Effect of Mindfulness Therapy on Cognitive, Behavioural and Affective Well Being of Adolescents Manifesting Symptoms of Attention Deficit Hyperactivity Disorder

A SUMMARY OF THE THESIS
SUBMITTED TO

GURU JAMBHESHWAR UNIVERSITY OF SCIENCE AND TECHNOLOGY, HISAR

FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY IN APPLIED PSYCHOLOGY (FACULTY OF MEDICIAL SCIENCES)

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SUMMARY

Attention-deficit/hyperactivity disorder is a complex disorder with diverse challenges arising at each new phase of a child’s developmental span. The clinical presentation of ADHD consists of inattention, hyperactivity and impulsivity. The American Psychiatric Association (2013) documented ADHD as “impairing disorder”. The body of literature revealed that the adolescents manifesting symptoms of ADHD undergo myriad of difficulties in cognitive, behavioural and affective domains. The DSM-5 listed ADHD under the heading of “Neuro-developmental Disorders” rather than under “Diagnoses Usually First Made in Infancy, Childhood, or Adolescence. ADHD has been found to be having the co-morbidity with many other problems and disorders. It has been found that the mindfulness therapy can be considered as the potential treatment for the ADHD adolescents. The mindfulness therapy equips the individual with skills which are required to overcome the deficit or impairments associated with ADHD. So the present study aims to investigate the effectiveness of mindfulness therapy with adolescents manifesting symptoms of ADHD.

5.1 Objectives of the present research:

1. To study the effect of mindfulness on attention of adolescents manifesting symptoms of attention deficit hyperactive disorder.
2. To study the effect of mindfulness on executive functions of adolescents manifesting symptoms of attention deficit hyperactive disorder.
3. To study the effects of mindfulness on learning problems of adolescents manifesting symptoms of attention deficit hyperactivity disorder.
4. To study the effects of mindfulness on memory of adolescents manifesting symptoms of attention deficit hyperactivity disorder.
5. To study the effects of mindfulness on hyperactivity of adolescents manifesting symptoms of attention deficit hyperactivity disorder.
6. To study the effect of mindfulness on impulsivity of adolescents manifesting symptoms of attention deficit hyperactivity disorder.
7. To study the effects of mindfulness on conduct problems of adolescents manifesting symptoms of attention deficit hyperactivity disorder.

8. To study the effects of mindfulness on anger of adolescents manifesting symptoms of attention deficit hyperactivity disorder.

9. To study the effects of mindfulness on peer relation of adolescents manifesting symptoms of attention deficit hyperactivity disorder.

10. To study the effect of mindfulness on emotional problems of adolescents manifesting symptoms of attention deficit hyperactivity disorder.

11. To study the effect of mindfulness on self esteem of adolescents manifesting symptoms of attention deficit hyperactivity disorder.

12. To study the effect of mindfulness therapy on the attention awareness of adolescent manifesting symptoms of attention deficit hyperactivity disorder.

5.2 Hypotheses of the present research:

1. There shall be positive effect of mindfulness on the attention of adolescents manifesting symptoms of ADHD.

2. There shall be positive effect of mindfulness on the executive functions of adolescents manifesting symptoms of ADHD.

3. Mindfulness therapy shall be helpful in reducing the learning problems of adolescents manifesting symptoms of ADHD.

4. Mindfulness therapy shall be helpful in enhancing the memory of adolescents manifesting symptoms of ADHD.

5. Mindfulness therapy shall be helpful in reducing the hyperactivity of adolescents manifesting symptoms of ADHD.

6. Mindfulness therapy shall be helpful in reducing the impulsivity of adolescents manifesting symptoms of ADHD.

7. Mindfulness therapy shall be helpful in reducing the conduct problems of adolescents manifesting symptoms of ADHD.

8. Mindfulness therapy shall be helpful in reducing the anger of adolescents manifesting symptoms of ADHD.

9. Mindfulness therapy shall be helpful in enhancing the peer relations of adolescents manifesting symptoms of ADHD.
10. Mindfulness therapy shall be helpful in reducing the emotional problems of adolescents manifesting symptoms of ADHD.

11. There shall be positive effect of mindfulness in enhancing the level self esteem of adolescents manifesting symptoms of ADHD.

12. There shall be positive effect of mindfulness therapy on the attention awareness of adolescent manifesting symptoms of ADHD.

5.3 Method:

5.3.1 Population and Sample:
The target sample of the study was adolescents with the age group of 13 to 16 years who were regular students of private schools. The sample of the present study comprises of 33 students (obtained after the screening of 400 subjects) in the age group of 13 to 16 years who were found to have inattention, difficulty in focusing, over-talkative, impulsive, blurt out things, lack of patience, always on go, difficulty controlling emotions, aggressive behaviour, problematic behaviour, low self esteem etc), were considered as the early indicators of ADHD. The pre- measures of ADHD, executive functioning, impulsivity, emotional and conduct problems were also measured. The screening of the sample was done with the help of respective tools used in the study. The primary mode of the sample selection was observation by teachers and research investigator which was further followed by parental interview and specific tests were applied on the selected sample of adolescents. The group of ADHD adolescents were engaged for the first time for treatment.

5.3.2 Measures:
The present study was conducted on the adolescents manifesting symptoms of ADHD and the measures used in the study were selected in accordance with the objectives of the study. The measure used in the study were selected to assess the key variable of the study, such as inattention, hyperactivity, impulsivity, executive functioning, emotional problem, conduct problem, aggression and self esteem. The selection of tools for the present study was done while considering the psychometric properties, nature of sample, scoring and interpretation. The tools used in the present study are as follows:

- Conners ADHD Rating Scales (3rd edition) developed by Conners, (2008), to assess ADHD and associated problems in school aged youth.
The d2 Test of Attention by Brickenkamp & Zillmer (1998) to measure selective and sustained attention.


Barratt Impulsivity Scale by Patton et al., (1995), to assess impulsive personality trait.

Buss Perry Aggression Questionnaire by Buss & Perry (1992), used for assessing hostility and aggression.

Strengths and Difficulties Questionnaire developed by Robert Goodman (1997) and is used as screening measure of emotional and behavioral difficulties in children and adolescents

Rosenberg Self Esteem Scale by Rosenberg (1965), measure the self-worth both positive and negative feelings about the self.

Mindfulness Attention Awareness Scale by Brown & Ryan (2003), to assess general tendency to be attentive to and aware of present-moment experiences in everyday life.

5.4 Procedure:

The present study has been carried out to investigate the effect of mindfulness therapy on ADHD adolescents. The mindfulness therapy was implemented for five days a week with each session of 45 minutes and continued for six months. The adolescents under mindfulness therapeutic program were being assessed after three months. The mindfulness program inculcates both group and individual sessions. The Mindfulness therapeutic program specifically planned for ADHD adolescents while considering the challenges of the disorder and its impact on one’s life. As adolescents with ADHD faced number problems associated with different domains of life such as adolescents perception about self, world and others, difficulty in academics, inattention, lack of concentration, forgetfulness, easily distractibility, difficulty in planning & sequencing of task, impulsivity, aggressiveness, stubbornness, difficulty regulating emotions, teacher- student relationship, parent – child relationship, peer relation etc.

The introductory session was planned and carried out with the adolescents to get oriented with the whole purpose of the programme and its guidelines. Certain the ground rules were formed and written down on a sheet visible to the adolescents. These initial few sessions were designed for rapport building with adolescents and to make
them comfortable within the group setting. The initial sessions created interest, curiosity and acceptable for ones and others feelings. Further, the psycho education session was conducted with the adolescents manifesting symptoms of ADHD. The ambiance of the group was child friendly, safe, open, accepting and appreciating to new ideas. The room selected for the intervention was away from distraction free area. Each adolescent received a folder, session summaries, and practice exercise worksheets. They take their folder home at the end of the program. The following domains were targeted with the mindfulness therapeutic program: Inattention Hyperactivity, Impulsivity, Behaviour/Conduct, Aggressive behaviour, Emotionality.

In the present study mindfulness therapy includes: **Session1**-Psycho-education, **Session2**-Attention and the five senses, **Session3**- Mindful Breathing, Mindful Eating, **Session4**- Mindfulness of sound, breath and body, **Session5**- Mindfulness of body sensation and movement, **Session6** Mindfulness of thoughts, **Session7**- Mindfulness of Feelings, **Session8**-Mindful Listening and Speaking, **Session9**- Mindful Decisions and Actions, **Session10**- Mindfulness in daily life and other activities such as sense of perception of time etc

### 5.5 Statistical Analysis:

After the completion of therapeutic programme, the post test measure was done with the ADHD adolescents. Further, baseline, middle and post measure were compiled and put for statistical analysis with help of descriptive statistics (mean and standard deviation), and paired t-test was used to test the significance of difference between means.

### 5.6 Major findings of the Study:

In the present study it was hypothesized that the mindfulness therapy shall have positive effect on attention of adolescents manifesting symptoms of ADHD. It has been proven in the current research work that the mindfulness therapy has the potential to regulate, sustain and orient attention. With the formal and informal practice mindfulness therapy activate the attentional network and thus ameliorating on the different aspects of attention such as switching, orienting, alerting and sustaining attention. The mindfulness therapy orients the ADHD adolescents to observe their attention and assists them to bring back their attention to present moment. The regular and continuous practice of keeping track on attention and awareness strengthen the
neural pathways. In an article of Goleman (2014) as well stated by Gazzaley, that mindfulness or meditation training can be considered as cognitive control exercise that enhances “the ability to self-regulate your internal distractions.” The present study has shown promising results that the adolescents with ADHD become more focus, attentive and better able to concentrate.

It was hypothesized in the present research that mindfulness therapy shall have positive impact on the executive functioning of adolescent manifesting symptoms of ADHD. Brown (2000) refers to executive functions as the “cognitive management system of the brain.” As the executive functions of the brain involved in higher order tasks such as planning, organisation, response inhibition, working memory, problem solving and to monitor one’s own actions. In the present study the executive functioning impairment has been tapped of selected sample from the Brown ADD Scale. The mindfulness therapy has proven to be effectively engage in executive function (focus, emotion, memory, action, activation, and effort; Brown, (2006) and thus strengthening of these abilities may lead to changes in self-regulatory skills Zylowska et al., (2009). The results of current study are found to be in accordance with the previous findings that the mindfulness therapy has the significant features in inculcating skills such as attention, alertness, task management, impulse control, emotional control, self regulation of thoughts, actions and emotions which are otherwise found to be deficit in ADHD adolescents. Bishop et al., (2004) documented that cultivating mindfulness has been found to be associated with the improved executive functioning as it assist in regulating the focus of attention whereas inhibiting the urge to act on thoughts and emotions. In support to previous study it has been found by Flook et al. (2010) that the mindfulness skill programme with younger kids has shown greatest improvement in so called executive function and behavioural regulation.

The present study has hypothesized that the mindfulness therapy has the potential in reducing the symptoms of hyperactivity, impulsivity, conduct problem, aggression and peer relation of adolescents manifesting symptoms of ADHD. The results indicate the effectiveness of mindfulness exercises reduces hyperactivity, impulsivity, conduct problems, aggression whereas increases peer relations. Kabat – Zinn (1990); Segal et al. (2002) stated that being mindful involve awareness and focus on current experience versus “automatic pilot,” which involves engaging in behaviour that is out of awareness and attention, and which is compulsive or automatic. It has been found in the study
that the mindfulness therapy has significant role in managing the undesirable behaviour thus enhancing the awareness of thoughts and action. It has been reported to foster the self regulating skills which further assists in behaviour modification of adolescents with ADHD. As the mindfulness training has the underlying feature of awareness, attention and attitude thus lead to enhanced insight, choice and thoughtful action.

The present study also investigated the effect of mindfulness therapy on the emotional problems and self esteem of adolescents manifesting symptoms of ADHD. As hypothesized mindfulness therapy has shown promising results with the participants in the study. As the ADHD adolescents find it difficult to express and regulate emotions thus face lots of emotional challenges and carry emotional burden for years. Further if these emotional difficulties continue it generates low self esteem. The present study reveals the remarkable role of mindfulness therapy in developing ADHD adolescents more emotionally stable, relaxed and better able to cope with stressful situations. It has been found that the adolescents with ADHD were better able to regulate and express their emotions as this therapy imparts the skill of mindful management of emotions. Broderick and Metz (2009) revealed that mindfulness program decreases negative affect and increases calmness, self acceptance, and emotional regulation.

5.7 Further Direction for future research:

The more researches can be conducted to study the effectiveness of mindfulness therapy with mental health issues concerned with children and adolescents. Longitudinal researches can be carried out to generalize the concept of mindfulness therapy with other childhood disorders. Furthermore researches can be done with parents of special need children to enhance the relationship bond and to lessen the parental stress. The working model can be designed or formulated to explain the methodological procedure to grow the concept.

5.8 Implications of the present research in the field:

The present research has provided the documentary evidence that the mindfulness therapy has the significant potential to be used as a tool with children and adolescent having ADHD and other associated problems such as learning problems, socio-emotional problems and disorder related to anxiety. The mindfulness therapy has already been proven its efficacy in the mental health area such as stress, GAD, depression, PTSD, OCD, panic attacks, suicidal ideations, relationship problems etc.
The basic feature of mindfulness therapy can be used with other psychological therapeutic approaches. The mindfulness practice equips the children and adolescents to deal with their world with more awareness, composure and the understanding of self. This mindfulness training supports them to manage the undesirable thoughts; actions and feelings rather develop more mindful behaviour.

The Mindfulness Therapy has the implication both in clinical and educational settings with children and adolescents. The therapy can be used with the school going children to build on sense of well being, positive emotions and constructive approach towards life. It has valuable role to be employed with children and adolescents dealing with the challenges or changes at the each stage of developmental period. With the practice of mindfulness approach schools, colleges, universities can benefit its students, teachers and administrator. As the mindfulness programme teaches being non judgmental with non reactivity attitude toward the situation around us rather welcoming each moment with curiosity, acceptance and open heartedness.

The mindfulness therapy has marked out the substantial efficacy in managing the symptoms of adolescents manifesting the symptoms of ADHD by approving/accepting the entire hypotheses framed in the present study.