In order of importance, list of ten best papers of the candidate, highlighting the important discoveries/contributions described in them briefly (not to exceed 3000 words)

List of 10 best papers

S.No	Journal Details	Year	Impact Factor	Citations
1	Sondhi, Vishal; Agarwala, Anuja; Pandey, Ravindra M; Chakrabarty, Biswaroop; Jauhari, Prashant; Lodha, Rakesh; Toteja, Gurudyal S; Sharma, Shobha; Paul, Vinod K; Kossoff, Eric;Gulati Sheffali (corresponding) Efficacy of Ketogenic Diet, Modified Atkins Diet, and Low Glycemic Index Therapy Diet Among Children With Drug-Resistant Epilepsy: A Randomized Clinical Trial. JAMA Pediatrics 2020; 174(10): 944-951	2020	13.946	14
2	Gulati, Sheffali(coresponding); Kaushik, Jaya Shankar; Saini, Lokesh; Sondhi, Vishal; Madaan, Priyanka; Arora, NK; Pandey, RM. Jauhari, Prashant; Manokaran, Ranjith K; Sapra, Savita. Development and validation of DSM-5 based diagnostic tool for children with Autism Spectrum Disorder. Plos one 2019;14(3); e0213242	2019	2.740	10
3	Arora NK, Nair MKC, Gulati S, Deshmukh V, Mohapatra A, Mishra D, Patel V, Pandey RM, et al. Neurodevelopmental disorders in children aged 2-9 years: Population-based burden estimates across five regions in India. PLoS Med. 2018 Jul 24;15(7):e1002615. doi: 10.1371/journal.pmed.1002615. PMID: 30040859; PMCID: PMC6057634.	2018	10.500	84
4	Dwivedi R, Ramanujam B, Chandra PS, Sapra S, Gulati S, Kalaivani M, Garg A, Bal CS, Tripathi M, Dwivedi SN, Sagar R, Sarkar C, Tripathi M. Surgery for Drug-Resistant Epilepsy in Children. N Engl J Med. 2017 Oct 26;377(17):1639-1647.	2017	91.245	277
5	Sharma S, Sankhyan N, Gulati S(corresponding author), Agarwala AUse of the modified Atkins diet for treatment of refractory childhood epilepsy: a randomized controlled trial. Epilepsia. 2013 Mar;54(3):481–6.	2013	6.040	139
6	Arya R, Gulati S(corresponding author), Kabra M, Sahu JK, Kalra V. Intranasal versus intravenous lorazepam for control of acute seizures in children: a randomized open-label study.Epilepsia. 2011 Apr;52(4):788–93	2011	6.040	79
7	Arya R, Gulati S (corresponding author), Kabra M, Sahu JK, Kalra V .Folic acid supplementation prevents phenytoin-induced gingival overgrowth in childrenNeurology. 2011 Apr 12;76(15):1338–43.	2011	8.485	54
8	Raju KNV, Gulati S, Kabra M, Agarwala A, Sharma S, Pandey RMEfficacy of 4:1 (classic) versus 2.5:1 ketogenic ratio diet in refractory epilepsy in young children: a randomized open labeled study Epilepsy Res. 2011 Sep;96(1–2):96–100.	2011	2.208	61
9	Choudhary, Anita; Gulati, Sheffali (Corresponding); Kabra, Madhulika; Singh, Upinder Pal; Sankhyan, Naveen; Pandey, Ravindra Mohan; Kalra, Veena. Efficacy of modified constraint induced movement therapy in improving upper limb function in children with hemiplegic cerebral palsy: a randomized controlled trial.Brain Development. 2013; 35(9): 870-876	2013	1.504	75
10	Choudhary A, Gulati S, Sagar R, Sankhyan N, SripadaK.Childhood epilepsy and ADHD comorbidity in an Indian tertiary medical center outpatient population. Sci Rep. 2018 08;8(1):2670.	2018	4.379	14

1. Efficacy of ketogenic diet, modified atkins diet, and low glycemic index therapy diet among children with drug-resistant epilepsy a randomized clinical trial.
ClinicalTrials.gov Identifier: NCT02708030

The RCT proposes whether the modified Atkins diet (MAD) and low glycemic index therapy (LGIT) diet are non-inferior to the ketogenic diet (KD) among children with drug-resistant epilepsy. Numerous research articles support the successful use of KD to treat children with drug-resistant epilepsy. One hundred seventy children (Age: 1-15years; ≥ 4 seizures/month); who had not responded to 2 or more anti-seizure drugs, and had not been treated previously with any diet therapy were randomized and assigned to receive the KD (n=52), MAD (n=52), or LGIT (n=54) diet along with the standard therapy. The LGIT diet showed a balance between seizure reduction and relatively fewer adverse events compared with the KD and MAD. Assessment at 24 weeks of intervention suggests that neither the MAD nor LGIT diet met the non-inferiority criteria and aimed towards individualized diet therapy.

Sondhi, Vishal; Agarwala, Anuja; Pandey, Ravindra M; Chakrabarty, Biswaroop; Jauhari, Prashant; Lodha, Rakesh; Toteja, Gurudyal S; Sharma, Shobha; Paul, Vinod K; Kossoff, Eric;Gulati Sheffali (corresponding) Efficacy of Ketogenic Diet, Modified Atkins Diet, and Low Glycemic Index Therapy Diet Among Children With Drug-Resistant Epilepsy: A Randomized Clinical Trial. JAMA Pediatrics 2020; 174(10): 944-951	Year 2020	Impact factor 13.946	Citations 14

Only 3 limb RCT in the world till date which compared the 3 diets and has led the path toward less restrictive diet therapies. This has aroused lot of interest and has had widespread media coverage, tweets and also as a podcast in ICNA pedia of International Child Neurology Association (I was the corresponding author)

2. Development and validation of DSM-5 based diagnostic tool for children with Autism Spectrum Disorder

The diagnosis of ASD in Indian subcontinent and low-middle income countries (LMIC) is based on Diagnostic and Statistical Manual of mental disorder-IV (DSM-IV) text revision based on INCLEN Diagnostic Tool for Autism Spectrum Disorder (INDT-ASD). The prior diagnostic data necessitated the revision of existing INDT-ASD tool to incorporate the DSM-5 related changes. The validation of the Modified-INDT-ASD Tool was conducted at All India Institute of Medical Sciences (AIIMS). The major modifications based on Delphi method included, rearrangement of questions and inclusion of new questions on sensory symptoms. The cut-off of Receiver operating characteristic (ROC) curves was compared to Childhood Autism Rating Scale (CARS) for scoring the severity of ASD. The sensitivity and specificity of the modified tool on two hundred twenty five children (159 boys, 66 girls, median age = 47months) was 98.4% and 91.7% respectively. A score ≥14 was suggestive of severe ASD (CARS>36.5) with a sensitivity and specificity of 80% and 80.7% respectively. The AIIMS-Modified-INDT-ASD Tool is a simplified structured instrument to facilitate diagnosis of ASD with acceptable diagnostic accuracy.

Gulati, Sheffali(coresponding); Kaushik, Jaya Shankar; Saini, Lokesh; Sondhi, Vishal; Madaan, Priyanka; Arora, NK; Pandey, RM. Jauhari, Prashant; Manokaran, Ranjith K; Sapra, Savita. Development and validation of DSM-5 based diagnostic tool for children with Autism Spectrum Disorder. Plos one 2019;14(3); e0213242	Year 2019	Impact factor 2.740	Citations 10

It was the 1st published diagnostic tool for Autism spectrum disorder based on DSM 5 criteria and we have developed a severity scoring for the same and it has been converted into a mobile app pedneuroaiimsdiagnostics for point of care physician. (I was the corresponding author)

3. Neurodevelopmental disorders in children aged 2-9 years: Population-based burden estimates across five regions in India

Neurodevelopmental disorders (NDDs) compromise the development and attainment of full socio-economic potential at individual, family, community, and country levels in most developing countries. To expedite the policies and programmatic action assessment was completed on 3,964 children (almost equal number of boys and girls; age group 2-6 and 6-9 years) were screened using cluster sampling technique from five geographically diverse populations in India. The populations were from North-Central; Palwal [*N* = 998; all rural, 16.4% non-Hindu, 25.3% from scheduled caste/tribe (SC-ST,these are considered underserved communities who are eligible for affirmative action)]; North; Kangra (*N* = 997; 91.6% rural, 3.7% non-Hindu, 25.3% SC-ST); East; Dhenkanal (*N* = 981; 89.8% rural, 1.2% non-Hindu, 38.0% SC-ST); South; Hyderabad (*N* = 495; all urban, 25.7% non-Hindu, 27.3% SC-ST) and West; North Goa (*N* = 493; 68.0% rural, 11.4% non-Hindu, 18.5% SC-ST). All children were screened for vision impairment (VI), epilepsy (Epi), neuromotor impairments [including cerebral palsy (NMI-CP)], hearing impairment (HI), speech and language disorders, autism spectrum disorders (ASDs), and intellectual disability (ID). Additional screening for ADHD and learning disorders was done for the 6-9 years age group

Standardization of the sample characteristics was based on Census of India 2011; site-specific prevalence of any of seven NDDs in 2-6 year age group ranged from 2.9% to 18.7% for any of nine NDDs in the 6-9year age group from 6.5% to 18.5%. Two or more NDDs were present in 0.4% to 4.3% in the younger age group and 0.7% to 5.3% in the older age category. Site pooled estimates for NDDs were 9.2% and 13.6% 2-6 and 6-9 year age groups respectively.

The pooled estimates for prevalence increased by up to three percentage points when these were adjusted for national rates of stunting or low birth weight (LBW). Upon risk modelling, non-institutional delivery, history of perinatal asphyxia, neonatal illness, postnatal neurological/brain infections, stunting, LBW/prematurity, and older age category (6±9 year) were significantly associated with NDDs, which are suggestive for contributing to underestimation of the true NDD burden in our population.

Arora NK, Nair MKC, Gulati S, Deshmukh V, Mohapatra A, Mishra D, Patel V, Pandey RM, et al. Neurodevelopmental disorders in children aged 2-9 years: Population-based burden estimates across five regions in India. PLoS Med. 2018 Jul 24;15(7):e1002615. doi: 10.1371/journal.pmed.1002615. PMID: 30040859; PMCID: PMC6057634.	Year 2018	Impact factor 10.500	Citations 84

I was he Network Coordinator and site PI for this study which was the 1st of its kind study in which screening and diagnostic tools for Neurodevelopmental disorders were developed and prevalence data estimated

4. Surgery for Drug-Resistant Epilepsy in Children

Clinical Trial Registry–India number, CTRI/ 2010/ 091/ 000525

Neurosurgical treatment may improve seizures in children and adolescents with drug-resistant epilepsy, but additional data are needed from randomized trials. In a single-center trial, 116 patients (18 years or younger with drug-resistant epilepsy) were directed to undergo brain surgery along with standard medical therapy (surgery group, 57 patients); other group received medical therapy alone (59 patients). Primary outcome, seizures at 12 months was observed in 44 patients (77%) in the surgery group and in 4 (7%) in the medical-therapy group (P<0.001). Secondary outcomes scored on the Hague Seizure Severity scale[difference, 19.4; 95% ;CI, 15.8 to 23.1; P<0.001], the social quotient on the Vineland Social Maturity Scale[difference, 4.7; 95% CI, 0.4 to 9.1; P = 0.03], and scores on the Child Behavior Checklist [difference, 13.1; 95% CI, 10.7 to 15.6; P<0.001] and the Pediatric Quality of Life Inventory[difference, 21.9; 95% CI, 16.4 to 27.6; P<0.001] favored the surgical intervention except the Binet–Kamat intelligence quotient[difference, 2.5; 95% CI, −0.1 to 5.1; P = 0.06]. Serious adverse events occurred in 19 patients (33%) in the surgery group, including hemiparesis in 15 (26%). Children and adolescents with drug-resistant epilepsy who had undergone epilepsy surgery had a significantly higher rate of freedom from seizures and better scores with respect to behavior and quality of life.

Dwivedi R, Ramanujam B, Chandra PS, Sapra S, Gulati S, Kalaivani M, Garg A, Bal CS, Tripathi M, Dwivedi SN, Sagar R, Sarkar C, Tripathi M. Surgery for Drug-Resistant Epilepsy in Children. N Engl J Med. 2017 Oct 26;377(17):1639-1647.	Year 2017	Impact factor 91.245	Citations 277

I was a co –guide for this PhD dissertation and contributed to design as well as execution of the study

5. Use of the modified Atkins diet for treatment of refractory childhood epilepsy: A randomized controlled trial

ClinicalTrials.gov Identifier: NCT00836836

The proposed RCT was to evaluate the efficacy of the modified Atkins diet in children with refractory epilepsy. 102 Children (2–14 years), having daily seizures despite the appropriate use of at least three anticonvulsant drugs were enrolled and randomized [Groups: Modified Atkins diet (n=50; 4 did not comply) and no dietary intervention (n=52; 3 were lost during follow-up)] for intervention of 3 months. The ongoing anticonvulsant medications were continued unchanged in both the groups. Adverse effects of the diet were assessed by parental reports. The mean seizure frequency at 3 months, was significantly less in the diet group; 59 ± 54 versus 95.5 ± 48 with p value equal to 0.003. The proportion of children with >90% seizure reduction and >50% seizure reduction was significantly higher in the diet group. Constipation was the most common adverse effect among children on the diet (46%).the results suggests that the modified Atkins diet was found to be effective and well tolerated in children with drug-refractory epilepsy.

Sharma S, Sankhyan N, Gulati S(corresponding author), Agarwala A Use of the modified Atkins diet for treatment of refractory childhood epilepsy: a randomized controlled trial. Epilepsia. 2013 Mar;54(3):481–6.	Year 2013	Impact factor 6.040	Citations 139

I was responsible for conceptualisation to execution of this study. (I was the corresponding author)

6. Intranasal versus intravenous lorazepam for control of acute seizures in children: A randomized open-label study

clinicaltrials.gov (NCT00735527)

Intravenous lorazepam is considered the drug of first choice for control of acute convulsive seizures. However, resource or personnel constraints necessitate the study of alternative routes and medications. A randomized open label study at an Indian hospital was conducted on 141 children (age group 6-14yrs; had acute convulsive seizures) to compare the efficacy and adverse effects of intranasal versus intravenous lorazepam. The children were randomized to receive either intravenous (n=70) or intranasal (n=71) lorazepam (0.1 mg/kg, maximum 4 mg). Clinical seizure remission within 10 min of drug administration was found in 80% of the intravenous group as compared to 83.1% of intranasal group. Intranasal administration of lorazepam is not found to be inferior to intravenous administration for termination of acute convulsive seizures in children.

Arya R, Gulati S(corresponding author), Kabra M, Sahu JK, Kalra V. Intranasal versus intravenous lorazepam for control of acute seizures in children: a randomized open-label study. Epilepsia. 2011 Apr;52(4):788–93	Year 2011	Impact factor 6.040	Citations 79

I was responsible for conceptualisation to execution of this study. (I was the corresponding author)

7. Folic acid supplementation prevents phenytoin-induced gingival overgrowth in children

Gingival overgrowth is an important adverse effect of phenytoin (PHT) therapy, occurring in about half of the patients. A randomized, double-blind, placebo-controlled trial was conducted at a tertiary level hospital to evaluate the effect of oral folic acid supplementation (0.5 mg/day) for the prevention of PHT-induced gingival overgrowth (PIGO) in 120 children [age group, 6–15 years; (n=62 folic acid group, n=58 placebo control); started on PHT monotherapy within last 1 month] with epilepsy on PHT monotherapy for 6 months. Twenty-one percent of patients in the folic acid arm developed PIGO, as compared with 88% receiving placebo (p= 0.001). Absolute risk reduction of PIGO by folic acid was 67% (95% confidence interval 54%–80%), and relative risk reduction was 0.76. Oral folic acid was found to significantly decrease the incidence of PIGO in children on PHT monotherapy in a clinically relevant manner.

Arya R, Gulati S (corresponding author), Kabra M, Sahu JK, Kalra V .Folic acid supplementation prevents phenytoin-induced gingival overgrowth in children Neurology. 2011 Apr 12;76(15):1338–43.	Year 2011	Impact factor 8.485	Citations 54

I was responsible for conceptualisation to execution of this study. (I was the corresponding author) Podcast interview by ProfessorNathan B. Fountain, University of Virginia https://www.aan.com/rss/search/home/episodedetail/?item=2223; Faculty 1000 included it in top 2% of articles in biology and medicine; Evaluated as Exceptional

8. Efficacy of 4:1 (classic) versus 2.5:1 ketogenic ratio diets in refractory epilepsy in young children: A randomized open labeled study

The ketogenic (lipid to non-lipid) ratio may play an important role in the efficacy and tolerability of ketogenic diets (KD). 38 children were enrolled (n=19 each group) to compare the efficacy and tolerability of 2.5:1 versus 4:1 lipid: non-lipid ratio KD in young children with refractory epilepsy. Baseline screening for all indicative parameters were done and adverse effects were recorded at three months in both groups. At three months, 11 children (58%) in the 4:1 group and 12 (63%) in the 2.5:1 group had more than 50% reduction in seizures (p = 0.78). Five children (26%) in the 4:1 group and four (21%) in 2.5:1 group became seizure free. The results suggests that 2.5:1 ratio KD is equally effective as 4:1 KD in controlling seizures and has fewer adverse effects.

Raju KNV, Gulati S, Kabra M, Agarwala A, Sharma S, Pandey RM Efficacy of 4:1 (classic) versus 2.5:1 ketogenic ratio diet in refractory epilepsy in young children: a randomized open labeled study Epilepsy Res. 2011 Sep;96(1–2):96–100.	Year 2011	Impact factor 2.208	Citations 61

I was responsible for conceptualisation to execution of this study. (I was the corresponding author)

9. Efficacy of modified constraint induced movement therapy in improving upper limb function in children with hemiplegic cerebral palsy: A randomized controlled trial

31 children(n=16,with conventional therapy; n=15,conventional therapy alone; age group 3–8 years) with hemiplegic cerebral palsy were enrolled in randomized single blind (outcome assessor) controlled trial, efficacy at 4 weeks of modified constraint induced movement therapy (mCIMT) was assessed for improvement of upper limb function in. Children were evaluated three times (at enrollment, follow-up at 4 and 12 weeks). Significant change in mean total QUEST scores (10.7 ± 5.2 vs 1.4 ± 1.7, $p < 0.001$) and time to complete nine-hole-pegboard test was documented at 4 weeks of intervention. The results suggests that the modified constraint induced movement therapy appears to be effective in improving upper limb function in 3–8 years old hemiplegic cerebral palsy children.

Choudhary, Anita; Gulati, Sheffali (Corresponding); Kabra, Madhulika; Singh, Upinder Pal; Sankhyan, Naveen; Pandey, Ravindra Mohan; Kalra, Veena. Efficacy of modified constraint induced movement therapy in improving upper limb function in children with hemiplegic cerebral palsy: a randomized controlled trial.Brain Development. 2013; 35(9): 870-876	Year 2013	Impact Factor 1.504	Citations 75

I was responsible for conceptualisation to execution of this study. (I was the corresponding author)

10. Childhood epilepsy and ADHD co-morbidity in an Indian tertiary medical center outpatient population

Epilepsy is a common paediatric neurological condition with frequent psychiatric co-morbidities, including ADHD. In this proposal 73 children (6-12years) were assessed for ADHD using DSM-IV-TR criteria. Epilepsy and psychiatric characteristics, socio-demographic indicators, and use of antiepileptic drugs were analyzed for differences between the ADHD and non-ADHD groups. Amongst all the children, 23% (n = 17) had co-morbid ADHD, of whom 59% (n = 10) had predominantly inattentive type, 35% (n = 6) combined type, and 6% (n = 1) predominantly hyperactive-impulsive type. Lower IQ scores, epileptic-form EEG activity, not attending school, and male sex were significantly associated with co-morbid ADHD in children with epilepsy. This study emphasizes on collaboration of specialists to optimize treatment for children with epilepsy and ADHD, especially for families in developing countries where there is huge burden of disease.

Choudhary A, Gulati S, Sagar R, Sankhyan N, SripadaK.Childhood epilepsy and ADHD comorbidity in an Indian tertiary medical center outpatient population. Sci Rep. 2018 08;8(1):2670.	Year 2018	Impact factor 4.379	Citations 14

I was responsible for conceptualisation to execution of this study. (I was the corresponding author)