A Scoping Review of the Literature on Homoeopathy in Child and Adolescent Psychiatry.

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Abstract

Background: Emotional and behavioural disorders are very common in childhood and adolescence. Homoeopathy is an alternative system of medicine which has a potential role in Child and Adolescent Psychiatry (CAP). Objectives: To identify, summarize and disseminate research findings that could assess the role of Homoeopathy in CAP. Materials and Methods: Three electronic databases PubMed, Cochrane and Google scholar are searched for publications on childhood behavioural disorders in peer-reviewed, indexed journals. Articles published on Homoeopathy and CAP from 2000 to 2022 are included. An explicit systematic search strategy included web-based keyword searches. The collected information has been collated, summarized, and the results are presented in tables and charts according to key themes. Results: The research studies varied widely in all aspects such as design, conduct, intervention and outcome reporting. 56 eligible publications, (Both quantitative or qualitative) are identified on different clinical conditions in CAP. Individual sources of data are critically appraised and findings are discussed in terms of implications for gaps in research. Conclusions: There is a limited evidence base for the utility of Homoeopathy in CAP, although existing evidence shows positive findings. Our review emphasizes the paucity of studies in other CAP disorders such as Intellectual disability, Learning disability, Conduct disorder, Childhood depression and Anxiety disorders etc. which is the domain of future research.

Keywords: Child and Adolescent Psychiatry (CAP), Emotional and Behavioural Disorders in Children, Homoeopathy, Scoping review.

Introduction

"Today's children are tomorrow's citizens" is a well-known statement and it is well accepted saying that the seeds of the future society are in the children of the present day. Children's mental health is as vital as physical health and demands special attention. Emotional and behavioural disorders are common during childhood and adolescence. They are classified as either “Internalizing” i.e emotional disorders such as depression and anxiety or “Externalizing” (disruptive behaviours such as oppositional defiant disorder (ODD), conduct disorder (CD), attention deficit hyperactive disorder (ADHD) or “Developmental” (speech/language delay, intellectual disability, autistic spectrum disorder) [1].

Despite varied prevalence rates across the studies, it is suggested that 25–30% of children and adolescents are affected by some mental disorder [2]. Childhood ADHD, ODD, CD, and Depression increase the risk of developing substance-related disorders and other psychiatric disorders in
adulthood. Hence there is a need for early detection and intervention to prevent debilitating disorders in later life [3].

Medications, psychosocial interventions and brain stimulation techniques are treatment options for children/adolescents with mental disorders, but each has its own limitations and side effects. Psychotropic medicines such as antipsychotics are mostly prescribed for targeted symptoms such as disruptive behaviours, anxiety, irritability, and sleep problems and often for longer periods of time than recommended. This off-label use of antipsychotics may be hazardous to children, as the effects and possible adverse effects have not yet been studied adequately [4]. Hence safe and effective alternatives are to be explored in the area of CAP.

Treatment for mental health disorders for children and adolescents has improved considerably with more evidence-based and effective medications, and psychosocial interventions in the past few decades [5]. However, the practice of child psychiatry is not accessible and not cost-effective in its present form, hence other professionals can perform some of the functions of child psychiatrists at a fraction of the cost. In addition, there is an urgency to meet the treatment gap of childhood mental health disorders [6].

Currently, there is a trend towards a unified medical philosophy referred to as Integrative Medicine (IM) that represents the convergence of Complementary and Alternative Medicine (CAM) and Conventional medicine. Homoeopathy is an alternative system of medicine that has a potential role in Psychiatry and can be integrated into the mainstream as an adjunctive or as a stand alone in certain cases. Several research studies are conducted and evidence base is generated for the role of Homoeopathy in various child psychiatric disorders but there is no systematic review of literature in this complex subject.

Scoping review design represents a methodology that allows the assessment of emerging evidence, as well as a first step in research development [7]. Scoping reviews of literature on Homoeopathy will serve to function as a good means to map the existing literature in terms of the volume, nature and characteristics of the primary research [8]. Few systematic reviews were conducted on the usefulness of Homoeopathy in Psychiatric disorders [9], as well as the role of Homoeopathy in paediatric conditions [10], but none were conducted specifically on Child and adolescent psychiatry (CAP). Hence a review is undertaken so as to synthesise preliminarily the research evidence on the usefulness of Homoeopathy in CAP.

**Methods**

Research studies on child psychiatry published between 2000 to 2020 in peer-reviewed journals of Homoeopathy were searched with the study being restricted to English. Unpublished manuscripts, thesis reports, conference abstracts, presentations, regulatory data, and working papers are excluded. Information is collected from three major electronic data bases i.e “PubMed”, “Google Scholar” and Cochrane from February to August 2021. Two independent researchers carried out the search for making the information thorough. The date on which the most recent search was executed is 28th February 2023. The search is carried out with keywords like “Child Psychiatry and Homoeopathy”, “Behavioural problems in children and Homoeopathy”, and terms of individual mental health issues of childhood and homoeopathy viz., “Autism and Homoeopathy”, “ADHD and Homoeopathy” etc. The key words are listed in Table no.1. Systematic reviews, Meta-analyses, Randomized controlled trials, Open label clinical trials, Case series and Case reports were included. This review did not undertake any processes for obtaining and confirming data from investigators. Studies using patents, Bach flower remedies and combinations are not considered in this review.
Table no.1: Key Words/ Terms used for the Search

<table>
<thead>
<tr>
<th>S. NO</th>
<th>SEARCH TERMS/ WORDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Child Psychiatry AND Homoeopathy</td>
</tr>
<tr>
<td>2</td>
<td>Behavioural disorders in childhood and Homoeopathy</td>
</tr>
<tr>
<td>3</td>
<td>Child Psychiatry AND Homoeopathic medicine</td>
</tr>
<tr>
<td>4</td>
<td>Emotional AND behavioral problems in children and Homoeopathy</td>
</tr>
<tr>
<td>5</td>
<td>Autism AND Homoeopathy</td>
</tr>
<tr>
<td>6</td>
<td>ADHD AND Homoeopathy</td>
</tr>
<tr>
<td>7</td>
<td>Hyperkinetic disorder AND Homoeopathy</td>
</tr>
<tr>
<td>8</td>
<td>Intellectual disability AND Homoeopathy</td>
</tr>
<tr>
<td>9</td>
<td>Mental Retardation AND Homoeopathy</td>
</tr>
<tr>
<td>10</td>
<td>Speech and Language disorder AND Homoeopathy</td>
</tr>
<tr>
<td>11</td>
<td>Developmental disorder AND Homoeopathy</td>
</tr>
<tr>
<td>12</td>
<td>Depression in children AND Homoeopathy</td>
</tr>
<tr>
<td>13</td>
<td>Anxiety in children AND Homoeopathy</td>
</tr>
<tr>
<td>14</td>
<td>Conduct disorder AND Homoeopathy</td>
</tr>
<tr>
<td>15</td>
<td>Oppositional Defiant Disorder AND Homoeopathy</td>
</tr>
<tr>
<td>16</td>
<td>Enuresis AND Homoeopathy</td>
</tr>
<tr>
<td>17</td>
<td>Pica AND Homoeopathy</td>
</tr>
<tr>
<td>18</td>
<td>Phobic disorder AND Homoeopathy</td>
</tr>
<tr>
<td>19</td>
<td>elective mutism AND Homoeopathy</td>
</tr>
<tr>
<td>20</td>
<td>Childhood anxiety disorder AND Homoeopathy</td>
</tr>
<tr>
<td>21</td>
<td>Obsessive Compulsive disorder AND Homoeopathy</td>
</tr>
</tbody>
</table>

Results
A total of 57 articles were found after removing the duplicates. One meta-analysis, three systematic reviews, six review articles, six randomized controlled trials, four open-label, non-randomised, single-arm clinical trials, twelve case series, six case reports are identified on the related subject. The information has been coalesced and reported according to PRISMA extension for Scoping reviews (PRISMA-ScR) guidelines. The number of sources of evidence screened, assessed for eligibility, and included in the review has been demonstrated using a flow diagram in Figure no.1. No studies on
Phobic disorder, elective mutism, Separation anxiety disorder, and other neurotic disorders in children were identified. Number of articles published on different child psychiatric conditions are presented in table no.2. Individual papers are critically appraised in the ‘Discussion’ section.

Table no.2: Number of publications in different CAP conditions and Homoeopathy

<table>
<thead>
<tr>
<th>Type of Study</th>
<th>Child Psychiatric Disorder</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ASD</td>
</tr>
<tr>
<td>Meta-analysis</td>
<td>-</td>
</tr>
<tr>
<td>Systematic Review</td>
<td>1</td>
</tr>
<tr>
<td>Review articles</td>
<td>3</td>
</tr>
<tr>
<td>RCT’S</td>
<td>-</td>
</tr>
<tr>
<td>Open-label, Non randomised, single-arm trials</td>
<td>4</td>
</tr>
<tr>
<td>Case Series</td>
<td>8</td>
</tr>
<tr>
<td>Case Reports</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
</tr>
</tbody>
</table>


**Discussion**

Heterogeneity of studies was encountered in all aspects such as design, conduct, intervention and outcome reporting of the studies on Homoeopathy in CAP. Homoeopathy is a system of medicine that is accepted among the public for paediatric conditions and has relevance to emotional and behavioural problems, especially of children. Most of the studies on CAP reported using classical homoeopathic method of prescribing i.e single remedy and minimum dose. Remedies were prescribed in centesimal as well as in millesimal scale.

The different study designs used in the studies related to CAP in Homoeopathy are randomised controlled trials, randomized placebo-controlled trials, pragmatic RCTs, cross-over design, partial cross-over design, TwiCs design etc. Most of the studies reported using classical homoeopathic method of prescribing i.e Single remedy and minimum dose. Remedies were prescribed in centesimal as well as in millesimal scale.

A systematic review on mental health in homoeopathy by Tiwari P et al, retrieved 83 studies from the different databases and internet site searches, out of which 77 studies were excluded & 06 studies were included by applying Critical Appraisal Skills Programme Score Tool (CASPS). (CASPS is the...
most commonly used tool for quality appraisal in health-related qualitative evidence syntheses, with endorsement from the Cochrane Qualitative and Implementation Methods Group.) The review concluded that though there are various literatures available in homoeopathic materia medica and repertory but conducted clinical trials are limited. There is not enough evidence to reliably assess the possible role of homoeopathy in mental health conditions. But there is currently a comparably better evidence base for role of homoeopathy more specifically in childhood behavioural disorders as found by our review.

The majority of the studies on CAP identified in Homoeopathy is in the field of Autism Spectrum Disorder (ASD) and Attention Deficit Hyperactivity Disorder (ADHD). Few studies were found on other CAP disorders which are summarized below.

**Autism Spectrum Disorder (ASD):** Apart from few published case studies, 5 uncontrolled studies are conducted in relation to Autism which are summarized in Table no.3. There are no published Randomized controlled trials in field of Autism with homoeopathic intervention to show the efficacy of homoeopathy in ASD.

In a Study conducted by Gupta et al (2013) and 10 cases by Gupta et al. (2010) suggest that a homeopathic medicinal regimen does produce positive improvement and modification of autistic symptoms if followed dutifully. A series of cases are published by Rajalaksmi [20,21,22,23] showing the experiences of treating autistic children with positive results but no rating scales were used to demonstrate the effects quantitatively. Two illustrative cases of Autism spectrum disorder by Barvalia et al [24], and a case series of 4 cases (2013) and 10 cases by Gupta et al. (2010) suggest that a homeopathic medicinal regimen does produce positive improvement and modification of autistic symptoms if followed dutifully [25]. A case series of 3 cases showed a piece of preliminary evidence for the role of *Carcinosinum* in ASD [26]. A case report of a 7 year-old boy showed the role of *Podophyllum Peltatum* in the management of ASD in individualized approach [27].

The homoeopathic principle of individualization correlates with the DSM-5 classification of Autism under a spectrum, due to wide variation of symptoms in each child. This favors Hahnemann’s assumption that each and every child is different from another in disease expressions also [28]. In future, randomized, placebo-controlled trials to determine the effect of Homoeopathic medicines in specific domains of ASD are necessary.
Table no.3: Studies on ASD in Homoeopathy [12-19]

<table>
<thead>
<tr>
<th>S. No</th>
<th>Author et al (Year)</th>
<th>Title of the study</th>
<th>Type of study</th>
<th>Sample size</th>
<th>Demographic features</th>
<th>Primary outcome measure</th>
<th>Follow-up time</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Robinson (2001)</td>
<td>Homoeopathic Secretin in autism: a clinical pilot study</td>
<td>Clinical pilot study</td>
<td>12 adults having autism</td>
<td>Age 24-43 years</td>
<td>Not mentioned</td>
<td>Weekly assessment for 12 weeks</td>
<td>Worsening of autistic symptoms during treatment and some improvement that are not recordable</td>
</tr>
<tr>
<td>2</td>
<td>Fonseca et al (2008)</td>
<td>Effect of homeopathic medication on the cognitive and motor performance of autistic children</td>
<td>single arm pilot study</td>
<td>N = 30 cases of ASD</td>
<td>Children of both sexes, below 7 years</td>
<td>Psycho-educational profile revised (PEP-R)</td>
<td>10 months</td>
<td>Positive inference of Homoeopathic intervention in cognitive, behavioural and motor performance</td>
</tr>
<tr>
<td>3</td>
<td>Gupta et al (2010)</td>
<td>Homeopathic medicinal treatment of Autism.</td>
<td>single arm study</td>
<td>25 cases of Autism</td>
<td>Both sexes, ages 4-14 years</td>
<td>Childhood autism rating Scale (CARS)</td>
<td>18 months</td>
<td>Significant improvement in 60%: mild to moderate, 38% severe autism</td>
</tr>
<tr>
<td>4</td>
<td>Barvalia P (2011)</td>
<td>Autism Spectrum Disorder: Holistic homoeopathy</td>
<td>single arm study</td>
<td>123 cases of Autism</td>
<td>Both sexes, ages 3-12 years</td>
<td>CARS: Childhood Autism Rating Scale, ATEC: Autism Treatment Evaluation Checklist</td>
<td>Long term not mentioned</td>
<td>Statistically significant lowering of autistic load following Homoeopathic interventions. Mean CARS came down from 34 to 19 and ATEC came down from 63 to 4.</td>
</tr>
<tr>
<td>5</td>
<td>Barvalia et al (2014)</td>
<td>Effectiveness of homeopathic therapeutics in the management of childhood autism disorder.</td>
<td>single arm self-controlled study</td>
<td>60 cases of Autism</td>
<td>Both sexes, ages below 12 years</td>
<td>ATEC: Autism Treatment Evaluation Checklist</td>
<td>18 Months</td>
<td>A statistically significant difference in the mean scores was observed in all the categories based on degree of autism, i.e. mild, moderate, and severe (14.45, 16.81 and 11.78 respectively with $P &lt; 0.005$)</td>
</tr>
<tr>
<td>6</td>
<td>Rajalakshmi (2018)</td>
<td>Homeopathic treatment as an aid to inclusive integration of children with autism spectrum disorders.</td>
<td>before and after quasi-experimental study design</td>
<td>40 cases of ASD</td>
<td>Both sexes, ages 2-9 years</td>
<td>ATEC: Autism Treatment Evaluation Checklist</td>
<td>Long term not mentioned</td>
<td>Significant reduction in the mean post-treatment scores (M=33.17, S.D.=6.42) as compared to the mean pre-treatment ATEC scores (M=78.15, S.D.=13.47), $t(39) = -26.8$, $p &lt; 0.000$.</td>
</tr>
<tr>
<td>7</td>
<td>Gilla et al (2022)</td>
<td>Autism Spectrum Disorder Managed with Individualised Homoeopathic Medicine—Analysis of 20 Cases</td>
<td>Retrospective, formal case series</td>
<td>20 cases of ASD</td>
<td>The mean age of the children at baseline was 7.23+/-2.52.</td>
<td>ATEC: Autism Treatment Evaluation Checklist</td>
<td>12 months</td>
<td>Median baseline ATEC score of 110.0 (116.0–94.5) reduced to 33.5 (61.75–25.0) at $p&lt;0.001$, with an effect size of 0.88.</td>
</tr>
</tbody>
</table>
Attention Deficit Hyperactivity Disorder (ADHD): The largest body of evidence pertaining to the use of homeopathy in CAP is present in the treatment of ADHD but the results are ambivalent. There is heterogeneity in the quality of trials and the outcome of studies but overall our findings suggest some potential for using homeopathy in ADHD.

Table no.4: Studies on Homoeopathy in ADHD [29-36]

<table>
<thead>
<tr>
<th>S. No</th>
<th>Author/Year</th>
<th>Type of study</th>
<th>Sample size</th>
<th>Demographic features</th>
<th>Primary outcome measure</th>
<th>Follow-up time</th>
<th>Result/Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Frei H., et al. (2001)</td>
<td>Comparative study of Homoeopathy with Methylphenidate (MPD)</td>
<td>115 cases (92 boys and 13 girls)</td>
<td>3-17 years</td>
<td>Conner global index (CGI)</td>
<td>6.5 month</td>
<td>86 patients sufficiently responded to homoeopathy. 25 needed MPD. 3 patients didn’t respond to any treatment. Clinical Global Improvement showed better change with Homoeopathy</td>
</tr>
<tr>
<td>2</td>
<td>Jacob J., et al. (2005)</td>
<td>Randomized double blind placebo controlled trial</td>
<td>43 cases</td>
<td>6-12 years</td>
<td>Conner’s Global Index—Parent, Conner’s Global Index—Teacher, Conner’s Parent Rating Scale—Brief, Continuous Performance Test, and the Clinical Global Impression Scale.</td>
<td>18 Weeks</td>
<td>There were no statistically significant differences between homeopathic remedy and placebo groups on the primary or secondary outcome variables. Future studies should be carried out over a longer period of time</td>
</tr>
<tr>
<td>3</td>
<td>Heirs M. (2007)</td>
<td>Systematic review</td>
<td>Pragmatic RCTs and case series were described</td>
<td>168 Studies</td>
<td></td>
<td></td>
<td>The forms of homeopathy evaluated to date do not suggest significant treatment effects for the global symptoms, core symptoms of inattention, hyperactivity or impulsivity, or related outcomes such as anxiety in ADHD</td>
</tr>
<tr>
<td>4</td>
<td>Frei H., et al. (2007)</td>
<td>Randomized, double blind, placebo-controlled crossover trial</td>
<td>83 cases</td>
<td>6-16 years</td>
<td>Clinical Global Impression Scale</td>
<td>6 weeks+ 6 weeks= 3 months</td>
<td>CGI at entry to the crossover trial, cognitive performance such as visual global perception, impulsivity and divided attention, had improved</td>
</tr>
</tbody>
</table>
significantly under open-label treatment ($P<0.0001$). During the crossover trial, CGI parent-ratings were significantly lower under verum (average 1.67 points) than under placebo ($P =0.0479$).

<table>
<thead>
<tr>
<th>№</th>
<th>Author(s)</th>
<th>Study Design</th>
<th>Cases Number</th>
<th>Age Range</th>
<th>Outcomes Measures</th>
<th>Duration</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Fibert P et al. (2016)</td>
<td>A comparative consecutive case series</td>
<td>20 cases with homeopath for one year and 10 cases with similar time and attention for 4 months</td>
<td>5-16 years</td>
<td>Conners' Parent Rating Scale, Revised Long Version &amp; MYMOP</td>
<td>1 year</td>
<td>Treatment by a homeopath was associated with sustained, increasing improvements and the intervention was acceptable to participants.</td>
</tr>
<tr>
<td>6</td>
<td>Fibert P et al. (2018)</td>
<td>Pilot study with (Trial within Cohorts) Twics design</td>
<td>124 cases</td>
<td>5-18 years</td>
<td>Conners' Global Index (CGI), Swanson, Nolan and Pelham Teacher and Parent Rating Scale (SNAP) and Child Health Utility health-related quality of life (CHU-9) measure</td>
<td>6 months</td>
<td>This pragmatic trial design allows the testing of treatment by homeopaths as experienced in usual practice over the long term. Attrition and non-attendance were common in ADHD trials, and providing evidence about the acceptability of interventions is therefore useful.</td>
</tr>
<tr>
<td>7</td>
<td>Goyal A, Singh M</td>
<td>Single-arm study</td>
<td>50 cases</td>
<td>Up to 12 years</td>
<td>Vanderbilt Diagnostic Scale</td>
<td>18 months</td>
<td>Of the 50 cases, only 6 patients showed marked improvement (i.e. 12 of the cases), 24 showed moderate improvement (i.e. 48% of the cases) and 15 patients showed mild improvement after treatment (i.e. 30% of the cases). Status quo in 5 patients (i.e. 10% of the cases).</td>
</tr>
</tbody>
</table>
A Case of a 16-year-old youth with a diagnosis of ADHD was reported to be treated for over one and half years with individualized homoeopathic medicines and additional ultra-molecular dilutions of cannabis, and there were improvements in ADHD status and patient generated outcomes [37].

A randomized placebo-controlled pilot trial to evaluate the usefulness of individualised homoeopathic medicines in treatment of total of 54 patients (homoeopathy = 27, placebo = 27). All patients in homoeopathy group showed better outcome in baseline adjusted General Linear Model (GLM) repeated measures ANCOVA for oppositional, cognition problems, hyperactivity and ADHD Index (domains of CPRS-R (S)) and CGI-IS at T3, T6, T9 and T12 (P = 0.0001) [38].

In a study conducted by Frei et al, for treatment of hyperactive children with homoeopathy compared to methylphenidate (MPD) in a family setting, 86 patients sufficiently responded to homoeopathy. 25 needed MPD [39]. A pilot randomized-controlled trial carried out for evaluating the effectiveness of homoeopathy in the treatment of ADHD concluded that there is no evidence to support a therapeutic effect of individually selected homeopathic remedies in children with ADHD as there were no statistically significant differences between homeopathic remedy and placebo groups on the primary or secondary outcome variables - Future studies are suggested to be carried out over a longer period of time [30].

A randomized controlled trial of homoeopathy in hyperactive children treatment procedure lead to an unconventional study design because of the necessity of identifying an optimal medication before response to treatment can be expected. This study identifies that randomization at the start of treatment in an RCT of homeopathy in ADHD children has a high risk of failure to demonstrate a specific treatment effect, if the observation time is shorter than 12 months [32].

In a study conducted by Fibert et al, 20 children with a diagnosis of ADHD receiving homeopathic treatment were compared with 10 children receiving usual care. Treatment by a homeopath was associated with sustained, increasing improvements and the intervention was acceptable to participants. It is recommended that future research in this area uses comparative effectiveness randomized controlled trial designs and CPRS-L long scale with 80 questions [33][34][40][41].

In a double-blind partial cross-over study conducted by John et al, 43 children randomly given homoeopathic medicine and placebo and after 10 days changes are compared among groups and also same individual before and after cross over. Statistically significant changes are found suggesting the efficacy of homoeopathic medicine [42].

The results of systematic review conducted by extracting data from four eligible studies (total n = 168) do not suggest significant treatment effects for the global symptoms, core symptoms of inattention, hyperactivity or impulsivity, or related outcomes such as anxiety in Attention Deficit/Hyperactivity Disorder. Development of optimal treatment protocols is recommended prior to further randomized controlled trials being undertaken [31].
A study design of a Randomized, Placebo Controlled Trial (RPCT) of the Homeopathic Treatment of ADHD was published in *Homeopathy* journal. Preliminary feasibility and clinical results of a pilot study of treatment by homeopaths for children with ADHD using the trials within cohorts (twics) design are also published [34].

Metanalysis by Gaertner et al concluded Individualized homeopathy showed a clinically relevant and statistically robust effect in the treatment of ADHD [36]. Some of the recent case reports also pointed to the usefulness of individualized homoeopathic medicine in the treatment of ADHD [44,45,46].

**Intellectual disabilities:** there is paucity of literature on usefulness of homeopathy for treatment of Intellectual disabilities, speech and language difficulties [47]. A case of Mental retardation treated with *Sulphur* is reported to produce holistic improvement [48]. In a study including 58 cases of patients suffering from Intellectual disability, 28 females and 30 males, forty-seven had improvement in adaptation skill. The study concluded that Homeopathy is a useful alternative to relieve pathologies associated with mental disability. In those cases, in which there were similarities between remedy and whole symptomatology, improvements in adaptation skills and in overall health were observed [49]. In a study conducted by Tiwari et al on 30 children aged 3 to 18 years diagnosed with intellectual disabilities, the result was found to be significant (p<0.05) in all the domains of the Behavioural Assessment Scale for Indian Children with Mental Retardation (BASIC-MR) but the attrition rate was high and only a few patients (n=10) completed follow up of the short study period of 6 months [50].

Arora D conducted a purposive, non-randomized, self-controlled, pre- and post-intervention study of 25 participants diagnosed with IDD. The initial 6 months were the control period, thereafter, the same participants were treated for 18 months, with homoeopathy. Treatment outcomes were assessed using domains of Diagnostic and Statistical Manual-V-V. Scores of each domain were observed at 6 months interval and there was a statistically significant difference (P < 0.001) in adaptive functioning treatment scores for conceptual domain, social domain and practical domains [51]. A case of Factor XIII Deficiency is reported to be successfully managed with constitutional medicine *Bufo Rana* in intellectually disabled child [52].

**Learning disabilities:** Analysis of 30 cases of Dysgraphia treated with homoeopathy found that Homoeopathy is effective. The efficacy of Homoeopathy medicine on Dysgraphia was assessed by comparing before and after-treatment writing scores with Learning Disability Diagnostic Inventory [53]. A case series of 4 cases of Learning disabilities reported positive outcome with Homoeopathic intervention. The medicines indicated are *Calcarea Mur*, *Calcarea Silicata*, *Hyoscyamus* and *Lachesis*. The study suggests that identifying and valuing the coping mechanisms are of value in arriving at the similimum in children with LD [54]. In a 3-year randomized, double-blind case-control study carried out by Dhwale et al on 67 children between ages 8-12 years fulfilling the criteria of LD (ICD-10) for dyslexia and dysgraphia with a minimal observation period of one year, Fifty-nine percent of children from the treatment group experienced no difficulty in reading at the end of one year as compared to 39% in the placebo group. The results indicated a significant change not only in the expressions of the LD but also in a better adaptation of the child to the environment [55]. In another study by Kondhalkar et al, homoeopathic medicine was prescribed to the 30 children having learning disability of age group 6 to 15. Statistical analysis of data of paired test by using VAS (Visual Analogue Scale) for scoring before and after study outcome at 95% confidence interval of degree of freedom 29 shows significant difference (p=<0.0001) [56]. No studies are identified on treating speech and language difficulties with homoeopathic medicines.
**Childhood depression:** The role of Homoeopathy in Depressive disorders has been presented through evidence-based studies such as Oberai et al. [57]. But there is a paucity of studies on childhood depression. Owing to the increasing prevalence of Depression in children in recent times especially in the pandemic scenario, studies are highly recommendable. There is an article published on “Depression in Children and Its Homoeopathic Management with Magnesium Carbonicum.” It narrates that Mag Carb can be given as it has been suggested in Kent's lectures [58]. But no clinical application or verification is quoted in this article. A single case report of Childhood depression responded well to Aurum met, Natrum mur, Aurum Mur Natronatum and Stramonium which were based on Herscu's cycles [59].

**Childhood anxiety and other neurotic disorders:** there is scarcity of studies on childhood anxiety disorders, although there are many studies conducted in anxiety disorders in general [60]. Three children with severe anxiety and Obsessive-compulsive disorder (OCD) were reported to be successfully treated with homeopathy [61].

**Conduct disorder:** Homoeopathic studies on Conduct disorder (CD) (individual under 18 who habitually violate the right of other, and will not conform their behaviour to the law or social norm appropriate to their age.)are very limited with hardly a case report on CD and two cases of Oppositional Defiant Disorder (ODD)(A pattern of angry/irritable mood, argumentative/defiant behavior, or vindictiveness lasting at least 6 months) A case of Oppositional defiant disorder treated with Platina has found to produce favorable results [62][63][64].

**Other behavioural problems of Children:** There are isolated case reports and review articles of other behavioural issues of childhood like Pica [65], Nocturnal enuresis [66] etc. 20 children suffering from enuresis were treated in an open trial with Ilex paraguensis for 2 months. The results were complete disappearance of the enuresis and improvement in the psychological symptoms in 50%. 10% of patients improved at the start of the treatment but relapsed. 40% did not respond to treatment [67]. Specific developmental disorders of speech and language is yet another area to be explored.

Most studies were based in international classification of diseases (ICD)-9, (ICD-10) criteria or Diagnostic Statistical Manual (DSM)-IV classifications, which are renewed by the ICD -11 and DSM V versions. Hence it would be ideal for futures studies to be based on the renewed criteria.

Infant mental health has emerged as a unique area of practice and research distinguished from child and youth sub-specialties by its advocacy for a relational practice framework with an emphasis on parents/caregivers [68]. Studies in homoeopathy on Infant mental health is an area which has to be explored.

There are few limitations of this “scoping” review process in terms of articles which were not open for free access and publications in different languages which may be included in the future reviews. The diversity of practice in homeopathy presents unique challenges for researchers who wish to improve the evidence base by scoping and systematic reviews. Study designs which are compatible with the homeopathic principle of individualization can be suggested for future research. The observations of studies for the potential integration of homeopathic practice into conventional settings are necessary [69]. Homoeopathic medicines are apparently safe and effective to children with emotional and behavioral problems either as standalone or in integrated approach, the evidence of which has to be corroborated with rigorous studies. Studies using universally accepted psychiatric rating scales and specific biomarkers are suggested.

**Conclusions and Recommendations**
There is a limited evidence base for the utility of Homoeopathy in CAP, although existing evidence show positive findings. Studies with rigorous study designs and definite parameters are necessary to establish the evidence. Certain areas of CAP Conduct disorders, Intellectual disability, Specific Learning disabilities etc. are yet to be studied to find the effectiveness and efficacy of Homoeopathy. Methodological errors and publication bias should be overcome to bring out the full potential of Homoeopathy in the field of CAP.

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Conflict of Interest
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Ethics and Dissemination
As this review has undertaken a secondary analysis of data already collected, ethical approval is not acquired. This review is intended to be presented at relevant national and international conferences by the authors after publication.

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