

Positive Psychology-Based Psychoeducation to Improve Generation Z Self-Esteem

Alda Syafira, Djudiyah

Master of Psychological Science Program, Directorate of Postgraduate Studies, Universitas Muhammadiyah
Malang, Indonesia

ABSTRACT

This study aimed to examine the effectiveness of a positive psychology-based digital psychoeducation intervention in improving self-esteem among Generation Z individuals who experience upward social comparison on social media. A quasi-experimental one-group pretest-posttest design was employed, involving 13 participants selected through purposive sampling. The intervention was delivered digitally over four days and included gratitude journaling and character strengths components. Self-esteem was measured using the Rosenberg Self-Esteem Scale before and after the intervention. Results showed that the mean self-esteem score increased from 26.69 at pretest to 28.31 at posttest, with a medium effect size (Cohen's $d = 0.50$). However, the paired sample t -test indicated that this increase was not statistically significant ($t = -1.819$, $df = 12$, $p = 0.094$). These findings suggest a promising, though inconclusive, direction of change, indicating that brief digital positive psychology interventions may hold potential benefits for improving self-esteem that warrant further testing with larger samples and a control group.

Keywords: Self-Esteem; Upward Social Comparison; Positive Psychology; Digital Psychoeducation; Generation Z

Corresponding author

Name: Alda Syafira

Email: aldasyafira@webmail.umm.ac.id

INTRODUCTION

Over the past decade, the rapid development of digital technology, particularly social media, has transformed the way individuals interact, present themselves, and construct their social identity. Generation Z, the cohort born between 1997 and 2012, has grown up alongside the evolution of social media and relies on it as one of the primary spaces for communication, self-expression, and the acquisition of social information. In Indonesia, social media use is exceptionally high. According to the Digital 2024: Indonesia report, there are approximately 185.3 million internet users, or 66.5% of the population, of whom 139.0 million are active social media users (DataReportal, 2024). Around 75% of internet users engage with at least one social media platform, positioning social media as a dominant social space, particularly for younger generations.

Demographically, Generation Z comprises approximately 27.94% of Indonesia's population, or around 74.9 million people, most of whom are in their adolescent to early adulthood years; individuals aged 18-24 alone account for about 11% of the population. At this developmental stage, individuals face important transitions, such as completing their education, entering the workforce, forming their identity, and determining their future direction. Amid high digital engagement, however, Generation Z also faces considerable socioeconomic pressure. The open unemployment rate in August 2025 reached 4.85%, or approximately 7.46 million people, while in 2023 around 452,713 university graduates were neither employed nor continuing their education (Statistics Indonesia [BPS], 2025). These conditions can heighten psychological vulnerability, particularly when individuals are continually exposed to the achievements of others displayed on social media. In such circumstances, social media functions not merely as a communication tool but as a space for social evaluation that can shape how individuals judge themselves.

One psychological process that frequently occurs in social media use is social comparison. Festinger (1954) explained that individuals naturally evaluate themselves through comparison with others, particularly in the absence of clear objective standards. Within the context of social media, this process becomes more intense because individuals are continuously exposed to curated, idealized representations of other people's lives that tend to showcase only their best moments. One relevant form of social comparison in this context is upward social comparison, that is, the tendency to compare oneself with individuals perceived as better, more successful, more attractive, or superior in certain respects. Among Generation Z, upward social comparison can arise when individuals view posts about peers' academic achievements, careers, lifestyles, appearance, relationships, or financial success.

In this study, upward social comparison is not positioned as the primary target of the intervention but rather as the problem context underlying low self-esteem among some members of Generation Z. In other words, this study does not primarily aim to reduce upward social comparison as an outcome variable; instead, the tendency toward upward social comparison is used as a characteristic or risk condition of the participants. Social media and upward social comparison help explain why self-esteem has become an issue of concern among Generation Z, while self-esteem itself remains the primary outcome that the intervention seeks to improve.

A number of studies indicate that upward social comparison is closely related to lower self-esteem. Midgley et al. (2021) found that social media activity involving upward comparison is associated with a decline in state self-esteem, and this effect appears stronger among individuals with already low self-esteem. R  ther et al. (2023) similarly showed that exposure to influencer content can trigger social comparison and is associated with lower self-esteem, particularly among female users. Alfonso-Fuertes et al. (2023) further reported that the duration of Instagram use is negatively associated with self-esteem, especially when individuals compare their physical appearance with others. Burnell et al. (2024) found that upward comparison is related to decreased self-esteem, whereas downward comparison is related to increased self-esteem, while Hu et al. (2023)

demonstrated that upward social comparison on social networking sites is linked not only to lower self-esteem but also to increased materialism among adolescents. Servidio et al. (2024) and Yuan et al. (2025) likewise found that social comparison and self-esteem play an important role in the relationship between fear of missing out, problematic social media use, and depression. Together, these findings reinforce that upward social comparison is a psychological condition that can weaken how individuals evaluate themselves.

Self-esteem is an important aspect of psychological development, particularly during late adolescence and early adulthood. Rosenberg (1965) defined self-esteem as an individual's overall evaluation of their own worth, encompassing both positive and negative attitudes toward the self. Individuals with healthy self-esteem tend to view themselves more positively, realistically, and stably, even when facing failure, delayed achievement, or social pressure. In contrast, low self-esteem can make individuals more prone to self-doubt, feelings of inadequacy, and reliance on external validation. Self-esteem continues to be regarded as a crucial construct for understanding psychological well-being, given its association with a sense of worth, self-respect, and effective functioning in social and academic life (Monteiro et al., 2022). Among Generation Z, who are highly engaged with social media, self-esteem is particularly vulnerable because self-evaluation is often shaped by comparisons with digital social standards that are not always realistic.

The relationship between upward social comparison and self-esteem can be understood through the mechanism of self-evaluation. When individuals view others' posts showcasing success, idealized appearances, or seemingly more attractive lives, they may begin to use these posts as comparison standards. The problem is that such standards are often incomplete, since social media tends to display only outcomes, highlights, or selectively curated moments. As a result, individuals may compare the complexity of their own lives with the best fragments of others' lives. This imbalanced comparison can generate feelings of falling behind, inadequacy, envy, shame, or failure, ultimately weakening positive self-evaluation. Le Blanc-Brillon et al. (2025) emphasized that self-esteem is one of the mental health outcomes frequently linked to social media use and social comparison among young adults. This concern is further underscored by Orth and Sowislo's (2013) meta-analysis, which found that low self-esteem more strongly predicts subsequent depression than the reverse, suggesting that low self-esteem is not merely a transient emotional state but a potential risk factor for more serious psychological problems, particularly relevant for Generation Z given the pressures of career transition and constant exposure to curated markers of success on social media.

Although research on the relationship between social comparison and self-esteem is extensive, most studies have focused on adolescents or young adults in general. Studies specifically examining Generation Z in Indonesia, particularly within the context of social media use and the pressures of transitioning into the workforce, remain limited. This gap is notable given that this group has distinctive characteristics, including intensive social media use, deep engagement with digital culture, and exposure to social standards formed through online platforms, highlighting the need for more contextually grounded research

to develop interventions suited to the needs of Indonesian Generation Z, particularly those experiencing upward social comparison and vulnerable self-esteem.

Various interventions have been developed to address the negative psychological impact of social media use and social comparison. Wakelin et al. (2021) showed that self-compassion-based interventions are effective in reducing self-criticism and improving self-esteem. Hooper et al. (2024) found that brief mindfulness exercises can prevent declines in self-esteem after individuals are exposed to idealized social media content. Media literacy programs have also been shown to improve positive body image and self-esteem, while Ladwig et al. (2025) demonstrated that online programs can reduce the tendency toward upward comparison. These findings suggest that simple, targeted psychological interventions can help individuals respond to social media more healthily and build more positive self-evaluations.

In this study, the approach used is a positive psychology-based digital psychoeducation intervention. Psychoeducation was chosen for its accessibility, flexibility, and ease of implementation, and it is well suited to Generation Z because it can be delivered in a concise, digital, and independently accessible format. Rather than functioning as in-depth clinical therapy, psychoeducation serves as a psychological learning program that helps participants understand their own experiences, recognize the effects of upward social comparison, and develop a healthier perspective toward themselves. Donker et al. (2009) showed that psychoeducation can produce positive effects in reducing psychological distress, anxiety, and depression, while a recent systematic review and meta-analysis by Saboor et al. (2024) indicated that digital positive psychology interventions have the potential to support the psychological well-being of children, adolescents, and young adults, making the digital format a relevant choice for a technology-familiar generation.

Positive psychology emphasizes strengthening positive aspects of the individual, such as gratitude, self-strength recognition, meaning, and more adaptive self-evaluation. In this study, positive psychology components were directed toward improving self-esteem rather than directly eliminating upward social comparison. The first component, gratitude journaling, involves the regular practice of writing about things one is grateful for; Emmons and McCullough (2003) showed that counting one's blessings can enhance subjective well-being, and more recent evidence from systematic reviews and meta-analyses by Diniz et al. (2023) and Kirca et al. (2023) similarly indicates that gratitude interventions are associated with improved gratitude, mental health, and psychological well-being. The second component, character strengths, refers to relatively stable positive qualities that individuals can draw upon in daily life, such as curiosity, perseverance, courage, kindness, gratitude, hope, humor, and leadership (Peterson & Seligman, 2004); Proyer et al. (2015) found that online strengths-based interventions can produce long-term positive effects on happiness and reduced depressive symptoms. Seligman et al. (2005) further demonstrated that positive psychology interventions, including gratitude exercises and the use of signature strengths, can increase happiness and reduce depressive symptoms, providing an empirical basis for the assumption that strengthening positive aspects of the self can improve self-evaluation and psychological well-being.

Gratitude journaling and character strengths work in a complementary direction: gratitude journaling redirects attention toward meaningful personal experiences and resources, while character strengths help individuals recognize positive qualities that can serve as a basis for self-appreciation. Rather than aiming to eliminate upward social comparison, which is a natural psychological process, this intervention is directed toward helping participants build healthier self-esteem even within a digital environment prone to triggering social comparison. Based on the foregoing, this study aims to examine the effectiveness of a positive psychology-based digital psychoeducation intervention in improving self-esteem among Generation Z who experience upward social comparison on social media. This research is expected to contribute to the development of a simple, applicable digital psychoeducation intervention suited to the characteristics of Generation Z in Indonesia, offering an accessible strategy for addressing the psychological impact of social media-driven social comparison.

METHOD

Research Design. This study used a quantitative approach with a quasi-experimental one-group pretest-posttest design. This design was employed to examine changes in participants' self-esteem before and after receiving a positive psychology-based digital psychoeducation intervention. Measurements were taken twice, before the intervention (pretest) and after the intervention (posttest), allowing the effectiveness of the intervention to be evaluated through the difference in self-esteem scores between the two measurement points. The one-group pretest-posttest design is commonly used in preliminary intervention research, although it has the limitation of not involving a control group, meaning the influence of extraneous variables cannot be fully controlled (Shadish et al., 2002).

Subjects, Population, and Sample. Participants in this study were members of Generation Z who actively used social media and reported a tendency toward upward social comparison. Participants were selected using purposive sampling, a technique for selecting samples based on specific characteristics relevant to the research objective. This technique was chosen because the study required participants with a specific characteristic, namely Generation Z individuals with experience of comparing themselves upward while using social media. Upward social comparison was not measured as the main outcome variable but was used as the problem context and participant selection criterion; the main outcome remained self-esteem. Inclusion criteria were: (1) aged 18-27 years, (2) belonging to Generation Z, (3) actively using social media daily, (4) having compared themselves with others perceived as more successful, attractive, productive, or superior on social media, (5) willing to complete the full four-day intervention, (6) willing to complete the pretest and posttest, and (7) providing consent through an informed consent form. Exclusion criteria were: (1) currently participating in another psychological intervention specifically targeting self-esteem, (2) experiencing a severe psychological crisis requiring intensive professional care, (3) not completing the full intervention, and (4) not completing the pretest or posttest in full. A total of 13 participants met these criteria and were included in the analysis.

Data Collection Procedure. The main instrument used in this study was the Rosenberg Self-Esteem Scale (RSES), developed by Rosenberg (1965) to measure global self-esteem, or an individual's overall evaluation of themselves. The RSES consists of 10 items and is among the most widely used self-esteem measures in psychological research; it has been included by the American Psychological Association as a 10-item self-esteem scale and has been reported as suitable for individuals aged 12 years and older, requiring only a short completion time.

Data collection followed several stages. The first stage was preparation, involving the development of the positive psychology-based digital psychoeducation module, the informed consent form, and the pretest and posttest instruments. The second stage was participant recruitment through social media, class groups, student communities, and other digital networks relevant to Generation Z; interested prospective participants were asked to complete the informed consent form as part of the recruitment process. The third stage was the pretest, an initial measurement of self-esteem using the RSES prior to the intervention. The fourth stage was the intervention itself, delivered over four days in the form of staged digital psychoeducation. Each day, participants received one digital material file containing a brief explanation, a reflection prompt, and a simple exercise, delivered through WhatsApp or another easily accessible digital platform; this format was chosen because it suits Generation Z's familiarity with technology and social media, and recent systematic reviews and meta-analyses indicate that digital positive psychology interventions hold potential for supporting the psychological well-being of children, adolescents, and young adults (Saboor et al., 2024). The fifth stage was the posttest, a measurement of self-esteem after the full intervention using the same scale as the pretest to allow accurate score comparison. The sixth stage was intervention evaluation, in which participants completed a brief evaluation form regarding the readability of the materials, ease of following the program, the perceived benefits of gratitude journaling and character strengths recognition, and their overall impression of the program.

The intervention consisted of a four-day digital psychoeducation program grounded in positive psychology, focusing on two main components: gratitude journaling and character strengths. Each day's material comprised three parts: a brief explanation, a self-reflection prompt, and a written exercise, with an estimated completion time of 15-30 minutes per session. On the first day, participants received material on social media and upward social comparison, aimed at raising awareness of the psychological process involved in comparing oneself to others online, without seeking to eliminate comparison altogether. On the second day, participants engaged in a gratitude journaling exercise, writing down three things they were grateful for, one positive personal quality, and one small experience that made them feel sufficient, intended to redirect attention toward meaningful aspects of their own lives. On the third day, participants received material on self-esteem and healthier self-evaluation, reflecting on their personal qualities and past accomplishments as a bridge toward the character strengths component. On the fourth day, participants identified three key personal strengths, described evidence of these strengths in their lives, and selected one strength to apply in daily activities, aimed at helping participants build a

more positive and stable self-evaluation based on personal qualities rather than social comparison. An overview of the intervention design is presented in Table 1.

Table 1. Positive Psychology-Based Digital Psychoeducation Intervention Design

Day	Topic	Objective	Activity	Assignment
Day 1	Recognizing upward social comparison on social media	Participants understand how social media can trigger social comparison and affect self-evaluation	Reading psychoeducation material; reflecting on personal comparison experiences	Noting two situations that triggered comparison
Day 2	Gratitude journaling	Participants redirect attention from perceived shortcomings toward meaningful personal experiences	Writing three things grateful for, one positive personal quality, and one small sufficient experience	Completing a gratitude journal entry
Day 3	Self-esteem and healthier self-evaluation	Participants understand that self-esteem should not depend solely on achievement, appearance, or social validation	Reflecting on personal qualities and past accomplishments	Writing a short self-reflection
Day 4	Character strengths	Participants build a more positive and stable self-evaluation by recognizing personal strengths	Identifying three key strengths and evidence of their use in daily life	Selecting one strength to apply in daily activities

Data Analysis. Data were analyzed quantitatively. First, descriptive analysis was conducted to examine self-esteem scores before and after the intervention, including the mean, standard deviation, minimum, and maximum scores. A normality test was then performed using the Shapiro-Wilk test, given the relatively small sample size. When the data were normally distributed, hypothesis testing was conducted using a paired sample t-test to determine whether a significant difference existed between pretest and posttest scores; if the data were not normally distributed, the nonparametric Wilcoxon Signed-Rank Test would be used instead. Intervention effectiveness was indicated by an increase in self-esteem scores following participation in the positive psychology-based digital psychoeducation program.

FINDING AND DISCUSSION

RESEARCH RESULT

Respondent Characteristics. This study involved 13 respondents, all members of Generation Z who were active social media users. The demographic characteristics of the respondents are presented in Table 2.

Table 2. Demographic Characteristics of Respondents (N = 13)

Category	Subcategory	Frequency	Percentage (%)
Age	20 years	1	7.7
	22 years	2	15.4
	23 years	9	69.2
	24 years	1	7.7
	Total	13	100.0
Gender	Male	1	7.7
	Female	12	92.3
	Total	13	100.0
Daily social media use	More than 3-5 hours	1	7.7
	More than 5-7 hours	5	38.5
	More than 7 hours	7	53.8
	Total	13	100.0
Most frequently used platform	Instagram	2	15.4
	TikTok	7	53.8
	WhatsApp	1	7.7
	X	1	7.7
	YouTube	2	15.4
	Total	13	100.0

By age, the majority of respondents were 23 years old (69.2%), followed by 22 years old (15.4%), while respondents aged 20 and 24 years each accounted for 7.7%. By gender, respondents were predominantly female (92.3%), with male respondents accounting for 7.7%. By daily social media use, most respondents used social media for more than 7 hours per day (53.8%), followed by 5-7 hours (38.5%) and 3-5 hours (7.7%). The most frequently used social media platform was TikTok (53.8%), followed by Instagram and YouTube (15.4% each), and WhatsApp and X (7.7% each).

Descriptive Statistics of Self-Esteem. The research instrument consisted of 10 items using a 1-4 Likert scale, yielding a total self-esteem score ranging from 10 to 40. Descriptive statistics for the pretest and posttest self-esteem scores are presented in Table 3.

Table 3. Descriptive Statistics of Self-Esteem Scores

	N	Minimum	Maximum	Mean	Std. Deviation
Pretest	13	19	34	26.69	3.772
Posttest	13	26	31	28.31	1.437

At pretest, respondent scores ranged from 19 to 34, with a mean of 26.69 (SD = 3.772). At posttest, scores ranged from 26 to 31, with a mean of 28.31 (SD = 1.437), reflecting a mean increase of 1.62 points following the intervention.

Normality Test. A normality test was conducted using the Shapiro-Wilk test, given the sample size of fewer than 50 respondents. The results are presented in Table 4.

Table 4. Shapiro-Wilk Normality Test Results

	Statistic	df	Sig.
Pretest	0.977	13	0.959
Posttest	0.950	13	0.602

The Shapiro-Wilk significance values were $p = 0.959$ for the pretest and $p = 0.602$ for the posttest, both exceeding 0.05, indicating that the data were normally distributed. The paired sample t-test was subsequently used for hypothesis testing.

Hypothesis Test (Paired Sample T-Test). The results of the paired sample t-test are presented in Table 5.

Table 5. Paired Sample T-Test Results

Measurement	Mean Difference	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Pretest - Posttest	-1.615	3.203	0.888	-1.819	12	0.094

The paired sample t-test yielded $t = -1.819$, $df = 12$, and a two-tailed significance value of $p = 0.094$. The correlation between pretest and posttest scores was significant ($r = 0.557$, $p = 0.048$), indicating that respondents with higher pretest scores tended to also have higher posttest scores. The effect size, calculated from the mean difference and the standard deviation of the score difference, yielded a Cohen's d of 0.50, corresponding to a medium effect size, although the 95% confidence interval for the score difference (-3.551 to 0.320) included zero.

DISCUSSION

The results showed that the mean self-esteem score increased from 26.69 at pretest to 28.31 at posttest following the positive psychology-based digital psychoeducation intervention. This direction of change is consistent with the study's initial assumption that strengthening gratitude through gratitude journaling and recognizing personal strengths through character strengths can help individuals build more positive self-evaluations (Emmons & McCullough, 2003; Peterson & Seligman, 2004; Seligman et al., 2005). The obtained effect size ($d = 0.50$) also indicates a medium magnitude of change, suggesting that the increase in self-esteem scores in this sample was not merely random fluctuation, even though it did not reach statistical significance.

The contribution of gratitude journaling in this intervention is consistent with several prior meta-analytic reviews. Cregg and Cheavens (2021) found that gratitude interventions consistently produce positive, though small-to-moderate, effects on psychological well-being indicators related to self-evaluation. Similar results were reported by Diniz et al. (2023) and Kirca et al. (2023), who each found that gratitude interventions generally produce positive effects on psychological well-being, although effect magnitudes vary across studies depending on duration and intensity. The medium effect size ($d = 0.50$) found in this study falls within a similar range to these findings, suggesting that the direction

and magnitude of change in this study are broadly consistent with patterns observed in the gratitude intervention literature, even though the small sample size in this study meant the result did not reach statistical significance.

The character strengths component in this intervention draws on the framework of Peterson and Seligman (2004), who emphasized the importance of recognizing and utilizing individual character strengths as a pathway to psychological well-being. Proyer et al. (2015), in an experimental study, found that signature strengths-based interventions produced improvements in well-being that persisted for several months, using a sample considerably larger than that of the present study. This difference in study scale helps explain why an effect that is conceptually consistent may not necessarily be statistically detectable in a study with a much smaller sample, such as this one.

Nevertheless, the paired sample t-test indicated that this increase did not reach statistical significance ($p = 0.094$), and this finding warrants cautious interpretation. One likely explanation lies in the limitation of the sample size, only 13 respondents, which restricted the statistical power to detect a difference despite a medium effect size. Another possible explanation relates to participants' self-esteem scores already falling within a relatively positive category at pretest ($M = 26.69$, out of a possible range of 10-40), which may have limited the room for further improvement, given that self-esteem is generally considered a relatively stable construct that does not always change significantly within a short period (Orth & Sowislo, 2013). The small, female-dominated, and narrow-age-range sample, together with reliance on a single self-report measure and the absence of a control group inherent to the one-group pretest-posttest design, further limit the extent to which these findings can be generalized or interpreted as evidence of a causal effect.

The importance of efforts to improve self-esteem among Generation Z exposed to upward social comparison is further supported by prior research on the impact of social media on self-esteem. Cingel et al. (2022) and Midgley et al. (2021) found that repeated social comparison on social media contributes to declining self-esteem, while R  ther et al. (2023) showed that exposure to influencer content can weaken self-esteem, with individual resilience moderating this effect. Servidio et al. (2024) similarly found that social comparison plays a role in the relationship between fear of missing out, problematic social media use, and lower self-esteem, while Hu et al. (2023) and Liu et al. (2025) found that upward social comparison is consistently associated with declining self-esteem across different age groups. Given the strength of evidence regarding the negative impact of upward social comparison on self-esteem, the observed tendency toward increased self-esteem following a brief intervention in this study can still be regarded as a meaningful preliminary indication, even though it did not reach statistical significance.

Compared with other interventions targeting self-esteem, the duration and format of delivery appear to play an important role in the magnitude of the resulting effect. Hooper et al. (2024), for example, found that a brief single-session mindfulness intervention was able to buffer the negative impact of exposure to idealized social media images on self-esteem. Cathlin and Salim (2024) developed a psychoeducation program specifically targeting improvements in self-esteem and empathy, demonstrating that structured

psychoeducational approaches hold potential as self-esteem interventions. These findings reinforce that the positive psychology-based digital psychoeducation intervention in this study is part of a broader and evolving body of work addressing the negative impact of social media on the self-esteem of Generation Z, although the format, duration, and intensity of interventions vary across studies and influence the strength of the resulting effects.

This finding is also consistent with the broader psychoeducation literature, which indicates that the effectiveness of psychoeducational interventions can vary depending on duration, intensity, and participant characteristics (Donker et al., 2009; Muñoz et al., 2026). The intervention in this study lasted only four days, which may not have been sufficient to produce statistically significant change in a relatively stable construct such as self-esteem. In addition, the decrease in standard deviation from 3.772 at pretest to 1.437 at posttest suggests that participants' responses became more uniform following the intervention, which may reflect a tendency among participants to converge toward a more stable and consistent self-evaluation, even though the group-level mean change was not statistically significant.

These findings carry both research and practical implications. From a research perspective, future studies should employ larger and more diverse samples in terms of age, gender, and background, incorporate a control group, and extend the intervention duration to strengthen causal inference regarding the relationship between the intervention and self-esteem improvement; the use of measurement methods beyond self-report would also help provide a more comprehensive picture. From a practical perspective, despite the lack of statistical significance, the findings suggest that brief, structured, digital psychoeducation grounded in positive psychology may offer an accessible, low-intensity option that counselors, student affairs practitioners, and mental health promotion programs could consider piloting for Generation Z, particularly to help them build healthier self-evaluations amid frequent exposure to upward social comparison on social media.

Overall, these findings can be regarded as preliminary evidence pointing toward a positive direction of change consistent with the theoretical framework of positive psychology, but not yet sufficient to establish a strong causal relationship between the intervention and improved self-esteem. These results offer a promising initial picture for the development of positive psychology-based digital psychoeducation interventions, though further testing with larger samples is needed to draw stronger conclusions.

CONCLUSION

This study aimed to examine the effectiveness of a positive psychology-based digital psychoeducation intervention in improving self-esteem among Generation Z experiencing upward social comparison. Based on the analysis of 13 respondents, the mean self-esteem score increased from 26.69 at pretest to 28.31 at posttest, with a medium effect size. This increase reflects a direction of change consistent with the intervention's objective of helping participants build more positive self-evaluations through gratitude journaling and character strengths recognition. However, the paired sample t-test showed that this increase did not reach statistical significance, meaning this study cannot conclusively

establish that the intervention significantly improved self-esteem. These findings are therefore best interpreted as promising preliminary evidence of the intervention's potential benefit, rather than conclusive proof of its effectiveness.

Future research is recommended to involve larger and more diverse samples, incorporate a control group, and extend the intervention duration to draw stronger conclusions about the intervention's effectiveness. In practical terms, this study may nonetheless serve as an initial reference for developing simple, applicable, positive psychology-based digital psychoeducation programs to help Generation Z respond to the psychological impact of upward social comparison on social media.

REFERENCES

- Alfonso-Fuertes, I., Álvarez-Mon, M. A., Ortega, M. A., et al. (2023). Time spent on Instagram and body image, self-esteem, and physical comparison among young adults in Spain: An observational study. *JMIR Formative Research*, 7, e42207. <https://doi.org/10.2196/42207>
- Andrade, F. C., Erwin, S., Burnell, K., Jackson, J., Storch, M., Nicholas, J., & Zucker, N. (2023). Intervening on social comparisons on social media: Electronic daily diary pilot study. *JMIR Mental Health*, 10, e42024. <https://doi.org/10.2196/42024>
- Burnell, K., George, M. J., Kurup, A. R., & Underwood, M. K. (2024). Adolescents' social comparison on social media: Links with momentary self-evaluations. *Affective Science*. <https://doi.org/10.1007/s42761-024-00240-6>
- Cathlin, & Salim. (2024). The effectiveness of psychoeducation intervention program for enhancing self-esteem and empathy.
- Cingel, D. P., Carter, M. C., & Krause, H. V. (2022). Social media and self-esteem. *Current Opinion in Psychology*, 45, 101304. <https://doi.org/10.1016/j.copsyc.2022.101304>
- 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. <https://doi.org/10.1007/s10902-020-00236-6>
- DataReportal. (2024). *Digital 2024: Indonesia*. DataReportal - Global Digital Insights.
- de Valle, M. K., Gallego-García, M., Williamson, P., & Wade, T. D. (2021). Social media, body image, and the question of causation: Meta-analyses of experimental and longitudinal evidence. *Body Image*, 39, 276-292. <https://doi.org/10.1016/j.bodyim.2021.10.001>
- Diniz, G., Korkes, L., Tristão, L. S., Pelegrini, R., Bellodi, P. L., & Bernardo, W. M. (2023). The effects of gratitude interventions: A systematic review and meta-analysis. *Einstein (São Paulo)*, 21, eRW0371. https://doi.org/10.31744/einstein_journal/2023RW0371
- Donker, T., Griffiths, K. M., Cuijpers, P., & Christensen, H. (2009). Psychoeducation for depression, anxiety and psychological distress: A meta-analysis. *BMC Medicine*, 7, Article 79. <https://doi.org/10.1186/1741-7015-7-79>

- 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.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7(2), 117-140.
- Hooper, R., Guest, E., Ramsey-Wade, C., & Slater, A. (2024). A brief mindfulness meditation intervention buffers the negative impact of idealized social media images on state self-esteem.
- Hu, Y. T., Liu, Q. Q., & Ma, Z. F. (2023). Does upward social comparison on SNS inspire adolescent materialism? A moderated mediation model of self-esteem and social self-efficacy.
- Kang, S. (2025). Toward a healthier social media experience: Designing “inspiration” and “connection” features to reduce upward comparison.
- Kirca, A., Oğuz-Duran, N., & Zorbaz, O. (2023). The effect of expressed gratitude interventions on psychological well-being.
- Kruzan, K. P., et al. (2022). Social media-based interventions for adolescent and young adult mental health: A scoping review.
- Ladwig, G., Schönhals, K., Quittkat, H. L., Dietel, F., & Vocks, S. (2025). Addressing the negative impact of social media use on body image and self-esteem: An online intervention program.
- Le Blanc-Brillon, J., Savard, A., Bouffard, S., & Bouchard, S. (2025). The associations between social media use, social comparison, and mental health among young adults.
- Liu, H., Kvintova, J., & Vachova, L. (2025). Parents' social comparisons and adolescent self-esteem.
- Maroqi, N. (2018). Uji validitas konstruk pada instrumen Rosenberg Self-Esteem Scale dengan metode confirmatory factor analysis (CFA) [Construct validity testing of the Rosenberg Self-Esteem Scale using confirmatory factor analysis]. *JP3I: Jurnal Pengukuran Psikologi dan Pendidikan Indonesia*, 7(2).
- Midgley, C., Thai, S., Lockwood, P., Kovacheff, C., & Page-Gould, E. (2021). When every day is a high school reunion: Social media comparisons and self-esteem.
- Monteiro, R. P., Coelho, G. L. H., Hanel, P. H. P., de Medeiros, E. D., & da Silva, P. D. (2022). The self-esteem scale: Cross-cultural translation and validation.
- Muñoz, M. B., Zafra-Agea, J. A., Marco, E. M., Flores-Saldaña, M., Vera-Remartínez, E. J., Esteve-Clavero, A., & Molés-Julio, M. P. (2026). Effectiveness of school-based psychoeducational programs in reducing bullying and improving self-esteem: A systematic review.
- Orth, U., & Sowislo, J. F. (2013). Does low self-esteem predict depression and anxiety? A meta-analysis of longitudinal studies. *Psychological Bulletin*, 139(1), 213-240.
- Parsons, C. A., Alden, L. E., & Biesanz, J. C. (2021). Influencing emotion: Social anxiety and comparisons on Instagram. *Emotion*, 21(7), 1427-1438. <https://doi.org/10.1037/emo0001044>

- Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification*. American Psychological Association; Oxford University Press.
- Proyer, R. T., Gander, F., Wellenzohn, S., & Ruch, W. (2015). Strengths-based positive psychology interventions: A randomized placebo-controlled online trial on long-term effects for a signature strengths versus a lesser strengths intervention. *Frontiers in Psychology*, 6, Article 456. <https://doi.org/10.3389/fpsyg.2015.00456>
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton University Press.
- Rüther, L., Jahn, J., & Marksteiner, T. (2023). #Influenced! The impact of social media influencing on self-esteem and the role of social comparison and resilience. *Frontiers in Psychology*, 14, Article 1216195. <https://doi.org/10.3389/fpsyg.2023.1216195>
- Saboor, S., Medina, A., & Marciano, L. (2024). Application of positive psychology in digital interventions for children, adolescents, and young adults: Systematic review and meta-analysis of controlled trials. *JMIR Mental Health*, 11, e56045. <https://doi.org/10.2196/56045>
- 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. <https://doi.org/10.1037/0003-066X.60.5.410>
- Servidio, R., Soraci, P., Griffiths, M. D., Boca, S., & Demetrovics, Z. (2024). Fear of missing out and problematic social media use: A serial mediation model of social comparison and self-esteem. *Addictive Behaviors Reports*, 19, Article 100536. <https://doi.org/10.1016/j.abrep.2024.100536>
- Shadish, W. R., Cook, T. D., & Campbell, T. D. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Houghton Mifflin.
- Statistics Indonesia (BPS). (2025, November 5). *Tingkat pengangguran terbuka (TPT) sebesar 4,85 persen* [Open unemployment rate reached 4.85 percent]. <https://www.bps.go.id>
- Ünlü, S. (2025). Addressing social media burnout and enhancing well-being through mindfulness-based psychoeducation. *Journal of Mental Health Studies*.
- Wakelin, K. E., Perman, G., & Simonds, L. M. (2021). Effectiveness of self-compassion-related interventions for reducing self-criticism: A systematic review and meta-analysis. *Clinical Psychology & Psychotherapy*. <https://doi.org/10.1002/cpp.2586>
- Yuan, M., Sun, Y., Wang, Y., & Yu, L. (2025). The influence of upward social comparison on social network sites on middle school students' depression: A two-wave multiple mediation model. *Development and Psychopathology*, 37(3), 1685-1693. <https://doi.org/10.1017/S0954579424001913>