addressing a limitation of studies employing passive comparison conditions (Davis et al., 2016).

The results are consistent with, and extend, prior evidence that gratitude interventions enhance wellbeing and alleviate depressive symptoms (Emmons & McCullough, 2003), (Sin & Lyubomirsky, 2009), (Cregg & Cheavens, 2021). The correlational findings, in which increases in gratitude were associated with gains in life satisfaction and reductions in depressive symptoms, align with the broaden-and-build account, in which the cultivation of positive emotion builds durable psychological resources (Fredrickson, 2001), and with evidence that gratitude fosters wellbeing partly by strengthening social connection and countering rumination (Wood et al., 2008), (Nolen-Hoeksema et al., 2008). That a simple, self-administered practice produced these effects underscores the practical promise of gratitude journaling as an accessible means of supporting student mental health.

5.1. Limitations and Future Directions

Several limitations warrant consideration. First, the six-week intervention period, while sufficient to detect change, does not establish whether benefits persist after the practice ends; future research should incorporate follow-up assessments to evaluate maintenance. Second, the sample comprised university students from a single institution, limiting generalisability to other populations and settings. Third, the study relied on self-report measures, which are subject to response biases, and did not assess potential mediators such as social support or rumination directly. Future research could employ longer interventions with follow-up, more diverse samples, and mediational designs that test the mechanisms through which gratitude journaling operates, as well as examine moderators such as baseline wellbeing and the manner in which the practice is engaged (Lyubomirsky et al., 2005).

5.2. Implications for Practice

These findings carry practical implications for those concerned with student wellbeing. Because gratitude journaling is brief, low-cost, and self-administered, it may be readily incorporated into campus mental health and wellness initiatives as a preventive or adjunctive practice, particularly for students facing barriers to formal services. Counsellors and educators might introduce gratitude practices within workshops or curricula, and the finding that benefits emerged relative to an active control suggests that guidance emphasising genuine grateful reflection, rather than rote listing, is likely to be important (Bono et al., 2004). More broadly, the results add to the evidence base supporting the integration of positive psychology practices into efforts to promote wellbeing (Seligman et al., 2005).

VI. CONCLUSION

This study provides experimental evidence that a brief gratitude journaling intervention produces significant improvements in psychological wellbeing and reductions in depressive symptoms among university students, relative to both active and waitlist control conditions. The association between increases in gratitude and gains in wellbeing supports the interpretation that the cultivation of gratitude underlies these benefits. Given the accessibility and low cost of the practice, together with the meaningful improvements observed, gratitude journaling warrants consideration as a practical strategy for promoting wellbeing and supporting mental health among university students. As positive psychology interventions continue to develop, further research on their long-term effects, mechanisms, and reach will help to translate these findings into sustained benefit.

REFERENCES

- Bono, G., Emmons, R. A., & McCullough, M. E. (2004). Gratitude in practice and the practice of gratitude. In P. A. Linley & S. Joseph (Eds.), *Positive psychology in practice* (pp. 464–481). Wiley.
- Cregg, D. R., & Cheavens, J. S. (2021). Gratitude interventions: Effective self-help? A meta-analysis of the impact on symptoms of depression and anxiety. *Journal of Happiness Studies*, 22(1), 413–445.
- Davis, D. E., Choe, E., Meyers, J., Wade, N., Varjas, K., Gifford, A., Quinn, A., Hook, J. N., Van Tongeren, D. R., Griffin, B. J., & Worthington, E. L. (2016). Thankful for the little things: A meta-analysis of gratitude interventions. *Journal of Counseling Psychology*, 63(1), 20–31.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment*, 49(1), 71–75.
- Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology*, 84(2), 377–389.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56(3), 218–226.
- Kashdan, T. B., Uswatte, G., & Julian, T. (2006). Gratitude and hedonic and eudaimonic well-being in Vietnam war veterans. *Behaviour Research and Therapy*, 44(2), 177–199.
- Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, 33(3), 335–343.
- Lyubomirsky, S., Sheldon, K. M., & Schkade, D. (2005). Pursuing happiness: The architecture of sustainable change. *Review of General Psychology*, 9(2), 111–131.
- McCullough, M. E., Emmons, R. A., & Tsang, J. A. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology*, 82(1), 112–127.
- Nolen-Hoeksema, S., Wisco, B. E., & Lyubomirsky, S. (2008). Rethinking rumination. *Perspectives on Psychological Science*, 3(5), 400–424.
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52, 141–166.
- Seligman, M. E. P., Steen, T. A., Park, N., & Peterson, C. (2005). Positive psychology progress: Empirical validation of interventions. *American Psychologist*, 60(5), 410–421.
- Sin, N. L., & Lyubomirsky, S. (2009). Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: A practice-friendly meta-analysis. *Journal of Clinical Psychology*, 65(5), 467–487.
- Watkins, P. C., Woodward, K., Stone, T., & Kolts, R. L. (2003). Gratitude and happiness: Development of a measure of gratitude, and relationships with subjective well-being. *Social Behavior and Personality*, 31(5), 431–451.
- Wood, A. M., Froh, J. J., & Geraghty, A. W. A. (2010). Gratitude and well-being: A review and theoretical integration. *Clinical Psychology Review*, 30(7), 890–905.
- Wood, A. M., Maltby, J., Gillett, R., Linley, P. A., & Joseph, S. (2008). The role of gratitude in the development of social support, stress, and depression: Two longitudinal studies. *Journal of Research in Personality*, 42(4), 854–871.