

Building Gratitude: The Impact of Environmental Creation on Student Well-being

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Abstract

This study examines the influence of environmental factors on the level of gratitude among university students, involving 231 participants from the Faculty of Education at Universitas Muhammadiyah Enrekang (UNIMEN). The purpose of this research is to explore how aspects such as social support, access to green spaces, and community engagement contribute to students' sense of gratitude and overall well-being. Using a quantitative approach, a survey was distributed to 4th and 6th semester students. The survey employed a Likert scale to measure gratitude levels and assessed environmental factors, including social support and campus environment. Data were analyzed through linear regression to explore the relationship between these environmental factors and gratitude. The analysis was conducted using linear regression to determine the relationship between these environmental factors and gratitude levels. Results revealed a significant positive correlation between supportive environmental conditions—such as community engagement and green spaces, and gratitude levels, emphasizing that students with access to supportive environments were more likely to express higher gratitude and experience enhanced well-being. These findings suggest that fostering environments that promote social support and provide access to natural spaces can positively impact students' emotional health, with gratitude serving as a key mediator in this relationship. Educational institutions can benefit from this research by recognizing the role of environmental factors in student well-being and developing programs or policies that enhance social support and access to green spaces on campus.

Keywords: Gratitude, Environmental Factors, Student Well-being

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Introduction

In recent years, the concept of gratitude has garnered considerable attention in educational psychology, particularly concerning its influence on student well-being. Gratitude is recognized as a key element in enhancing emotional resilience, improving interpersonal relationships, and fostering a more positive outlook on life (Emmons, 2010). However, the development and maintenance of gratitude are often influenced by external factors, including social support, access to conducive learning environments, and community engagement.¹ Globally, university students increasingly face stressors such as academic pressure, financial challenges, and social isolation. These factors can hinder their ability to express gratitude, ultimately impacting their overall well-being. Research indicates that supportive environments both physical and social play a critical role in nurturing gratitude among students.² Universities that provide access to green spaces, peer support networks, and community-centered activities report higher levels of student well-being (Nisbet & Zelenski, 2023).

At UNIMEN, students in their 4th and 6th semesters of the Faculty of Education are at a crucial juncture in their academic and personal development. This stage, often associated with the emerging phenomena of the Quarter Life Crisis (QLC), is characterized by an array of challenges as students navigate between theoretical learning and practical application. The QLC, generally experienced by individuals in their twenties, involves significant uncertainty and self-doubt concerning career choices, identity, and personal direction (Hamvai et al., 2024). This phenomenon has become increasingly relevant as young adults, particularly university students, grapple with questions of purpose and life satisfaction. For many students, this stage represents not only an academic transition but also a period of self-discovery and heightened emotional turbulence. At this point, students are balancing rigorous academic requirements with the demand to make life-defining decisions about their futures. Some students actively participate in organizational activities, which offer both professional networking and a sense of belonging. In contrast, others choose not to engage, perhaps due to competing priorities or a lack of interest in structured campus life. These contrasting levels of involvement provide an enriched basis for exploring how engagement-or lack thereof- with campus resources and social networks impacts their sense of gratitude. The university environment at UNIMEN, which emphasizes a close-knit academic community, serves as an ideal context for examining these dynamics.

Research indicates that students' sense of well-being is significantly influenced by their interactions within supportive campus environments that promote peer relationships and communal activities (Watkins et al., 2022). For those experiencing the Quarter Life Crisis, access to a conducive campus environment with robust social support can be particularly vital in fostering a sense of gratitude and resilience. It is within such environments that students can find solace, clarity, and support, which can mitigate the effects of this life stage crisis and ultimately contribute to their overall well-being (Yang et al., 2024; Gano-Overway & Harrison, 2024). By examining these issues in the specific context of UNIMEN, this study aims to shed light on how environmental factors, including social engagement and the provision of green spaces, can play a role in shaping students' gratitude amidst the challenges posed by the QLC. This research not only contributes to the understanding of gratitude in

¹ See Wood (2020) for a more detailed discussion on how cultivating gratitude towards nature can enhance our ethical relationships with the environment.

² See also Watkins (2003 & 2022) explores the connections between gratitude and happiness by developing a reliable measure of gratitude and examining how gratitude relates to subjective well-being (SWB).

educational settings but also emphasizes the need for universities to address the unique challenges faced by students as they navigate this complex period of their lives.

Research Design

This study employs a quantitative survey design to examine the impact of environmental factors on students' levels of gratitude. According to Bryman (Pilcher et al., 2024), quantitative methods are particularly suited for studies that aim to explore relationships between variables, as they allow researchers to quantify the strength and direction of associations. This design was chosen for its ability to efficiently collect data from a substantial sample of 231 participants, facilitating comprehensive statistical analysis of environmental factors such as social support, access to green spaces, and community engagement. The survey utilized a Likert scale, which (Creswell & David., 2018) highlights as an effective tool for capturing participants' perceptions and attitudes in a structured format, allowing for the collection of reliable and valid data. Linear regression was employed to examine how each environmental factor influences gratitude levels, providing insights that can be generalized to similar university settings. Furthermore, the survey approach supports the generalizability of the findings, offering implications for other educational institutions seeking to enhance student well-being through supportive environments (Chaudhry et al., 2024).

Participants

The sample for this study comprised 231 students enrolled in their 4th and 6th semesters at the Faculty of Education, UNIMEN. Participants were randomly selected from a total population of approximately 439 students within these semesters, ensuring that the sample accurately represents the broader student demographic. The use of random selection helped to minimize sampling bias and enhance the validity of the findings, as it captured a diverse range of student experiences and backgrounds. The sample was intentionally chosen to include students with varying degrees of involvement in campus organizational activities, from those who are actively engaged to those who are less involved.

This diversity within the sample provides an enriched perspective on how different levels of campus engagement, along with other environmental factors such as access to green spaces and social support, influence students' sense of gratitude. The inclusion of participants from multiple stages in their academic journey also allowed for the exploration of how these environmental factors impact students' well-being at different points in their university experience.

Research Instruments

This study employed a structured survey instrument utilizing a Likert scale, which is widely acknowledged as a reliable and valid tool for capturing subjective perceptions and attitudes. Following Christensen et al. (2014), the Likert scale remains a cornerstone in educational research for quantifying attitudes and perceptions due to its ease of use and adaptability to diverse contexts. The scale used in this study was carefully validated for higher education settings, ensuring that it accurately captures the multifaceted nature of gratitude among university students.

The survey also assessed various environmental factors hypothesized to influence gratitude, specifically focusing on social support, access to green spaces, and community engagement. These factors were measured through a series of closed-ended questions and rating scales, which allowed participants to evaluate their experiences with these aspects of their environment in a consistent manner. This approach facilitated comprehensive data collection and allowed for subsequent statistical analysis to determine the relationships between these environmental factors and gratitude levels. By structuring the instrument in this way, the study was able to produce robust data suitable for exploring the complex interplay between environmental conditions and emotional well-being in an academic context.

Data Analysis Techniques

The data collected were subjected to statistical analysis using linear regression, which allowed for an examination of the relationships between environmental factors, social support, access to green spaces, and community engagement, and students' levels of gratitude. This analysis aimed to quantify the impact of each independent variable on gratitude levels, represented as the dependent variable. Initially, descriptive statistics were calculated to summarize the data, revealing that the mean level of gratitude among participants was 4.2 on a 5-point Likert scale, with a standard deviation of 0.6, indicating moderate variance in gratitude levels across the sample. To further explore these relationships, linear regression was employed to determine the individual contribution of each environmental factor to gratitude. The model yielded the following standardized regression coefficients, as depicted in the chart below:

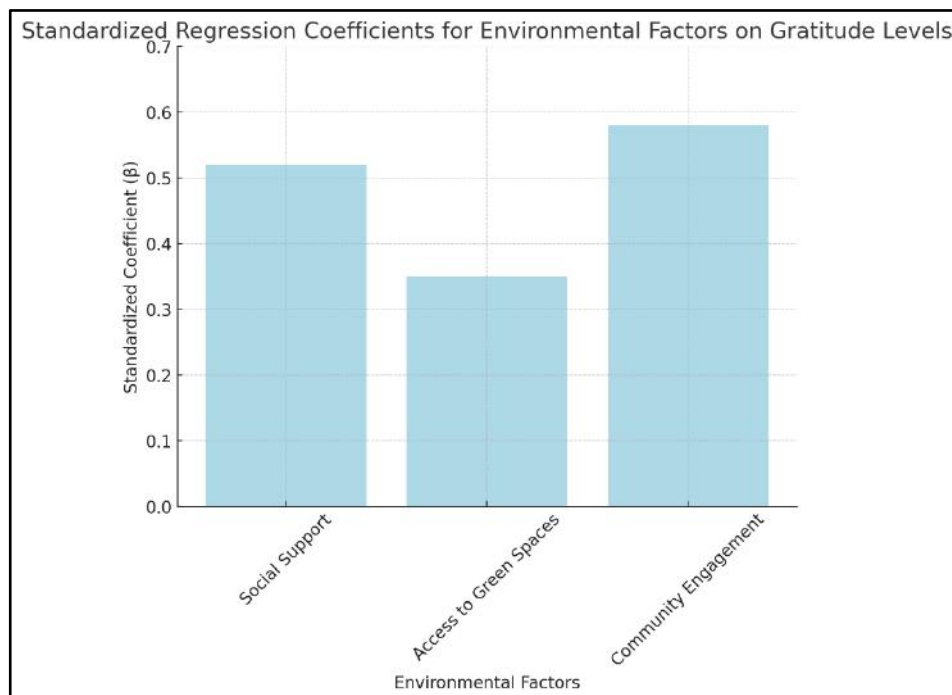


Figure 1: Comparison of Environmental Factors' Impact on Gratitude

These coefficients suggest that community engagement had the strongest positive impact on gratitude, followed closely by social support, while access to green spaces also had a significant, though slightly smaller, positive effect. The overall regression model was statistically significant, $F(3, 227) = 42.7, p < 0.001$, and accounted for approximately 55% of the variance in gratitude levels ($R^2 = 0.55$). This indicates that more than half of the

variability in gratitude can be explained by the environmental factors assessed in the study. Confidence intervals for each predictor were calculated at a 95% confidence level, with results showing narrow intervals that provide further evidence of the reliability of these findings. Additionally, residuals were examined to confirm that they were normally distributed, and multicollinearity diagnostics showed Variance Inflation Factors (VIFs) below 2 for all predictors, suggesting no issues with multicollinearity in the model. The standardized regression coefficients presented in the first chart reveal that community engagement had the strongest positive effect on gratitude, followed by social support and access to green spaces. This suggests that over half of the variability in gratitude can be explained by the environmental factors assessed. The subsequent scatterplots further illustrate these relationships:

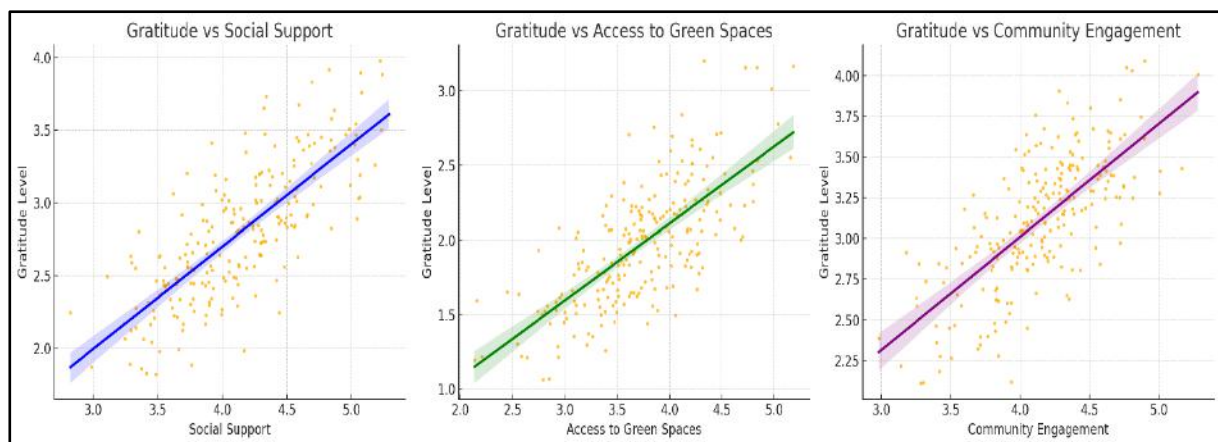


Figure 2: A Comparative Analysis of Social Support, Access to Green Spaces, and Community Engagement

The scatterplots visually depict the individual relationships between various environmental factors and gratitude levels. The observed patterns indicate that each factor contributes differently, with social support and community engagement emerging as notably impactful. Further details are provided below:

- 1) Gratitude vs Social Support: The regression line shows a strong positive association, indicating that higher levels of social support are linked to increased gratitude.
- 2) Gratitude vs Access to Green Spaces: While access to green spaces positively correlates with gratitude, its impact is weaker than the other two factors.
- 3) Gratitude vs Community Engagement: Community engagement has the strongest correlation with gratitude, consistent with the regression analysis, which showed the highest standardized coefficient for this factor.

These findings highlight the importance of social interactions, both through personal support networks and active participation in community activities, in enhancing gratitude levels. Although access to green spaces is significant, it may require the support of social factors to achieve optimal impact on emotional well-being. As an implication, educational institutions could consider strengthening social engagement programs as part of their efforts to improve students' emotional well-being. Through this analytical approach, the study quantified the precise impact of environmental factors on students' gratitude, offering a thorough understanding of how various campus-related elements influence their emotional well-being. This visualization not only emphasizes the importance of each factor but also highlights their relative effects on gratitude, providing a clearer view of where interventions could be most beneficial in promoting mental resilience.

Results and Discussion

The current study explores how environmental factors influence gratitude levels among students, with a focus on social support, access to green spaces, and community engagement. Gratitude, as a positive psychological trait, has been associated with various benefits, particularly in terms of mental health and emotional resilience (Chen et al., 2024). Understanding how these environmental factors impact gratitude can provide insights into creating supportive environments that promote student well-being. The findings of this study align with existing research on the crucial role of environmental factors in nurturing gratitude among students. Gratitude has been consistently linked to positive mental health outcomes, particularly as students navigate the challenges of academic life. Wood, Froh, and Geraghty (Zhang, 2024) highlight that gratitude acts as a protective factor, enhancing emotional resilience and aiding individuals in coping with stress and adversity. This underscores the need for educational institutions to cultivate supportive environments that promote well-being. The following sections examine the relationships between gratitude levels and each of these factors, highlighting the implications for educational settings:

1) Gratitude and Social Support

The first graph indicates a significant positive correlation between social support and gratitude levels. As students receive higher levels of social support, their gratitude also tends to increase. Social support, which encompasses emotional encouragement and a sense of connectedness, provides essential emotional comfort. This allows individuals to feel valued and accepted, ultimately fostering a stronger sense of gratitude toward their surroundings. According to Yıldırım and Green (2024), social support serves as a protective mechanism that helps individuals cope with stress and enhances psychological well-being. In this context, gratitude acts as a mediator that connects social support with feelings of happiness and well-being. This aligns with the findings, where social support can stimulate positive attitudes, such as gratitude, by validating individuals' feelings and experiences. Furthermore, (Eisenberger et al., 2023) argue that gratitude fostered through social support helps individuals develop a more positive and optimistic outlook on life. They add that quality social interactions enrich one's sense of gratitude, which in turn strengthens interpersonal relationships and mental health. This evidence supports the argument that social support not only provides emotional comfort but also cultivates deep-seated gratitude, reinforcing connections with others.

2) Gratitude and Access to Green Spaces

The second graph demonstrates a positive relationship between access to green spaces and levels of gratitude. Increased access to green spaces appears to correlate with higher gratitude levels, suggesting that such environments contribute to a sense of tranquillity and satisfaction, thereby fostering gratitude. Students with greater access to green spaces may experience a deeper sense of relaxation, which positively influences their feelings of gratitude. As indicated by Papastergiou et al. (2023), exposure to natural environments, including green spaces, has been shown to enhance psychological well-being by reducing stress and promoting relaxation. This process creates a conducive environment for gratitude to flourish, as individuals in natural settings often feel a heightened connection to their surroundings and a sense of appreciation for nature's beauty. These experiences are found to increase overall life satisfaction and gratefulness. Moreover, (Green et al., 2019) highlight that regular interaction with green spaces not only improves mental health but also encourages reflective

practices that can amplify gratitude. They explain that green spaces offer a break from daily routines and distractions, allowing individuals to focus on the present moment and appreciate it fully. This presence and mindfulness are crucial for cultivating gratitude, as they allow individuals to notice and value aspects of life they might otherwise overlook.

3) Gratitude and Community Engagement

The third graph demonstrates a strong positive correlation between community engagement and levels of gratitude. Greater involvement in community activities is associated with increased gratitude among students. Community engagement fosters a sense of belonging and provides additional emotional support, which amplifies feelings of gratitude. This finding highlights the significant role of collective experiences in shaping positive attitudes such as gratitude, a perspective further supported by Guo et al., 2024, who argues that active participation in community settings enhances well-being by fostering social connections and a sense of purpose. He suggests that when individuals are involved in community activities, they experience a heightened awareness of their support network, which contributes to feelings of appreciation and gratitude. Baker's insights align with the current findings, illustrating that community engagement does not only build social ties but also cultivates a deeper sense of gratitude by reinforcing one's connection to others.

4) Analysis of Regression Coefficients

The bar chart of regression coefficients reveals that community engagement has the strongest impact on gratitude levels, followed by social support and then access to green spaces. This underscores the notion that, while all factors significantly contribute to gratitude, community engagement exerts the most substantial influence.

These findings emphasize the role of educational institutions in promoting well-being by creating environments that foster gratitude, particularly crucial for students experiencing quarter-life crises (QLC). In this study, involving 231 participants from the Faculty of Education at UNIMEN, the demographic and academic context likely shaped students' responses to environmental factors. As future educators, these students may possess a heightened sensitivity to social connections and supportive settings, which can positively influence their levels of gratitude. QLC is marked by feelings of uncertainty, identity exploration, and stress about prospects. Students going through QLC are at risk of significant mental strain, especially if they lack emotional support. However, research suggests that those with high well-being and positive emotions, such as gratitude, are better equipped to navigate these challenges. By valuing and seeking social support, community involvement, and access to green spaces, students can build resilience against the stresses associated with QLC.

Educational institutions are uniquely positioned to help students through QLC by intentionally cultivating supportive environments. Integrating social support networks and expanding green spaces within campus infrastructure directly addresses the emotional needs of students, helping them foster positive attitudes like gratitude, which in turn boosts academic success. Green spaces, for instance, offer more than aesthetic benefits; they provide students with a peaceful setting to reflect, relax, and enhance their mental well-being. The perspectives of Seligman and Csikszentmihalyi (2014) align with this approach, emphasizing that environments fostering positive emotions can significantly enhance resilience. Additionally, Lyubomirsky, Sheldon, and Schkade (Fernandes de Souza, 2024) highlight that

supportive social interactions play a substantial role in cultivating gratitude and enhancing well-being. This is particularly relevant in managing QLC, where gratitude helps students stay positive amidst uncertainty. Bryant and Veroff's concept of "savoring" (Colombo et al., 2024) underscores the importance of appreciating positive moments, suggesting that green spaces and community activities on campus can further nurture gratitude. By fostering gratitude through social networks, green spaces, and community activities, universities can provide students with the resilience needed to navigate QLC, helping them thrive both academically and personally.

Conclusion: Implications and Limitations

1) Implications

Evidence from this study emphasizes the role of environmental factors like social support, access to green spaces, and community engagement in fostering gratitude among students. These findings have significant implications for higher education institutions striving to promote emotional well-being among their students.

- a. Importance of Physical and Social Environment for Emotional Well-being:** Educational institutions may consider developing social engagement programs and providing more green spaces on campus as part of efforts to improve students' mental and emotional well-being. A supportive environment can facilitate positive experiences like gratitude, which plays a crucial role in building resilience against the pressures of academic and personal life.
- b. Gratitude as a Protective Mechanism during the Quarter Life Crisis (QLC):** In the context of the QLC, often experienced by students, this study underscores that gratitude can serve as an important mediator in helping students navigate emotional and psychological challenges. Students engaged in supportive environments are more likely to develop gratitude, aiding them in coping with the uncertainties and psychological stressors associated with early adulthood.
- c. Expansion of Counseling Services to Support Mental Health:** Enhancing student counseling services that prioritize well-being is crucial, ensuring that these services address not only academic issues but also provide comprehensive emotional and psychological support. Based on this study's findings, institutions can offer counseling programs that prioritize emotional support and help students foster gratitude through positive social interactions. These well-being-oriented counseling programs can include reflective sessions, group therapy, and emotional skills training aimed at enhancing students' resilience in the face of QLC.

Sustained support from counseling services will help students become more actively involved in the campus community and utilize existing green spaces for relaxation and personal reflection. This is also relevant for educational policymakers who aim to create a holistic academic environment where counseling services address not only academic issues but also support students' emotional and psychological well-being. Through this approach, campuses can become spaces that foster both academic achievement and optimal emotional well-being.

2) Limitations

These limitations highlight areas where future research can expand and deepen the findings, offering a more nuanced understanding of the dynamics at play. The primary limitations of this study include constraints on the generalizability of results, the choice of a quantitative research design, potential biases in measurement tools, the cross-sectional nature of the data, and the exclusion of certain external variables. Each of these factors is elaborated upon below to clarify their potential impact on the study's conclusions and suggest directions for future research.

a) Limited Generalizability

The study sample consists solely of students from the Faculty of Education at Universitas Muhammadiyah Enrekang. As a result, the findings may not be generalizable to other universities, faculties, or broader populations. Future research that includes diverse institutions and student demographics could help enhance the applicability of the results across different educational contexts.

b) Quantitative Research Design

The reliance on a quantitative survey approach restricts the depth of insight into students' subjective experiences and perceptions of gratitude and environmental factors. While useful for statistical analysis, this method may not fully capture the emotional nuances and personal insights that qualitative methods, such as interviews or focus groups, could reveal. Follow-up studies incorporating these methods would offer a more comprehensive understanding.

c) Measurement Limitations

This study used Likert scales to measure gratitude and environmental factors, which, despite their validation, may be susceptible to response biases, such as social desirability bias. Additionally, individual differences in interpreting and responding to Likert scale items may affect result accuracy. Utilizing a combination of qualitative and quantitative approaches in future research could help mitigate these biases and validate the findings.

d) Cross-Sectional Data

As data were collected at a single point in time, this study offers a snapshot of the relationship between environmental factors and gratitude, without the ability to infer causality or observe changes over time. Longitudinal research would be needed to better understand the long-term effects of environmental factors on students' gratitude levels and how these relationships may evolve.

e) Unmeasured External Factors

This study did not account for potential external influences, such as family background, socioeconomic status, or past life experiences, which could affect levels of gratitude. The exclusion of these variables might introduce confounding factors, limiting the ability to fully interpret the findings. Future research that includes a broader range of variables could provide a more holistic understanding of the factors influencing student gratitude.

Despite these limitations, this study contributes to the growing body of literature on environmental factors and gratitude, offering a foundation for further exploration and practical applications within educational settings. Future research that addresses these

limitations can help scholars develop a more comprehensive understanding of how supportive environments enhance student well-being and resilience.

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