Does Gratitude Work at School? Piloting the Modified Interventions for Managing Academic Stress in Pakistani High Schools

Najam us Sahar*, Diana Lea Baranovich† and Ida Hartina Ahmed Tharbe‡

The present research measures the effectiveness of gratitude interventions in dealing with academic stress and daily hassles among Pakistani high school students. A total of 162 students randomly assigned in experimental (82) and control groups (80) took part in a four week interventions program. The gratitude interventions included Count Your Blessings, writing Gratitude Letters, and Loving Kindness Meditations which were modified & adapted into Urdu. The pretest and posttest assessment was done. The results of paired sample t-test showed significant decrease in academic expectation scores (t = 5.76**, M1 + SD1 = 31.44 + 6.56, M2 + SD2 = 27.30 + 6.75) with medium effect size (Cohen's d = 0.65), and also for daily hassles decrease. Further results showed high level of stress about personal future, academic concerns and excessive social demands which were decreased after interventions. This study supports the use of gratitude interventions in school setting especially in developing country like Pakistan where structured counseling services are limited.

Keywords

Introduction

Adolescence is a critical period for human development that is encompassed by various challenges and opportunities. During this phase of life, parents and teachers put many expectations regarding self-responsibility, career path selection, and good performance at the high school exams. A number of studies have reported that parental expectations can lead to psychological distress, anxiety, and depression among adolescents (Ma et al., 2018; Madjar et al., 2015; Tan &

*University of Malaya, najam.sahar@gmail.com
https://orcid.org/0000-0002-0610-0999
† University of Malaya, dr.dileab@gmail.com
https://orcid.org/0000-0001-9852-8644
‡University of Malaya, hartina@um.edu.my
https://orcid.org/0000-0002-5903-1616

Correspondence concerning this article should be addressed to Najam us Sahar, najam.sahar@gmail.com

Yates, 2011; Wang & Heppner, 2002). A global survey indicated that 41% of Pakistani students feel parental pressure to perform well, the third highest in the survey of 21 countries by the Pew Research Center (2011). A Pakistani study found that students felt pressure from their parents to attain high academic grades for reasons ranging from social respect to concerns about future wellbeing for both students and their parents (Sheikh & Hussain, 2014).

Parents' expectation is operationalized as judgments about their children's futures in terms of school performance, displaying socially desirable behavior, and striving toward better standards of life (Neuenschwander et al., 2007). Parents with high expectations invest more time and money in their children's education (Danişman, 2017). As education in Pakistan requires personal financial investment, it results in increased parental expectations for similar effort investment and good results from their children. In a large-scale cross-sectional Pakistani research, 33% of respondents considered the poor financial conditions of their families as the source of their academic stress (Parpio et al., 2012). This situation can lead to increased daily life hassles and frustration that need to be addressed effectively. Common hassles among adolescents include academic problems, conflicts with parents and teachers, disenchantments with friends, and the impact of maturing into college, all having impact on individual mental health and wellbeing (Flett et al., 2016).

Daily life hassles are addressed through formal psychological techniques, coaching, and informal guidance and mentorship by parents, teachers, and peers. A number of stress reduction programs for students were developed and tested in Western countries (Chodkiewiczi & Boyle, 2016); however, implementation for these programs is difficult in developing countries like Pakistan due to several factors such as the presence of multiple educational systems (Ahmad, 2011), lack of school- or community-based mental health service models (Jooma et al., 2009) interdependent family structure (Sahar & Muzaffar, 2017), political and economic instability (Khalily et al., 2011), stigmatization, and lack of resources (Farooq & Kayani, 2012). It is important to consider these social factors while implementing some intervention models. Positive Psychological Interventions (PPIs) may apply in this regard as they comprise several activities and recommendations theoretically based, empirically validated, and connected to philosophical aspects narrated by different religions (Bolier et al., 2013).

Gratitude interventions in PPIs focus on appreciating the goodness in the social environment and returning the favor (Froh et al., 2009). The interventions include counting one's blessings (Sheldon & Lyubomirsky, 2006)), writing a gratitude letter (Seligman et al., 2005), engaging in acts of kindness (Sheldon & Lyubomirsky, 2006), gratitude contemplation (Graser et al., 2016), and keeping a gratitude journal (Emmons & McCullough, 2003)). These techniques aim at cognitive, motivational, and emotional changes by developing benevolence and supportive attitudes toward self and others. Some of these interventions were used with adolescents though with mixed results in effectiveness for reducing distress (Flinchbaugh et al., 2012; Jans-Beken et al., 2018; Martínez-Martí et al., 2010; Sin & Lyubomirsky, 2009; Martínez-Marti, 2010).

The limitations of these studies include underrepresentation among Asian samples, limited cultural variation in samples and interventions, and previous research not addressing parental pressure, participant expectations, or classroom settings. The present research intends to address some of these gaps by evaluating the use of gratitude interventions in classroom settings in the public schools of Pakistan. At present, no published data on positive psychology interventions in addressing psychological distress among adolescents in Pakistan is available. Comparable Pakistani studies examined relationships between gratitude, psychological wellbeing, the demographic characteristics of participants (Amjad et al., 2013), and their subjective experiences (Ramzan & Rana, 2014).

It is thus important to evaluate the influence of interdependent Pakistani cultures where the role of family is vital. Pakistani adolescents comprise almost one quarter of the country's population (United Nations International Children's Emergency Fund, 2013), emphasizing a need for attention on their issues and concerns. The country's demographic profile shows that the adult literacy rate is 57%, increasing to 87% among Pakistani adolescents. The average household size is between 6 and 7 individuals with one wage-earning member per family. Family financial responsibility mainly lies with fathers in this collectivistic society. The per capita monthly income is 6662 Rupees ($41). The largest monthly expenditure are food (36%) and household maintenance (26%). Only 3.98% of family income is spent on education (Pakistan Bureau of Statistics, 2019). This bleak situation demands some collaborative efforts by public and private institutions to improve the country's standard of living and education quality.

The experimental nature of this study will provide some empirical data in analyzing the effectiveness of gratitude exercises which may be adapted in stress reduction programs at the school level. Gratitude interventions in schools can be cost-effective as existing resources like human resources and durable assets would be utilized. Adolescents require guidance and support from parents, teachers, and peers to meet the challenges mainly related to daily hassles and academics. These interventions may improve social connectedness, an important aspect of interdependent cultures where family is significant in one's life; a positive family environment can act as a buffer against psychosocial problems in youth.

Research Objectives

The present research has formulated the following objectives to assess the dynamics of parental pressure and gratitude interventions:

1) To examine the presence of parental pressure and expectations among Pakistani adolescents
2) To explore the types of daily hassles experienced by Pakistani adolescents
3) To assess the effectiveness of combined gratitude intervention model in dealing with stress and daily hassles among adolescents

Research Hypotheses

I. Gratitude interventions will decrease parental pressure and teacher's expectations in the experimental group
II. The combined gratitude interventions model will reduce the daily hassles in experimental group of high school students in comparison to no change in control group.

Method

Participants

A total of 162 high school students (Age M + SD = 15.78 + 0.94) served as participants in this experimental research and were randomly assigned to experimental (n = 82) and control (n = 80) groups. All of them were in tenth grade at two government schools in Rawalpindi, Pakistan. A priori power analysis through G-Power software determined the minimum sample size to be at least 102 participants (α = 0.05, effect size d = 0.5, and β = 0.80), with approximately 51

participants in each condition for one-tailed hypothesis (Soper, 2018). The sample in the current research is relatively large than estimation, which is suitable for statistical analysis. The selection of school and grade was made from the list provided by the Department of Education in Punjab. As Pakistani public schools are gender segregated, the interventions were delivered separately for boys and girls in their schools. The inclusion criteria were based on age (between 14 and 18 years old), type of education (public school), grade (10th), and language (able to understand Urdu). Furthermore, only those students with tenures longer than six months at their respective schools were contacted. Individuals going through any severe medical or psychological treatment were not included in the sample.

The demographic profile (Annexure A) showed that the vast majority the sample was Muslim (96%), girls (61%), and more than half have between 4 and 6 siblings (53%). In terms of family-related variables, all participants except one had two living parents. For parent education, high school completion is the highest reported value (43%). The vast majority of participants' mothers work as homemakers (88%), with fathers as wage earners (96%). The demographic profile of the present research is in line with the country's demographics (Pakistan Bureau of Statistics, 2019), suggesting the appropriateness in sample selection and potential generalizability for study results.

Measures

Four instruments and a demographic sheet were used in the current research. The dependent variable (academic stress) was assessed through AESI and IHSSRLE and included in the main analysis. GAC and GQ-6 were used to determine the dynamics of gratitude in this Pakistani sample that influenced intervention selection and modifications.

Demographic Sheet: A demographic sheet was prepared in Urdu. It contained information about the participant's name (optional), age, gender, religion, school name, school grade, native language, ethnicity, number of siblings, birth order, mother's education, father's education, and work status of parents.

Academic Expectation Stress Inventory (AESI-9): The Academic Expectation Stress Inventory is a nine-item inventory developed by Ang and Huan (2006) and is a reliable and valid instrument widely used especially in assessing parental expectations (Ang et al., 2009; Qadir et al., 2012; Sun et al., 2011;Zhang et al., 2016).; 12; 2016). The two subscales are Self-Expectations and Others Expectations covering the domains of stress, self-blame, disappointment, anxiety, and feeling of inadequacy. It has Likert-type scoring ranging from 1 (never true) to 5 (almost always true), with higher scores showing more stress. The existing Urdu version was used in the present research. In the pilot study of present research (n = 60), Cronbach Alpha was reported to be .75 for total, .70 for Self subscale, and .73 for Expectations from Others subscale.

Inventory of High–School Students' Recent Life Experiences (IHSSRLE): This inventory was created by Kohn and Milrose in 1993 and is a self-reported reliable and valid measure that assesses daily hassles among adolescents (Bodenhorn et al., 2007; Cheng & Li, 2010; Flett et al., 2016). The inventory has 41 items with four points scoring ranging from 1 (*Not at all*) to 4 (*Completely true*) and has eight subscales. Higher scores reflect a high stress level. The eight subscales are social alienation, excessive demands, romantic concerns, personal future concerns, loneliness, assorted annoyance, social mistreat, and academic concerns. It was translated into Urdu with permission from the author and this version was found to be suitable for Pakistani adolescents. In the pilot study of present research, Cronbach Alpha was reported to be .87, suggesting the Urdu version's suitability.

Gratitude Adjectives Checklist (GAC): The state of gratitude is measured with the help of Gratitude Adjective Checklist (GAC) developed by McCullough and colleagues in 2002. It is the sum of three adjectives, including gratefulness, thankfulness, and appreciativeness (McCullough et al., 2002). It has five-point Likert scoring from *Not at all* (01) to *Extreme* (05) experience of these three emotions. In the present research, the instrument was translated into Urdu by following World Health Organization Guidelines (2016) and author permission. The Cronbach Alpha was reported to be .74 in the pilot study, suggesting the suitability of the translated version.

Gratitude Questionnaire – (GQ-6): Gratitude was assessed using the GQ-6 developed by McCullough et al. in 2002 (McCullough et al., 2002). It is the most widely used instrument for assessing gratitude as a personal characteristic trait (Froh et al., 2010). There are six items with Likert scoring ranging from 1 (strongly disagree) to 7 (strongly agree), and two items (3&6) reversed scored. High scores indicate a higher level of trait gratitude. It was translated in present research into Urdu with the author permission and following WHO guidelines. In the pilot study, the Cronbach Alpha reliability was found to be .64. According to Shrout's (1998) guidelines for reliability, .61-.80 is moderate reliability of an instrument, especially if it measures a trait, which is applicable in the present research for GQ-6 (Shrout, 1998).

Procedure

The present research used pretest-posttest design with control group. The interventions were applied for four weeks in the experimental group. The posttest was carried immediately after interventions. It was a parallel-group design in which treatment and control groups were compared. The treatment group received interventions, and no intervention was provided to the control group during the experiment. After the study completion, the same intervention model was repeated with control group to avoid compensatory rivalry and resentful demoralization.

This study was a part of doctoral research at the University of Malaya, Malaysia and received approvals from the ethical board of the University of Malaya (REF: UM.TNC2/UMREC-621). The permission for study conduction was obtained from Education District Office in Rawalpindi, Pakistan (REF: 6062/GB/DEO SE, Rawalpindi) and the school principals of the study sites. Parental consent and participant assent were also obtained. Three instruments were translated into Urdu. A psychology graduate associate carried out the baseline assessment, so the researcher did not influence the test results. The interventions were carried out in group settings with 20 to 25 students in each group. Participants were randomly assigned into experimental and control groups. The data enrollment process is included in Annexure B.

The first author contacted participants within school premises for four days every week for 40 to 50 minutes daily during the study period. The researchers maintained the record of all activities carried out in the experiment by following ethical guidelines. After four weeks of interventions, participants immediately completed measures related to gratitude and stress. Both groups completed the posttest at the same time. They were debriefed on the research and thanked with an appreciation certificate. The Consort checklist was used in this experimental research.

Intervention Plan

In order to address the research objective that stated, "To assess the effectiveness of combined gratitude intervention model in dealing with stress and daily hassles among adolescents," a precise and comprehensive intervention model was adapted. It included three interventions labeled Count Your Blessings (Sheldon & Lyubomirsky, 2006) Gratitude Letters (Seligman

Table 1. Intervention Model Summary

Interventions	Brief Description
Count Your Blessings	Participants wrote about up to three things related to daily routine (school, friends, parents, and religious activities) daily for up to two weeks, for which they are grateful. It was later modified for school-related experiences only.
Writing Gratitude Letters	Participants were asked to write a short letter to a family member (parent, siblings, relative) thanking his/her contribution in their lives, delivering this letter and noting the beneficiary response. At second level, letters to teachers, coaches, and mentors were written and delivered indirectly.
Loving Kindness Meditation	Imagery technique performed for 15 to 20 minutes each day. The sub-components, Receiving loving-kindness, Sending Loving-Kindness to Loved Ones, Neutral People, and All Living Beings, were performed with instructions. The meditation focused on the same person to whom the participant wrote a gratitude letter in second intervention.

et al., 2005), and Loving Kindness Meditation (Baer, 2003). The activity plan was developed in Urdu (the national language of Pakistan). Two doctorate-level, experienced counselors reviewed the model and found it suitable for Pakistani adolescents in terms of language, Islamic cultural values, and school settings. The first session was a brief overview of research along with rapport building. Instructions were given at the start of each intervention with opportunities for participants to ask questions. Participants then performed the activities step by step under researcher supervision and completed reflections. At the end of the four-week intervention, the overall response was collected though a summary reflection sheet. A brief description of interventions is given below.

Data Analysis and Results

Statistical analysis was performed by using SPSS (IBM version 21). The descriptive statistics included mean, standard deviation, and line graph. The inferential statistics included paired sample t-test and effect size calculation. After data cleaning, removing the outliers, and running the normality tests, the analysis was carried out. A 2 × 2 analysis was carried out to test the research hypotheses. The majority of participants in the sample were girls (61%) with a mean age of 15 and half years(Annexure A). The family characteristics represented Pakistani generality with 6 to 7 family members, mothers as homemakers, and fathers employed

Table 2 showed the mean and standard deviation for AESI and its subscales in comparison to previous research. The mean score at pre-intervention level is 31.57(SD = 6.31), which is relatively high compared to Canadian and US samples. Only the Singaporean adolescents had mean scores closer to current study sample. It may suggest the presence of high level stress coming from parental and self-expectations among students from interdependent cultures.

At first, the equivalence of the control and experimental groups prior to treatment was established by using the independent sample t-test (Table 3). No significant difference between experimental and control group was found (t (160) = .27, p = .79). Participants in both groups did not differ in demographic characteristics (χ^2 values in Annexure A). It supports the assumption

Table 2. Mean and Standard Deviation on AESI in comparison to Previous Research

	Sample	Mean (Standard Deviation)		
		Total AESI	Expectation from Self	Expectation from Others
Present Study Pakistani adolescents	Experimental Group (n = 82)	31.44 (6.56)	13.79 (3.13)	17.65 (4.46)
	Control Group (n = 80)	31.71 (6.08)	14.10 (3.02)	17.61 (4.21)
	Total (n = 162)	31.57 (6.31)	13.94 (3.07)	17.64 (4.33)
Ang et al. (2009)	Singaporean adolescents (n = 310)	32.38 (7.21)	14.61 (3.43)	17.77 (4.59)
	Canadian adolescents (n = 289)	29.69 (8.32)	13.95 (3.91)	15.74 (5.30)
Ang, Huan, & Braman (2006)	Singapore Chinese adolescents (n = 211)	28.08 (8.21)	13.31 (3.98)	14.78 (5.16)
	US Hispanic adolescents (n = 191)	26.28 (7.17)	11.58 (3.43)	14.70 (4.48)

Table 3. Independent Sample t-test for Academic Stress at Pre-Intervention (N = 162)

	Experimental Group (n = 82)		Control Group (n = 80)				
Outcome	M	SD	M	SD	t(160)	*p*	*Cohen's d*
AESI Total	31.44	6.56	31.71	6.08	-0.27	0.79	0.04
Self Expectation	13.79	3.13	14.10	3.02	0.64	0.52	0.10
Others Expectation	17.65	4.46	17.61	4.56	0.06	0.95	0.01

AESI = Academic Expectations Stress Inventory, M = Mean, SD = Standard Deviation, *p* = Level of significance

that randomization and treatment conditions explain any change at the posttest level in the experimental group.

A paired-samples t-test measured the effectiveness of gratitude interventions on parental and self-expectations among high school students (Table 4). There was a statistically significant decrease in the scores of stress from $Time_1$ (M = 31.44, SD = 6.56) to $Time_2$ (M = 27.30, SD = 6.75); t = 5.76, p = 0.001 for experimental group. The control group has no statistically significant difference from pretest to posttest scores (t = 0.09, p = n.s.). The mean difference value was 4.14 with a 95% confidence interval ranging from 2.64 to 5.91 for the total scores on Academic Expectations. This interval [2.64–5.91] indicates 0 is not a plausible difference for academic stress scores. The Cohen's *d* statistic (0.65) indicated medium effect size and suggesting the suitability of interventions used. The first hypothesis was accepted, suggesting the effectiveness of gratitude interventions in reducing parental pressure and stress.

Table 5 presents daily hassles among high school students. Significant differences were reported for total scores t (78) = 4.08, p < .001 with a mean difference of 5.12 at 95% confidence

Table 4. Paired Sample t-test for Parent Expectation and Self Expectation in response to Gratitude Interventions (N = 162)

Outcome	N(162)	Pre-intervention		Post-intervention		t	p	Cohen's d
		M	SD	M	SD			
AESI (Total)	Experimental Group(82)	31.44	6.56	27.30	6.75	5.76***	.000	.65
	Control Group (80)	31.71	6.08	31.35	7.02	0.49	.63	.05
Self Expectation	Experimental Group (82)	13.79	3.13	11.68	3.58	5.01***	.000	.55
	Control Group(80)	14.10	3.02	13.49	3.47	1.73	.09	.19
Parent Expectation	Experimental Group(82)	17.65	4.46	15.62	4.55	4.27***	.000	.48
	Control Group(80)	17.61	4.21	17.86	4.59	-0.46	.65	.05

AESI = Academic Expectation Stress Inventory, M = Mean, SD = Standard Deviation, p = Level of significance

Table 5. Paired Sample t-test for Daily Hassles among Pakistani Adolescents (N = 158)

Outcome	N(158)	Pre-Interventions		Post-interventions		t	p	Cohen's d
		M	SD	M	SD			
IHSSRLE (Total)	Experimental Group (79)	82.28	17.65	77.15	14.80	4.08***	.000	.46
	Control Group (79)	91.44	16.50	88.58	17.65	1.77	.08	.20
Academic Concerns	Experimental Group (79)	10.53	2.30	10.25	2.18	1.02	.31	.12
	Control Group (79)	10.64	2.29	10.53	2.74	0.33	.74	.04
Social Mistreat	Experimental Group (79)	11.71	3.96	11.01	3.74	2.13*	.04	.24
	Control Group (79)	12.46	4.10	12.77	4.39	1.93	.06	.10
Personal Future	Experimental Group (79)	6.08	1.82	5.38	1.74	2.88**	.005	.33
	Control Group (79)	6.12	1.67	5.92	1.67	0.87	.39	.10
Romantic Concerns	Experimental Group (79)	3.37	1.82	3.57	1.75	0.89	.38	.10
	Control Group (79)	4.56	2.17	4.05	2.15	1.59	.12	.18
Loneliness	Experimental Group (79)	10.16	3.26	09.02	2.93	3.79***	.000	.43
	Control Group (79)	11.42	3.64	10.38	3.23	2.32*	.02	.26
Assorted Annoyance	Experimental Group (51)	08.41	3.12	08.17	2.58	0.87	.71	.08
	Control Group (51)	09.67	2.87	09.73	3.2	-.19	.85	.01
Excessive Demands	Experimental Group (51)	21.05	4.97	19.41	4.15	3.22*	.002	.36
	Control Group (51)	22.18	4.59	22.01	5.05	0.30	.76	.04
Social Alienation	Experimental Group (51)	10.97	3.66	10.33	3.42	1.96	.05	.22
	Control Group (51)	13.01	4.16	13.22	4.68	-.51	.61	.06

IHSSRLE = Inventory of High-School Students' Recent Life Experiences, M = Mean, SD = Standard Deviation, p = Level of significance
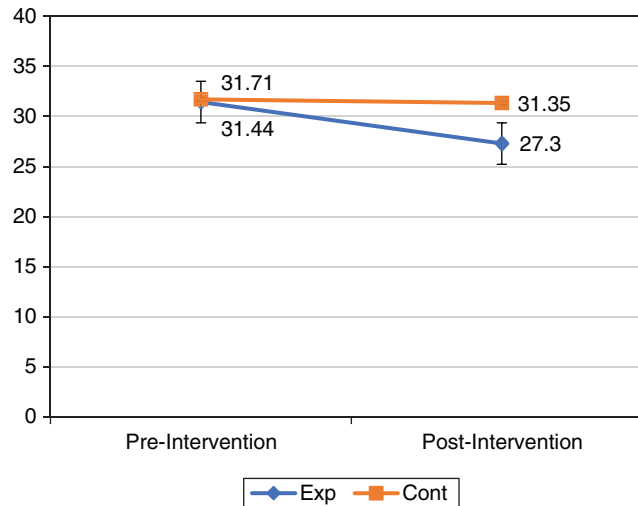
Figure 1. Mean Scores Differences for Academic Expectations

interval for the experimental group. In terms of subscales analysis, improvement was reported for Loneliness, Excessive Demands, Personal Future, and Social Mistreat. For the control group, only significant change was observed in Loneliness subscale $t(78) = 2.32$, $p < .01$ with a mean difference of 1.04 at 95% CI. The effect size for overall scores is medium (.46), suggesting the suitability of treatment conditions for addressing daily hassles among adolescents. The second research hypothesis was supported through this analysis.

These inferential statistics reflect potential utility for using gratitude interventions in dealing with everyday life stress among adolescents. The excessive demands and parental pressure can be dealt with these techniques. Figure 1 presents the difference in the mean scores for academic expectations. Experimental and control groups did not differ at pretest level; however, change can be observed at posttest where mean scores decreased for experimental group and slightly increased for control group.

Reflection Analysis

The reflections on interventions were also collected through a response sheet containing open- and closed-ended questions related to individual's emotional experience, satisfaction with particular intervention, and intention for using these techniques in future. From the participant's feedback, it was reflected that interventions were simple and comprehensive. They learned new strategies to manage their stress and function more effectively in their personal and social lives. All of the participants reported that they felt relaxed, happy, and energetic after performing these activities, especially LKM. As stated by a participant, "I feel happy and relaxed. And want to do it again in the school."

Some individual experiences were also reported in the experiment. One participant cried while sending the kind wishes to her dead grandmother to whom she was emotionally attached. She further stated that her imagination was vivid, and she felt her presence. Other important emotions experienced by the participants include love, contentment, joy, and interest. Some negative emotions like guilt, sadness, and fear also arose at the beginning of interventions. A few students were shy to write a letter, but after ensuring confidentiality they agreed to write. They considered it a positive experience that helped in improving their relationships with

teachers and parents. As stated by one of the respondents, "After writing this letter, I felt really good because we can communicate many things through such letters which are difficult to say in person."

The response of benefactor was also noted. The common responses were the expression of joy, pride, and happiness. People who received letter, thanked the participants for this effort and kept the letter. A respondent reported that her father also penned a gratitude letter to her after receiving one. This reflection analysis upon this intervention showed improvement in self-expression and positive emotions especially gratitude, happiness, inspiration, and relational connectedness. Through the Count Your Blessing exercise, students were able to note positive elements from their daily life such as support from parents and friends, attending sports events, and sharing lunch. Most of the participants reported to be more observant, thankful, and noted positive elements from their surroundings after performing this intervention. One of the participants stated, "Yes, this activity helped me a lot mentally. I have realized that how many abilities I have. My parents, teachers and God (especially) have helped me very much for polishing my abilities."

All of these responses were helpful and encouraging to continue. The majority of participants (65%) reported intentions to use these techniques in the future. This reflection is a favorable indication of gratitude interventions application in school settings.

Discussion

The present study results showed that gratitude interventions are effective in reducing stress and daily hassles among adolescents. These results are supported by previous studies (McCabe-Fitch, 2009; Miller et al., 2010; Sin & Lyubomirsky, 2009; Terjesen et al., 2004). These studies have shown that practicing positive psychology interventions helps in improving mental and physical wellbeing for young people. The results are auspicious for Pakistani society, where limited mental health services are available to the general population. Furthermore empirical data from a developing country is also provided through this research.

The results showed a high level of stress regarding parental expectations, concerns about future, and excessive demands from the social environment, whereas scores on loneliness were low. This suggests the influence of interdependent social environment and parent roles in adolescent development. A Pakistani study reported that family conflicts, peer conflicts, and academic stressors were the most common hassles among high school students (Saeed, 2010). In the current research, these hassles manifested through parental pressure to achieve good grades, insufficient time management, and arguments with siblings and friends. Because of these factors, adolescents scored high in comparison to those belonging to cultures emphasizing individual independence.

Through the provision of gratitude interventions, participants were able to focus more on the positive aspects of their lives and improved their relationships. It is supported by the results of Tables 4 and 5 and Figure 1, where significant differences are observed in daily hassles scores and academic expectations. Practicing gratitude in the early years of life is very important. According to Bono and Froh (2009), gratitude is linked with "upstream generativity," suggesting that practicing gratitude at an early stage of life motivates children to give back to their peers, community, and the world. Through this mechanism, gratitude acts as the buffer for social support and quality of life (Bono & Froh, 2009). It decreases the level of stress and negative emotional experiences. The current study suggests that by practicing gratitude-related activities regularly, the wellbeing of individuals may be enhanced. The feeling of being grateful helps promote social connectedness and relationship not only with the benefactor but also with others.

The expression of gratitude motivated them to give back to their friends, family, teachers, community, and society at a larger level. Healthy adolescent transitions include the maintenance of good relationships with family, friends, and teachers. The results of this experimental research contribute to existing literature by addressing the gap in terms of population, interventions modification, and cultural context. The use of gratitude interventions in school settings is a relativity new concept in Pakistan, which requires a positive mindset and open minds by school administration and teachers.

Conclusion

The current study showed that parental pressure, self-expectations, concerns about future life, and excessive demands are major stress elements among adolescents. That stress can be reduced with the help of gratitude interventions within school settings. Since data from developing countries is limited, the current research is a good addition in this sociocultural context. Positive results in changes in self-expectations scores signify the autonomy of individuals in managing their own attitudes. Compassion toward oneself helps to decrease stress levels. In the current study, this was practiced through Loving Kindness Meditation, where the participants imagined receiving kindness messages and expanding them to their social environment. The current research is important in addressing the cognitive and behavioral aspects of both independent and dependent variables.

Limitations and Suggestions

There are some limitations in the present research, which can serve as guidelines for further researches. First, the data was collected from adolescents and not their parents and teachers, which may limit understanding of the stressors and environment. Second, personality characteristics like neuroticism, agreeableness, and self-control were not taken into consideration. Thirdly, data was collected twice with no plan for follow-up, limiting opportunities to assess the long-term effects of interventions. Future research may address these limitations by introducing triangulation in data collection, follow-up, and longitudinal research design to understand the phenomenon comprehensively. It is recommended to add these interventions as a stress management training program in school curriculums. Furthermore, counseling services mechanisms are also needed within schools to address mental health and the social wellbeing of students.

References

Ahmad S.I. (2011). Issue of Medium of Instruction in Pakistan. *International Journal of Social Sciences and Education,* 1(1), 66–82. http://www.cscanada.net/index.php/css/article/download/j.css.1923669720110701.014/1242

Amjad N., Ahmad S., & Zaidi G. (2013). Exploring Gratitude in a Muslim context. Presented at *International Conference of Cross Cultural Psychology*, 19th -21st June 2013, UCLA, Los Angeles, USA. https://www.researchgate.net/publication/303016558_gratitude_in_muslim_context#fullTextFileContent

Ang R. P., Klassen R. M., Chong W. H., Huan V. S., Wong I. Y. F., Yeo L. S., & Krawchuk, L. L. (2009). Cross-cultural invariance of the Academic Expectations Stress Inventory: Adolescent samples from Canada and Singapore. *Journal of Adolescence*, *32*(5). https://doi.org/10.1016/j.adolescence.2009.01.009

Baer R. A. (2003). Mindfulness training as a clinical intervention: A conceptual and empirical review. In *Clinical Psychology: Science and Practice*. 10(2). https://doi.org/10.1093/clipsy/bpg015

Bodenhorn N., Miyazaki Y., Ng K. M., & Zalaquett C. (2007). Analysis of the inventory of college students' recent life experiences. *Multicultural Learning and Teaching*, *2*(2). https://www.degruyter.com/document/doi/10.2202/2161-2412.1022/html

Bolier L., Haverman M., Westerhof G. J., Riper H., Smit F., & Bohlmeijer E. (2013). Positive psychology interventions: A meta-analysis of randomized controlled studies. *BMC Public Health*, *13*(1). https://doi.org/10.1186/1471-2458-13-119

Bono G., & Froh J. (2009). Gratitude in school: Benefits to students and schools. In *Handbook of Positive Psychology in Schools*. https://doi.org/10.4324/9780203884089-16

Cheng S. T., & Li K. K. (2010). Combining Major Life Events and Recurrent Hassles in the Assessment of Stress in Chinese Adolescents: Preliminary Evidence. *Psychological Assessment*, *22*(3). https://doi.org/10.1037/a0019579

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). https://doi.org/10.1037/0022-3514.84.2.377

Farooq A., & Kayani A. K. (2012). Prevalence of Superstitions and other Supernaturals in Rural Punjab: A Sociological Perspective. *South Asian Studies*, 27(2), 335. http://journals.pu.edu.pk/journals/index.php/IJSAS/article/view/2856

Flett G. L., Schmidt D. H., BesserA., & HewittP. (2016). Interpersonal Personality Vulnerabilities, Stress, and Depression in Adolescents: Interpersonal Hassles as a Mediator of Sociotropy and Socially Prescribed Perfectionism. *International Journal of Child and Adolescent Resilience*, *4*(1), 103–121. Retrieved from https://www.ijcar-rirea.ca/index.php/ijcar-rirea/article/view/207

Flinchbaugh C. L., Moore E. W. G., Chang Y. K., & May D. R. (2012). Student Well-Being Interventions: The Effects of Stress Management Techniques and Gratitude Journaling in the Management Education Classroom. *Journal of Management Education*, *36*(2). https://doi.org/10.1177/1052562911430062

Froh J. J., Bono G., & Emmons R. (2010). Being grateful is beyond good manners: Gratitude and motivation to contribute to society among early adolescents. *Motivation and Emotion*, *34*(2). https://doi.org/10.1007/s11031-010-9163-z

Froh J. J., Kashdan T. B., Ozimkowski K. M., & Miller N. (2009). Who benefits the most from a gratitude intervention in children and adolescents? Examining positive affect as a moderator. *Journal of Positive Psychology*, *4*(5). https://doi.org/10.1080/17439760902992464

Graser J., Höfling V., Weßlau C., Mendes A., & Stangier U. (2016). Effects of a 12-week mindfulness, compassion, and loving kindness program on chronic depression: A pilot within-subjects wait-list controlled trial. *Journal of Cognitive Psychotherapy*, *30*(1). https://doi.org/10.1891/0889-8391.30.1.35

Jans-Beken L., Lataster J., Peels D., Lechner L., & Jacobs N. (2018). Gratitude, Psychopathology and Subjective Well-Being: Results from a 7.5-Month Prospective General Population Study. *Journal of Happiness Studies*, *19*(6). https://doi.org/10.1007/s10902-017-9893-7

Jooma R., Minhas F. A., & Saxena S. (2009). WHO-AIMS Report on the Mental Health System in Pakistan. *WHO*, *1*(1). Retrieved May 30th 2022 http://www.who.int/mental_health/pakistan_who_aims_report. pdf.

Khalily M. T., Foley S., Hussain I., & Bano M. (2011). Violence, psychological trauma, and possible acute post-traumatic interventions in Pakistani society. *Australasian Journal of Disaster and Trauma Studies*, *2011*(1).

Ma Y., Siu A., & Tse W. S. (2018). The Role of High Parental Expectations in Adolescents' Academic Performance and Depression in Hong Kong. *Journal of Family Issues*, *39*(9). https://doi.org/10.1177/0192513X18755194

Madjar N., Voltsis M., & Weinstock M. P. (2015). The roles of perceived parental expectation and criticism in adolescents' multidimensional perfectionism and achievement goals. *Educational Psychology*, *35*(6). https://doi.org/10.1080/01443410.2013.864756

Martínez-Martí M. L., Avia M. D., & Hernández-Lloreda M. J. (2010). The effects of counting blessings on subjective well-being: A gratitude intervention in a spanish sample. *Spanish Journal of Psychology*, *13*(2). https://doi.org/10.1017/S1138741600002535

McCabe-Fitch K. A. (2009). Examination of the impact of an intervention in positive psychology on the happiness and life satisfaction of children. In *Dissertation Abstracts International: Section B: The Sciences and Engineering*.

McCullough M. E., Emmons R. A., & Tsang J. A. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology*, *82*(1). https://doi.org/10.1037/0022-3514.82.1.112

Miller L., Short C., Garland E., & Clark S. (2010). The ABCs of CBT (Cognitive behavior therapy): Evidence-based approaches to child anxiety in public school settings. *Journal of Counseling and Development*, *88*(4). https://doi.org/10.1002/j.1556-6678.2010.tb00043.x

Neuenschwander M. P., Vida M., Garrett J. L., & Eccles J. S. (2007). Parents' expectations and students' achievement in two western nations. *International Journal of Behavioral Development*, *31*(6). https://doi.org/10.1177/0165025407080589

Pakistan Bureau of Statistics (2019). https://www.pbs.gov.pk/sites/default/files//pslm/publications/hies2018-19/hies_2018-19_writeup.pdf

Parpio Y., Farooq S., Gulzar S., Tharani A., Javed F., & Ali T. S. (2012). Factors associated with stress among adolescents in the city of Nawabshah, Pakistan. *Journal of the Pakistan Medical Association*, *62*(11).

Pew Global Attitude Survey (2011). Americans Want More Pressure on Students, the Chinese Want Less: The Parenting Gap-US. vs China. Survey Report. Pew Research Center Q86. Retrieved from https://www.pewglobal.org/2011/08/23/americans-want-more-pressure-on-students-the-chinese-want-less/

Qadir F., Sahar N., Masood A., Bakhtawar N.,Pauli R., Gilvarry C., &Essau C. (2012). Relationship between Academic Stress & Anxiety among Adolescents in Pakistan: A Preliminary Analysis, presented at International Conference of Applied Psychology (ICAPP) organized by department of Applied Psychology University of Punjab, Lahore, & Psychology Subcommittee of HEC's CDSSHP December 15th -19th 2012

Saeed I. (2010). Daily stressors, coping strategies and Adjustment of Adolescents (A published Doctoral dissertation, National Institute of Psychology, Quaid-i- Azam University). http://prr.hec.gov.pk/jspui/handle/123456789//305

Sahar N., & Muzaffar N. M. (2017). Role of Family System, Positive Emotions and Resilience in Social Adjustment among Pakistani Adolescents. *Journal of Educational, Health and Community Psychology*, *6*(2). https://doi.org/10.12928/jehcp.v6i2.6944

Seligman M. E. P., Steen T. A., Park N., & Peterson C. (2005). Positive psychology progress: empirical validation of interventions. *The American Psychologist*, *60*(5). https://doi.org/10.1037/0003-066X.60.5.410

Sheikh I. & Hussain N. (2014). Parental Pressure on Student's Attainment of High Grades in Karachi based Universities. *Pakistan Business Review*. https://www.researchgate.net/publication/262007497

Sheldon K. M., & Lyubomirsky S. (2006). How to increase and sustain positive emotion: The effects of expressing gratitude and visualizing best possible selves. *Journal of Positive Psychology*, *1*(2). https://doi.org/10.1080/17439760500510676

Shrout P. E. (1998). Measurement reliability and agreement in psychiatry. In *Statistical Methods in Medical Research*. 7(3). https://doi.org/10.1191/096228098672090967

Sin N. L., & Lyubomirsky S. (2009). Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: A practice-friendly meta-analysis. *Journal of Clinical Psychology*, *65*(5). https://doi.org/10.1002/jclp.20593

Sun J., Dunne M. P., Hou X. yu, & Xu A. qiang. (2011). Educational stress scale for adolescents: Development, validity, and reliability with Chinese students. *Journal of Psychoeducational Assessment*, *29*(6). https://doi.org/10.1177/0734282910394976

Tan J. B., & Yates S. (2011). Academic expectations as sources of stress in Asian students. *Social Psychology of Education*, *14*(3). https://doi.org/10.1007/s11218-010-9146-7

Terjesen M. D., Jacofsky M., Froh J., & DiGiuseppe R. (2004). Integrating positive psychology into schools: Implications for practice. *Psychology in the Schools*, *41*(1). https://doi.org/10.1002/pits.10148

United Nations International Children's Emergency Fund. Pakistan: Statistics. 2013. http://www.unicef.org/ infobycountry/pakistan_pakistan_statistics.html

Wang L. F., & Heppner P. P. (2002). Assessing the Impact of Parental Expectations and Psychological Distress on Taiwanese College Students. *The Counseling Psychologist*, *30*(4). https://doi.org/10.1177/00100002030004006

Zhang X., Tze V. M. C., Buhr E., Klassen R. M., & Daniels L. M. (2016). A Cross-National Validation of the Academic Expectations Stress Inventory With Chinese and Korean High School Students. *Journal of Psychoeducational Assessment*, *34*(3). https://doi.org/10.1177/0734282915599460

Annexure A:
Demographic Profile of Participants (N = 162)

Sr. No.	Variables		Experimental Group (n = 82)	Control Group (n = 80)	Mean ± SD	χ^2 / F(p)
			f(%)	f (%)		
1	AGE	14 years 15 years 16 years 17 years 18 years	06 (7.3) 37 (45.1) 26 (31.7) 13 (15.9) 02 (2.5)	04 (4.9) 19 (23.8) 35 (43.8) 17 (21.2) 03 (3.8)	15.78 ± 0.94	9.02 (.11)
2	GENDER	Boys Girls	33 (41.9) 49 (58.1)	31 (48.3) 49 (51.7)		.04 (.85)
3	GRADE	10th	82 (100)	80 (100)		n.a
4	RELIGION	Muslim Non-Muslim	81 (96.8) 01 (3.2)	75 (96.6) 05 (3.4)		2.87 (.09)
5	NUMBER OF SIBLINGS	1–3 4–6 7–9 > 9	29 (29.0) 42 (48.4) 08 (16.1) 03 (6.5)	26 (37.9) 44 (48.3) 10 (13.8) 00 (00)		3.41 (.33)
6	BIRTH ORDER	Eldest Middle Youngest	20 (19.4) 40 (48.4) 22 (32.3)	23 (41.4) 40 (41.4) 17 (17.2)		.83 (.66)
7	MOTHERS' EDUCATION	No education Up to grade 5 High school Above high school missing	18 (22) 10 (12.2) 32 (39) 20 (24.4) 02 (2.4)	17 (21.4) 09 (11.4) 32 (40) 20 (25) 02 (2.5)		.06 (1.0)
8	FATHERS' EDUCATION	No education Up to grade 5 High school Above high school missing	11 (13.4) 11 (13.4) 36 (43.9) 20 (24.4) 04 (4.9)	13 (16.3) 07 (8.8) 32 (40) 26 (32.5) 02 (2.5)		2.07 (.56)
9	LIVING WITH PARENTS	Both Parents Mother only Father only	80 (97.6) 01 (1.2) 01 (1.2)	80 (100) -- --		1.98 (.37)

Sr. No.	Variables		Experimental Group (n = 82)	Control Group (n = 80)	Mean ± SD	χ^2 / F(p)
			f(%)	f (%)		
10	BOTH PARENTS ALIVE	Yes No	81 (98.8) 01 (1.2)	80 (100) --		.98 (.32)
11	MOTHER WORK STATUS	Housewife Working	71 (86.6) 11 (13.4)	72 (90) 08 (10)		1.17 (.56)
12	FATHER WORK STATUS	Working Not working missing	77 (93.9) 03 (3.7) 02 (2.4)	79 (98.8) --- 01 (1.3)		3.02 (.08)
13	ETHNICITY	Punjabi Pathan Kashmiri Others	06 (7.3) 12 (14.6) 01 (1.2) 63 (76.8)	07 (8.6) 11 (13.6) 01 (1.3) 61 (72.4)		.13 (.99)
14	MOTHER TONGUE	Urdu Punjabi Pashto Kashmiri Others missing	61 (74.4) 05 (6.1) 07 (8.5) 03 (3.7) 06 (7.4) --	53 (66.2) 18 (22.5) 04 (5) 00 (00) 04 (5) 01 (1.3)		12.08 (.02)

Annexure B:
Procedure of Data Collection

```
┌─────────────────────────────────┐
│ Participants were recruited from  │        ⭕ Enrolment
│ Two Public High Schools of        │
│ Rawalpindi City, Pakistan &       │
│ completed Pre-intervention        │
│ Assessment                        │
│        (n = 210)                  │
└─────────────────────────────────┘
                │
                │                     ┌─────────────────────────┐
                │                     │ 15 students dropped based │
                │                     │ on age range, 11 refused  │
        ┌───────────────┐            │ to continue further after │
        │ Randomization  │            │ initial survey. 06        │
        │  (n = 170)     │            │ students went to          │
        └───────────────┘            │ participate in a sports   │
          /          \               │ event outside school, 08  │
         /            \              │ were absent when          │
        /              \             │ interventions started.    │
                                     │ 15 + 11 + 06 + 08 = 40    │
                                     └─────────────────────────┘
```

```
┌──────────────────────┐   ┌──────────────────────┐
│ Allocation to          │   │ Allocation to          │       ⭕ Allocation
│ Gratitude Interventions│   │ Control Conditions     │
│ (Count your blessings, │   │   (n = 85)             │
│ Gratitude letter & LKM)│   │                        │
│     (n = 85)           │   │                        │
└──────────────────────┘   └──────────────────────┘
          │                           │
          │                           │
┌──────────────────────┐   ┌──────────────────────┐
│ Lost to post           │   │ Lost to post           │       ⭕ Post
│ interventions due to   │   │ interventions due to   │       Interventions
│ school shift (01),     │   │ school shift &         │
│ absentee for more than │   │ absentee during        │
│ a week during          │   │ post-test (05)         │
│ interventions (02)     │   │                        │
└──────────────────────┘   └──────────────────────┘
          │                           │
┌──────────────────────┐   ┌──────────────────────┐
│ Data Analysis          │   │ Data Analysis          │       ⭕ Analysis
│ includes n = 82        │   │ includes n = 80        │
└──────────────────────┘   └──────────────────────┘
```