Implementing Group Mindfulness Therapy (GMT) for Adolescents with Anxiety in an After-School Program: Results of an Open Trial

Deborah McCarthy, MS, OTR/L, Division of Occupational Therapy, American International College, Springfield, MA
Deborah.mccarthy2@aic.edu
Principal Investigator: Michael J. Crowley, PhD., Yale Child Study Center, Program for Anxiety and Mood Disorders, Yale School of Medicine, New Haven, CT
Michael.Crowley@yale.edu
The need:

The uptick in the prevalence of anxiety disorders in adolescence (Beesdo et al., 2009) points to a specific area of need.

Mindfulness based approaches (MBAs) have shown validated positive results for reducing anxiety in adults (Khoury et al., 2013; Zoogman, Goldberg & Miller, 2014).

Base on current early research on the use of Mindfulness with youth, Mindfulness has been shown to be beneficial and without iatrogenic harm. Most research with youth has been done in schools and has not targeted clinical populations (Zoogman et. al., 2014).
Mindfulness Definition

John Kabat-Zinn (1994)

“paying attention in a particular way: on purpose, in the present moment, and non-judgmentally”
Mindfulness with youth:

My explanation to adolescents:

Working with attention in a kind, nonjudgmental manner, while learning about one’s individual habits of the mind.

Once you start to learn how your individual mind behaves: where it wanders to, and how that creates and maintains states of anxiety, you are able to gain some control of the mind and anxiety and prevent it from taking over your life.

This is simple to do – harder to remember to do it.
Accessibility - Increased access to interventions
Cost-effectiveness
Sustainability
Accessibility

There are multiple clinician specialties typically working in school settings (school psychologists, school counselors, occupational therapists, school nurses, and school social workers),

We thought a particularly important innovation in anxiety treatment would be to document the feasibility and acceptability of a Mindfulness Based Intervention designed for anxious adolescents, delivered where these professionals work, and reaching youth who otherwise may not have access to this type of service.
Purpose:

- This pilot study examined the feasibility, acceptability, and effectiveness of a Group Mindfulness Therapy (GMT) program delivered at a middle-school, for adolescents with anxiety concerns.
- We hypothesized that GMT would reduce informant-rated youth anxiety, stress, and attention problems and provide a method of delivery for anxiety treatment accessible to more youth than current standards of care.
- Parent- and youth-reported internalizing, anxiety, and perceived stress were primary outcomes.
- Informant-rated attention symptom severity was a secondary outcome.
Project Description:

11 students at a middle school in Connecticut with significant anxiety symptoms were provided the 10-week GMT for anxiety program in an after-school format.
Project Description:

- The group met once per week after school (Students could take the late bus home).
- 60-minute sessions.
- Program delivery by an occupational therapist and school psychologist, both trained in mindfulness and the GMT for anxiety program.
Project Description

Sustainability

- The school psychologist was a participating group leader, and simultaneously learned the program in order to be able to continue delivering the program to students exhibiting anxiety at the Middle school after the study was completed.
- The school psychologist met with the students approximately once per week for short sessions to review and reinforce techniques learned.
- School psychologist was also there to process/facilitate referrals for deeper work if needed.
- This could be a counselor, social worker, etc. within the school.
Methodology

- All students at a middle school were invited to participate in screening, and 35 were screened with the parent report SCARED (clinical cutoff < 30).
- Parents provided written parental consent. Youth provided written assent. This study was approved by the Yale University Human Subjects Committee.
- Thirty-five youth were screened and 16 made the SCARED clinical cutoff ≥30. Eleven youth were recruited into the study (SCARED M = 34.45, SD = 4.12).
- 11 adolescents, ages 12-13, were enrolled in the trial and participated in the 10-week GMT for anxiety program.
- Pretreatment data were acquired 10 days prior to GMT and post-treatment data were collected 3 days following GMT completion.
Measures

Multidimensional Anxiety Scale for Children (MASC; March, Parker, Sullivan, Stallings, & Conners, 1997): Anxiety symptom severity from the youths’ perspective.

Total score = treatment outcome.

(Assesses Physical Symptoms, Social Anxiety, Harm Avoidance, Separation Anxiety/Phobias, Generalized Anxiety, and Obsessive-Compulsive symptoms.)
Measures

Global functioning was assessed with the Achenbach scales [parent report – Child Behavior Checklist (CBCL), Youth Self Report (YSR)] (Achenbach & Rescorla, 2001).

Treatment outcome was assessed using the broadband internalizing subscales.

We also evaluated change on the Externalizing subscale and the Attention Problems subscale.

(The internalizing problems consisted of anxious/ depressed, withdrawn/depressed, and somatic complaints subscales; externalizing problems consisted of delinquent behavior and aggressive behavior subscales.)
Measures

Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983), was used to measure stress.  
(Higher scores indicate greater perceived stress.)
Results

Feasibility and Acceptability to adolescents:

- Of the 11 adolescents, all but one completed GMT. One male participant dropped out after session 5, due to a scheduling conflict (he didn’t like taking the late bus).

- Mean attendance rates were high (i.e. 8.8 sessions, SD = 0.92)

- GMT had an excellent retention rate (91%), with unanimous agreement among completers that they would recommend GMT to their peers.

- The school expressed that they planned to continue to run groups after the study.
Results

GMT yielded significant effects across multiple measures in this pilot study, across adolescent and parent informants.
Significant improvements were found on YSR self-ratings of internalizing problems \( [t(9) = 3.65, p = .005, d = 1.15] \) and externalizing problems \( [t(9) = 2.39, p = .041, d = .76] \); a similar pattern of improvement emerged for parent ratings of youth internalizing problems on the CBCL \( [t(9) = 4.26, p = .002, d = 1.34] \);
There was a significant reduction in self-reported anxiety on the MASC \([t(9) = 2.78, p = .022, d = .88]\) and self-reported perceived stress on the PSS \([t(9) = 3.09, p = .013, d = .98]\).
Parent and youth reports of attention problems on the CBCL and YSR indicated significant improvements in attention from pre- to post-treatment, CBCL: $t(9) = 3.638, p = .005$, YSR: $t(9) = 2.236, p = .052$. 

Parent and child report attention symptoms, *$p < .05$* (error bars are standard errors)
Limitations

- The findings of this pilot study are limited by the small sample size and single group comparison.
- We cannot rule out regression to the mean and expectancy and/or demand characteristics (social desirability) as alternative explanations of change.
- Because participants were not clinically referred, we cannot make strong generalizations to clinically referred youth.
- Our study needs replication in a larger randomized trial, preferably with an active control group
- And a follow-up to examine retention of potential gains.
Conclusions:

This is the first study to directly target adolescent anxiety in a school setting with a Mindfulness Based Approach.

Given the clear benefits of MBAs for clinically referred adults, and the promising findings we report here, we expect that GMT could benefit clinically referred youth.

It is feasible and acceptable to adolescents, their parents and schools.

It is sustainable by the school after implementation.
Conclusions:

GMT could be cost effective for youth and families by providing this to multiple adolescents in one group without added cost for outside of school treatment.

We believe it could also enhance work being done in individual psychotherapy and counseling outside of school, or introduce adolescents to the experience, thereby increasing the chance they will seek it or participate more readily outside of school in private counseling.
The Program

GMT was informed by multiple training programs and retreats nationally and internationally, including Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn, 2005), Mindful Schools (Mindful Schools, 2012), MindUP™ (Hawn Foundation, 2011), and Semple’s Mindfulness program for anxiety in children (Semple & Lee, 2011), Insight Meditation Society.
The Program

- At the outset, youth were informed about confidentiality and privacy of group membership.
- They were guided through direct practice of the skill(s) taught in each session and encouraged to complete independent weekly home practice (discussed the following week). There was also a weekly follow up with the school psychologist participant/co-leader.
- Treatment rationale was provided for all skills taught. (Adolescents like to know why.)
- Skills taught were built upon with each successive weekly meeting.
The Program

OUTLINE: Specific sequence taught in specific way

Week 1: Introduction (buy-in), establish group rules, intro to Mindful listening and breathing practice.

Week 2: Body awareness and self-compassion. Continue listening and breathing practice.

Week 3: Add awareness to breathing practice and self-compassion practice.
(Breathing practice and self-compassion now continue weekly with incremental variations).

Week 4: Continue breathing and self-compassion, add mindful movement and emotion awareness.

Week 5: Continue above, add more experiences for mindful movement.
The Program

Week 6: Continue previous skills, add working with thoughts and emotions. Start self-awareness experience charts (weekly).

Week 7: Continue previous skills, add further work with thoughts and emotions.

Week 8: Continue previous skills, add more work with sound awareness, begin daily schedule charts.

Week 9: Continue previous skills, add mindfulness of taste/eating, continue work in daily schedule charts.

Week 10: Closing, review, application. Discussion of continued meetings.
The Program

- Students were provided with some charts to fill out at certain points during the week that encouraged self-awareness, such as experience charts and journals. Self-compassion was incorporated throughout.

- There was also emphasis on integration of the skills into daily life through a self-reflective daily schedule chart later on in the program.

- Homework was, “suggested” versus mandatory – adolescents are already stressed about their homework loads. We did not want resistance or a negative experience.
The program

- After school, so it did not interrupt classes. It was accessible, since students could take the late bus home if needed.
- In a comfortable room, not a classroom. (Use of beanbag chairs, yoga mats, comfortable seating).
- Care was taken to keep the techniques developmentally appropriate.
- Care was taken to give the adolescents space to spread out and create a feeling of safety / aloneness in the room due to their self-conscious stage of emotional development in addition to anxiety.
The Program

- Made sure to check in individually before or after the group at several points over the 10 week period, as they were less likely to share experiences and feelings within the group (anxiety/self-conscious).

- We could find out more about how they were feeling about things and progressing and answer their individual questions this way.
Acknowledgements

This research was supported by a NIDA training grant K01 DA034125 (MJC). The authors have declared that they have no competing or potential conflicts of interest. All authors contributed equally to the design of this study. They are grateful to Superintendent Robert Siminski and Principal Michael Seroussi for their support and willingness to work with us on this Project at RHAM Middle School. They thank the youth and parents who participated in this work, as well as Christina Pheuffer and Jessica Walthall for assisting with data collection
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