SELARAS
Journal of Psychological Studies
Vol.2, No.1, Mei 2026

ONE DROP STARTS A RIPPLE: A QUASI-EXPERIMENTAL STUDY OF AN ACTS OF KINDNESS INTERVENTION ON FINAL-YEAR STUDENTS' WELL-BEING

Allegra Tayori[1], Febe Tefila Elyona Penaamadiong[2], Jocelyn Klementina[3], Putri Ardhiyyah Muammar Ilyas[4], Chrysan Gomargana[5]
Fakultas Psikologi, Universitas Pelita Harapan, Indonesia
Corresponding e-mail: chrysan.gomargana@uph.edu

Abstract
This study examines the impact of an "Acts of Kindness" intervention on the well-being of final-year students experiencing academic stress. A total of 39 participants were divided into an experimental group (19 participants) and a comparison group (20 participants). The experimental group engaged in daily acts of kindness for 14 days, while the comparison group completed daily coloring activities. Both groups were assessed for well-being before and after the intervention using the Mental Health Continuum – Short Form (MHC-SF). Within-group analysis showed a significant increase in well-being for the experimental group (t = -2.024, p = 0.029), while the between-group comparison did not reach statistical significance (t = 1.534, p = 0.134). Taken together, these findings suggest that acts of kindness may show preliminary potential as a strategy for enhancing well-being among final-year students, but the current study does not provide evidence that this approach is more effective than an alternative active activity such as coloring. Further research with larger samples and longer interventions is needed before any claim of effectiveness can be made.

Keywords: *acts of kindness; final-year students; intervention; prosocial behavior; well-being; quasi-experimental*

Abstrak — Penelitian ini menguji dampak intervensi "Acts of Kindness" terhadap kesejahteraan mahasiswa tingkat akhir yang mengalami stres akademik. Sebanyak 39 partisipan dibagi menjadi kelompok eksperimen (19 partisipan) dan kelompok pembanding (20 partisipan). Kelompok eksperimen melakukan tindakan kebaikan setiap hari selama 14 hari, sementara kelompok pembanding melakukan kegiatan mewarnai setiap hari. Kesejahteraan diukur sebelum dan sesudah intervensi menggunakan Mental Health Continuum – Short Form (MHC-SF). Hasil analisis intra-kelompok menunjukkan peningkatan signifikan pada kesejahteraan kelompok eksperimen (t = -2.024, p = 0.029), sedangkan perbandingan antar kelompok tidak menunjukkan perbedaan signifikan (t = 1.534, p = 0.134). Secara keseluruhan, temuan ini menunjukkan bahwa tindakan kebaikan berpotensi sebagai strategi awal untuk meningkatkan kesejahteraan mahasiswa tingkat akhir, namun penelitian ini belum membuktikan bahwa intervensi ini lebih efektif dibandingkan kegiatan aktif lainnya

seperti mewarnai. Penelitian lanjutan dengan ukuran sampel lebih besar dan durasi intervensi lebih panjang diperlukan sebelum klaim efektivitas dapat ditegakkan.
Kata Kunci: intervensi; kesejahteraan; mahasiswa tingkat akhir; perilaku prososial; tindakan kebaikan; kuasi-eksperimen

INTRODUCTION

Final-year university students, typically engaged in undergraduate thesis writing as a requirement for graduation, often face significant academic challenges. These students, who typically spend three to four years in university, encounter various stressors during the thesis process, such as repeated revisions, difficulties in sourcing appropriate references, delayed feedback from academic advisors, limited research time, and the difficulty of accessing supervisors (Cahyani & Akmal, 2017; Wuthrich et al., 2020; Lavoie-Tremblay et al., 2021). In Indonesia, these pressures are compounded by additional factors such as the highly competitive academic environment, familial expectations, and societal pressure to graduate on time, all of which exacerbate stress levels (Ningsih et al., 2025; Sarfika et al., 2025). As a result, many students experience mental health challenges such as anxiety, burnout, and depression. According to research, approximately 45.3% of final-year students in Indonesia experience stress and anxiety during the thesis process (Krisdianto & Mulyati, 2015; Abdullah et al., 2017; Bodys-Cupak et al., 2020).

Increased stress often leads students to procrastinate, avoiding the academic workload and engaging in activities that provide temporary relief, including avoiding their supervisors altogether (Gamayanti et al., 2018). Research by Clemente et al. (2016) found a significant negative relationship between stress and psychological well-being, suggesting that higher well-being is linked to lower levels of stress. This is particularly relevant for Indonesian students, where high academic pressures and the challenges of completing a thesis can contribute to diminishing well-being. Well-being, as defined in positive psychology, encompasses psychological, social, and emotional aspects of an individual's life (Seligman, 2012). According to Seligman (2012), well-being includes five key dimensions: positive emotions, engagement, positive relationships, meaning, and achievement. These elements not only define happiness but also contribute to a deeper sense of fulfillment and life satisfaction (Seligman, 2015; Goodman et al., 2018). In Indonesia, where social connections and community bonds play a central role in an individual's well-being, fostering positive relationships and social engagement are crucial aspects of this model (Ilham et al., 2025; Pohan et al., 2025).

From a theoretical perspective, the link between acts of kindness and well-being can be understood through Fredrickson's (2001) Broaden-and-Build Theory of positive emotions, which serves as the grand theoretical framework of the present study. According to this theory, positive

emotions, such as joy, gratitude, and feelings of connection that arise from helping others, broaden an individual's momentary thought–action repertoire and, over time, build enduring personal resources, including psychological resilience, social bonds, and adaptive coping skills. When applied to acts of kindness, the theory predicts that performing kind acts generates positive affect, which in turn broadens cognitive and behavioral options for managing stress and accumulates lasting psychological, social, and emotional resources. These accumulated resources map directly onto the three dimensions of well-being captured by the Mental Health Continuum-Short Form (Keyes, 2002; Putra, 2023); emotional, social, and psychological well-being and complement Seligman's (2012) PERMA model by specifying the proximate mechanism through which prosocial behavior contributes to flourishing. Broaden-and-Build Theory therefore provides a parsimonious account of how a relatively brief and simple intervention, such as a 14-day acts-of-kindness program, may produce measurable improvements in self-reported well-being.

Acts of kindness, which are prosocial behaviors performed with genuine intent to assist others without expecting personal gain, are deeply embedded in Indonesian culture. From everyday acts of courtesy to communal activities, kindness is a cornerstone of Indonesian social norms. Yet, despite its cultural significance, the true power of kindness is often overlooked, particularly when faced with the mounting pressures of academic life. According to Youngs et al. (2021), acts of kindness can be expressed in two forms: proactivity and social prescriptions. Proactive individuals actively seek opportunities to help others, even when no explicit need is present. Social prescriptions, on the other hand, refer to actions that are guided by societal norms, such as offering a seat to the elderly or holding the door open for others, practices common in Indonesian society.

Aknin et al. (2013) argue that those who regularly engage in acts of kindness tend to experience improved mental and emotional health due to the positive emotions generated by helping others and the enhanced sense of community. Given the cultural emphasis on community in Indonesia, acts of kindness are seen as a means of strengthening social bonds and enhancing collective well-being (Otake et al., 2006; Curry et al., 2018). Despite this, the potential of kindness to alleviate stress and improve mental health is often underestimated. Research by Lyubomirsky et al. (2005) demonstrated that performing five acts of kindness per week over six weeks led to significant improvements in happiness levels. Similarly, Aknin et al. (2013) and Curry et al. (2018) found that providing social support through acts of kindness was linked to enhanced emotional well-being, while Otake et al. (2006) showed that such acts could reduce stress and increase happiness. These findings highlight the transformative role acts of kindness can play in enhancing well-being.

Other interventions aimed at enhancing well-being have also been studied. One such intervention, explored by Palmer-Cooper et al. (2024), tested the effects of a self-guided coloring activity

over two weeks on well-being, mental health, and mindfulness in university students. The results showed significant improvements in these aspects. However, the researchers emphasized that coloring may not be a universal solution for enhancing well-being, as not all participants were equally engaged. This suggests that maintaining well-being practices requires personal commitment, social support, and a conducive environment. For long-lasting benefits, individuals need sufficient resources and opportunities to continue engaging in these practices.

Despite a growing body of work on acts of kindness and well-being, several research gaps remain. First, most experimental studies of kindness-based interventions have been conducted in Western contexts, and relatively little evidence is available from Southeast Asian, and particularly Indonesian, samples a setting in which prosocial behavior is embedded in everyday social norms and may interact with cultural expectations in distinctive ways. Second, although academic stress in final-year students has been extensively documented, there is limited experimental research that directly tests well-being interventions in this specific population during the thesis-writing period. Third, prior studies have rarely compared kindness-based interventions to other active well-being activities that share surface features (e.g., daily routine, low effort, short duration); without such a comparison, it is difficult to determine whether observed improvements are specific to acts of kindness or reflect more general effects of structured daily activity. The present study addresses these gaps by testing an acts-of-kindness intervention against an comparison activity (coloring) in a sample of Indonesian final-year students.

The high stress levels among Indonesian final-year students, particularly during thesis writing, highlight the need for effective interventions to enhance their well-being. Academic stress not only hinders timely thesis completion but also significantly affects psychological well-being. Previous studies, such as those by Clemente et al. (2016), show a negative correlation between stress and well-being, indicating that as stress levels increase, well-being decreases. Observations in Indonesian universities show that many final-year students avoid their thesis work and advisors as a coping strategy, which could exacerbate their mental health challenges (Gamayanti et al., 2018). If left unaddressed, these issues could escalate into more serious conditions, such as depression. Therefore, experimental research is needed to evaluate the effectiveness of various coping strategies that reduce stress and improve the well-being of final-year students.

The hypothesis of this study is that an "Acts of Kindness" intervention can improve the well-being of final-year students and may yield greater improvements than an comparison activity (coloring). This research aims to assess the preliminary effectiveness of the "Acts of Kindness" intervention in enhancing well-being among students working on their undergraduate thesis. The primary focus is to determine whether this intervention helps students manage stress in a more adaptive manner,

ultimately contributing to an improvement in their overall well-being. The findings are expected to provide practical recommendations for final-year students, particularly in Indonesian universities, to adopt adaptive coping strategies. Furthermore, this study will contribute to a deeper understanding of how acts of kindness can influence individual well-being, offering valuable insights for developing psychological intervention programs aimed at improving societal well-being. This research also seeks to enrich positive psychology theory by integrating Broaden-and-Build Theory and the PERMA model with empirical evidence from an Indonesian sample and expanding our understanding of the factors contributing to individual well-being and providing empirical evidence for future research in this field.

METHOD

Participants

The study involved 39 final-year students from University A, divided into two groups: 19 students in the experimental group and 20 students in the comparison group. Participants were selected using convenience sampling, a method that involves choosing participants who are easily accessible and willing to participate in the study. As noted by Golzar et al. (2022), convenience sampling involves gathering data from a group of individuals that can be reached with minimal effort.

A priori power analysis was not feasible prior to data collection due to the practical constraints of recruiting final-year students during the thesis-writing period; participation depended on students' availability and willingness during a high-stress academic window. To assess the adequacy of the sample achieved, a post-hoc sensitivity analysis was conducted using G*Power (Faul et al., 2007). With the final sample size of N = 39, alpha = .05, and power = .80, the minimum detectable effect size for an independent-samples t-test is approximately Cohen's d = 0.92, indicating that the study was adequately powered to detect large between-group effects but underpowered to detect small-to-moderate effects (Brysbaert, 2019). This limitation is revisited in the Limitations section.

Design

This research utilized a quasi-experimental design with a non-randomized pretest-posttest control-group format with a comparison condition, involving two groups. In this design, no randomization was performed for the experimental and comparison groups. Both groups were given a pretest before the intervention and a post test following the treatment (Seniati et al., 2009).

Group assignments were determined by participant availability and class schedules rather than by random allocation. Specifically, students who indicated interest in participating were assigned to the experimental or comparison condition based on the time slots in which they were available to attend briefing and follow-up sessions; researchers were blind to participant pretest scores at the time of

assignment. Because allocation was not random, the possibility of selection bias cannot be ruled out. To partially address this, a baseline equivalence check (independent-samples comparison of demographic variables and pretest well-being scores) was conducted prior to the primary analyses (see Results). The implications of this design choice are discussed in the Limitations section.

Procedure

Participants were divided into two groups: the experimental group and the comparison group. Both groups were briefed on their tasks and completed a pretest measuring their well-being at different locations but at the same time. The comparison group, consisting of 20 participants, engaged in a 14-day coloring activity, was selected as a comparison condition because it is a low-effort, time-matched activity that has demonstrated positive effects on mental health and mindfulness in university students (Palmer-Cooper et al., 2024). Coloring therefore controls the effects of engaging in any structured daily activity, allowing a more conservative test of whether acts of kindness offer specific benefits beyond a general engagement effect.

Meanwhile, the experimental group was instructed to perform daily acts of kindness for 14 days. Each participant in the experimental group was required to carry out at least one act of kindness daily, with a minimum of two acts per day: one proactive and one following social prescription. No maximum limit for acts of kindness was set. Participants were encouraged to balance proactive and social prescription behaviors. They recorded their actions and reflections in an observation sheet provided by the researchers. At the end of the intervention, both groups completed a posttest to measure their well-being again.

To monitor adherence and improve the accuracy of self-report, several procedural safeguards were used. First, participants in both groups submitted a photograph or scan of their completed daily observation/coloring sheet at the end of each day via a dedicated secure messaging channel. Second, the research team reviewed all submitted entries weekly. When entries in the experimental group described behaviors that did not clearly meet the predefined criteria for an act of kindness (e.g., the act was undertaken with an expectation of reciprocation), the participant was contacted privately for clarification, and the entry was recorded or excluded accordingly. Across the 14-day intervention, 30 entries were excluded on this basis (see Results). Third, participants were reminded at the briefing session that honest reporting, including reporting days on which no acts had been performed, was more important than producing complete logs. Despite these safeguards, the procedure remains self-report based, and the residual potential for over- or under-reporting is acknowledged in the Limitations.

Instruments

SELARAS
Journal of Psychological Studies
Vol.2, No.1, Mei 2026

As part of the non-randomized pretest-posttest control-group design, the study employed the Mental Health Continuum-Short Form (MHC-SF) to measure well-being. This 14-item questionnaire was used for both the experimental and comparison groups. The MHC-SF was initially developed by Keyes et al. (2008) and later adapted into Indonesian by Putra (2023). The Indonesian version of the MHC-SF has a Content Validity Index (CVI) above 0.78, an S-CVI/UA above 0.90, and a Cronbach's alpha above 0.70, indicating that the instrument is both valid and reliable. In the present sample, the MHC-SF showed acceptable internal consistency, with Cronbach's alpha of 0.78 at pretest and 0.76 at posttest.

Additionally, the researchers used an Acts of Kindness observation sheet to measure the number of kind acts performed by participants each day. This sheet was designed as a self-report tool, with each participant recording their acts of kindness for 14 consecutive days. To maintain internal validity, the researchers provided the comparison group with a comparison task, requiring them to complete a daily coloring activity.

Analysis Techniques

Statistical analysis was conducted in two stages. First, baseline equivalence between the two groups was assessed using independent-samples t-tests on age and pretest well-being scores, and a chi-square test on gender. Second, the primary analyses comprised a 2 (Group: experimental, comparison) × 2 (Time: pretest, posttest) mixed-design ANOVA on well-being scores. The Group × Time interaction served as the primary test of differential change. As a robustness check, an ANCOVA was conducted on posttest scores with pretest scores entered as a covariate. For transparency and to facilitate comparison with prior literature, the original within-group paired t-tests and the independent-samples t-test on posttest scores are also reported. All statistical analyses were carried out using the JASP program. The Shapiro-Wilk test was used to assess data normality, and Levene's test was conducted to assess homogeneity of variance.

RESULTS

Demographic Data

The 39 participants were distributed across the two groups as shown in Table 1. The combined table presents demographic characteristics for both groups side by side to facilitate baseline comparison.

Table 1. ***Demographic data of the experimental and comparison group***

UPH FAKULTAS PSIKOLOGI
selaras.jurnalpsi@gmail.com
https://ojs.uph.edu/index.php/selaras

Demographic data of the experimental group **(N = 19)**		
Demographic Factors	M (SD)	Range
Age	20.52 (0.61)	20-22
	N	%
Gender		
Male	5	26.3%
Female	14	73.7%

N = 20		
Demographic data of the comparison group **(N = 20)**		
Demographic Factors	M (SD)	Range
Age	21.1 (1.65)	19-25
	N	%
Gender		
Male	6	30%
Female	14	70%

Baseline Equivalence

Before testing the primary hypothesis, the two groups were compared on baseline characteristics to assess equivalence. An independent samples test revealed no significant difference in age between the experimental (M = 20.52, SD = 0.61) and comparison group (M = 21.10, SD = 1.65), $t(37) = 1.44$, $p = .158$. A chi-square test showed no significant association between group and gender, $\chi^2(1) = 0.07$, $p = .795$. Most importantly, the two groups did not differ significantly on pretest well-being scores (experimental: $M = 41.84$, $SD = 8.92$; comparison: $M = 40.65$, $SD = 9.43$), $t(37) = 0.41$, $p = .686$. Together, these results suggest that the two groups were comparable at baseline on demographic characteristics and on the primary outcome variable, supporting the validity of subsequent group comparisons.

Acts of Kindness Behavior

During the 14-day intervention, participants in the experimental group completed a total of 617 acts of kindness, with 30 behaviors not meeting the predefined criteria for acts of kindness. Of the total, 339 acts were proactive, with the most frequent behavior being "Encouraging friends" (N = 77). The remaining 279 acts were classified as social prescriptions, with "Holding the door/lift for others" being the most common behavior (N = 115). These results indicate that proactive acts of kindness were more commonly performed, with a wide variety of behaviors involved.

Table 2. ***Descriptive Data of Acts of Kindness Behavior over 2 Weeks***

SELARAS
Journal of Psychological Studies
Vol.2, No.1, Mei 2026

Proactivity	Frequency	Social Prescription	Frequency
Encouraging friends	77	Holding the door/elevator for friends/people around to pass	115
Doing tasks/responsibilities for friends/people around	59	Helping parents with housework	45
Giving gifts	46	Greeting friends/people around	30
Taking and bringing items for friends/family/people around	29	Giving way to parents/pregnant women/children/people around	28
Complimenting friends/family/people around	23	Listening to friends/parents/people around's stories	26
Tidying up belongings of friends/people around	16	Saying thank you to friends/family/people around	16
Greeting/asking how friends are	13	Doing religious service job description*	10
Teaching friends/parents	12	Giving directions	7
Giving charity	12	Accompanying parents/spouse	6
Giving food to stray cats	6	Saying excuse me to people around*	4
Saying happy birthday	6	Following directions from parents/people around*	4
Praying for friends	6	Saying goodbye to parents/people around*	3
Cooking for friends/family	4	Helping parents to carry items	2
Inviting friends to join positive activities	4	Queueing*	2
Helping others to shelter from the rain	3	Sharing educational information	2
Reminding friends to do tasks/class schedule	2	Respecting those who are fasting*	1
Lending items to others	2	Helping others to cross the road	1
Finishing friends/family's food	2	Opening car doors for others	1
Accompanying friends	2		
Offering food to others	2		
Distributing news on local disaster	2		
Taking friends home	2		
Asking friends to meet up	2		
Keeping an eye on others' belongings	1		
Helping others to get a job	1		
Offering suggestions to friends	1		
Offering seats to people around	1		
Wishing others well	1		
Praying for others' safety	1		
Letting others know their mistakes	1		
Total Behaviors	339		309
		647	
Total *Acts of Kindness*	339		279
		617	

Total acts of kindness: 617 (proactive: 339; social prescription: 279); plus 30 entries not meeting the predefined criteria, which were excluded after researcher review.

Within-Group Analyses

Normality of pre–post differences was assessed with the Shapiro-Wilk test. For the experimental group, the pre–post difference scores were normally distributed (p = 0.838). A dependent sample t-test revealed a significant improvement in well-being scores from pretest to posttest, t = -2.024, p = 0.029, Cohen's d = -0.464 (SE = 0.150), indicating a moderate-sized within-group increase. For the comparison group, pre–post difference scores were also normally distributed (p = 0.592). The dependent samples t-test revealed no significant change in well-being from pretest to posttest, t = -1.255, p = 0.112, Cohen's d = -0.281 (SE = 0.217), reflecting a small, non-significant within-group change.

Between-Group Comparison

Assumption checks for the posttest between-group analysis indicated that posttest scores were normally distributed for both the experimental group (p = 0.070) and the comparison group (p = 0.883), and that variances were homogeneous (Levene's p = 0.430). An independent-samples t-test on posttest well-being scores showed no significant difference between groups, t(37) = 1.534, p = 0.134, Cohen's d = 0.491 (SE = 0.330), reflecting a moderate but non-significant effect.

Mixed ANOVA and ANCOVA (Primary Analyses)

A 2 (Group: experimental, active comparison) × 2 (Time: pretest, posttest) mixed-design ANOVA was conducted on well-being scores to provide a more comprehensive test of differential change across the intervention period. The main effect of Time was significant, $F(1, 37) = 5.46$, $p = .025$, $\eta^2p = .128$, indicating an overall change in well-being from pretest to posttest. The main effect of Group was not significant, $F(1, 37) = 1.06$, $p = .310$, $\eta^2p = .028$. The Group × Time interaction, which constitutes the primary test of differential intervention effects, was not significant, $F(1, 37) = 0.33$, $p = .569$, $\eta^2p = .009$. As a robustness check, an ANCOVA was performed on posttest scores with pretest scores entered as a covariate; this analysis did not support a significant between-group difference, $F(1, 36) = 2.18$, $p = .148$, $\eta^2p = .057$. Together, these results indicate that both groups showed measurable change in well-being across the intervention period, but the change did not differ significantly between the two groups. This pattern aligns with the non-significant between-group posttest comparison and supports a cautious, preliminary interpretation of the intervention's effects.

DISCUSSION

Acts of Kindness as a Pathway to Enhanced Well-being

The findings of this study indicate that acts of kindness were associated with an improvement in the well-being of final-year students within the experimental group, although the between-group comparison did not reach statistical significance. The significant result obtained from the dependent-samples t-test between the pretest and posttest scores of the experimental group demonstrates that

acts of kindness had a positive within-group effect on participants' well-being. Because the between-group comparison was non-significant, however, this improvement should not be interpreted as evidence that acts of kindness are more effective than the comparison activity; rather, it indicates that participants who engaged in kindness intervention showed measurable gains over the 14-day period. This improvement may be attributed to the positive emotional experiences generated through performing kind acts, which in turn contribute to enhanced psychological well-being.

This pattern is consistent with Fredrickson's (2001) Broaden-and-Build Theory, which provides a parsimonious mechanism for the observed within-group improvement. Performing daily acts of kindness is likely to elicit positive emotions (e.g., joy, gratitude, social connection), which in turn broaden participants' thought–action repertoires and, over time, build durable psychological, social, and emotional resources. Within the context of the MHC-SF, these three resource domains map directly onto the instrument's three subscales, offering a coherent theoretical explanation for why a brief, low-intensity intervention can produce measurable changes on this outcome measure. The framework also helps explain why the same instrument is sensitive to a coloring activity which may evoke its own positive emotional states through aesthetic engagement and mindful focus (Palmer-Cooper et al., 2024) and therefore why the two interventions may yield comparable benefits even if their proximal mechanisms differ.

Ko et al. (2019) found that acts of kindness can increase positive affect, reduce negative affect, and enhance life satisfaction. Similarly, Nelson et al. (2016) and Curry et al. (2018) explained that engaging in kind behavior toward others can evoke feelings of happiness, satisfaction, and love, all of which may strengthen overall well-being and improve social relationships.

The present finding is also consistent with previous studies examining the association between acts of kindness and well-being. Lyubomirsky et al. (2005), for example, reported that individuals who performed five acts of kindness per week for six weeks experienced significant improvements in emotional well-being. Such acts may take many forms, including offering social support to others (Aknin et al., 2013). Therefore, the present study extends existing evidence by showing that the within-group benefits of acts of kindness can also be observed among final-year students who are coping with academic demands.

Within the context of final-year students, the positive experiences gained from helping others may function as an adaptive coping strategy amid academic stress. Cash et al. (2024) argued that small, routine prosocial actions can improve well-being even during difficult life periods. By engaging in kind acts, individuals may experience positive emotions that help them respond to stress in a more constructive and adaptive manner. This is especially relevant for final-year students, who often encounter substantial academic pressure during the thesis-writing process.

Effect Size and Its Practical Implications

The within-group effect size observed in this study was moderate (Cohen's d = -0.464), indicating that the intervention had a meaningful, although not large, impact on well-being within the experimental group. According to Cohen's (1962) guidelines, an effect size of 0.2 is considered small, 0.5 medium, and 0.8 large. Thus, the present effect size suggests practical relevance, meaning that the intervention produced beneficial changes in well-being even if the magnitude of change was not particularly strong. Given the absence of a significant between-group difference, however, this practical relevance should be interpreted cautiously and not as evidence that acts of kindness outperform other active well-being activities.

One possible explanation for this moderate effect size lies in the duration of the intervention. Lally et al. (2010) reported that the time required for individuals to develop automaticity in a behavior may range from 18 to 254 days. Automaticity refers to the capacity to perform a behavior with minimal conscious effort. Given that the present intervention lasted only 14 days, it is possible that participants had not yet engaged in acts of kindness long enough for the behavior to become habitual. As a result, the relatively short intervention period may have limited the strength of its impact. Future studies should therefore consider extending the duration of the intervention to determine whether longer engagement in acts of kindness leads to greater improvements in well-being.

Simplicity and the Often-Overlooked Impact of Acts of Kindness

Acts of kindness are often manifested in the simplest forms of everyday life, such as expressing gratitude, offering praise, or holding lifts and doors for strangers. Prior research by Kumar and Epley (2023) showed that even simple acts of kindness generate greater positive effects for recipients than givers typically expect. Their study further found that individuals who perform kind acts tend to underestimate the significance of their behavior, often perceiving their actions as less meaningful than recipients actually experience them. These findings suggest that the impact of everyday kindness is frequently overlooked, despite its potential psychological value.

Consistent with these findings, the present study showed that acts of kindness were associated with within-group improvements in well-being among final-year students, with a medium effect size (t = -2.024, p = 0.029, d = -0.464). This result reinforces the view that kindness is a meaningful yet often neglected variable in psychological research. In principle, most individuals have the capacity to engage in kind behavior; however, because such actions are simple and ordinary, their importance is often underestimated in both practice and scholarship (Lomas & VanderWeele, 2026). Accordingly, this study contributes to the early evidence base by suggesting that even small acts of kindness may hold meaningful value in improving psychological well-being, not only for individuals but also for the wider community.

Why Was There No Significant Difference Between Acts of Kindness and Coloring?

This study partially replicated previous findings showing that acts of kindness are associated with improvements in well-being (Lyubomirsky et al., 2005; Otake et al., 2006; Aknin et al., 2013; Curry et al., 2018). At the same time, the study introduced an comparison condition in which participants engaged in a daily coloring activity for 14 days. However, the between-group comparison revealed no significant difference in posttest well-being scores between the experimental and comparison groups ($p = 0.134$). Several explanations may account for this result.

First, the relatively short duration of the intervention may have contributed to the absence of a significant between-group difference. Binfet and Whitehead (2019) suggested that kindness-based interventions may produce stronger effects when implemented over a longer period. Similarly, Palmer-Cooper et al. (2024) found that coloring may contribute to improved mental health when practiced consistently over at least two weeks. Therefore, although acts of kindness were associated with within-group improvements, the short intervention duration may not have been sufficient to produce a clear advantage over the comparison conditions.

Second, both interventions may have provided comparable psychological benefits, albeit through different mechanisms. Acts of kindness may enhance well-being by fostering prosocial engagement, strengthening social connection, and eliciting positive emotions (Lyubomirsky et al., 2005; Aknin et al., 2013; Otake et al., 2006). In contrast, coloring may promote relaxation, reduce stress, and facilitate mindfulness (Palmer-Cooper et al., 2024). From a Broaden-and-Build perspective, both activities can generate positive emotions that broaden cognitive–behavioral repertoires and build psychological resources, even though the proximate trigger differs (social/prosocial engagement vs. aesthetic/mindful engagement).

Although these two interventions differ in nature, both may have supported mental health in meaningful ways. This overlap in benefits may partly explain why no statistically significant difference was found between the two groups at posttest. This pattern also has practical implications: rather than viewing acts of kindness and coloring as competing interventions, both may be viable, low-cost activities that students can incorporate into their daily routines during periods of academic stress.

Limitations and Future Directions

Several limitations of this study should be acknowledged. First, the use of convenience sampling limits the generalizability of the findings. Because participants were recruited based on accessibility and willingness to participate, the results may not fully represent the broader population of final-year students. Future research should involve more diverse samples drawn from different academic disciplines and institutions in order to improve external validity.

Second, the modest sample size (N = 39) limited statistical power. As indicated by the post-hoc sensitivity analysis, the study was adequately powered to detect only large between-group effects (d ≥ 0.92), which may partially explain the non-significant between-group result. Future research should incorporate priori power analysis and recruit larger samples to enable detection of small-to-moderate effects.

Third, the non-randomized assignment of participants to conditions raises the possibility of selection bias. Although the baseline equivalence check did not reveal significant pre-existing differences between groups, unmeasured confounds cannot be ruled out. Future studies should employ randomized allocation where feasible, or stratified matching when randomization is not possible.

Fourth, the duration of the intervention was relatively short. As noted earlier, a 14-day period may not have been sufficient for participants to fully internalize acts of kindness as habitual behavior or to experience stronger long-term psychological benefits. Future studies should therefore test longer intervention periods to examine whether the effects become more pronounced over time.

Fifth, the use of self-report observation sheets may have introduced bias. Participants may have overreported their kind acts, misunderstood some behavioral categories, or varied in how consistently they completed the observations and reflections. Although the present study employed daily submission and weekly review of entries to monitor compliance, residual reporting bias cannot be ruled out. Future research may benefit from including additional measures, such as behavioral verification, observer ratings, or qualitative interviews, to provide a more comprehensive understanding of participants' experiences.

Finally, future studies may explore the psychological mechanisms underlying the relationship between acts of kindness and well-being. Variables such as positive affect, social connectedness, meaning in life, and adaptive coping may help explain how and why kindness-based interventions produce beneficial outcomes. A mixed-methods design may also be useful in capturing the subjective experience of participants and providing richer insight into the process of psychological change during the intervention.

CONCLUSION

In conclusion, this study provides preliminary evidence that an acts-of-kindness intervention may be associated with improvements in the well-being of final-year students, as indicated by a significant within-group increase in MHC-SF scores. However, because the between-group comparison did not reach statistical significance, the present findings do not support the stronger claim that acts of kindness are more effective than an alternative active well-being activity such as coloring. The results should therefore be interpreted as indicating potential, rather than confirmed, benefits.

The findings nonetheless suggest that simple, everyday acts of kindness may serve as one promising coping strategy among several that students can draw on while managing academic stress, particularly during the thesis-writing period. Although the within-group effect size was moderate, the absence of a significant between-group difference indicates that further research is needed before any firm claim of effectiveness can be made. Future studies with larger samples, randomized allocation, and longer intervention periods are recommended to test more rigorously whether acts of kindness offer benefits beyond those of other structured daily activities, and to clarify the conditions under which kindness-based interventions may be most effective.

REFERENCES

Aknin, L. B., Hamlin, J. K., & Dunn, E. W. (2013). Giving leads to happiness in young children. PLOS ONE, 8(5), e55776. https://doi.org/10.1371/journal.pone.0039211

Abdullah, S. A., Sarirah, T., & Lestari, S. (2017). Peran Perfeksionisme terhadap Strategi Coping pada Mahasiswa Tingkat Akhir. MEDIAPSI, 3(1), 9–16. https://doi.org/10.21776/ub.mps.2017.003.01.2

Binfet, J.-T., & Whitehead, J. (2019). The Effect of Engagement in a Kindness Intervention on Adolescents' Well-Being: A Randomized Controlled Trial. International Journal of Emotional Education, 11(2), 33–49.

Bodys-Cupak, I., Ściło, L., & Kózka, M. (2022). Psychosocial determinants of stress perceived among Polish nursing students. International Journal of Environmental Research and Public Health, 19(6), 3410. https://doi.org/10.3390/ijerph19063410

Brysbaert, M. (2019). How Many Participants Do We Have to Include in Properly Powered Experiments? Journal of Cognition, 2(1), 16. https://doi.org/10.5334/joc.72

Cahyani, Y. E., & Akmal, S. Z. (2017). Peranan spiritualitas terhadap resiliensi pada mahasiswa yang sedang mengerjakan skripsi. Psikoislamedia, 2(1), 32–41.

Cash, T. A., Aknin, L. B., & Girme, Y. U. (2024). Everyday acts of kindness predict greater well-being during the transition to university. Social and Personal Psychology Compass, 18(6). https://doi.org/10.1111/spc3.12972

Clemente, M., & Hezomi, H. (2016). Stress and Psychological Well-being. Journal of Child and Adolescent Behaviour, 4(1), 1–5.

Cohen, J. (1962). The statistical power of abnormal-social psychological research. The Journal of Abnormal and Social Psychology, 65(3), 145–153.

Curry, O. S., Rowland, L. A., Van Lissa, C. J., Zlotowitz, S., McAlaney, J., & Whitehouse, H. (2018). Happy to help? A systematic review and meta-analysis. Journal of Experimental Social Psychology, 76, 320–329. https://doi.org/10.1016/j.jesp.2018.02.014

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program. Behavior Research Methods, 39, 175–191. https://doi.org/10.3758/BF03193146

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. https://doi.org/10.1037/0003-066X.56.3.218

Gamayanti, W., Mahardianisa, M., & Syafei, I. (2018). Self Disclosure dan Tingkat Stres pada Mahasiswa yang sedang Mengerjakan Skripsi. Psympathic, 5(1), 115–130.

Golzar, J., Noor, S., & Tajik, O. (2022). Convenience sampling. International Journal of Education & Language Studies, 1(2).
Goodman, F. R., Doorley, J. D., & Kashdan, T. B. (2018). Well-being and psychopathology. Handbook of well-being, 1–25.
Ilham, M., Abdillah, R., & Ariyadi, A. (2025). Social Interaction as a Determinant of Social Psychological Well-Being. Journal Social Humanity Perspective, 3(1), 16–27.
Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. Journal of Health and Social Behavior, 43(2), 207–222.
Ko, K., Margolis, S., Revord, J., & Lyubomirsky, S. (2019). Comparing the Effects of Performing and Recalling Acts of Kindness. Journal of Positive Psychology, 16(1), 73–81.
Krisdianto, M. A., & Mulyanti, M. (2016). Mekanisme Koping dengan Tingkat Depresi pada Mahasiswa Tingkat Akhir. Jurnal Ners dan Kebidanan Indonesia, 3(2), 71–76.
Kumar, A., & Epley, N. (2023). A little good goes an unexpectedly long way. Journal of Experimental Psychology: General, 152(1), 236–252.
Lally, P., van Jaarsveld, C. H. M., Potts, H. W. W., & Wardle, J. (2010). How are habits formed: Modelling habit formation in the real world. European Journal of Social Psychology, 40(6), 998–1009.
Lavoie-Tremblay, M., Sanzone, L., Aubé, T., & Paquet, M. (2022). Sources of stress and coping strategies among undergraduate nursing students. Canadian Journal of Nursing Research, 54(3), 261–271.
Lomas, T., & VanderWeele, T. J. (2026). Contributions towards a positive epidemiology of compassion. International Journal of Wellbeing, 16(2).
Lyubomirsky, S., Sheldon, K. M., & Schkade, D. (2005). Pursuing happiness: The architecture of sustainable change. Review of General Psychology, 9(2), 111–131.
Nelson, S. K., Layous, K., Cole, S. W., & Lyubomirsky, S. (2016). Do unto others or treat yourself? Emotion, 16(6), 850–861.
Ningsih, E., Marwa, M., & Marissa, D. N. (2025). Academic achievement students' experience in facing social pressure. ICEI, 2(1), 119–123.
Otake, K., Shimai, S., Tanaka-Matsumi, J., Otsui, K., & Fredrickson, B. L. (2006). Happy people become happier by being kinder. Journal of Happiness Studies, 7(3), 271–292.
Palmer-Cooper, E. C., Seneviratne, R., & Woodford, E. (2024). Can self-guided colouring improve university student wellbeing, mental health, and mindfulness? Arts & Health, 1–14.
Putra, R. F. N. P. (2023). Adaptasi Mental Health Continuum – Short Form Bahasa Indonesia. Psychocentrum Review, 5(2), 86–96.
Sarfika, R., Azzahra, W., Ananda, Y., Saifudin, I. M. M. Y., & Abdullah, K. L. (2025). Academic burnout among nursing students. Teaching and Learning in Nursing, 20(3), 253–260.
Seligman, M. (2012). Flourish: A visionary new understanding of happiness and well-being. Free Press.
Seligman, M. (2015). Evidence-based approaches in positive education. Springer.
Seniati, L., Yulianto, A., & Setiadi, B. N. (2009). Psikologi eksperimen. Indeks.
Wuthrich, V. M., Jagiello, T., & Azzi, V. (2020). Academic stress in the final years of school. Child Psychiatry & Human Development, 51(6), 986–1015.
Youngs, D. E., Yaneva, M. A., & Canter, D. V. (2021). Development of a measure of kindness. Current Psychology, 42, 5428–5440.