An Overview of Mindfulness-Based Interventions on Parents of Children with Autism Spectrum Disorders

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Abstract

Mindfulness-Based Interventions (MBIs) have forayed into many domains. One pertinent part is that of children and their parents in mental health. Neurodevelopmental disorders (NDD) such as Autism Spectrum Disorder (ASD) bring parents difficulties, challenges, and distress. MBIs have proven to help alleviate the parental level of social, parental, and cognitive functioning. This paper brings together a few of the western and Indian studies on MBIs in parents of children with ASD. Our challenges, and the need to implement such programs for the parental population, are emphasized.

Abbreviations

ASD = Autism Spectrum Disorder
MBIs = Mindfulness-Based Interventions
NDD = Neurodevelopmental Disorders
MBSR = Mindfulness-Based Stress Reduction
MBCT = Mindfulness-Based Cognitive Therapy
MPP = Mindful Parenting Program
MT = Mindful Training

CBCT-SG = Cognitively-Based Compassion Training – Second Generation
MBPBS = Mindfulness-Based Positive Behavior Support
MBPEP = Mindfulness-Based Psycho-Educational Program
DBT = Dialectical Behavior Therapy
MBPT = Mindfulness-Based Parent Training

MBCP = Mindfulness-Based Childbirth and Parenting
PC-MBT = Parent-Child Mindfulness-Based Training
MBSR-OT = Mindfulness-Based Stress Reduction - Occupational Therapy

Introduction

Things change for us when we change how we see things [1]. Mindfulness is one construct that fits this quotation very well.

Indians come from an ancient tradition of payer, meditation as part of the religious and spiritual practice. Mindfulness meditation finds its roots in the Upanishads of the Hindu scripture. The meaning of the term mindfulness is “sati” in ancient Pali and “smriti” in Sanskrit, meaning awareness as a spiritual or psychological aspect to attain enlightenment [2].

The construct of mindfulness in its applications has forayed into many fields since its introduction from Buddhist teachings [3]. It is a noted form of intervention in the discipline of positive psychology. Being aware of the moment in a loving, accepting, nonjudgmental, yet curiously and openly are the hallmark aspects of mindfulness and its interventions [4]. This is a major shift from the behavioral model [5].

Mindfulness has forayed into many areas of health [6]. One of the crucial arenas of its advent and success has been that of children. Various physical and mental health issues of children have been addressed using mindfulness [7]. Parents cannot be far behind when we address the challenges of children. Many models of mindfulness have been explored in parents of children with ASD, both for intervention and prevention. The present review addresses MBIs for the parents of children with ASD. This overview and research update can be used to understand and enhance the quality of relationships of parents with their children with ASD.

Autism Spectrum Disorder

One of the disorders under the umbrella of neurodevelopmental disorders (NDD) is ASD. According to The Diagnostic and Statistical Manual of Mental Disorders [8], it is a complex condition characterized by impairments in social communication, social interaction, and behavioral problems. The origin is in the developmental period and mostly gives rise to lifelong disabilities in children. Chauhan et al. (2019) [9], in a meta-analytic and systematic review of the prevalence rates of ASD in India within the age group of 0 to 15 years, found 0.09% and 0.11% in 0 to 18 years group. The age group of 2 to 9 years is regarded as a significant public health concern for India [10].

Parents and Their Children with ASD: Indian Context

The findings from the west on the experiences of raising a child with ASD are well documented. The attempt here is to turn towards our Indian subcontinent for understanding our parenting experiences and challenges while raising a child with ASD.

Low parenting experience and competence, low marital satisfaction, poor family adaptability with chronic stress, and fatigue are well documented in Indian parents with a child with ASD [11]. These effects result in a high emotional and personal strain on the family’s resources [12]. Again, the severity of ASD in children is highly related to the distress in parents [13]. The challenges for these parents are both personal and social in India [14,15]. An increase in attention towards the child with ASD results in social isolation and reduced interaction with other extended family members or other children [12]. Given these many factors, the call for attention is warranted not only for the children but also their families [11], importantly the parents.
Parents are children’s “natural therapists.” Pesha-waria and Menon (1991) [16] addressed the parents of children with neurodevelopmental disabilities as their biggest strength decades back. They were regarded as key people to provide positive parental and child-based outcomes. It holds even today when parents are not merely “service recipients” from mental health professionals or clinicians but a key member in the service to the children. Parents have a more significant investment, hold valuable information about the child and supplement the interventions of their children [17].

**Table 1: Types, Themes of MBIs in Use for Parents with Children with NDD/ASD**

<table>
<thead>
<tr>
<th>Type of MBI</th>
<th>Themes of MBI</th>
<th>Research group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mindfulness-Based Stress Reduction (MBSR)</td>
<td>Mindfulness meditation, body awareness, yoga, exploration of patterns of behavior, thinking, feeling, and action</td>
<td>Kabat-Zinn, 1990 (as cited in Kabat-Zinn, 2003) [18]</td>
</tr>
<tr>
<td>Mindfulness-Based Cognitive Therapy (MBCT)</td>
<td>Empowerment and a focus on awareness of experience at the moment through guided awareness exercises, nonjudgmental awareness of bodily sensations, thoughts, and feelings, and activities designed to integrate the application of awareness skills into daily life</td>
<td>Segal et al., 2002 [4]</td>
</tr>
<tr>
<td>Mindful Parenting Program (MPP)</td>
<td>Mindfulness, breathing, body awareness exercises, self-awareness, and intentionality</td>
<td>Placone-Willey, 2002 (as cited in Cohen &amp; Semple, 2010) [19]</td>
</tr>
<tr>
<td>Mindfulness Training (MT)</td>
<td>Perceptions, responding versus reacting, affects, exploring forgiveness, working with conflict, compassion, and kindness, working with anger, silent retreat, working with fear, beginning, and ending</td>
<td>Cullen &amp; Wallace, 2010 (as cited in Benn et al., 2012) [20]</td>
</tr>
<tr>
<td>Cognitively Based Compassion Training—Second generation MBI (CBCT-SG)</td>
<td>Mindful attention and insight into the nature of mental experience, self-compassion, cultivating impartiality, appreciation and affection and empathic concern and engaged compassion</td>
<td>Negi, 2012 (as cited in Fernandez-Carriba &amp; Bradshaw, 2019) [21]</td>
</tr>
<tr>
<td>Mindfulness-Based Parent Training (MBPT)</td>
<td>Mindfulness principles, nonjudgmental acceptance, identifying thoughts, accepting, and distancing from thoughts, staying in the present, focus on pleasant events, and being effective</td>
<td>Ferraioli &amp; Harris, 2013 [22]</td>
</tr>
</tbody>
</table>
Note: Various models and themes on Mindfulness-Based Interventions have been evidenced. Their themes are particularly highlighted to give us the components of the model or the training.

The components of the different variations of MBIs are primarily based on Mindfulness-Based Stress Reduction (MBSR) [18] and Mindfulness-Based Cognitive Therapy (MBCT) [4] and from mindfulness techniques provided in the Dialectical Behavioral Therapy (DBT) [27]. Many other forms of MBIs for parents include Mindfulness-Based Parent training (MBPT) [5] for children with disruptive behaviors, to alleviate academic stress in children and parents, a program called Parent-Child Mindfulness-Based Training (PC-MBT) [28]. Another program for the would-be mothers is Mindfulness-Based Childbirth and Parenting (MBCP) [29]. Most of the interventions use awareness and attention training of the mind and body. It involves loving, accepting, and kindness towards the child and oneself, responding to a challenging situation vis-à-vis reacting to it, understanding one’s attitude and perception towards ASD, and practicing in everyday life situations involving children.

### Mechanisms of Change in MBIs for Parents

Research has deliberated on the theory and the change mechanisms behind using MBIs in parents [30]. Mindfulness for parents integrates many aspects of parental opinions, attitudes, and affective reactivity in the parent and the child [31]. The role of acceptance and increase in self-compassion in parents of children with ASD are linked with better parenting and psychological well-being [32]. Further the move towards understanding the parent-oriented goals, child-oriented goals towards a relationship goal using mindfulness allows for better development of the child and parent-child relationship [30].

Bogels et al. (2014) [23] enlist many factors under parenting a child with NDD/ASD, that makes the MBIs work positively for various outcomes. The outcomes include reducing parenting stress, awareness of parental preoccupation due to the child’s
or, in some cases, the parent’s psychopathology, bringing upon self-nourishing attention on themselves, and finally breaking the intergenerational transmission of the maladaptive parenting schemas and beliefs. Some neuropsychological benefits such as improved executive functioning (EF) in parents is also observed [23].

**Western Studies on MBIs in Parents of Children with ASD**

A search-on-search engine (Google Scholar, JSTOR, and PubMed) yielded many studies on the terms “Mindfulness-Based Interventions on Parents of Children with ASD” [33]. A few hand-searched studies on all outcomes pertaining to parents of children with ASD are given in Table 2. The table provides an overview of the western studies on MBIs in parents of children with ASD. The inclusion criteria are provided in Table 3.

<table>
<thead>
<tr>
<th>Research Group</th>
<th>Research Design</th>
<th>Sample Size</th>
<th>Type of MBI</th>
<th>The Outcome of the Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benn <em>et al.</em>, 2012 [20]</td>
<td>Randomized group with waitlist control group</td>
<td>32 parents</td>
<td>MT</td>
<td>Decrease in stress and increase in positive psychological functioning in parents</td>
</tr>
<tr>
<td>Ferraioli &amp; Harris, 2013 [22]</td>
<td>Pre-test-Posttest treatment</td>
<td>15 parents</td>
<td>MBPT</td>
<td>Parental distress and general health improved significantly</td>
</tr>
<tr>
<td>Dykens <em>et al.</em>, 2014 [34]</td>
<td>Randomized clinical trial</td>
<td>243 parents</td>
<td>MBSR</td>
<td>Slight improvement was observed in distress, the mental health of the mothers with MBSR</td>
</tr>
<tr>
<td>de Bruin <em>et al.</em>, 2015 [35]</td>
<td>Pre-test-Posttest treatment</td>
<td>29 parents</td>
<td>Mindful Parenting</td>
<td>Increase in parental competence, decrease in reactivity and increase in quality of life</td>
</tr>
<tr>
<td>Rayan &amp; Ahmad, 2016 [36]</td>
<td>Quasi-Experimental with control group</td>
<td>104 parents</td>
<td>MBPT</td>
<td>Positive reappraisal and a few domains of quality of life improved significantly</td>
</tr>
<tr>
<td>Ridderinkhof <em>et al.</em>, 2018 [37]</td>
<td>Repeated measures</td>
<td>74 parents</td>
<td>Mindful Parenting</td>
<td>Improvement in social communication, emotional and behavioral functioning, parental over-reactivity, parent sense of competency, and parent-child interaction</td>
</tr>
</tbody>
</table>
Note: Eight studies are listed on mindfulness-based interventions in the parents of children with Autism spectrum disorder. ASD = Autism Spectrum Disorder; MBI = Mindfulness-Based Intervention; MBPT = Mindfulness-Based Parent Training; MBSR = Mindfulness-Based Stress Reduction; MT = Mindfulness Training; CBCT = Compassion-Based Cognitive Therapy; SG-MBI = Second Generation Mindfulness-Based Intervention; MBSR + P-ESDM = Mindfulness-Based Stress Reduction + Parent Mediated Early Start Denver Model.

### Table 3: Inclusion and Exclusion Criteria of Western Studies

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Inclusion Criteria</th>
<th>Exclusion Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Studies on interventions using mindfulness-based training only</td>
<td>Studies on other interventions for parents, exploratory studies on mindfulness in parents</td>
</tr>
<tr>
<td>2.</td>
<td>Studies on parents of children with ASD or parents of children with ASD are a part of the sample included.</td>
<td>Only teachers, siblings, and other family members of children with ASD</td>
</tr>
<tr>
<td>3.</td>
<td>Studies from June 2011 to August 2021</td>
<td>Studies from prior to June 2011 or later than August 2021</td>
</tr>
<tr>
<td>4.</td>
<td>Studies in English language only</td>
<td>Studies in other languages</td>
</tr>
<tr>
<td>5.</td>
<td>Parents of children, adolescents or adults diagnosed with ASD</td>
<td>Parents of children, adolescents or adults diagnosed with other childhood mental disorders</td>
</tr>
</tbody>
</table>

Note: The inclusion and exclusion criteria for choosing the articles based on Mindfulness-Based Interventions are provided. ASD = Autism Spectrum Disorder; NDD = Neurodevelopmental Disorders.

Studies included in Table 5.2 depict varied participant populations along with the parents of children with ASD. One study has educators and parents as participants of the MBIs [20]. Another incorporates adolescents with ASD and their parents in a parallel MBI study [37]. From controlled randomized design to multiple timeline design to simple pretest posttest design have been noted in these studies. Focus on the outcome variables such as parental distress and mental health, parenting competence, and its effect on parent-child interactions are highly observed in the parents of children with ASD. This depicts the high demand and need to intervene in this population. Fernandez-Carriba and Bradshaw (2019) [21] depict high acceptance and requirement of stress reduction programs in parents of children with ASD. They implemented second-generation MBI and found it feasible in its implementation. Similar variations of mindfulness techniques have been used in many other studies. Time periods variations, choosing the themes pertinent to the sample and comparison with other skill-based programs for the parents of children with ASD could be noted. From as low as 15 parents in each group to more than 200 parents, MBIs have improved the outcomes. The age of the children with ASD varied
from very young children to youth to adults. The time frame of the programs is short from five to eight weeks mostly. Results depict significant improvement in parental stress, social communication problems, reduction in parental reactivity, and a better sense of parental competency in raising a child with Autism Spectrum Disorder. Attribution to the increased attention and awareness to the internal thoughts and feelings surrounding the parents, coupled with low negative judgment have been regarded to be reducing the stress of the parents. The ability of the parents to disengage from the situations temporarily with the use of MBIs is discussed [20,34,35]. The attrition rates are to be noticed in a few studies [22,34,36]. One main issue highlighted has been the need for a good childcare while the parents participate in the studies. Compliance is noted when the parents have been provided with support through telephone sessions [36], parent and child participation programs [35,37]. Hence provision of regular feedbacks, booster sessions could assist in the training adherence of the parents training [22]. The place and population of parents are widespread from China, Netherlands, Britain, USA, and Arab countries. Therefore, we look to assess the Indian studies on MBIs in parents of children with ASD.

Studies on MBIs in Parents of Children with ASD: Indian Context

A search-on-search engine (Google Scholar, JSTOR, and PubMed) yielded a few studies on the terms “Mindfulness-Based Interventions and Indian Parents of Children with ASD”; “Indian Parents of Children with ASD and Mindfulness.” A few hand-searched studies on all outcomes pertaining to Indian parents of children with ASD are given in Table 4. The inclusion criteria used are provided in Table 5.

**Table 4: An Overview of the Studies on MBIs in Indian Parents of Children with ASD**

<table>
<thead>
<tr>
<th>Research Group</th>
<th>Research Design</th>
<th>Sample Size</th>
<th>Type of MBI</th>
<th>The Outcome of the Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lily &amp; Tun-</td>
<td>Randomized control</td>
<td>40 mothers</td>
<td>MBPEP</td>
<td>Improvement in the stress in the mothers of the MBPEP group</td>
</tr>
<tr>
<td>gol, 2015 [25]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sarang et al.,</td>
<td>Pretest-posttest</td>
<td>30 parents</td>
<td>MBSR-OT</td>
<td>Improvements in stress, anxiety, depression and increased</td>
</tr>
<tr>
<td>2021</td>
<td>treatment</td>
<td></td>
<td></td>
<td>mindfulness and psychological well-being</td>
</tr>
</tbody>
</table>

Note: Two studies on mindfulness-based interventions in the Indian parents of children with Autism Spectrum Disorder. ASD = Autism Spectrum Disorder; MBI = Mindfulness-Based Intervention; MBPEP = Mindfulness-Based Psycho-Educational Program; MBSR-OT = Mindfulness-Based Stress Reduction - Occupational Therapy.

**Table 5: Inclusion and Exclusion Criteria of Indian Studies**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Inclusion Criteria</th>
<th>Exclusion Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Studies on MBIs</td>
<td>Studies on other interventions for parents</td>
</tr>
<tr>
<td>2.</td>
<td>Parents of children with ASD or parents of children with ASD are a part of the sample included.</td>
<td>Only teachers, siblings, and other family members of children with ASD</td>
</tr>
</tbody>
</table>
Only two studies could be obtained on the search for MBIs on Indian parents of children with ASD. One was a controlled study design while the other a pretest-posttest design. Both the studies employed a novel approach towards MBIs in this sample. And the studies depicted promise in the use of the MBIs in the Indian setting. Formulation, operationalization and quantifying the construct of mindfulness is necessary in studies using MBIs. This helps to being the specific effects of MBIs [39]. The conditions under which MBIs are offered to Indian parents of children with ASD needs to be enumerated to ascertain its usage with specificity.

### Barriers to MBIs in Parents of Children with ASD

As children are the probands of ASD, the parents are the closest to them in the genetic link [40]. They are the key caregivers and “natural therapists” in most households. The challenges include difficulties in parenting, worries surrounding the child’s future, and having a good professional helping the parent and the child with ASD in India [41-43]. Hence their cognitive, mental health, and parenting needs are to be investigated with utmost urgency.

Nevertheless, some problems faced by mental health professionals in recruiting parents of children with ASD could be low motivation in parents, time crunch due to both the parents working and requesting a direct “treatment” for the child than for themselves. In a study on 80 mothers and 11 fathers of children with ASD, Castells (2020) [44] conducted a study to understand the barriers to mindfulness. Disinterest in mindfulness, less time allocation towards self, and high misconceptions about mindfulness were statistical predictors. Secondly, mindfulness and personality correlates [45] would be essential before implementing MBIs. Thirdly the choice of a model, its techniques, and its need in a psychotherapeutic sense must be emphasized. The terms “mindfulness” and “meditation” are many times used interchangeably, though there are differences between them [6,7]. As mental health professionals, we need to demarcate the empirically based therapeutic format of mindfulness for a sample such as the Indian parents of children with ASD. It is because many forms of mindfulness are available now, and professionalism needs to be thoroughly assessed [7]. And for evaluating the outcome of such interventions, the emphasis on its fidelity and interventional characteristics would help us to confidently promote the clinical and non-clinical sample’s psychological well-being.

The fidelity and feasibility of MBIs in our set-ups could be evaluated while setting up the interventions. Borrelli et al. (2005) [46] have discussed strategies on research design, training providers, delivery of treatment and its receipt, and finally, the enactment of treatment skills. This could help strengthen the results obtained in the Indian
subcontinent on MBIs and provide us with more robust clinical outcome studies [47].

**Conclusion**

With the challenges and issues raised on parenting and in parents of children with ASD, MBIs are quite promising for Indian set-ups. Promoting kind, loving, and nonjudgmental awareness of the child’s condition and their attitudes and thoughts regarding parenting a child with ASD, reducing stressful interactions, and improving parent-child relationships would be necessary while combating the epidemic of ASD.

**Bibliography**


