

Effectiveness of Gratitude Interventions for Managing Daily Stressors among High School Students

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Abstract

Adolescent mental health problems are frequently caused by daily life stressors. The timely detection and management can lessen the likelihood of more serious issues. Therefore, the present research intends to test the effectiveness of school-based gratitude interventions in reducing daily stressors among high school students. A parallel group experimental design with control is used. 61 students were randomly assigned to the experimental group, while 59 served as wait-control. The experimental group completed a four-week gratitude intervention program (09 sessions with 45-80 minutes). The baseline assessment was carried out through the Inventory of High School Students Recent Life Experiences Urdu version. Mixed-model between-within-subject analysis of variance (ANOVA) showed a decrease in the scores related to daily hassles, excessive demands, personal future concerns, and social mistreatment. The effect size was moderate, suggesting the applicability of interventions within school settings. The other important stressors identified in this group were academic challenges, loneliness, and assorted annoyance. The focus on school-related experiences in this stress-reduction program serves as a milestone for considering school life as a buffer and improves the relationship among students, family, and teachers. The components of social interaction are important in reducing stress especially in interdependent cultures.

Keywords: *daily hassle, gratitude interventions, high school students, Pakistani adolescents, stress in students*

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Introduction and Literature Review

Youth is considered as the *prime time of an individual life*, which is encompassed with various social, environmental, and psychological challenges if not addressed properly, can lead to future distress and maladjustment. The majority of this stress stems from everyday problems or annoyances labelled as daily stressors. Daily stressors or hassles are defined as small events that occur on daily basis and they are irritating, frustrating and annoying (Hochwalder & Saied, 2018). Several researchers suggest that daily hassles have more impact on physical and mental health than major life events (Kohn & MacDonald, 1992; Leppink et al., 2016). According to these researches, the major life events, such as the death of a family member or having a parent moved out occur infrequently and have readily identifiable onsets and endings. On the other hand, daily hassles occur frequently while interacting with the social environment and have less readily identifiable beginnings and endings (Wright, Creed & Zimmer-Gembeck, 2010).

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These stressors vary during different phases of life. For adolescents, these hassles mostly coming from school life such as tests, examination, assignments, homework, peer influence, disagreement with peers & teachers, difficulty in understanding certain subject, meeting deadlines and time management. Researchers have found that the main sources of stress among students are examinations, competition with classmates (Ward, 2021), homework and work outside of school (Killinger et al., 2017), giving presentations, academic overload (Kogan, et al., 2005, available online, 2015), peer pressure, attending social events and decision making for a future career (Acosta-Gómez et al., 2018). The important stressors are academics, social pressure, and excessive demands mostly coming from social interaction. Among high school students, the stress for passing the final examination is very high due to college admission that determines their future career. This situation is more important in developing countries like Pakistan where few good and affordable institutions are available. The competition for admitting to these colleges is very high (Akram, 2020). There are some additional stressors like large family size, living conditions, family SES and cultural interdependence in developing countries. These additional stressors require effective management and guidance within school settings using existing resources.

In a Pakistan-based research on 800 school-going children of age 10-16, it was reported that 33% considered family poor financial conditions as the source of their stress. It has further stated that with one number increase of a room in the house, the mean estimated stress score decreased by -0.201 (95% CI: -0.317, -0.085) related to the socioeconomic condition of the family (Parpio et al., 2012). In another research by Mize & Kliever (2017) on low-income urban youth, significant negative impact of daily hassles related to parents, peers, academics, and neighborhood on adjustment among 353 African American adolescents has been reported. In the longitudinal research by Aroian, et al. (2013) on daily hassles among Arab immigrants' adolescents, it was reported that school and parent hassles were greater than other hassles at every time point. School and parent hassles increased with time. Adolescents with refugee mothers reported greater school and neighborhood and fewer parent hassles than those with non-refugee mothers. Adolescents with unemployed fathers reported significantly more school and neighborhood hassles. Some intervention programs were applied to students in reducing psychological distress (Bani et al., 2020; Baumsteiger et al., 2019). Out of these, gratitude interventions are more significant in terms of resource management, time consumption and training. According to Lyubomirsky, Dickerhoof, et al. (2008) gratitude interventions are more effective than other forms of PPIs in enhancing the wellbeing for long duration. Another strength of gratitude intervention is application in diverse population. Some studies from Malaysia, India and China support the use in different cultures (Al-Seheel, & Noor, 2016; Khanna, & Singh, 2016; Peng, et. al., 2021).

An effective intervention model for addressing these annoyances should consider the socio-cultural aspects, resource constraints and acceptability in the population. According to Maqsood, et al. (2020), there is potential and acceptability in Pakistani public schools for counseling and teacher training. Teachers favor the use of psychological interventions for career guidance, stress management, and confidence building. The present study intends to examine the effectiveness of gratitude interventions in dealing with daily life stressors among Pakistani adolescents. The reasons for selecting gratitude intervention have multiple facets. First, gratitude interventions are more effective than other forms of positive psychology interventions (PPIs) in enhancing wellbeing for a long duration (Lyubomirsky et al., 2008). Positive emotions like gratitude widen the scope of attention, broaden behavioral repertoires, and positively influence the mind and body through improved immune systems, and reduced depressive symptoms (Fredrickson & Losada, 2013). Second, these interventions in schools are cost effective as the existing resources (in terms of human resources and durable assets) can effectively be utilized and sustainability can be increased. Third, the focus of gratitude

interventions is on the meaningful and engaged life, which helps in resource building both at the individual level and at community level. This component is linked with interdependence in collectivistic culture (like Pakistan) will have greater acceptability and suitability in the community. There are number of gratitude interventions that have been used with adolescents (O'Connell et al., 2017). These can be classified into two groups first is self-reflective practices including gratitude journal, count your blessings, and meditation, which are sued for self-expression. The second group comprises of interactive methods through which person actively express the gratitude to others such as writing gratitude letter, visits and gratitude tree.

In the present research, modifications in the existing gratitude interventions are made. The first intervention “Count Your Blessing” ask the individual to think about three good things that happened in a day and write it down before going to bed. This has been modified into thinking and writing about school related experiences. The second intervention “Gratitude letter” instructs the participant to write a letter to someone who did something for which one is extremely grateful and did not thank in proper way. Participants are asked to express their feelings, describe the event for which they would like to thank that person. For the present research, it will be modified into thanking some teacher, mentor, staff member who significantly contributed to student’s life and improved academics, social or personal wellbeing. The third intervention to be used in current research “Loving Kindness Meditation” or grateful meditation in which the person is asked to take comfortable body position, relax and follow instructions of the therapist who perform guided imagery. Participant is asked to image a loved one, or important person from his/her life and image those holding hands, sending kind and affirmative messages. After doing it for five minutes the participant is asked to send back these wishes to that person. This will be modified in the present research by focusing on someone significant in his or her current school life for instance a friend, class fellow, teacher or staff member. By combing these interventions, cognitive, behavioral and emotional aspects of engaged and meaningful life will be covered.

Rationale of Study

This research will focus on the school-related positive life experiences such as thinking about a teacher/mentor’s kindness and contribution in their lives, and then write a letter that describes their gratitude & this letter will be delivered to that person indirectly. This may help in focusing on the positive aspects of school life. This modification will serve as testing this new model for assessing the combined effect of gratitude interventions.

Objective of Study

The present research is aimed at testing gratitude interventions in reducing daily life stressors.

Materials and Methods

Research Design

A randomized wait list-controlled trial with pre-test and post-test was applied. It was a parallel-group design in which the experimental group has received interventions for one month and no treatment for the control group. In the end, post-assessment was carried out separately for both groups; then interventions were replicated for the control group to avoid compensatory rivalry and resentful demoralization. No statistical differences exist between groups at the pre-test, suggesting the change at post-test would result from the interventions applied.

Participants Characteristics

The study was carried out with high school students (age range 14-18), selected from two public schools in Rawalpindi Pakistan. Sample size calculation done through G-Power with $\alpha = 0.05$, *cohen’s d* = 0.5, and $\beta = 0.80$ parameters, showing an estimate of 102 participants equally divided into experimental and control groups. In the present study, 138 students from

10th grade were contacted initially, but after data cleaning, 120 were included in main analysis (61 in experimental & 59 in control group). The inclusion criteria were based on age, school, understanding of Urdu language, absence of physical, mental illness, and treatment. The demographic profile showed more girls (58%), being middle child, having 4-6 siblings (53%), and living with both parents (100%). The mean age of participants was 15.68±0.49. The family-related variables showed that the majority of mothers were homemakers (-97%), father was the sole earner in the family (96%), and high school completion by most of the parents (39-%). Further details are provided in Annexure A.

Instruments

The outcome variable daily life stressors were assessed through the Inventory of High School Students' Recent Life Experiences along with a demographic sheet. Furthermore, the intervention protocol consisting of three gratitude exercises was adapted for this sample. The Inventory of High-School Students' Recent Life Experiences is a self-reported reliable and valid measure that assesses daily life stress among adolescents. It has 41 items with likert type scoring range from Not at all (01) to Completely True (04). Kohn and Milrose have developed the scale in 1993. He has defined hassles as "the irritations and sources of stress commonly encountered on daily basis and affect the physical and mental well-being of individual". This version for high school students is the modification of the Inventory of College Students Recent Life experiences (ICSRLE), developed earlier by the authors. This inventory is suitable for adolescents because it assesses a wide range of daily life problems encountered by adolescents. It includes developmental challenges (mainly academics), time pressure, romantic problems, friendship problems, and general social mistreatment (of oneself by others). The inventory has 41 items with 04-point scoring ranging from 01 (Not at all) to 04 (Completely true) divided into eight subscales mentioned below.

| <i>Subscale</i> | <i>Item included</i> | <i>T otal</i> |
|---------------------------------------|-----------------------------|-------------------|
| Social Alienation | 2,6,25,27,30,33, & 40 | 7 |
| Excessive Demands | 4,12, 14,17,24,26,28,35 &36 | 9 |
| Romantic Concerns | 15,16 | 2 |
| Decisions About One's Personal Future | 19,21 | 2 |
| Loneliness and Unpopularity | 22,37,38,39 &41 | 5 |
| Assorted Annoyances and Concerns | 8,20,29,32& 34 | 5 |
| Social Mistreatment | 1,3,5,7,9 &11 | 6 |
| Academic Concerns | 10,13,18 & 23 | 4 |

All items except item 31 failed to load on any of the domains, therefore, were excluded from final analysis. High score reflects high stress level. In the present research, the instrument has been translated in Urdu language following the World Health Organization Guidelines (2016) for forward and backward translations through a committee approach. Permission from the author was also secured before this process. The newly translated version was tested for reliability and validity. The pilot study with 60 participants showed 0.87 Cronbach alpha reliability of this translated version. Furthermore, principal factoring with oblique rotation

generated eight (8) moderately correlated factors. The overall scale and the subscales had adequate internal consistency (.89 for total, .60-.77 for subscales) for the translated version. At first, two psychologists who are bilingual and had full command on English and Urdu translated the instrument separately. After the initial translations, a committee was formed to review these translations. It comprised of first author and a subject expert (who has a doctorate in Psychology and fluent in English and Urdu). They reviewed both versions and selected the appropriate translations. In the next phase, two more bilinguals with postgraduate degrees in clinical and education Psychology were approached and this new Urdu translation was handed over for back translation into English. Both of them independently translated the instrument. At the end, the consistency of this newly translated English version with the original one was checked through committee approach. After this, the instrument was finalized, adapted and applied. This suggests the suitability of the instrument in current research.

Gratitude Interventions Protocol: For the present research, three gratitude interventions, count your blessings (Sheldon & Lyubomirsky, 2006), Gratitude Letters (Seligman et al., 2005), and Loving Kindness Meditation (Baer, 2003) were selected, translated & adapted. Further details about this modification can be provided later based upon request to authors. The selection of these exercises was based on suitability with the adolescent group, easy to comprehend and catering to both components of interventions i.e. self-reflective & interactive (Froh et al., 2009). A total of nine (09) sessions were carried out with 1-4 exercises in different sessions. The inter-rater reliability has been established for the finalization of these activities through a committee approach with 80% agreement of raters

In the first exercise, participants were instructed to identify & write about three good things from their daily life, family, friends, and academics on a daily basis. They were encouraged to complete this record before going to bed or early in the morning after school assembly. This activity was carried out for next three weeks. The next activity was a Gratitude letter, in which participants wrote two letters, one to a family member and one to their teacher thanking them about their contribution to the student's life. These letters were delivered indirectly to the benefactor to avoid bias/ favoritism in the future. The third activity "Loving Kindness Meditation" started in week three after the completion of gratitude letters. It used imagery & relaxation with a focus on sending well wishes to their benefactors, family, and class fellows. It continued for two weeks each day for 20 minutes. It was ensured that participants learned it and practice it at home without relying on the researcher. It will help in self-reliance & resource building for the future.

Procedure

This current experimental research applied pre-test post-test parallel-group design with control at the difference of four weeks. CONSORT checklist & APA ethical guidelines were followed. The ethical approval and study permissions were secured from the University of Malaya, Malaysia (REF: UM. TNC2/UMREC-621) and the Education District Office, Rawalpindi Pakistan (REF: 6062/GB/DEO SE, Rawalpindi). Parental consent and participant assent were also secured before allocating them in experimental and control groups. The data enrollment process is explained in Annexure B. After establishing the validity & reliability of instrument and intervention protocol through a pilot study, the main experiment was conducted. The interventions were carried out in group settings including 20-25 students in each group after completing pre-assessment on day one. Three gratitude interventions were delivered in series order (each week new activity was introduced). The details of the interventions are mentioned in section above. The daily responses were collected by the researcher during school hours & queries were handled. By the end of week four, post-

intervention was carried out. It was followed by debriefing and certificate distribution among participants. After that, interventions were replicated with a control group to avoid compensatory rivalry.

Analysis Plan

Statistical analysis was performed by using SPSS (IBM version 22). The descriptive statistics included mean and standard deviation skewness and kurtosis. The analysis has been carried out after data cleaning, removing the outliers and running the normality tests. Furthermore, the sphericity assumption (based on Mauchly's tests at $p > .05$) was suitable to run the analysis. A series of 2×2 analyses (Group [intervention, control] \times Time [pre-, post-intervention]) mixed-model between-within-subject analysis of variance (ANOVA) was conducted for daily hassles in eight domains including academic concerns, excessive demands, concerns about personal future, romantic concerns, social mistreat, loneliness, social alienation, and assorted annoyance. Before conducting the main analysis, differences between control and experimental groups were computed through independent sample t-test at baseline.

Results

The results were non-significant at this point ($t=1.00$, $p=n.s.$) suggesting that any difference at post-test may be attributed to interventions. Table 1 presents the means and standard deviations for each condition at pre-test and post-test.

Table 1.

Mean and Standard Deviations for Daily Life Stressors (N=120)

| Outcome Variable | Pre-test | | Post-test | |
|-----------------------------------|--------------|--------------|--------------|--------------|
| | M(SD) | | M(SD) | |
| | Experimental | Control | Experimental | Control |
| 1.Daily Life Stressors Total | 85.78(15.66) | 88.82(17.60) | 78.73(16.65) | 87.49(17.02) |
| 2.Academic Challenges | 10.93(2.18) | 10.70(2.48) | 10.22(1.97) | 10.62(2.83) |
| 3.Social Alienation | 10.90(3.36) | 12.81(4.03) | 9.93(3.87) | 13.36(5.02) |
| 4.Excessive Demands | 21.00(4.43) | 22.50(4.71) | 19.31(1.55) | 22.61(5.02) |
| 5.Romantic Concerns | 3.31(1.71) | 4.59(2.24) | 3.31(1.54) | 4.11(2.18) |
| 6. Loneliness | 10.17(3.14) | 11.39(3.36) | 8.90(2.64) | 10.67(3.32) |
| 7.Decisions about Personal Future | 6.19(1.76) | 6.16(1.72) | 5.15(2.55) | 5.90(1.71) |
| 8.Assorted Annoyance | 8.68(2.62) | 9.82(2.84) | 8.12(4.26) | 10.02(3.46) |
| 9.Social Mistreat | 11.71(4.00) | 13.80(4.07) | 10.80(1.97) | 13.20(4.19) |

Test of Changes over time across conditions Table 2 shows the results from 2 [condition: experimental, control] \times 2 [time: pre-test, post-test] analyses of variance. Time is within-subjects factor and condition is between-subjects factor. For Daily stressor total, there was an

interaction between condition and time, $F(1,119) = 7.85, p = .01, \eta^2 = 0.09$. Simple effect (paired sample t-test) suggest that participants in the experimental group showed decreased in daily stressors score from pre-test to post-test ($t(59) = 6.51, p = .001, d = .42$), whereas, no change was reported by control group ($t(57) = 0.77, p = .45, d = .06$). The two-way interaction between groups and time was significant for three subscales Social Alienation, Excessive Demands, and Decision about Personal Future. For the other five subscales, differences were non-significant. For groups differences, results were significant for Social Alienation, Excessive Demands, Romantic concerns, Loneliness and Assorted Annoyance. The most significant change was reported for loneliness followed by personal future. The significant reduction of daily stressors scores after receiving interventions and medium effect size (Cohen, 1988) suggest the effectiveness of gratitude interventions for dealing with daily life hassles among adolescents.

Table 2.
Mixed Factorial Analysis of Variance (N=120)

| Outcome Variable | | F | p | η^2 |
|--|-----------------|----------|----------|----------------------------|
| Daily Life Stressors total | Condition | 13.46 | 0.00 | 0.11 |
| | Time | 16.83 | <.001 | .14 |
| | Condition× Time | 7.85 | 0.01 | 0.09 |
| Academic Challenge | Condition | 0.06 | 0.81 | 0.00 |
| | Time | 2.65 | 0.11 | .02 |
| | Condition× Time | 1.67 | 0.20 | 0.01 |
| Social Alienation | Condition | 17.27 | 0.00 | 0.13 |
| | Time | 0.63 | 0.43 | .01 |
| | Condition× Time | 7.19 | 0.01 | 0.06 |
| Excessive Demands | Condition | 11.52 | 0.00 | 0.09 |
| | Time | 3.44 | 0.07 | .03 |
| | Condition× Time | 4.41 | 0.04 | 0.04 |
| Romantic concerns | Condition | 15.36 | 0.00 | 0.12 |
| | Time | 1.03 | 0.31 | .01 |
| | Condition× Time | 1.03 | 0.31 | 0.01 |
| Loneliness | Condition | 9.20 | 0.00 | 0.07 |
| | Time | 11.99 | <.001 | .10 |
| | Condition× Time | 0.91 | 0.34 | 0.01 |
| Decisions about Personal future | Condition | 1.96 | 0.16 | 0.02 |
| | Time | 11.95 | <.001 | .10 |
| | Condition× Time | 4.23 | 0.04 | 0.03 |
| Assorted Annoyance | Condition | 10.62 | 0.00 | 0.08 |
| | Time | 0.53 | 0.47 | .00 |
| | Condition× Time | 2.30 | 0.13 | 0.02 |
| Social mistreat | Condition | 10.72 | 0.00 | 0.08 |
| | Time | 5.87 | .02 | .05 |
| | Condition× Time | 0.24 | 0.62 | 0.00 |

Note: Degree of Freedom for Condition: 1, 119, Time: 1,119, Condition× Time: 1,119; Condition (Experimental, Control) is a between-subject factor, time (pretest vs. posttest) is within-subjects factor, Condition× Time is within-subject factor

Discussion

The current research intended to see the effectiveness of gratitude interventions in reducing daily life stress among adolescents. The eight domains of stressors were assessed through IHSRLE. The scores were highest for decisions related to personal future, assorted annoyances, and excessive demands such as having many responsibilities at one time, poor health of a friend, disagreement with others, interruption in school work and making important decisions about one's education. These results reflect the importance of school-related experiences for adolescents. These results also reflect the interplay of family factors and school environment. The previous studies reported similar results (Flett, Schmidt, Besser & Hewitt 2016; Kohn & Milrose, 1993; Lai et al., 2009) in American and Chinese students using the same inventory. It is important to note that scores on Social Alienation were high for the American sample than Chinese sample (Lai et al., 2009) and Pakistani students in the present research.

This can be linked with the interdependence present in Pakistani society. Family is more connected in terms of physical proximity and value sharing. Parents and elders are responsible for financial assistance and social support; however, independence in decision-making is not appreciated. This is manifested from the results of present research where participants felt pressure to meet family demands and showed more concerns about their future but the limited level of loneliness and social alienation. This situation demands to address the academic concerns and daily hassles of Pakistani students. These results are consistent with past Pakistani researches (Qadir et al., 2017; Saeed, 2010; Zafar & Khalily, 2015). However, the management of these stressors has not been addressed in this research.

This situation strengthens the notion of using interventions focusing on relationships and communication improvement among adolescents. The results of mixed method ANOVA (Table 2) showed reduction in daily stressors total score for experimental group. Through the provision of gratitude interventions in form of Count your Blessing and Gratitude Letters, the participants were able to identify the positive aspects of their daily lives such as peer support, teacher's mentoring, birthday celebrations and attending a sports event. After considering these positive elements in one's life, the students could connect more at the intrapersonal level and shared their good fortune with others. This was done through LKM and the delivery of gratitude letters. The communication pattern also improved between adolescents and their benefactors. This further led to a decrease in excessive demands and social mistreat because participants were able to identify more positive elements and less negative ones. The medium effect size also supports the application of interventions in school settings.

The statistical analysis for each domain of daily stressor shows mixed results. The scores in three domains (excessive demands, decision about personal future & social alienation) improved with the interventions, whereas for five domains (academic concerns, assorted annoyance, romantic concerns, social mistreat and loneliness) showed non-significant results from Group \times Time condition. However, time (within-subjects) is significant for social mistreat, decision about personal future, and loneliness subscales. These mixed results can be explained as the interplay of social and cognitive factors. In subscales, excessive demands, social mistreat and loneliness, items were related to social interaction and communication. Academic concerns (e.g. low grades, dissatisfaction with mathematical abilities) and assorted annoyance (e.g. money problem, health problem) are more relevant to cognitive and environmental aspects. The gratitude interventions focus more on intrapersonal and interpersonal aspects of social lives; it is possible that environmental conditions might not improve through these interventions. A recent systematic review of gratitude interventions on

physical symptoms showed mixed results of using these techniques (Boggiss et al., 2020). The self-reported physical symptoms improved only in two out of eight (2/8) studies. More research is needed in this regard.

Conclusion

It can be concluded that gratitude interventions are effective in addressing daily life stressors coming from social interaction and personal relationships. The gratitude interventions are based on the concept of being thankful, so by practicing this on regular basis not only decreases the level of stress but also strengthens the bond of an adolescent with family, friends and social circle. The present research showed that gratitude interventions helped in improving student-teacher relationships, peer interaction, and self-expression. Furthermore, the application of these interventions within school setting is new in a developing country like Pakistan. The use of positive psychology interventions is possible within the classroom using existing resources. Thus, it can be stated that these interventions are comprehensive and effective in dealing with daily life stress among adolescents.

Limitations and Suggestions of Study

The limitations of the present research include a small sample, the absence of a placebo group and follow-ups. Furthermore, the effect of combined intervention has been studied. For future research, it is suggested to include pre-test, post-test and follow-ups to assess the long-term effects of interventions. It will also be interesting to assess each intervention separately. For future implications, it is suggested to include positive psychology techniques in the school curriculum. Since these interventions are cost-effective and easy to learn, academicians, administrators and students can be taught to manage daily life stressors through these techniques. The empirical data from a developing country can be utilized in the identification, assessment and management of daily life problems especially related to future planning, social mistreatment and excessive demands. Furthermore, the knowledge gained from the present research can be utilized in resolving family-related conflicts, which are major concerns in the lives of adolescents.

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References

- Acosta-Gómez, M.G., Roca-Chiapas, J.M., Zavala-Bervena, A., Cisneros, A.E.R., Pérez V.R., Rodrigues, C.S., & Novack K. (2018) Stress in High School Students: A Descriptive Study. *Journal of Cognitive Behavioral Therapy* - 1(1):1-10. Retrieved from <https://openaccesspub.org/jcbt/article/706>
- Akram, H. (2020). Education governance in Pakistan: A critical analysis of challenges. *Journal of Social Sciences Advancement*, 1(01), 38-41. <https://doi.org/10.52223/JSSA20-010105-05>

- Al-Seheel, A. Y., & Noor, N. M. (2016). Effects of an Islamic-based gratitude strategy on Muslim students' level of happiness. *Mental Health, Religion & Culture, 19*(7), 686-703. <https://doi.org/10.1080/13674676.2016.1229287>
- Aroian, K. J., Templin, T. N., & Hough, E. S. (2016). Daily hassles, mother-child relationship, and behavior problems in Muslim Arab American adolescents in immigrant families. *Cultural diversity & ethnic minority psychology, 22*(4), 533-543. <https://doi.org/10.1037/cdp0000084>
- Baer, R.A. (2003). Mindfulness Training as a Clinical Intervention: A Conceptual and Empirical Review. *Clinical Psychology: Science and Practice, 10*(2), 125-143. <https://doi.org/10.1093/clipsy.bpg015>
- Bani, M., Zorzi, F., Corrias D., & Strepparava M. (2020). Reducing psychological distress and improving students well-being and academic self-efficacy: the effectiveness of a cognitive university counselling service for clinical and non-clinical situations. *British Journal of Guidance & Counselling*, <https://doi.org/10.1080/03069885.2020.1840512>
- Boggiss, A. L., Consedine, N. S., Brenton-Peters, J. M., Hofman, P. L., & Serlachius, A. S. (2020). A systematic review of gratitude interventions: Effects on physical health and health behaviors. *Journal of Psychosomatic Research, 135*, 110165. <https://doi.org/10.1016/j.jpsychores.2020.110165>
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences*. New York, NY: Routledge Academic. Available at <http://www.utstat.toronto.edu/~brunner/oldclass/378f16/readings/CohenPower.pdf>
- Flett, G. L., Schmidt, D. H., Besser, A., & Hewitt, P. L. (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*, 103-121. Retrieved from <https://ijcar-rirea.ca/index.php/ijcar-rirea/article/view/207>
- 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. *The Journal of Positive Psychology, 4*(5), 408-422. <https://doi.org/10.1080/17439760902992464>
- Fredrickson, B. L., & Losada, M. F. (2013). "Positive affect and the complex dynamics of human flourishing": Correction to Fredrickson and Losada (2005). *American Psychologist, 68*(9), 822. <https://doi.org/10.1037/a0034435>
- Hochwalder, J., & Saied, V. (2018). The Relation between Sense of Coherence and Daily Hassles among University Students. *Journal of Health Psychology and Behavioral Medicine, 6* (1): 329-339. <https://doi.org/10.1080/21642850.2018.1538802>
- Khanna, P., & Singh, K. (2016). Effect of gratitude educational intervention on well-being indicators among North Indian adolescents. *Contemporary School Psychology, 20*(4), 305-314. <https://doi.org/10.1007/s40688-016-0087-9>
- Kohn, P. M., & Mac Donald, J. (1992). Hassles, anxiety and negative well-being. *Anx. Stress, & Coping, 5*: 151-163. Published online 2007. <https://doi.org/10.1080/1061580920825049>
- Kohn, P.M. & Milrose, J.A. (1993). The Inventory of High-School Students' Recent Life Experiences: A Decontaminated-Measure of Adolescents' Hassles. *Journal of Youth and Adolescence, 22*(1): 43-54. <https://doi.org/10.1007/BF01537903>
- Kogan, L.R., McConnell, S.L., & Schoenfeld-Tacher R. (2005, online 2015) Veterinary students and non-academic stressors. , *Journal of Veterinary Medical Education 32*, 193-200. <https://doi.org/10.3138/jvme.32.2.193>

- Killinger, S., Flanagan, S., Castine, E., & Howard, K. (2017). Stress and Depression among Veterinary Medical Students. *Journal of Veterinary Medical Education*, 44(1), 3-8. <https://doi.org/10.3138/jvme.0116-018r1>
- Lai, J. C. L. (2009). Dispositional optimism buffers the impact of daily hassles on mental health in Chinese adolescents. *Personality and Individual Differences*, 47(4), 247–249. <https://doi.org/10.1016/j.paid.2009.03.007>
- Leppink, E., Odlaug, B., Lust, K., Christenson, G., & Grant, J. (2016). The Young and the Stressed. *J. Nerv. Ment. Dis.* 204(12): 931–938. <https://doi.org/10.1097/NMD.0000000000000586>
- Lyubomirsky, S., Dickerhoof, R., Boehm, J.K., & Sheldon, K.M. (2008). Becoming happier takes both a will and a proper way: an experimental longitudinal intervention to boost well-being. *Emotion*, 11(2):391-402. <https://doi.org/10.1037/a0022575>.
- Mize, J. L., & Klierer, W. (2017). Domain-Specific Daily Hassles, Anxiety, and Delinquent Behaviors among Low-Income, Urban Youth. *Journal of applied developmental psychology*, 53, 31–39. <https://doi.org/10.1016/j.appdev.2017.09.003>
- Maqsood, A., Sahar, N. U., & Malik, N. I. (2020). Counselling Needs Of High School Students: Exploring Teachers' perspective. *PAFMJ*, 70(2), 540-47. Retrieved from <https://www.pafmj.org/index.php/PAFMJ/article/view/4226>
- O'Connell, B. H., O'Shea, D., & Gallagher, S. (2017). Feeling Thanks and Saying Thanks: A Randomized Controlled Trial Examining If and How Socially Oriented Gratitude Journals Work. *Journal of Clinical Psychology*, 73(10):1280-1300. <https://doi.org/10.1002/jclp.22469>
- Parpio, Y., Farooq, S., Gulzar, S., Tharani, A., Ali, T. S., & Javed, F. (2012). Factors associated with stress among adolescents in the city of Nawabshah, Pakistan. *JPMA: Journal of the Pakistan Medical Association*, 62(11), 1209-1213. Available at: http://ecommons.aku.edu/pakistan_fhs_son/120
- Peng, J., Xiao, Y., Zhang, J., Sun, H., Huang, Q., & Shao, Y. (2021). Benefits of counting blessings in basic psychological needs satisfaction and subjective well-being of prisoners. *Psychology, Crime & Law*, 1-16. <https://doi.org/10.1080/1068316X.2021.1905814>
- Qadir, F., Maqsood, A., Sahar, N.U., Bukhtawer, N., Khalid, A., Pauli, R., Gilvarry, C., Medhin, G., & Essau, C.A. (2017): Factor Structure of the Urdu Version of the Spence Children's Anxiety Scale in Pakistan, *Behavioral Medicine*. 44(2):1-8. <https://doi.org/10.1080/08964289.2016.1276427>
- Saeed, I. (2010). *Daily stressors, coping strategies and Adjustment of Adolescents* (A published Doctoral dissertation, National Institute of Psychology, Quaid-i- Azam University, Pakistan) Retrieved from <http://pr.hec.gov.pk/jspui/handle/123456789//305>
- Seligman, M. E. P., Steen, T. A., Park, N., & Peterson, C. (2005). Positive Psychology Progress: Empirical Validation of Interventions. *American Psychologist*, 60(5), 410–421. <https://doi.org/10.1037/0003-066X.60.5.410>
- 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*, 73–82. <https://doi.org/10.1080/17439760500510676>
- Ward, E. (2021). Easing stress: Contract grading's impact on adolescents' perceptions of workload demands, time constraints, and challenge appraisal in high school English. *Assessing Writing*, 48, 100526. <https://doi.org/10.1016/j.asw.2021.100526>
- World Health Organization (WHO) (2016) Process of translation and adaptation of instruments. Available at: http://www.who.int/substance_abuse/research_tools/translation/en/

- Wright, E., Creed, M., Zimmer-Gembeck, P.M. (2010). The Development and Initial Validation of a Brief Daily Hassles Scale Suitable for Use with Adolescents. *European Journal of Psychological Assessment*, 26(3): 1-20. <https://doi.org/10.1027/1015-5759/a000029>.
- Zafar, H., & Khalily, M. T. (2015). Didactic therapy for management of stress and co-morbid symptoms of depression and anxiety in Pakistani adolescents. *Pakistan Journal of Psychological Research*, 30(1), 131–149

Annexure A

Demographic Profile of Participants (n=120)

| Sr. No. | Variables | | Experimental Group(n=61) | Control Group (n=59) | Mean \pm SD | $\chi^2 / F(p)$ |
|---------|---------------------|-------------------|--------------------------|----------------------|--|-----------------|
| 1 | AGE | | <i>f</i> (%) | <i>f</i> (%) | 15.68 \pm 0.49 15.74 \pm 0.85 | .55(.97) |
| | | 14years | 11(18) | 12(20.3) | | |
| | | 15 years | 29(47.5) | 30(50.8) | | |
| | | 16 years | 12(19.7) | 09(15.3) | | |
| | | 17 years | 06(9.8) | 05(8.5) | | |
| | 18 years | 03(4.9) | 03(5.1) | | | |
| 2 | GENDER | Boys | 26(42.6) | 25(42.3) | | .008(.98) |
| | | Girls | 35(57.4) | 34(57.7) | | |
| 3 | EDUCATION GRADE | 10 th | 61(100) | 59(100) | | n.a |
| 4 | RELIGION | Muslim | 59(96.8) | 58(98.3) | | .31(.58) |
| | | Non-Muslim | 02(3.2) | 01(1.7) | | |
| 5 | NUMBER OF SIBLINGS | 1-3 | 18(29.5) | 22(37.3) | | .89(.64) |
| | | 4-6 | 30(49.2) | 28(47.5) | | |
| | | 7-9 | 12(19.7) | 09(15.3) | | |
| | | > 9 | 01(1.6) | 00(00) | | |
| 6 | BIRTH ORDER | Eldest | 12(19.7) | 18(30.6) | | 1.88(.39) |
| | | Middle | 30(48.2) | 25(42.4) | | |
| | | Youngest | 19(31.1) | 16(27.2) | | |
| 7 | MOTHERS' EDUCATION | No education | 20(32.8) | 12(20.3) | | 5.57(.13) |
| | | Up to grade 5 | 11(18.0) | 12(20.3) | | |
| | | High school | 14(23.0) | 24(40.7) | | |
| | | Above high school | 16(26.2) | 11(18.6) | | |
| 8 | FATHERS' EDUCATION | No education | 18(29.0) | 16(27.1) | | 1.25(.74) |
| | | Up to grade 5 | 08(12.9) | 10(16.9) | | |
| | | High school | 24(38.7) | 19(32.2) | | |
| | | Above high school | 11(19.4) | 14(23.7) | | |
| 9 | LIVING WITH PARENTS | Both Parents | 61(100) | 59(100) | | n.a |

| | | | | | |
|-----------|-----------------------|------------------------|---------------------|---------------------|------------|
| 10 | BOTH PARENTS ALIVE | Yes No | 61 (100) 00(00) | 59(100) 00(00) | n.a |
| 11 | MOTHER WORK STATUS | Housewife working | 60(98.6) 01(3.2) | 57(96.6) 02(3.4) | .34(.54) |
| 12 | FATHER WORK STATUS | Working Not working | 60(96.8) 01(3.2) | 59(100) 00(00) | .0009(.97) |

Appendix B:

Participant Enrollment Procedure

