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Review article

Mindfulness to Decrease Social Anxiety in Children and Adolescents

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Abstract

General and social anxiety continues to plague many children and adolescents within the United States and globally. Efforts to support teachers and school nurses with their daily interactions with students in recognizing and supporting the student's emotional health is a worthy endeavor. This article was prepared to gather a collection of research evidence between 2014-2019 regarding the utilization of mindfulness activities in promoting emotional resilience and reducing anxiety in adolescents and school age children.

Keywords: Children and adolescents; Mindfulness, Social anxiety

Introduction

According to the Center for Disease Control (CDC), approximately 4 million children in the United States age 3-17 have been diagnosed with anxiety [1]. Anxiety comes in many forms such as separation, general, and social. Social anxiety pertains to a fear of school and other environments where there are a lot of people [1]. Increased fear and worry can lead to behavior or conduct issues as the child or adolescent withdraws from society. Social anxiety in children has been connected to attendance issues, behavior and discipline problems, and cognitive performance [2]. In addition, childhood anxiety has been identified as a precursor to suicidal ideation in adolescents, generalized anxiety disorders, and chronic depression in adulthood [2]. Exploring the relationship between social anxiety and the fear of embarrassment's relationship with aggressive behavior in early education settings is important to identifying the benefit of mindfulness activities in providing children with coping mechanisms to deter escalating violence as the child matures [3].

Thus, endeavors for early intervention when identifying a child exhibiting social anxiety and oppositional behavior can potentially impact a child's long-term mental health. Prior to conducting evidence-based research this paper briefly defined

mindfulness and conducted a simple review of literature regarding the benefits of mindfulness training for children and adolescents with anxiety. Limited research studies regarding the focus of the authors' topic was identified. The paper also explored gaps in the research, potential barriers to implementation of mindfulness in the school system and suggestions for future research.

A Definition of Mindfulness

Mindfulness is the basic human ability to be fully present, aware of where we are and our emotions and what we're doing, but not overly reactive or overwhelmed by what's going on around us [4]. According to Perry-Parrish, et al. [2], "Mindfulness approaches can be taught to children, adolescents, and their parents to improve self-regulation, particularly in response to stress". Recently, a growing body of research evidence supporting the use of mindfulness in school age children and adolescents is surfacing.

Simple Review of Literature

A simple review of literature was conducted via a search using the key terms social anxiety and mindfulness. The data bases searched included Cumulative Index to Nursing and Allied Health Literature (CINHAL) and PubMed. The search was limited to publications from the previous six years. The first scope of literature revealed hundreds of articles which included mindfulness approaches in adults, Autism Spectrum Disorders,

various disabilities, alternative medicine, and several mental health disorders. With the addition of the search term school-age children, twenty-one articles were examined more closely and provided contributing evidence to mindfulness regarding social anxiety, behavior issues and attendance problems. Ten of the twenty-one included research pertinent to the paper's specific focus and were chosen for inclusion. The paper included a brief definition of the instruments and mindfulness guidelines included in context of the literature reviewed.

Random Control Trials

Four random control trials were included in the review. Three were discussed here and one was discussed in discrepant research. The first Random Control Trial (RCT) included 100 sixth grade participants in which 52 were assigned to an intervention group and 48 were assigned to a control group. The authors used the Youth Self Report (YSR) with 112 questions to measure general wellbeing pre and post study. The intervention group participated in a six -week mindfulness meditation program and kept journals. Qualitative data collected from the participant journals reported feelings of relaxation, calmness, and a decrease in worry compared to the 48 in the control group [5].

A second RCT used the Social Anxiety Scale for Children (SASC), Self Esteem Scale, and Mindful Attention Awareness Scale (MAAS) as pre and post assessments in sixty-three 11-13-year-old students participating in a Mindfulness Based Cognitive Therapy in Children (MBCT-C) program [6]. The SASC scale measured social avoidance and distress, the Self Esteem Scale measured feelings of self-worth, and the MAAS measured awareness of emotions [6]. MBCT was developed as a sub-method of Mindfulness Based Stress Reduction (MBSR). Dr. Jon-Kabat Zinn founded MBSR designed to use meditation and sometimes yoga to decrease stress [4]. Using MBSR as an example, Zindel Segal, Mark Williams, and John Teasdale developed MBCT for depression originally and revised to include therapies for children MBCT-C [7]. Following the three pre assessments, Mindfulness Based Cognitive Therapy in Children (MBCT-C) was provided in the intervention group for eight weeks and evidence showed significantly decreased symptoms of social anxiety in the post assessments [6].

The third RCT reviewed was conducted using the MindUP program; a Social and Emotional Learning (SEL) program founded by Goldie Hawn in 2003 who used neuroscience experts to develop learning skills for children to help manage stress [8]. Ninety-nine fourth and fifth grade Canadian students were randomly divided into two groups. One intervention group participated in the MindUP curriculum for twelve weeks, and the control group participated in a social responsibility program. The authors used the Mindfulness Attention Awareness Scale (MAAS), previously defined, to measure emotional components. The authors reported

enhancing social-emotional development for students using the MindUP program [9].

Cohorts

Five cohort studies were reviewed. The first was a pre and post intervention design conducted by Ramesh [7]. The author targeted thirty adolescents between the ages of 14-17 diagnosed with social anxiety disorder and being as an out patient. The author used the Liebowitz Social Anxiety Scale for Children and Adolescents (LSAS-CA), Hamilton Anxiety Rating Scale (HAM-A), and the General Self Efficacy Scale (GSE) as pre and post anxiety assessments [7]. The LSAS- CA measured fear and social avoidance, while the HAM-A assessed psychic and somatic anxiety symptoms, and the GSE assessed ability to respond to difficult situations [7]. Next, the students participated in 12 sessions of Mindfulness Based Cognitive Therapy (MBCT). Results reported less fear and decreased avoidance behavior in social situations when using MBCT-C [7]. Also, only nine of the thirty continued to meet the designated criteria for social anxiety [7].

According to Lam [10], weekly group sessions for 17 children in Hong Kong diagnosed with anxiety using MBCT-C reported less feelings of anxiety and sadness and that the sessions were helpful for them in school [10]. The author who used the Children's Anxiety and Depression Scale (CADS) pre and post MBCT-C also reported that at a three- month post study follow-up students were continuing to use mindfulness [10]. The CADS scale used 47 self-report items to assess symptoms of anxiety and depression [10]. Meagher, et al. [11], collected evidence from fourteen 7-11-year-old children in Australia using Acceptance-Based Behavioral Therapy (ABBT) for eight weeks and reported decreased worry by the children and less anxiety in their children by the parents [11]. The authors used the Penn State Worry Questionnaire for Children (PSWQ-C) and the Spence Children Anxiety Scale for Children (SCAS-C) for their pre and post assessments in the study. Each of these tools measured subjective reports of worry by participants [11]. The ABBT as an intervention for the cohort provided education about the role of worry in avoidance and how mindfulness approaches led to positive actions [11].

A qualitative exploratory study reviewed provided a ten-week mindfulness course delivered to 16 adolescents in the United Kingdom through a focus group [12]. Following the mindfulness program, qualitative data was collected via adolescent interviews, and the authors summarized that students attained valuable coping skills [12]. No anxiety measurement instruments were used as pre and post assessment. The mindfulness was provided by certified teachers in mindfulness interventions rather than an established program curriculum.

Vickery and Dorjee [13], conducted a pilot study in the

United Kingdom using seventy-one students 7-9 in age [13]. The students completed the Child Adolescent Mindfulness Measure (CAMM), the Emotion Expression Scale for Children (EESC), Sterling Children's Well Being Scale (SCWBS) and the Positive and Negative Affect Scale for Children (PANAS-C) as measurement tools. The CAMM measured the extent a child was aware, while the EESC measured emotional expression [13]. The SCWBS and the PANAS-C looked at optimism and negative and positive emotions- respectively [13]. The Pawsb program, which was designed to provide children with skills to be less automatically reactive to situations and use mindfulness approaches, was used by the authors as the intervention. Follow up found that the Pawsb program promoted resilience and decreased negative feelings in the children [13].

Systematic Review

One systematic review was included in the literature review. Perry-Parrish, et al. [2], conducted a systematic review of literature dating between 2000 and 2013. The studies reviewed did not address anxiety measuring instruments. The authors focused on discussion of studies that used mindfulness in a variety of children populations for a variety of conditions. Topics discussed pertinent to this paper included the effects of Mindfulness Based Stress Reduction (MBSR), Mindfulness Based Cognitive Therapy (MBCT) and the MindUP program [2]. Two key concepts by

the authors provided support for their research interest. The first was that the motivation and enthusiasm of those with an interest in mindfulness and desire to support a child's mental health was threaded throughout their review and well founded. The second was, "Mindfulness interventions need to demonstrate the same level of clinical and psychological value as other evidence-based treatments, and dissemination of these interventions needs to ensure fidelity" [2].

Discrepant Research

One of the research studies reviewed released findings that distraction worked better than positive thinking prior to performing in sports for forty-seven students in Greece. Half of the students used a positive repetitive statement, while half of the students used a distraction statement prior to participation in a sporting event [14]. Those students using purposeful positive thinking through meditation were shown to have heightened anxiety levels, while those who participated in the group using the distraction statement showed lower anxiety scores [14]. (Table 1), Grading of References, provided research study citations, level of evidence and strength of evidence. The authors used Polit and Beck's [15] hierarchy to determine the level of evidence and pyramid to determine the strength [15]. Following this simple review of the literature, an appraisal of the evidence was prepared considering strength of findings and gaps in the research.

Citation	Evidence Type	Strength of Evidence
[5]	Randomized Control Trial (RCT)	Moderate Quality- defined as level II RCT, second level pyramid. Deemed moderate quality due to sample size N=47.
[10]	Cohort	Fair Quality- defined as level IV, third level pyramid, Cohort. Deemed fair quality due to sample size N = 17.
[6]	RCT	Moderate Quality- defined as level II RCT, second level pyramid. Deemed moderate quality due to sample size N=62
[12]	Cohort	Fair Quality- defined as level IV, third level pyramid Cohort. Deemed fair quality due to sample size N= 14.
[11]	Cohort	Fair Quality- defined as level IV, third level pyramid Cohort. Deemed fair quality due to sample size N=16.
[2]	Systematic Review	High Quality- defined as level I First level pyramid Systematic Review
[7]	Cohort	Fair Quality- defined as level IV third level pyramid Cohort Deemed fair quality due to sample size N=30.
[9]	RCT	High Quality- defined as level II RCT, second level pyramid Deemed high quality due to sample size N=99
[14]	RCT	Moderate Quality- defined as level II RCT, second level pyramid Deemed moderate quality due to sample size N= 47
[13]	Cohort	Moderate Quality- defined as level IV third level pyramid Cohort. Deemed moderate quality due to sample size N= 71

Table 1: Grading of References.

Summary

The research appraised originated from peer reviewed publications in the fields of neuroscience, psychology, psychiatry and education counseling. Of the articles reviewed, four were Random Control Trials [5,6,9,14]. Five were cohort studies [7,10-13]. Each of the research studies reviewed discussed limitations. For example, some of the studies had a sample size of 30 or less [7,10-12]. Gaps in the research existed. The first gap noted was a lack of research conducted by nursing or referenced nursing journals found in the search. Second, no evidence using the specific focus and setting intended for the authors' potential study was found as an example. Of the studies reviewed, seven were outside of the United States [6,9,10-14]. Barriers mentioned in the literature included some difficulty in recruitment of participants due to the perceived stigma of the term social anxiety [12]. Secondly, the argument mindfulness was an extension of religious practices which should not take place in school was voiced in the systematic review article [2].

Future Research

Suggestions for future research following the review included repeating studies like those reviewed using larger sample sizes, consistent instrument to measure anxiety and consistent mindfulness program to establish greater reliability. A second research interest would be to expand on the body of knowledge that mindfulness enhances caring behaviors in disturbed family processes. Lastly, continuing research regarding the use of mindfulness to improve cognitive processes in children could be led by advanced practice nurses.

Conclusion

In summary, a substantial body of evidence supporting mindfulness practices in general was available. A moderate body of the research targeted children with physiological problems unrelated to anxiety. A limited body of research pairing mindfulness with treatment of social anxiety in children and adolescents was discussed in this literature review. Of the ten studies reviewed, nine were able to report positive use of mindfulness. However, limited research is available using large sample sizes, and consistent instruments for measuring social anxiety specifically. Nurses advocating mindfulness can contribute to further evidence-based practice through research. Nurses have the opportunity to influence knowledge regarding mindfulness benefits and provide the skills to use mindfulness to impact positive mental health in children in school systems.

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