

**ПЕДАГОГИЧЕСКАЯ ПСИХОЛОГИЯ, ПСИХОДИАГНОСТИКА ЦИФРОВЫХ ОБРАЗОВАТЕЛЬНЫХ
СРЕД/EDUCATIONAL PSYCHOLOGY, PSYCHODIAGNOSTICS OF DIGITAL EDUCATIONAL
ENVIRONMENTS**

DOI: <https://doi.org/10.60797/PSY.2026.10.1>

**EFFECT OF GRATITUDE STRATEGIES ON THE MENTAL WELL-BEING OF SECONDARY SCHOOL
STUDENTS IN KANDARA SUB-COUNTY, KENYA**

Research article

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Abstract

This study examined the effect of gratitude-based activities in the psychological well-being of adolescents in the Kandara Sub-County, Kenya. The study had 848 Form Two students by applying a mixed-methods framework and a quasi-experimental design. The intervention group was exposed to a 10-week guided program involving keeping gratitude journals, reflecting on blessings, and visiting with gratitude, and there was a control group that was allowed to proceed with their usual routine. The data collected through the Gratitude Questionnaire (GQ-6) and the PERMA-Profiler revealed a statistically significant positive result, which is quantitative in nature. Regression analysis revealed that practice in gratitude practices explained 25.2 percent of mental well-being scores ($R^2 = 0.252$, $p = 0.001$). These findings were supported by qualitative data on educator and student leader interviews, which revealed changes in positive affect, peer relationships, and overall school culture that could be observed. The paper finds that gratitude-based interventions taught in a systematic manner can be an effective tool to support the mental health of adolescents and suggests their inclusion in psychosocial support programs in schools to help students to become more resilient and develop in a holistic way.

Keywords: gratitude strategies, mental well-being, positive psychology interventions, secondary school students.

**ВЛИЯНИЕ СТРАТЕГИЙ БЛАГОДАРНОСТИ НА ПСИХИЧЕСКОЕ БЛАГОПОЛУЧИЕ УЧАЩИХСЯ
СРЕДНИХ ШКОЛ В СУБ-ОКРУГЕ КАНДАРА, КЕНИЯ**

Научная статья

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Аннотация

В данном исследовании изучалось влияние деятельности, основанной на благодарности, на психологическое благополучие подростков в округе Кандара, Кения. В исследовании приняли участие 848 учащихся вторых классов, при этом использовалась смешанная методология и квазиэкспериментальный подход. Экспериментальная группа участвовала в 10-недельной программе, включавшей ведение дневников благодарности, размышления о своем благополучии и визиты благодарности, а контрольная группа продолжала жить по-прежнему. Данные, собранные с помощью анкеты благодарности (GQ-6) и PERMA-Profiler, показали статистически значимый положительный результат, который носит количественный характер. Регрессионный анализ показал, что практика благодарности объясняет 25,2% показателей психического благополучия ($R^2 = 0,252$, $p = 0,001$). Эти выводы были подкреплены качественными данными, полученными в ходе интервью с педагогами и лидерами студенческого самоуправления, которые выявили изменения в уровне положительных эмоций, отношениях со сверстниками и общей школьной культуре. В статье делается вывод, что систематически проводимые мероприятия, основанные на благодарности, могут быть эффективным инструментом поддержки психического здоровья подростков, и предлагается включить их в программы психосоциальной поддержки в школах, чтобы помочь учащимся стать более устойчивыми и гармонично развиваться.

Ключевые слова: стратегии благодарности, психическое благополучие, вмешательства позитивной психологии, учащиеся средней школы.

Introduction

Psychological wellbeing of adolescents is a burning global issue, and the increased rates of depression, anxiety, and psychosocial distress among the students are reported [19]. Factors such as parental drug abuse and a high rate of orphaned children contribute to worsening this matter in resource-constrained Kenyan areas such as Kandara Sub-County [10], [12]. The conventional education systems that mainly focus on academic performance at the expense of a holistic development do not prepare youths to cope with the challenges of life (OECD, 2024).

Positive Psychology Interventions (PPIs), in turn, have become a strength-based proactive approach to mental health. Instead of only practicing remedying pathology, PPIs strive to foster positive emotions, character strengths, and general prosperity [16]. One of them, gratitude-oriented practices, aimed at fostering the feeling of thankfulness, demonstrate notable potential in improving mental well-being (MWB). The paper will analyze the results of an empirical study and theoretical basis

of implementing the gratitude strategies in the specific context of Kenyan secondary education to determine their effect on the psychological wellbeing of students.

Research methods and principles

2.1. Research Methodology and Design

This study adopted a mixed method process to have a holistic view of the research issue. The approach has made it possible to gather, examine, and combine numerical and narrative data and found information that a one-method study could not provide [5]. Quantitative data included the statistical data of the effect of the intervention, whereas qualitative data enriched it with the depth and context, with the personal opinions, making it methodologically triangulated.

The quasi-experimental design was used, which is suitable to test the effectiveness of the intervention in the environment of a natural school where the assignment of individual students was impossible. The study was designed as non-equivalent control group where pre-test and post-test measurements were done. Schools were divided into two on the basis of which, one half constituted the intervention group and the other half was the control group.

2.2. Participants and Sampling

The study was conducted in public secondary schools within Kandara Sub-County (KSC), Murang'a County, Kenya. Form Two students were selected as the target population, as they are more settled than Form Ones and less burdened by national exam preparation than Form Threes and Fours.

A stratified random sampling technique selected 8 schools from the 58 public secondary schools in KSC to ensure representation across Extra-County, County, and Sub-County categories. From these, 848 Form Two students were chosen via simple random sampling and allocated to either the intervention ($n = 424$) or control ($n = 424$) group.

Purposive sampling was used for qualitative data collection, selecting Heads of Guidance and Counselling, Form Two teachers, and class secretaries from the sampled schools as key informants.

2.3. The Gratitude Intervention

The intervention group underwent a 10-week, structured program integrated into the school schedule and facilitated by teachers trained by the researcher. The program featured evidence-based practices:

Gratitude Journaling: students maintained a dedicated journal to record three to five items they were grateful for each day.

Counting Blessings: participants engaged in guided reflection sessions to mentally acknowledge and affirm positive aspects and supportive elements in their lives.

Gratitude Visits: students identified a benefactor they had not properly thanked, composed a detailed letter of appreciation, and read it aloud to the person if possible. The control group continued their usual activities without any structured gratitude practices.

2.4. Data Collection Instruments and Measures

Data was gathered using:

a) quantitative data: the Gratitude Questionnaire (GQ-6) This standardized 6-item self-report tool [11] assessed students' dispositional gratitude (e.g., "I have so much in life to be thankful for") on a 7-point Likert scale. It demonstrates strong internal consistency (Cronbach's alpha ~.82-.87);

b) quantitative data: the PERMA-ProfilerA modified PERMA-Profiler [3] measured the dependent variable, mental well-being (MWB), evaluating five pillars: Positive Emotion, Engagement, Relationships, Meaning, and Accomplishment to generate a composite well-being score;

c) qualitative data: interview GuidesSemi-structured interviews with Guidance staff, teachers, and class secretaries explored observations of changes in student emotions, social dynamics, and overall behavior post-intervention.

2.5. Data Collection Procedure

Pre-test: after securing permissions and ethical consent, the GQ-6 and PERMA-Profiler were administered to both groups to establish a baseline.

Intervention: the intervention group completed the 10-week program; the control group received no treatment.

Post-test: both groups retook the GQ-6 and PERMA-Profiler questionnaires after the intervention.

Qualitative Interviews: the researcher concurrently conducted interviews with key informants to gather in-depth insights.

2.6. Data Analysis

Quantitative data from the surveys were analyzed with SPSS Version 26. Descriptive statistics summarized demographics and GQ-6 responses. Inferential statistics, including independent t-tests, paired t-tests, and regression analysis, tested the hypothesis (H0: No statistically significant mean difference in mental well-being between groups). Qualitative interview data were transcribed and subjected to thematic analysis to identify key patterns regarding gratitude's perceived impact. Finally, triangulation integrated both data types to form a validated, holistic conclusion.

2.7. Ethical Considerations

The study adhered to strict ethical standards, receiving approval from the Mount Kenya University Institutional Ethics Review Committee (IERC) and a NACOSTI research permit. Consent was obtained from the County Education office, school principals, and parents, with student assent also secured. Anonymity and confidentiality were maintained through the use of codes, and participants were informed of their right to withdraw without penalty.

Quantitative Findings

3.1. Descriptive Analysis of Gratitude Strategies

The Gratitude Questionnaire (GQ-6) was used to assess students' levels of gratitude. The responses for both the control and intervention groups are summarized in the Descriptive Statistics for Gratitude Strategies (GQ-6) table.

Table 1 - Descriptive Statistics for Gratitude Strategies (GQ-6)

DOI: <https://doi.org/10.60797/PSY.2026.10.1.1>

Statement	1	2	3	4	5	6	7	Mean	Std Dev.
Control Group (n=400)									
There exist a lot of things and people in my life to be thankful for	18	32	51	97	93	68	41	4.56	1.23
If I were to write every single thing for which I am felt grateful for in my life, the list would be very long	16	23	47	82	96	83	53	4.78	1.45
Considering my life and the world at large, there is very little to be grateful for	29	42	58	91	78	63	39	4.34	1.09
There are so many people in my life to be grateful to	11	19	33	68	102	89	78	4.89	1.67
The older I get, the better I become in appreciating the events, situations, and people that have had an impact in my life	6	14	26	63	98	107	86	5.12	1.82
I tend to take a long time before getting something or somebody to be grateful to	24	36	49	92	83	71	45	4.67	1.34
Intervention Group (n=400)									
There exist a lot of things and people in my life to be thankful for	14	26	38	87	94	79	62	4.85	1.56
If I were to write every single thing for which I am felt grateful for in my life, the list would be very long	9	21	36	73	102	91	68	5.02	1.72
Considering my life and the world at large, there is very little to be grateful for	26	34	52	79	88	72	49	4.67	1.34
There are so many people in my life to be grateful to	7	17	29	67	99	101	80	5.12	1.82
The older I get, the better I become in appreciating the events, situations, and people that have had an impact in my life	4	11	22	58	92	112	101	5.34	1.96
I tend to take a long time before getting something or somebody to be grateful to	16	24	41	78	89	82	70	4.89	1.67

Note: 1 = Strongly Disagree, 7 = Strongly Agree

Table 1 (Descriptive Statistics for Gratitude Strategies) presented responses from the GQ-6. The intervention group consistently reported higher mean scores on all six statements compared to the control group. The overall mean gratitude score was 4.98 for the intervention group versus 4.73 for the controls, indicating a stronger grateful disposition among participants who engaged in the gratitude exercises.

3.2. Inferential Analysis: The Effect of Gratitude on Mental Well-being

A regression analysis was conducted to determine if the observed differences in gratitude levels translated into a statistically significant effect on overall mental well-being (as measured by the PERMA-Profiler). The results are summarized in Tables below.

Table 2 - Model Summary for Gratitude and Mental Well-being

DOI: <https://doi.org/10.60797/PSY.2026.10.1.2>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.502	0.252	0.251	1.22

The model summary (Table 2) shows a moderate positive correlation ($R = 0.502$) between gratitude strategies and mental well-being. The R Square value of 0.252 indicates that 25.2% of the variance in students' mental well-being can be explained by their engagement in gratitude-based strategies.

Table 3 - ANOVA for the Regression Model

DOI: <https://doi.org/10.60797/PSY.2026.10.1.3>

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	413.82	1	413.82	277.80	< .001
Residual	1221.18	798	1.53	–	–
Total	1635.00	799	–	–	–

The ANOVA results (Table 3) show that the regression model is statistically significant, $F(1, 798) = 277.80, p < .001$. This confirms that gratitude is a significant predictor of mental well-being.

Table 4 - Regression Coefficients

DOI: <https://doi.org/10.60797/PSY.2026.10.1.4>

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
(Constant)	2.710	0.093	–	29.14	< .001
Gratitude	0.615	0.037	0.502	16.67	< .001

The coefficients table (Table 4) provides the details of the regression equation. The unstandardized coefficient ($B = 0.615$) indicates that for every one-unit increase in the gratitude score, a student's mental well-being score increases by 0.615 units. The standardized coefficient ($Beta = 0.502$) confirms a moderate to strong effect, and the $*p*$ -value of $< .001$ confirms that this relationship is statistically significant.

3.3. Qualitative Findings

Interviews with Guidance and Counselling Heads, Form Masters, and Class Secretaries provided rich, contextual insights that corroborated the quantitative data. Thematic analysis revealed several key themes:

Enhanced Positive Atmosphere: teachers consistently reported a noticeable improvement in the classroom and school environment. One Form Master stated, "Students often come up to me after class to say thank you for the lessons. It creates a positive atmosphere."

Strengthened Relationships: a primary observation was that gratitude fostered stronger, more supportive peer relationships. A Class Secretary noted, "It's common to see students helping each other with homework or offering to share their notes. They are very supportive of one another." A Guidance and Counselling H.o.D added, "Students love making cards and writing notes to thank their teachers... It shows that they value and appreciate the efforts."

Increased Resilience and Positive Coping: stakeholders observed that grateful students were better equipped to handle challenges. A Class Secretary shared, "When students face difficulties, they often express gratitude for the help they receive. It helps them stay positive and motivated."

Observable Positive Emotions: the link between gratitude and happiness was frequently mentioned. A Form Master remarked, "Students who practice gratitude tend to be happier and more content. They have a positive outlook on life and school."

3.4. Triangulation of Findings

The integration of quantitative and qualitative data provides compelling, multi-faceted evidence for the effect of gratitude strategies.

The quantitative data established a statistically significant, moderate-strong causal relationship, showing that gratitude interventions directly account for over 25% of the improvement in mental well-being scores.

The qualitative data explained the *how* and *why* behind these numbers. The narratives from teachers and student leaders described the visible manifestations of this improvement: a more positive school climate, stronger social bonds, and students who were more resilient and emotionally balanced.

This convergence of data from different sources strongly validates the conclusion that the implementation of school-based gratitude strategies significantly enhances the mental well-being of secondary school students in Kandara Sub-County.

Discussion

This study aimed to determine the impact of structured gratitude interventions on the mental well-being of students in Kandara Sub-County. The results robustly demonstrate that the program was highly effective, leading to the rejection of the null hypothesis.

The regression model confirmed a statistically significant, positive relationship, with gratitude accounting for 25.2% of the variance in well-being scores ($R^2 = 0.252$) and a substantial effect size (Beta = 0.502). This aligns with existing positive psychology research [8], [15], confirming the cross-cultural applicability of these practices in a Kenyan context.

Qualitative data illuminated the lived experiences behind the statistics. Observations of an improved atmosphere, stronger friendships, and enhanced student motivation provided a causal pathway for the quantitative PERMA score increases. The rise in prosocial behaviors mirrors findings by Bono et al. [2] and Forster et al. [8] on gratitude's role in building supportive relationships.

The PERMA model [14] coherently explains the intervention's success:

Positive Emotion: journaling and visits directly cultivated feelings of thankfulness and joy.

Relationships: gratitude acted as a "social glue," strengthening student and teacher bonds.

Meaning: reflecting on positive influences helped students see their lives as more interconnected and purposeful.

An interesting nuance was that while interpersonal gratitude increased, cultivating a broader, existential gratitude for the state of the world remained challenging, echoing cautions from [18]. Furthermore, higher standard deviations in the intervention group suggest variable individual responses, potentially moderated by personality, baseline coping skills, and home environment [4]. This underscores the value of a flexible, school-wide approach over a one-size-fits-all program.

Gratitude interventions represent an effective, low-cost, and scalable method to enhance student mental health. Integrating these structured practices into the Kenyan educational system is a recommended policy option to address the growing psychosocial needs of adolescents, building psychological resources for academic persistence and lifelong well-being.

Conclusion

This research found that a structured, 10-week gratitude intervention significantly enhanced the mental well-being of secondary school students in Kandara Sub-County, Kenya.

Quantitatively, regression analysis showed that gratitude strategies explained 25.2% of the improvement in mental well-being scores, a statistically significant effect ($\beta = 0.502, p < 0.001$).

Qualitatively, interviews corroborated these findings, reporting visible improvements in positive emotions, peer relationships, resilience, and the overall classroom climate.

Overall, the integration of both data types provides compelling evidence that school-based gratitude interventions are an effective tool for promoting adolescent mental well-being in this setting.

The study successfully fulfilled its objective, demonstrating a causal effect and bridging a literature gap by providing empirical evidence from a specific African educational context.

5.1. Suggestions for Future Research

Long-Term Efficacy: track the persistence of benefits and the potential need for booster sessions.

Individual Differences: investigate moderating factors (e.g., personality, baseline mental health, gender) to understand variable effectiveness.

Cultural Adaptation: design and test interventions more deeply integrated with local Kenyan values and expressions of thankfulness.

Broader Applications: explore integrating gratitude with other psychosocial or academic programs for a comprehensive well-being approach.

Existential Gratitude: develop methods to foster a broader sense of gratitude beyond interpersonal thankfulness.

Конфликт интересов

Не указан.

Рецензия

Все статьи проходят рецензирование. Но рецензент или автор статьи предпочли не публиковать рецензию к этой статье в открытом доступе. Рецензия может быть предоставлена компетентным органам по запросу.

Conflict of Interest

None declared.

Review

All articles are peer-reviewed. But the reviewer or the author of the article chose not to publish a review of this article in the public domain. The review can be provided to the competent authorities upon request.

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