

DOI: 10.21767/2471-9854.100041

# The 'Hood Can Flourish, Too! Challenges and Successes of a Low-Cost Gratitude-Meditation Intervention among Urban Adolescents

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## Abstract

**Background:** Adolescents living in the United States (U.S.) report mental challenges from depressive symptoms to suicidal ideations. The positive psychology (PP) paradigm is a preventative approach to mental health challenges. Increasing gratitude, well-studied among adolescents, is a PP intervention; yet, most U.S.-based studies were limited with respect to study population diversity. Few studies included urban or multicultural youth.

**Objective:** The current study provides a brief introduction to PP and contemplative studies, and how the paradigms were combined into one intervention. A gratitude-meditation intervention was conducted among a diverse cohort of adolescents. The feasibility, acceptability, preliminary outcomes, as well as the challenges and successes of conducting the intervention are described.

**Method:** A four-week, gratitude-meditation study was manualized and tested in a middle school. The science of gratitude was merged with the secular practice of meditation to test a novel intervention among adolescents in an urban setting. The gratitude visualization exercises were extracted from *The Jewels of Happiness*—a collection of poetry and prose for developing positive qualities. The study feasibility and acceptability is quantified; the study challenges and successes are summarized.

**Conclusion:** Despite challenges encountered in conducting the study, the study was feasible, accepted, and the intervention was completed successfully.

**Keywords:** Adolescents; Subjective well-being; Positive psychology; Gratitude interventions; Life satisfaction; Meditation; Sri Chinmoy

## Introduction

The adolescent years are reported to be a time of challenges and turbulence. The problem, according to Duthely [1], is that in the United States (US), 20-25% of adolescents reported

attempted self-harm, depression, and other psychological symptoms; 33% reported feelings of sadness or hopelessness—negative trends in population health studies that have continued for more than two decades. These challenges [2] affect many aspects of adolescents' lives, including academic performance, and follow adolescents into early adulthood. In urban regions, where social, environmental, and economical disadvantages may be more pronounced, adolescents are even more likely to experience these challenges.

There are multiple approaches that address mental health challenges among adolescents. The study summarized in this paper takes a strengths-based approach. To that end, the first aim of this study is provide a brief overview of the fields of positive psychology interventions among youth, meditation interventions conducted among youth, and how the two approaches were merged into a novel intervention conducted among adolescents.

## Positive psychology and human flourishing

The traditional approach to addressing mental health issues among adolescents is to diagnose and treat [1]. The positive psychology (PP) paradigm [3] is a more preventative approach to mental health and well-being—contrasting the traditional deficits approach of curing mental illness.

Meta-analyses have demonstrated that the PP approach works to increase well-being [4]. The PP interventions, tested first among adults, proved successful for adolescents as young as the age of eight [5]. Seligman [6] has summarized several PP interventions that target increasing strengths, such as optimism, and positive emotions, such as the emotion of gratitude.

Studies conducted first among adults were replicated with youth. Human flourishing, extended to include the concepts of meaning in life, accomplishment, and growth, is considered the next step beyond well-being [6]. Flourishing is studied most often among older adolescents, young adults, and adults. Increased well-being was found to foster positive youth development, as well [7].

## The science of gratitude

The recent interest in the study of gratitude as a psychological construct, and how to increase gratitude, has come about with the advent of the field of positive psychology. Gratitude interventions among youth, explained Froh et al. [5], entail typically journaling or making gratitude visits to thank someone for something received. The object or gesture received can be something tangible such as a gift, something intangible such as an act of kindness, or more abstract, like “thankful to be alive”. A more recent approach taken by Froh et al. [5] was to teach a benefits appraisal curriculum to youth from eight to 11 years of age. In Froh et al.’s [5] study, the youth learned to recognize and appropriately respond to help received from another person. Dozens of gratitude studies have been conducted among youth, but Duthely’s [1] review of the literature revealed a paucity of well-being and gratitude interventional studies among culturally diverse populations in the U.S.

## The science of subjective well-being or happiness

Measuring well-being subjectively, i.e., from the perspective of the individual, is something which psychologists, epidemiologists, and economists engaged in about two decades before the positive psychology paradigm emerged. The term subjective well-being (SWB) first appeared in the academic literature by Diener [8]. Subjective well-being represents an individual’s general state of well-being. As stated by Diener, SWB is a three-part construct that takes into consideration an individual’s positive and negative reactions to life, and their overall satisfaction with life. The three-part construct of SWB can be measured as a one-part construct, alone—life satisfaction. Lewis et al. [9] explained that the measurement of life satisfaction is a valid measure of adolescent SWB or happiness.

## Meditation and youth

Contemplative sciences, which study ancient disciplines such as Hatha Yoga, Tai Chi, and meditation, have been studied as a means for increasing well-being among youth, as well [10,11]. Different techniques can be practiced within the specific disciplines of contemplative sciences. As an example, both Hatha Yoga and meditation can be based on different styles, or schools of thought. In the literature, explained Duthely [1], meditation intervention studies traditionally targeted specific behavioral issues, such as attention deficit hyperactive disorder (ADHD) or bullying, or health-related diagnoses like chronic pain. The literature revealed a paucity of well-being studies bringing the two paradigms together—a strengths-based approach and the secular practice of meditation—particularly among minority youth and youth in urban settings. As the first of its kind, which had not been previously documented in the literature, the intervention combined the science of gratitude together with the contemplative practice of the heart-centered meditation of Sri Chinmoy [12]. The current study summarizes the feasibility, acceptability, challenges, and success of conducting a heart-centered, gratitude-meditation intervention among adolescents, attending an urban, South Florida school.

## Methods

A four-week, heart-centered, gratitude-meditation intervention was manualized and tested in a middle school. The science of gratitude was merged with the secular practice of meditation to test a novel intervention among adolescents. The gratitude visualization exercises were taken from Sri Chinmoy’s *The Jewels of Happiness*—a collection of poetry, prose, and aphoristic writings for developing positive qualities, such as peace, happiness, enthusiasm, and gratitude. The current study, which is a secondary analysis of the completed quasi-experimental study, quantifies the feasibility and acceptability of conducting the study, and summarizes the study’s challenges and successes.

## Study intervention

Participants were assigned to one of the two study groups. From a list of student identification numbers of students consented to participate, students were randomized either to the intervention arm or to the control arm of the study. A total of 55 students with complete data were included in the final study cohort: 25 in the control group and 30 in the intervention group. Participants were instructed for an average of 15 minutes, 3-4 times per week, over a four-week period. Participants were advised to practice at home as well.

## Tools and intervention aides

Several tools and aides were required to complete the study. Tools and aides amounted to under \$75.00 USD. Two books [12,13] were used to manualize the intervention, one music CD [14] was required to maintain a calming atmosphere during the interventions, and two boxes of aphoristic, or poetry, cards were distributed to the participants. Below is an example of an aphoristic poem from the study intervention manual.

*Each good, pure and useful thought*

*Is a solid power*

*For our daily use [13].*

Other miscellaneous office supplies were required, as well. Items were purchased on the Internet and at a local discount store. Visualizations were read aloud at each session. Below is an example of a selection on gratitude.

*Gratitude comes from sweetness. So the more we can create sweetness in our hearts and in our being, the easier it becomes to offer gratitude.*

*Sweetness brings gratitude—One way to feel sweetness is to look at a most beautiful fragrant flower [13].*

## Instrumentation

The second aim of this study is to summarize the intervention’s preliminary findings. To test intervention effectiveness, students were assessed at both pre-test and posttest with three, relatively short, validated instruments. The instruments, which consisted of 6-8 questions, were publicly

available on the Internet, at no cost for research, academic, and non-commercial use.

**School satisfaction:** school satisfaction, which represents school engagement, is an important predictor of academic success. Among youth, school engagement was found to be inversely related to school drop-out [9]. Students were evaluated before and after the study with Huebner's [15] School Satisfaction Domain subscale (SSS) of the 40-item Multidimensional Students' Life Satisfaction Scale (MSLSS). The SSS, designed for children and adolescents, consists of eight Likert-type questions. The internal consistency of the SSS has been reported at minimum of 0.70 [16-19].

**Life satisfaction:** Different measures have been documented to assess SWB among adolescents, including happiness and life satisfaction [20]. Life satisfaction, a component of SWB, is another important predictor of academic achievement among youth. Adolescent life satisfaction is a valid measure of happiness [9]. Student life satisfaction was measured with the Student Life Satisfaction Scale (SLSS) and a reported internal consistency of 0.82-0.88 [21].

**Gratitude:** Increased gratitude has been correlated to prosocial behavior, lower levels of depression, and higher grade point average (GPA) [22]. McCullough et al.'s Gratitude Questionnaire Six-Item Form (GQ-6) [23] was administered to measure students' level of gratitude. Froh, Fan et al. [24] demonstrated internal consistency for the GQ-6 of 0.59 for 10- to 12-year-olds, 0.45 for 12- to 13-year-olds, and 0.70 for 14- to 19-year-olds.

### Study permissions

Appropriate institutional permissions were obtained. The middle school authorities provided school-level permission. Human subjects approval was obtained from a university Institutional Review Board (IRB), and AUM Publications, who holds the rights to *The Jewels of Happiness*, authorized non-commercial use of the book to manualize the study. As required by the IRB, both student assent and parental consent were obtained via paper-and-pencil forms.

### Study population

Participants of the study were public middle school students, located in an urban region of Metropolitan Miami. Students were boys and girls, enrolled in grades 6 to 8. Students randomized to the intervention group met two to three times per week and learned the gratitude-meditation exercises for one month. The control group received a shorter version of the program at the end of the study.

### Study feasibility and acceptability

The third aim of this study is to summarize the study feasibility and acceptability of conducting the intervention among a cohort of adolescents enrolled in a public middle school. Feasibility was operationalized by two criteria—signed site approval to conduct the study and sufficient student enrollment. Duthely [1] reported that 52 students with complete

data were needed to meet the minimum requirements determined by the power analysis to run the ANCOVA statistical test. To account for potential attrition, a minimum of 59 participants were needed to enroll. Study acceptability was assessed quantitatively by summarizing participant retention.

School-based gratitude interventions and meditation interventions have been shown to be feasible and acceptable amongst adolescents. Reviews, meta-reviews, and meta-analyses among thousands of adolescents include school-based gratitude interventions [5] or meditation interventions [25-28] that were published between 2009 and 2014. Furthermore, approximately 100 of the studies reviewed reported statistically significant psychological and behavioral outcomes.

## Results

### Demographic summary

As depicted in **Table 1**, a total of 55 participants with complete data met all eligibility criteria. There were slightly more girls (58%) and more in the 7th or 8th grade (56%). The ethnic breakdown was 62% African-American, 22% Caribbean-American, and the remainder (16%) comprised other ethnic groups. While students were randomized equally to either the control group (N=32) or the treatment group (N=32), due to attrition and incomplete data elements, 25 remained in the control group and 30 remained in the treatment group.

**Table 1** Participant demographic information.

	N (%)
<b>Study Group</b>	
Control	25 (58)
Treatment	30 (42)
Total	55 (100)
<b>Gender</b>	
Girl	32 (58)
Boy	23 (42)
<b>Grade</b>	
6th	24 (44)
7th / 8th	31 (56)
<b>Ethnicity</b>	
African-American	34 (62)
Caribbean-American	12 (22)
Other (Hispanic/Multiple/Other)	9 (16)

### Preliminary findings of study measures

**Table 2** summarizes participant life satisfaction, school satisfaction, and gratitude scores—before and after the intervention. Mean posttest scores were compared for the two study groups by the Student's T-Test. Group mean scores were

significantly higher at posttest for the three measures—life satisfaction, school satisfaction, and gratitude, with  $p$ -values of  $p < 0.05$ ,  $p < 0.01$ , and  $p < 0.01$  respectively.

### Feasibility

Feasibility was operationalized as obtaining signed approval and sufficient student enrollment to conduct the study. Conducting the study required a change in site twice. Although only one site was required to conduct the study, Duthely et al. [29] reported that barriers, first with Site#1 and subsequently with Site#2, required a change in location, a new site approval and IRB approval. The total time elapsed, from the first contact with the administrators of Site#1 to study start up at Site#3, was approximately six months.

**Table 2** Preliminary findings: scores by treatment group.

Measure	Pretest Mean	Statistic +/-SD p-value	Posttest Mean	Statistic +/-SD p-value
<b>Life Satisfaction (SLSS)</b>				
Control	28	7.4	26.6	7.6
Treatment	29.6	6.5	31.2	6.7
		$p = ns$		$p < 0.05$
<b>School Satisfaction (SSS)</b>				
Control	35.5	6.3	34.2	7.9
Treatment	35.3	5.1	39.7	5.8
		$p = ns$		$p < 0.01$
<b>Gratitude (GQ-6)</b>				
Control	32.4	7	29.6	9.1
Treatment	32.7	5.8	36.7	3.9
		$p = ns$		$p < 0.01$

**Site #1:** Within 10 days of being approached, administrators of Site #1 approved the study, but instructors agreed for the study to be conducted during the school's afterschool program only. Approximately four weeks elapsed from IRB approval to recruitment. Low attendance and attendance irregularity during the afterschool time were the primary barriers to conducting the study at Site #1. Consequently, only 5 of 65 middle school students were consented, yielding 8% enrollment (Table 3). Within two weeks study was discontinued.

**Site #2:** School administrators approved the study for Site#2 within two weeks, but instructors were not properly informed or prepared, resulting in low instructor buy-in, and delays in study start-up. Furthermore, the start-up delay extended into State and district testing season, necessitating a change from the original agreement. Administrators adjusted the intervention time from an academic period to the lunch period. Approximately six weeks elapsed from IRB approval to recruitment. Conducting the study during the lunch hour was an

additional barrier to conducting the study at Site #2. Consequently, only 13 of 150 (9%) active middle school students were consented (Table 3). The study was discontinued two weeks post-enrollment.

**Table 3** Study enrollment and study initiation by potential study sites.

	Population Enrolled Initiated N (%)	Site Challenges to Enrollment and Data Completion
<b>Site #1</b> Middle School Enrollment Initiated Study	n=65 5 (8%) 0 (0%)	1. Administrative challenges 2. Instructor buy-in 3. Attendance irregularities
<b>Site #2</b> Middle School Enrollment Initiated Study	n=150 13 (9%) 0 (0%)	1. Instructor buy-in 2. Access to students 3. State/district testing
<b>Site #3</b> Middle School Randomized Initiated Study	n=75 68 (91%) 61 (81%)	1. Administrative delays 2. Attrition post-consent

**Site #3:** It required several encounters with school administrators to obtain site approval for conducting the study with the middle school students. Site approval from the school required one letter, two in-person consultations with school administrators, and one in-person meeting with the lead middle school teacher. The entire process lasted approximately four weeks. An additional six weeks elapsed from IRB approval to participant recruitment. Administrators and teachers agreed for the study to be conducted during the classroom time, amongst two groups of middle school students, (n=75). A total of 68 of 75 students available for the research study consented, yielding a 91% enrollment rate.

### Acceptability

Study acceptability was assessed quantitatively as participant retention. The study was discontinued at the two initial sites due to under-enrollment. Participant retention, therefore, was assessed for Site #3 only—the final study site. As determined by the power analysis, 52 students with complete data were required to meet the minimum requirements for study completion.

As depicted in Table 4, 68 students were consented to participate. Due to attrition, a total of 55 students met all study requirements and completed the study—yielding an 81% retention rate: 25 remained in the control group and 30 in the intervention group. Attrition occurred at three stages: after participants were consented, but prior to study start up; during the study; and, post study. Reasons included participant chronic illness, suspension from school, low participation in the sessions (below 50%), incomplete data forms, and extreme scores.

Although permission was not granted to publish specific onsite observations and conversations, Duthely [29] reported that the intervention seemed to be well-received. Positive comments were expressed generally by school administrators,

the middle school teachers, and student participants. Specifically, school administration remarked that participation in the intervention group appeared to positively influence student behavior. Middle school teachers observed heightened student academic focus. Several students commented directly to the researcher that practicing the exercises helped them to deal better with stressful situations, both at home and in school.

**Table 4** Recruitment, attrition, and final study cohort (Site #3).

Gender	Students Consented (N)	Attrition Post-Consent (N)	Study Attrition (N)	Final Cohort (N)
Girls	39	4	3	32
Boys	29	3	3	23
Total	68	7	6	55

### Challenges and successes

In summary, both challenges and successes were encountered to conducting the study. The first challenge, as evidenced in **Table 3**, is that completing the study necessitated enlisting a total of three sites. Due to low enrollment, first at Sites#1 (8%), and subsequently at Site #2 (9%), a third site, Site #3 was enlisted. Second, administrative delays, instructor buy-in, and student access were barriers to completing the study at Site #1 and Site #2. Third, approximately six months elapsed from site approval for Site #1 to study startup at Site #3. Dozens of similar school-based interventional studies were documented previously in the literature, including meditation interventions [21-24], and life satisfaction studies [25]. As such, two changes of study site were not anticipated.

Despite the study challenges noted above, there were several key successes. First, as depicted in **Table 2**, permission was granted and enrollment commenced at three different sites. Second, although the study was not feasible at the first two sites, the study did meet feasibility criteria at Site #3. Third, preliminary analyses, as evidenced in **Table 2**, indicate that participant school satisfaction, life satisfaction, and gratitude increased. In addition, although it was not possible to present specific administrator, instructor, or student comments, positive comments were expressed at these three levels. Fourth, conducting this study required only a modest financial investment to purchase study aides and annualize the intervention (\$75.00 USD). Instruments were free of charge and could be scored manually.

### Conclusion

Not unlike what is reported worldwide, one-fourth to one-third of adolescents living in the U.S. experience behavioral and mental health challenges, which can be more prevalent in large urban regions. What is demonstrated in the literature is that rather than waiting for problems to manifest, strengths-based interventions rooted in positive psychology (PP) framework can help prevent these challenges in the future.

The review of the literature revealed a paucity of PP intervention studies conducted among certain sub-groups. Very few studies included youth in urban districts; furthermore, there was little cultural diversity represented in participant profiles. The intervention described in this study sought to address this gap in the literature. A heart-centered, gratitude-meditation intervention was conducted among a cohort of culturally diverse adolescents attending an urban middle school. The current study, a secondary analysis of the aforementioned intervention, determined the feasibility and acceptability of conducting the intervention, and summarized the challenges and successes of conducting the study in an urban middle school.

It was anticipated that the intervention would be feasible at the first site where administrative approval was attained. In fact, administrative challenges and teacher buy-in indirectly affected participant enrollment. In one location, a break down in communication between administration and instructors resulted in low instructor buy-in and impaired access to the students. In another site, administrative delays pushed the intervention date forward into the middle school state and regional testing, thereby limiting access to the students. The first school site granted access to the students during the afterschool program only. The second school site granted access to students during the lunchtime hour only. Finally, the third site granted access to the students during the school day, at appropriate times that would not disrupt student testing or learning. Consequently, the study was feasible only in the third, and final, site.

It was anticipated also that the study would be accepted at the (first) site where administrative approval was granted. In fact, due to under enrollment at the first two sites, feasibility was assessed for the third site only. Despite study attrition, an appropriate number of participants completed the intervention. Also, positive remarks were made about the intervention by administration, instructors, and the student participants. Taken together, the intervention was accepted.

Preliminary results of mean scores before the intervention, compared to post-intervention, indicate overall positive results on the three measures. Students randomized to the experimental arm of the study scored significantly higher in their levels of school engagement, life satisfaction, and gratitude, compared to students randomized to the control group. Finally, the intervention was carried with relatively low cost. Approximately \$75.00 USD worth of materials were needed to carry out the study.

This study has limitations. First, this was a retrospective review of a previously reported intervention, which limited the amount of reportable data. Second, the intervention was designed as a purely quantitative study, and permission was not granted to report specific comments by school administrators, instructors, nor the student participants.

To conclude, despite several challenges encountered prior to study completion, the gratitude-meditation intervention was successfully implemented among adolescents attending an urban middle school. Urban schools, who may be faced with daily budgetary, administrative, structural, behavioral, and academic challenges, are sought out more for interventions that

attempt to “fix” problems, or target “at-risk” youth. Perhaps moving forward, researchers will consider including urban schools in research centered on happiness, well-being, positive emotions like gratitude, and flourishing!

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