

RESEARCH ARTICLE

Reducing adolescent aggression and moral disengagement with gratitude practices: An experimental approach

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ABSTRACT

This study explores the impact of gratitude-based interventions on adolescent aggression and moral disengagement in Pakistan. Using a pre-post experimental design, 200 college students (17–19 years) were randomly assigned to experimental (n = 100) and control (n = 100) groups. The intervention consisted of daily gratitude journaling and the “counting blessings” activity for two weeks. Data were collected using standardized scales for gratitude, aggression, and moral disengagement, and analyzed through SPSS using t-tests and ANOVA. Results showed a significant increase in gratitude and a significant decrease in aggression and moral disengagement in the experimental group compared to the control. Findings support gratitude practices as effective, low-cost strategies to enhance emotional well-being and reduce problematic behaviors in adolescents.

Keywords: gratitude intervention; gratitude; aggression; moral disengagement; moral issues

1. Introduction

As a result of global moral issues, numerous studies have been conducted that seek to evaluate issues of moral conduct and determine why adolescents engage in 'outside the rules' behavior and how they remain satisfied after acting beyond their moral standards. Adolescence is a transitional phase of development and growth from childhood to adulthood.

This study presents an innovative gratitude intervention that integrates culturally sensitive journaling with the well-established “counting blessings” technique. Specifically designed for college-aged adolescents in Pakistan, the intervention aims to foster gratitude while simultaneously reducing aggression and moral

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disengagement constructs that have received limited empirical attention within this cultural and developmental context.

Positive psychology introduced a constructive approach that explores human nature and reduces the impact of negative emotions by inducing positive emotions in individuals. This study is among the first to assess the combined impact of gratitude journaling and daily blessings on behavioral regulation among Pakistani adolescents, providing a culturally grounded and scalable intervention model^[1].

Gratitude is described as having a grateful orientation, being appreciative, and being thankful for what one receives from others. It is derived from the Latin word *Gratia*, which denotes thanks, favor, acceptance, or compliment^[1]. As a positive emotion, feeling thankful is inherently pleasant and is associated with joy and contentment^[2]. Developmental theorists, such as Melanie Klein, suggested that gratitude is present at birth and contributes to the child's mature cognitive and emotional system.

Among all positive psychology-based interventions, gratitude-based practices are the most effective. Three well-known methods enhance gratitude in individuals: (a) daily listing of things one is grateful for, (b) gratitude contemplation, and (c) writing a letter to someone they are grateful for. The gratitude list method is the most frequently used, as it is simple, easy, and accessible. In sum, promoting gratitude is a viable route toward advancing human flourishing. This study highlights why gratitude intervention is particularly useful during adolescence.

This study employed the counting blessings intervention, a well-established method to encourage gratitude. In this intervention, participants write three things they are grateful for daily, along with their causes, over two weeks. Spending a few minutes each day reflecting on life's positive aspects can significantly improve gratitude.

By practicing gratitude, individuals can evoke positive emotions and facilitate grateful thinking. The fundamental teachings of Islam encourage believers to remain content and grateful to Allah Almighty, regardless of their circumstances^[3]. Writing gratitude notes has been shown to enhance gratitude and increase happiness^[4]. The gratitude intervention also elevated positive emotions and lowered aggression levels. Notably, the effect of the blessings intervention persisted for six months, while the effect of gratitude letters lasted for one month.

A study on college students found that gratitude interventions improved well-being^[5]. Researchers observed that gratitude helps enhance positive experiences while reducing negative emotions and behaviors. The listing method has proved particularly effective among school and college students. Froh, Emmons, and Sefick found that adolescents (ages 11–14) who participated in gratitude list exercises exhibited higher gratitude and fewer negative emotions compared to those in neutral event conditions^[6].

Sheldon demonstrated that the effects of gratitude listing are stronger when the individual is intrinsically motivated and practices consistently over time^[7]. Therefore, gratitude is of great concern for adolescents experiencing negative emotions and life challenges. Gratitude interventions can thus yield emotional and psychological benefits during this stage of life.

In the gratitude-based journal used in this study, participants listed responses to prompts over seven days. The journal provided structured guidance, such as expressing gratitude to family members. Participants shared how they felt before and after completing the exercises. These responses helped identify recurring emotional and psychological themes. A qualitative study found that children often expressed gratitude for family protection and love^[8]. In Islam, gratitude “*shukr*” is foundational to moral and social conduct and is a principle often emphasized in Sufi philosophy.

Fredrickson developed a gratitude theory in the broader context of positive emotions^[9]. Her “Broaden-and-Build” theory suggests that grateful individuals who experience positive emotions develop stronger personal resources. These emotions eliminate negativity and help individuals build resilience, leading to better behaviors and coping mechanisms.

Gratitude broadens cognitive flexibility, breaks rigid mental patterns, and promotes the development of personal and social resources. Literature shows that individuals with higher gratitude demonstrate broader thinking, more adaptive coping, fewer rule-breaking behaviors, and reduced moral disengagement^[10]. Froh et al. also found that gratitude-listing adolescents reported more optimism and self-worth^[6].

Adolescents are more likely to act immorally due to emotional and psychological volatility. They encounter many stressors and obstacles while pursuing goals, which can fuel aggressive behavior. Aggression manifests verbally, physically, or mentally and often leads to moral disengagement^[11,12]. It is commonly defined as intentional behavior aimed at harming others^[13].

Research shows that aggressive behavior intensifies in situations involving bodily harm and varies based on contextual urgency. Therefore, adolescence remains a critical phase for addressing aggression. Gratitude interventions show promise in mitigating such behaviors. Deng et al. demonstrated that aggression levels significantly decreased following a gratitude-based intervention. In recent years, adolescent aggression has surged as a mental health concern. Shelley and Sonja found a strong link between aggression and moral disengagement, where adolescents rationalize harmful behavior through cognitive distortions.

Given this context, the present study sought to reduce aggression and moral disengagement among adolescents by enhancing gratitude through counting blessings and journaling. Moral disengagement is a cognitive process that enables individuals to justify immoral behaviors and actions. According to Bandura, people are guided by internal moral standards and refrain from actions that cause guilt or shame. Moral disengagement allows people to override these standards, engage in unethical behavior, and cope with associated emotions^[14].

Bandura’s theory explains how individuals reframe harmful behaviors as acceptable without necessarily changing moral norms. This review highlights the persistent link between aggression and moral disengagement and points to gratitude as a counterbalance to these distortions. According to Sauri, societal norms are rooted in moral decency. Luthan emphasized that moral codes are essential for ethical behavior, judgment, and community integrity.

Social learning theory, as stated by Bandura, underscores how people learn through observation and modeling^[15]. Research shows that adolescents are more susceptible to moral disengagement than university students^[16]. Boys, in particular, show higher rates of disengagement using techniques like euphemistic labeling and diffused accountability^[17].

While Froh et al. and Sheldon emphasized intrinsic motivation in gratitude practice, Bandura’s theory helps explain how gratitude may neutralize cognitive mechanisms behind moral disengagement. Studies from both Islamic and Western perspectives affirm the value of gratitude in emotional and moral development, making such interventions particularly relevant in diverse cultural contexts like Pakistan.

Detert, Trevino, and Sweitzer described moral disengagement as a result of ethically compromised decision-making^[18]. Moral disengagement and rule-breaking behavior are especially prominent among adolescents^[19]. While disengagement may increase from late adolescence into early adulthood, research also shows it can decline with age.

Based on this literature, the present study hypothesizes that gratitude interventions can foster emotional well-being while reducing aggression and moral disengagement in adolescents. Research shows that moral disengagement increases from late adolescence to early adulthood^[19]. However, other findings suggest that with age, individuals may become more morally aware, leading to a gradual decrease in disengagement levels.

Therefore, in the present study, we hypothesize that a gratitude intervention not only enhances gratitude levels among adolescents but also effectively reduces their aggressive behaviors and moral disengagement. By encouraging young individuals to reflect on blessings, express thankfulness, and develop emotionally constructive habits, the intervention addresses two pressing challenges in adolescent development: regulating aggression and reinforcing moral behavior.

This intervention has the potential to serve as a culturally grounded, low-cost, and scalable psychological tool. It aligns with both psychological theories and Islamic teachings, offering a dual framework that supports adolescents' emotional and moral development. In a society like Pakistan, where family, faith, and social cohesion are vital, fostering gratitude may serve as an essential buffer against the increasing prevalence of aggression and moral disengagement among youth.

In conclusion, the current study extends the literature on gratitude-based interventions by incorporating culturally sensitive practices and targeting moral disengagement a relatively underexplored construct in non-Western adolescent populations. By doing so, it offers a novel, evidence-informed approach for enhancing well-being and behavioral regulation in emerging adults. However, this tendency can diminish with maturity and social responsibility. Therefore, in the present study, we hypothesized that gratitude intervention enhances gratitude and reduces aggression and moral disengagement among adolescents.

Several studies support the importance of gratitude in enhancing psychological resilience, emotional regulation, and positive behavior. Dossett^[20] highlighted how gratitude and kindness improve subjective well-being. Similarly, Eisenberg et al.^[21] emphasized the role of prosocial reasoning in adolescents, linking gratitude to empathy and moral reasoning.

Emmons and his colleagues^[22–24] have consistently shown that gratitude is a psychological strength that can be cultivated through daily practices. Their studies on “counting blessings” confirmed that gratitude interventions enhance life satisfaction and decrease depressive symptoms. Fredrickson^[25] also emphasized how gratitude-based positive emotions broaden thought-action repertoires, allowing individuals to build enduring resources.

Froh et al.^[26] further validated the effectiveness of gratitude interventions in adolescents, especially when compared to neutral activities. Gini and colleagues^[27] showed through meta-analyses that moral disengagement is significantly associated with aggressive behaviors in youth.

Göcen^[28] explored the spiritual and cultural dimensions of gratitude among Turkish-Muslim children, suggesting gratitude as a universal construct adaptable across religious and cultural lines. Gómez Tabares and Landinez-Martínez^[29] established that moral disengagement is a strong predictor of aggression and bullying in youth facing psychosocial risks.

Gratitude also correlates strongly with happiness and well-being. Gottlieb and Froh^[30] demonstrated that grateful adolescents are more optimistic and socially connected. Hymel and Perren^[31] identified moral disengagement as a key mechanism in school bullying, reinforcing the value of interventions targeting moral cognition.

Jackowska et al.^[32] found that brief gratitude interventions improve sleep, stress levels, and overall well-being. According to the previous studies, confirmed that gratitude plays a significant role to overcome moral

disengagement behavior by encouraging creative thinking and fostering engagement in positive emotions^[33,34]. It has been shown to predicts life satisfaction and psychological resilience among adolescents^[35,36]. LF Barrett^[37] suggested that positive emotions like gratitude are evolutionarily advantageous, improving emotional awareness and adaptability. Lomas et al.^[38] reviewed gratitude interventions and called for culturally sensitive applications like the present study. Lopez and Snyder^[39,40] emphasized the role of positive psychology in promoting human strengths, including gratitude and optimism.

Martínez-Martí et al.^[41] found that gratitude counting exercises improved subjective well-being among Spanish participants. McCullough, Emmons, and Tsang^[42] also highlighted gratitude as a stable personality trait with positive emotional consequences. Meier^[43] explored the qualitative dimensions of gratitude and its impact on well-being and depression. Seligman et al.^[44,49] established empirical validation for positive psychology interventions, including gratitude journaling and letter writing.

Moore^[45] reviewed how moral disengagement allows individuals to rationalize immoral behavior. Gratitude may prevent such rationalizations by cultivating moral self-awareness. O'Connell et al.^[46] showed that gratitude strengthens interpersonal bonds and social harmony. Paciello et al.^[47] noted that moral disengagement and personal values predicted aggressive behavior in adolescents with conduct disorders. Rubio-Garay et al.^[48,49] supported this finding, suggesting gratitude may act as a mediational buffer.

Snyder and Lopez^[50] documented the clinical effectiveness of gratitude-based interventions. Sheldon and Lyubomirsky^[51] found that expressing gratitude and envisioning positive futures increased and sustained positive emotions. Steyn^[52] developed a psycho-educational program to address aggression among educators, showing the transferability of gratitude-based tools across age groups. Sun et al.^[53] confirmed that gratitude reduces problem behaviors by promoting positive coping.

Thornberg and Jungert^[54] showed how moral disengagement underpins school bullying, and Utley and Garza^[55] demonstrated the therapeutic impact of journaling on adolescents. Wang and colleagues^[56,57] examined moral disengagement's relationship with aggression, revealing that gratitude-based interventions could reduce moral disengagement, especially when paired with empathy or cognitive reframing strategies.

Wigham et al.^[58,59] reviewed psychosocial interventions for violence reduction, calling for innovative approaches like the one presented in this study. WS Kim^[60] analyzed moral emotions through the lens of constructed emotion theory, which aligns with gratitude as a learned moral-emotional response. Yadava et al.^[61,62] confirmed that moral disengagement is closely tied to aggressive tendencies, especially when emotional regulation is low. Gratitude, therefore, offers a powerful counterbalance to emotional impulsivity and moral cognitive failure.

2. Methods

2.1. Participants and procedure

Participants aged 17 to 19 years (gender = 50% male, 50% female) from various public and private colleges were included after formal permission from the authorities and informed consent from the participants. The present study employed a pre-post experimental study design with an intervention and quantitative nature. The study was compromised of two research conditions. In the study, an experimental group and a control group were used.

The study was divided into three phases: (1) before intervention (baseline measurement), (2) 14 days of gratitude intervention and gratitude meditation, and (3) postintervention measurement. The participants were approached, and the purpose of the study was explained while reassuring them that their participation was

voluntary and the collected data will be treated as confidential. The information sheet and the consent form were provided to the participants. Two hundred participants were divided into experimental and control groups on random sampling in the classroom setting. All participants received the Phase I measure.

Phase II was carried out after the completion of Phase I, with a gap of two days. Each group was given 14 days to perform the tasks given in gratitude form and the journals. Separate journals were created for each group. In this Phase, the gratitude journal was given to the experimental group, which contained daily entries for seven days, and the gratitude form was given for 14 days. Each day, participants were reminded to fill out their journals and perform given tasks. Gratitude journals contained tasks like being grateful to your family members, listing things that one feels grateful for, and completing instructions for gratitude given. Participants were asked to do it daily and share their feelings. Gratitude meditations were given to the participants after filling out the gratitude activity and journals.

Participants in the control group were asked to write about resentful past neutral events or share their daily routine in a given journal. In Phase III, participants from all two groups were requested to return their gratitude form and journal after fourteen days. After that, they were requested to perform a post-test. Measures used in Phase I were also used in the post-test. The participants were thanked for being part of the research.

Statistical analysis was conducted on the data to investigate the underlying objectives of the present study. After evaluating the data, the analysis was performed using SPSS version 23. Descriptive statistics for all the scales used in the study were computed to check the normality of the data and overall trends. Alpha reliability was estimated for the evaluation of internal consistency. The Pearson product-moment correlation was computed to see the relationship patterns among the study variables. To calculate the mean differences between the groups and within groups, independent sample t-test, two-way analysis of variance (ANOVA), and multiple analysis of variance were used.

2.2. Instrument

2.2.1. The Gratitude Questionnaire: GQ-6

The GQ-6^[42], comprising six items developed by McCullough et al., was used to measure the participants' gratitude level. It is a self-report questionnaire. It is a seven-point Likert-type scale ranging from -1 strongly disagree to -7 strongly agree. It has been validated in various cultural contexts with internal consistency ($\alpha = 0.76$ in post-test in our sample). The alpha reliability for the scale is .82 (McCullough et al., 2002). In the present study, GQ-6 was administered in the pre-test and post-test. In the present study, the alpha reliability for the scale is .63 in the pre-test and .76 in the post-test measurements.

2.2.2. The aggression questionnaire

The aggression questionnaire^[10] consists of 29 items and developed by Buss & Perry. It is a 5-point Likert scale ranging from 1 (extremely uncharacteristic of me) to 5 (extremely characteristic of me); items 7 and 18 are reversed scores. The alpha reliability is .85. A high score indicates the tendency to a severe form of aggression. In the present study, The Aggression Questionnaire, the alpha reliability is .83 in the pre-test and .83 in the post-test.

2.2.3. Moral disengagement scale

The Moral Disengagement Scale was developed by Bandura. This scale consists of 32 items. It is a five-point Likert scale rated from strongly agree (5) to strongly agree (1). It has no reverse elements. A high scale on the scale indicates a person's high moral disengagement. The scale has an alpha coefficient of .90 (Bandura, 1996). In the present study, the alpha reliability for the scale is .81 in the pre-test and .83 in the post-test.

3. Results

The correlation analysis (**Table 1**) shows the correlation between variables in the pre-test for the control group, and below the diagonal shows the correlation between variables in the post-test for the control group. The results showed that gratitude was not significantly associated with aggression and moral disengagement. Aggression was negatively significant with moral disengagement. Furthermore, aggression was negatively significantly associated with gratitude. Moral disengagement has a significant negative correlation with aggression, while a non-significant positive relationship with gratitude in the post-test of the control group.

Table 1. Correlation among study variables before and after the test (Control Group) ($N = 100$).

S.no	Variables	1	2	3
1.	Gratitude	-	.018	.016
2.	Aggression	.089**	-	.298**
3.	Moral Disengagement	.191	-.249*	-

Above diagonal = Pre-test, below diagonal = Post-test

* $p < .05$. ** $p < .01$.

The person product moment was again computed to find the relationship between the variables and also compare the correlation values in the pre-test and post-test in the experimental group. In **Table 2**, the above diagonal shows the correlation between variables in the pre-test for the experimental group, and the below diagonal shows the correlation variables in the post-test for the experimental group. Results showed that gratitude had a non-significant negative relationship with aggression and a positive significant relationship with moral disengagement. Aggression had a significantly negative relationship with moral disengagement. However, in the experimental group's post-test, aggression had a non-significant negative relationship with gratitude.

Furthermore, moral disengagement has a non-significant positive correlation with gratitude and a significant negative association with aggression. However, if we compare the level of correlation among study variables in the pre-test and post-test, the relationship can be stronger in the post-test. In the post-test measurement of the experimental group, we can see that some relations are stronger and were found to be significant in the post-test.

Table 2. Correlation between Study Variables Before and After the Test (Experimental Group) ($N = 100$).

S.no	Variables	1	2	3
1	Gratitude	-	-.015	.243*
2	Aggression	-.189	-	-.303**
3	Moral Disengagement	.186	-.462**	-

Above diagonal = Pre-test, below diagonal = Post-test

* $p < .05$. ** $p < .01$.

Group Differences among Study Variables

Group differences between study variables were measured using an independent sample t-test.

Table 3. Mean differences between the control and the experimental group in the pre-test on all study variables ($N=200$).

Var	Control ($n = 100$)		Experimental ($n = 100$)		t	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
Gra	30.46	4.61	30.19	4.85	.403	.687	-1.05	1.59	0.00
Agg	78.66	16.36	82.32	18.33	-1.489	.138	-8.50	1.18	0.21
MD	106.36	15.57	105.91	15.80	.203	.839	-3.92	4.82	0.02

Note. Gra= Gratitude; Agg= Aggression; MD= Moral Disengagement; M = Mean; SD = Standard Deviation.

CI= Confidence Interval; UL = Upper Limit; LL = Lower Limit; p = Significant Value.

The results in **Table 3** demonstrated that the mean differences of the groups were tested using the independent sample t-test between the control group and the experimental group in the pre-test. The table shows that the p-values are not significant for all study variables, which means there were no significant differences between the control group and the experimental group, which had no differences in the pre-test and were balanced on the study variables before intervention.

Table 4. Mean differences between the control and the experimental group in the post-test on all study variables ($N=200$).

Variables	Control ($n = 100$)		Experimental ($n = 100$)		t	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
Gra	31.13	5.44	34.25	5.36	-4.083	.000	-4.62	-1.61	0.57
Agg	75.16	17.07	70.15	18.44	1.992	.048	.049	9.96	0.28
MD	104.33	17.54	96.72	17.31	3.090	.000	2.75	12.47	0.43

Note. Gra= Gratitude; Agg= Aggression; MD= Moral Disengagement; M = Mean; SD = Standard Deviation; CI= Confidence Interval; UL = Upper Limit; LL = Lower Limit; p = significant value

Table 4 represents the differences between the control and experimental groups in the post-test on the study variables. According to the findings, the mean difference is significant in Gratitude, Aggression, and Moral disengagement. This implies that the experimental group had higher Gratitude while lower Aggression and Moral disengagement. However, there were significant differences between the two groups.

Within-group comparison in the pre-test and post-test

A paired sample t-test was used to test the differences between the groups in the pre-test and post-test.

Table 5. Mean in the study variables in the control group before and after the test ($N = 100$).

Variables	Pre-Test ($n = 100$)		Post-Test ($n = 100$)		t	df	p	95% CI	
	M	SD	M	SD				LL	UL
Gra	30.46	4.61	31.13	5.44	-1.007	99	.316	-1.08	.649
Agg	78.66	16.36	75.16	17.07	1.982	99	.050	-.003	7.00
MD	106.36	15.57	104.33	17.53	.974	99	.332	-2.09	6.14

Note. Gra= Gratitude; Agg= Aggression; SE= Self-Esteem; MD= Moral Disengagement; M = Mean; SD = Standard Deviation; CI= Confidence Interval; UL = Upper Limit; LL = Lower Limit; df = Degree of freedom; p = Significant value.

Table 5 represents the mean differences calculated using the paired sample t-test in the control group for the pre-test and post-test. The table shows that the p-value is insignificant for any study variable, which means that the control group participant's scores on study variables remain stable in the pre-test and post-test.

Table 6. Mean in the study variables in the Experimental Group during pre-test and post-test ($N=100$).

Variables	Pre-Test ($n = 100$)		Post-Test ($n = 100$)		t	df	p	95% CI	
	M	SD	M	SD				LL	UL
Gra	30.91	4.85	34.25	5.36	-7.205	99	.000	-5.17	-2.94
Agg	82.32	18.33	70.15	18.44	8.175	99	.000	9.21	15.11
MD	105.91	15.80	96.72	17.31	5.261	99	.000	5.72	12.65

Note. Gra= Gratitude; Agg= Aggression; MD= Moral Disengagement; M = Mean; SD = Standard Deviation; CI = Confidence Interval; UL = Upper Limit; LL = Lower Limit; df = Degree of freedom; p = significant value.

In **Table 6**, the paired sample t-test shows that the experimental group had significant differences in the measurement before and after the test. Participants in the experimental group scored lower in aggression and moral disengagement. The results also show a significant increase in gratitude scores.

Differences between and within groups

Two-way analysis of variance (ANOVA)

Table 7. Two-way ANOVA to test differences in pre- and post-assessment for the experimental and control group ($N=200$).

Variables	Pre-Test				Post-Test				F	p	Eta SQ
	Control		Experimental		Control		Experimental				
	M	SD	M	SD	M	SD	M	SD			
Gra	30.46	4.61	30.19	4.85	31.13	5.44	34.25	5.36	21.72	.000	.052
Agg	78.66	16.36	82.32	18.33	75.16	17.07	67.15	18.44	33.06	.000	.078
MD	106.36	15.57	105.91	15.80	104.33	17.53	95.93	17.59	13.34	.000	.033

Table 7 represents the differences within and between groups in the pre-test and post-test measurements of the study variables. The results show that the two-way ANOVA appeared significant for all study variables. The effect size estimate showed medium to high effect sizes ranging from 0.33 to 2.52. The differences between individual variables are elaborated in graphs and figures (**Figures 1 to Figure 3**).

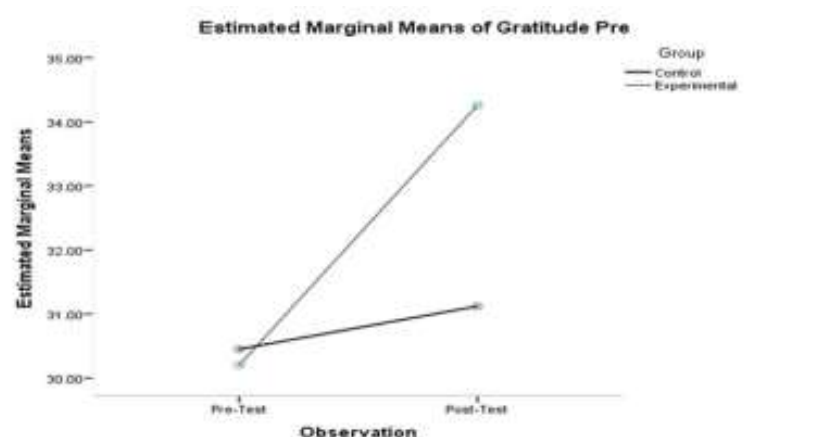


Figure 1. The figure shows the gratitude differences between the control and experimental groups for pre-test and post-test measurement.

The results show that gratitude scores for the experimental group increased from pre-test to post-test as compared to the control group from pre-test to post-test. The level of gratitude was similar in participants in

the experimental and control groups in the pre-test, but in the post-test, the participants in the experimental group had a higher level of gratitude than the control group.

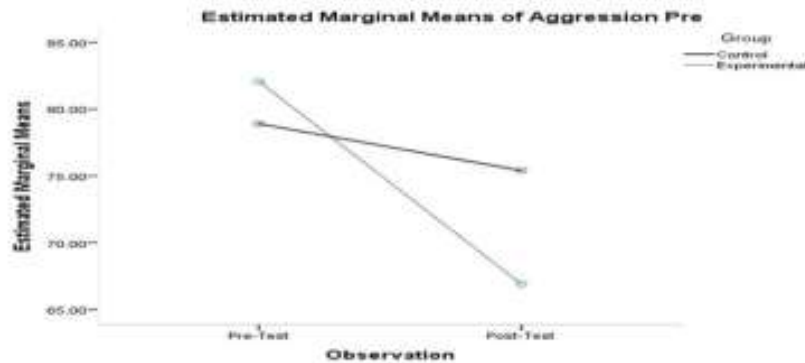


Figure 2. Aggression in the control group and experimental group for pre-test and post-test measurement.

The results show that the aggression scores for the experimental and control groups change in the pre-test and post-test measurements. The level of aggression decreased significantly in participants in the experimental group from pre-test to post-test measurement compared to the control group.

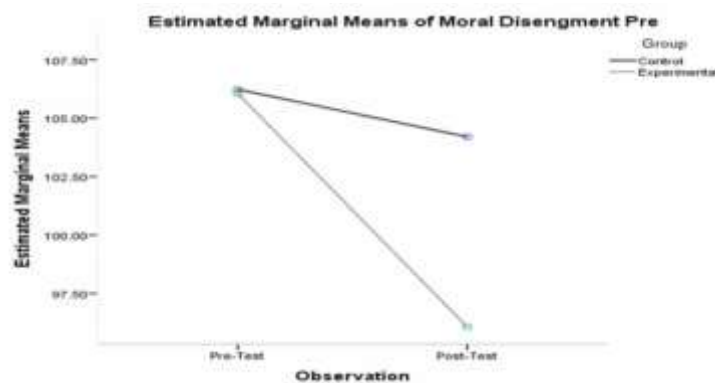


Figure 3. Moral disengagement in the control group and experimental group for pre-test and post-test measurements.

Moral disengagement scores did not change significantly between the pre-test and post-test in the control group, but the participants in the experimental group scored considerably lower on moral disengagement at the post-test compared to the pre-test. The level of moral disengagement significantly decreased in participants in the experimental group from pre-test to post-test measurement compared to the control group.

4. Discussion

The present study aimed to investigate the effect of gratitude intervention on the aggression and moral disengagement of the outcome variables among adolescents. The study was carried out on adolescents (college students) in Pakistan. Furthermore, the objective of the present study was based on the understanding that adolescents who engage in undesirable behavior or immoral acts exhibit aggression and low gratitude.

The study aimed to apply the gratitude intervention to foster grateful thinking, feeling, and behavior among adolescents. The survey method was used to collect data from public and private college students through self-reported measures. The pre-post experimental study design with the intervention was applied, consisting of two research conditions. The researcher assisted the participants in this study in three phases: (1) before intervention (baseline measurement), (2) after 14 days of gratitude intervention and gratitude meditation, and (3) after postintervention measurement.

This study found that completion of the gratitude activities and the gratitude journal led to significant increases in gratitude and a lower level of aggression and immoral behaviors from the pre-test to the post-test. These increases were significantly greater in the experimental group than the changes reported by the control group. The satisfactory consistency ranges of the measures are between 0.60% to 0.90% (Blank & Altman), and in the current study, the alpha coefficients of all scales were satisfactory. The general reliabilities of the scales indicate that they are acceptable and reliable for satisfactory internal consistency.

The first objective was to explore the relationship between gratitude, aggression, and moral disengagement among adolescents. Each correlation points in the expected direction. In the pre-post-test of the control group, gratitude was positively non-significantly associated with aggression and moral disengagement. Aggression was negatively significantly associated with moral disengagement. Furthermore, aggression had a negative and significant relationship with gratitude. Moral disengagement has a significant negative relationship with aggression, while a non-significant positive relationship with gratitude in the post-test of the control group.

Results of the pre-post test of the experimental group showed that gratitude had a non-significant negative relationship with aggression and a positive significance association with moral disengagement. Aggression had a significantly negative relationship with moral disengagement. However, in the experimental group's post-test, aggression had a non-significant negative relationship with gratitude. Furthermore, as expected, moral disengagement has a nonsignificant positive correlation with gratitude and a significant negative associated with aggression. We found that men in adolescents are higher than women in adolescents in aggression and moral disengagement. However, if we compare the level of correlation among study variables in the pre-test and post-test, the relationship can be stronger in the post-test.

The study hypothesized that the participants in the experimental group will have a higher level of gratitude and a lower level of aggression and moral disengagement in the post-evaluation compared to the participants in the control group, which will prove the intervention's efficacy. According to the results of a two-way analysis of variance (ANOVA) and independent sample t-test, participants in the experimental group scored considerably higher than those in the control group. These results are similar to existing literature, as McCullough and Emmons's findings, counting blessings intervention employed for two weeks increased the level of gratitude participants who were in the gratitude intervention compared to participants who were not given any intervention.

According to Deng et al., after gratitude-based counting blessings intervention, the level of aggression decreased significantly among adolescents. As a result, the hypothesis of the study was accepted. A paired sample t-test was used to identify any changes in the scores of the participants of the control and experimental groups. The present findings showed no significant differences and the scores of the control group participants remained stable in the post-test measurement of the study variables. However, there were significant differences in the participants' scores in the experimental group in the post-test measurement. The participant scores in the experimental group increased significantly for gratitude, while the score decreased for aggression and moral disengagement. This means that the gratitude intervention and the gratitude journal had high efficacy in all study outcome variables. All changes in post-test measurement were consistent with the hypothesis of the study.

5. Conclusion

The results and discussions in the present study's findings elaborated that the two-week gratitude intervention based on the counting blessings intervention and gratitude journal is an effective technique to

improve gratitude and decrease the level of aggression and moral disengagement in Pakistani adolescents. The participant experienced more positive emotions after the blessing of gratitude counting intervention. These findings can aid in developing a novel and cost-effective intervention for use in therapeutic settings and educational institutes.

The present study has given insight into how positive psychology-based interventions work in educational institutes in Pakistan. It can potentially divert the individual's attention away from the negative aspects of their lives and help them experience greater happiness by focusing on the blessings of daily life. The present study's findings demonstrated that adolescents could benefit from a gratitude intervention and a gratitude-based journal, which is quite economical and simple.

The findings confirmed that gratitude interventions significantly enhanced positive emotions and reduced aggression and moral disengagement. These findings align with prior work by Emmons & McCullough mentioned above, who demonstrated similar benefits of gratitude journaling in adolescents, and reported reductions in aggression post-intervention. This study contributes new insights by applying culturally adapted gratitude interventions in a South Asian context, offering scalable psychological tools for adolescent behavioral health.

Study also has implications and limitations. This study found that a two-week gratitude intervention significantly increased gratitude and reduced aggression and moral disengagement in adolescents. The study's limitations include the lack of long-term follow-up, a relatively small sample size, and exclusive reliance on self-reported data. Future research should use mixed methods, larger samples, and longitudinal designs to assess the sustained impact of gratitude practices in diverse adolescent populations.

However, the study provides benefits to adolescents by enhancing gratitude and reducing the level of aggression and moral disengagement. Psychologists, therapists, wellness centers, and college counseling centers could use the study findings to understand how college students respond to positive psychology-based interventions. First, the study uses a quantitative research design, as it lacks a detailed and in-depth investigation of the effects of the interventions.

For this purpose, a qualitative study is required to establish an association between the proposed variables. Second, there was only one post-test measurement, which prevented the study from identifying the lasting effects of the intervention. Third, the sample size might not be representative. We should have a larger sample size to ensure greater reliability and generalizability. Future research should use mixed methods, larger samples, and longitudinal designs to assess the sustained impact of gratitude practices in diverse adolescent populations.

Author Contribution Statement

Arshia Mukhtar contributed to the original draft's conceptualization, methodology, formal analysis, and writing. Jamil A. Malik provided supervision and validation and contributed to reviewing and editing the manuscript. Dil Sher Khan was responsible for writing, data curation, investigation, and software management. Muhammad Kamran handled resources, project administration, and review. Sarfraz Aslam and Sharareh Shahidi Hamedani contributed to writing, reviewing, and editing the manuscript, as well as visualization and supervision. Amjad Islam Amjad handled references and editing.

Data Availability Statement

The datasets generated and/or analyzed during the current study are available from the first author upon reasonable request.

Funding Statement

No funding was received for this study.

Ethics Approval Statement

The study was approved by the Institutional Ethics Review Board of the National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan (IERB#10-2024/QUI)

Informed Consent

Informed consent was obtained from all participants before they participated in the research.

Conflict of interest

The authors declare no conflict of interest.

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