

5 METHODS

5.1 DESIGN

A multiple baseline single case experimental design (AB1B2) was implemented for this study. Each participant went through three phases: (A) baseline phase without intervention, (B1) intervention phase in institute setting with yoga teacher and caregiver, and (B2) intervention phase in home setting with only caregiver. Continuous assessments were planned and administered for each participant at a frequency of every two weeks. The start of the intervention was stratified based on completion of four months of without any yoga practice and completion of associated baseline assessments for respective participants from the time of recruitment. This was planned to establish the existence of the problem related to the variables of interest before start of the intervention. Six months of intervention along with yoga interventionist and caregiver in institute setting followed by three months of yoga along with caregiver alone in home setting was planned. The duration of each intervention phase was decided based on number of intervention sessions as per the plan and that covers at least five counts of assessments for observable data representation for a phase analysis (Lobo et al., 2017). The multiple baselines were compared for each replication across six participants; twelve parameters distributed under three psychological domains and two settings. Replication added strength for external validity (Bentley et al., 2019). There was limited scope of randomization in this study. The continuous assessment outcomes were blinded for the interventionist and parents, also the assessors were blinded to the intervention procedure throughout the study. The study was conducted and reported as per the Single-Case Reporting Guidelines In Behavioural Interventions (SCRIBE) 2016 Statement (Tate R. L., 2016).

5.2 PARTICIPANTS

5.2.1 Sample Size and Demographics

Six children participated along with their caregivers (mothers), recruited from National Institute of Empowerment for of Persons with Multiple Disabilities (Divyangjan), [NIEPMD(D)] Chennai, Tamilnadu, India, a reputed institute handling multiple disabilities. The participants are residents and day boarders availing therapeutic services from the institute. Two of the participants attend special model school run by the institute and four attend other schools outside the institute admitted based on special status. The mothers with limited educational background could communicate only in vernacular (Tamil) language and children could follow their mothers. For children, two were non-verbal and other four however verbal, had minimal communication. Mostly caregivers understood them better and helped bridging the communication gaps during the intervention.

The two participants from the institute were introduced to basic yoga postures as part of school curricula in form of a group practice and not formally as a regular therapeutic one-to-one intervention. Other four participants had no prior exposure. The common therapeutic services like occupational therapy, speech therapy, behavioural therapy and special education were attended time to time by all the participants in the institute.

All the participants are certified by the institute under Department of Empowerment of Persons with Disability (DEPD) gazette guidelines for multiple disability certification on ASD and with ID. As per the guidelines, INCLIN Diagnostic tool for Autism Spectrum Disorder (INDT-ASD) is used by the institute for ASD diagnosis followed by Indian Scale for Assessment of Autism (ISAA) to assess the severity of the condition. The Binet-Kamat Test of Intelligence (BKT) and Malins Intelligence Scale for Indian Children (MISIC) are used to confirm the ID diagnosis and Vineland Social Maturity Scale (VSMS) tool is used assess the severity of the diagnosis.

The six assessors recruited were practicing clinical psychologists facilitated by the institute. One assessor was mapped to one participant. The trained yoga teacher was the researcher of this study to execute the intervention.

5.2.2 Inclusion and Exclusion Criteria

The inclusion criteria for the study included children were certified by the institution as multiple disabled having ASD and with ID, chronological age between 7-12 years having mild to moderate severity level and the caregiver agreed to participate throughout the study.

Children having other disabilities, beyond the age criteria, having severe to profound conditions in ASD and ID were excluded. Demographic details are represented in **Table 4**.

| Participant | Gender | Age | Disability Severity | | Caregiver | |
|---------------|--------|-----|---------------------|------|-----------|------------------|
| | | | ASD | ID | Relation | Education |
| Participant#1 | Male | 9 | Mild | Mild | Mother | Higher Secondary |
| Participant#2 | Female | 8 | Mild | Mild | Mother | Higher Secondary |
| Participant#3 | Female | 12 | Mild | Mild | Mother | Higher Secondary |
| Participant#4 | Male | 12 | Mild | Mild | Mother | Under Graduate |
| Participant#5 | Male | 10 | Mild | Mild | Mother | Higher Secondary |
| Participant#6 | Male | 9 | Mild | Mild | Mother | Under Graduate |

Table 4: Participant Demographics

5.2.3 Ethical Consideration

Prior to the participation the informed consent form was signed and provided by the parents [**Appendix-4**]. The study was approved by Research Committee of the NIEPMD(D), Chennai, India and Institutional Ethics Committee (IEC) of Swami Vivekananda Yoga Anusandhana Samsthana (Deemed to-be University), Bengaluru, India [**Appendix-5**]. The study adhered to the approved protocol and consent process, executed in NIEPMD(D), Chennai, India.

5.3 MEASURES AND MATERIALS

Indian Scale for Assessment of Autism (ISAA) and Behavioural Assessment Scales for Indian

Children with Mental Retardation (BASIC-MR) instruments were used to assess the desired cognitive, behavioural, and emotional parameters objectively.

ISAA is an objective assessment tool for persons with autism which uses observation, clinical evaluation of behaviour, testing by interaction with the subject and information supplemented by parents or caretakers. The ISAA questionnaire is divided under six domains: social relationship and reciprocity, emotional responsiveness, language and communication, behaviour pattern, sensory aspects, and cognitive component. These are further quantified by providing percentages to indicate the frequency, degree and intensity of behavioural characteristics that are observed. Lower the percentage indicates lesser problem and higher the score indicates severity. ISAA is a standardized, reliable, and valid tool for diagnosis and assessment of severity in autism among children (Chakraborty et al., 2015).

BASIC-MR is designed to elicit systematic information on the current level of behaviour in school going children with development disorders. It is developed in two parts. Part-A helps to assess the current level of skills behaviours in the child. Part-B helps to assess the current level of problem behaviours in the child. Part-A consists of seven domains: motor, activity of daily living (ADL), language, reading-writing, number-time, domestic-social, and prevocational-money. Part-B consists of ten domains: violent and destructive behaviour, temper tantrums, misbehaviour with others, self-injurious behaviours, repetitive behaviours, odd behaviours, hyperactive behaviours, rebellious behaviours, antisocial behaviours, and fears. For both Part-A and Part-B each of the respective domains of interest can be consumed independently. The scores for each domain are calculated and converted into a percentage. For Part-A a higher score indicates better skill behaviours, while for Part-B a lower score indicates fewer behaviour problems (Peshawaria & Venkatesan, 1992).

Twelve domains as variables of interest were picked from ISAA and BASIC-MR (A&B) that was administered to generate percentage scores. The aggregate score of the child on each

domain expressed as the raw score. This was converted into percentage for each domain by dividing the obtained raw score by maximum score for that domain and multiplied by 100. The percentage scores across phases were compared against the expected outcome of increasing or decreasing measure as prescribed in the tool. **Table 5** describes the assessment parameters of interest, description of problems assessed in each domain, and expected outcome.

Table 5: Variables of Interest

| Domain | Instrument | Parameter | Description | Expected Outcome |
|---------------|-------------------|----------------------------|---|-------------------------|
| Cognitive | ISAA | Cognitive Component | Assess participants lack of attention and concentration. Their responses to the instructions are prompt or after a considerable delay. | Decrease |
| | BASIC-MR (A) | Language | Assess (A) Receptive language ability like pointing to a picture in a book, arranging pictures after listening to a story, etc. (B) Expressive Language like ability to use two phrases, name common objects in use, etc. | Increase |
| | | Reading-Writing | Assess the reading ability of sight words, own name, scribbling with pencil or chalk, writing own name, address, etc. | Increase |
| | | Number-Time | Assess abilities to rote counts till five, count five objects meaningfully, add single digit numbers, name or identify numbers on the clock, name or identify day, date and months of the year, etc. | Increase |
| Behavioural | ISAA | Behavioural Pattern | Assess participants engagement in self-stimulatory behaviour in the form of flapping of hands or using an object for this purpose, insisting on following routines, resisting change, restlessness and exhibiting aggressive behaviour. | Decrease |
| | BASIC-MR (B) | Hyper Activity-Inattention | Assessed the ability to sit in one place for required time, completing task at hand, etc. | Decrease |
| | | Repetitive Behaviour | Assess patterns like rocking the body, nodding head, shaking parts of the body repeatedly, etc. | Decrease |

| | | | | |
|-----------|--------------|---------------------------------|--|----------|
| Emotional | ISAA | Emotional Responsiveness | Individuals with autism do not show the expected feelings in a social situation. Emotional reactions are unrelated to the situation and may show anxiety or fear which is excessive in nature without apparent reason. They may engage in self-talk that is inappropriate for their age and may lack fear of danger. | Decrease |
| | BASIC-MR (B) | Violent & Destructive Behaviour | Tear books, break things, throw objects, etc. | Decrease |
| | | Temper Tantrums | Bangs head, scratches self, pulls own hair, bites self, peels skin/wound, etc. | Decrease |
| | | Self-Injurious Behaviours | Rolls on the floor, screams, cries excessively, etc. | Decrease |
| | | Odd Behaviours | Smiles, laughs, or talks to self without reason, collects rubbish, etc. | Decrease |

The study was conducted over three phases. The assessments were administered by assessors to collect cognitive, behavioural, and emotional data desired for the study every two weeks as per the plan. Total twenty-six (26) assessments were administered throughout the study with first eight during baseline phase (without intervention), followed by twelve during intervention phase in institute setting followed by six during intervention phase in home settings. The assessors were blinded to the intervention modifications. The *yoga* interventionist and caregivers were blinded to the assessment scores during the intervention phases. After all the assessments were completed and completion of intervention phases, the scores were revealed and consolidated for analysis.

5.4 INTERVENTION PROCEDURE

A caregiver orientation workshop was conducted before commencing the intervention to explain the purpose of study and the importance of their role during the intervention. The

participants continued their respective regular therapies throughout the study. There were no conditional restrictions on other therapies along with yoga intervention. This also met the purpose of SCED where respective participants served as their own control and only change was additional yoga intervention to assess the impact.

The *yoga* sessions were administered for the participants as one-to-one intervention along with *yoga* teacher and caregiver. The intervention sessions started in institute setting along with *yo2ga* teacher and caregiver for 120 days, followed by 60 days in home setting along with only caregiver. Each intervention session duration was between 45 to 60 minutes administered every working day of the week excluding weekends and holidays. Before moving from institute setting to home setting, the ownership of intervention was handed over to the caregiver with documented course plan for continuity and smooth execution. A sample documented plan can be referenced in [Appendix-1].

During home setting phase, six sessions (once in a fortnight) over this period were conducted by the *yoga* teacher to re-establish the continuity and correct the course plan as applicable. The total days of intervention were adjusted to the planned number of days to compensate any longer absences (more than a week) against medical emergencies. **Figure 3** represents the flow.

5.5 COURSE PLAN

A well-crafted course plan designed that was personalized, prioritized function over form, and was safe based on the fundamental principles of *yoga* as rooted in the scripture of *Patanjali Yogasutra* (Desikachar, 1999).

5.5.1 Personalized

The practice was designed specific to the individual's capacity and comfort. The course plan was further modified to suite the physical and mental condition of the participant on a particular day.

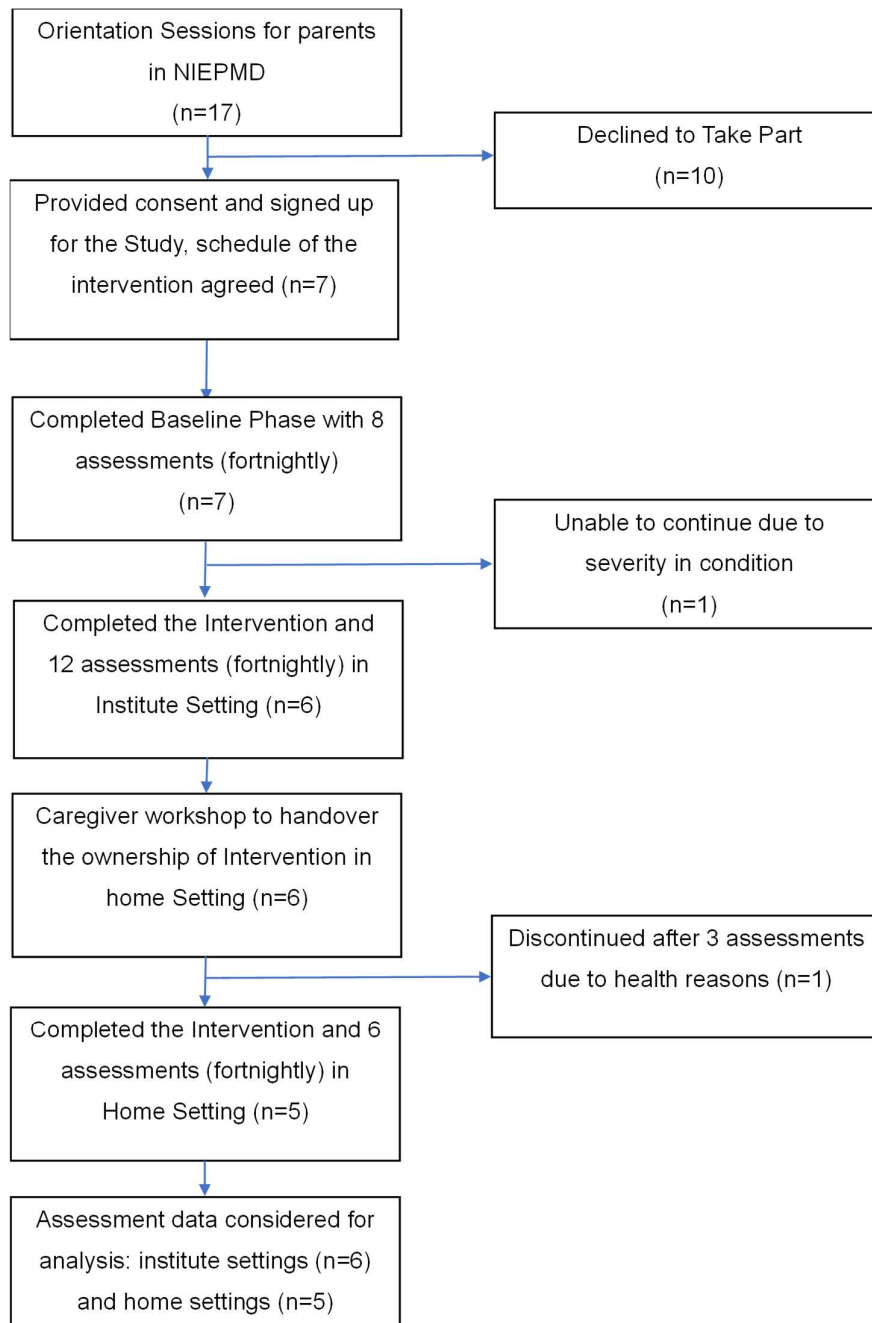


Figure 3: Recruitment Flow and Intervention Procedure

5.5.2 Function over form

A well-structured yet flexible course plan was designed with appropriate sequences towards fulfilling the function rather than emphasis to achieve the form.

5.5.3 Transition of planes

Transition of planes were carefully crafted keeping it smooth and in sequence for example from seated to standing to supine to prone to kneeling to seated.

5.5.4 Counterposes

For all *āsana-s* (physical postures) adequate counter postures were given.

5.5.5 Rests

Adequate rests were incorporated between asanas integrated with counting or chanting to sustain the participant's attention. Refer to a sample course plan [**Appendix-1**].

In the initial phase, the sessions were simplified, preparatory, and executed depending on the interest and comfort of the participant on that day. Once the relationship was established (between the *yoga* teacher and the participant), the nuances were understood by the *yoga* teacher, the sessions were modified incrementally as per the course plan.

5.6 TEACHING METHODOLOGY

The fundamentals of *yoga* movement, breath and awareness were achieved by incorporating following adaptation techniques in teaching.

5.6.1 Movement

(1) The objective is to get into and come out of the posture with comfort. This sequence was simplified and broken into smaller steps.

(2) Adaptations were seasoned by repetition. The approach was iterative and incremental, subject to the readiness of participant for next stage.

(3) *āsana* forms were established using patterning wherever applicable with support of caregiver. For example, in *dvipāda pīṭham* (bridge pose), the hip movements were patterned by support of caregiver lifting the back of the participant.

5.6.2 Breath

The breath was influenced in two ways.

- (1) Our body naturally inhales on expansion and exhales on contraction. Appropriate sequencing by alternating movements helped to achieve the right breathing.
- (2) Chanting happens on exhalation. Thus, chanting of any syllable of participants' choice was used in exhalation leading to an implicit inhalation. Length of the chant was moderated as per the participant's capacity.

5.6.3 Awareness

Awareness was brought by maintaining the attention of the participants throughout the session.

- (1) Every session started by re-establishing a positive connect between *yoga* teacher, the participant, and the caregiver.
- (2) The sessions were then executed with continuous engagement in form of movements integrated with limited voice modulated short instructions, counting, chanting, demonstration, and patterning that was suitable for the participant for that session.
- (3) Every day the teacher assessed the readiness and responsiveness of the participants and accordingly customised the session to bring the best to meet the session objective.
- (4) The *yoga* teacher demonstrated and practiced along with the participants throughout the session for ease of imitation.

The visual cues (parallel demonstration), auditory cues (limited voice modulated short instructions), support (caregiver patterning), simple plan integrating movements with chanting or counting; all combined throughout the session helped in making the session mindful and accessible.

5.7 DATA EXTRACTION

The study was conducted over three phases. The assessments were administered by assessors

to collect cognitive, behavioural, and emotional data desired for the study every two weeks as per the plan. Total twenty-six (26) assessments were administered throughout the study with first eight during baseline phase (without intervention), followed by twelve during intervention phase in institute setting followed by six during intervention phase in home settings. The assessors were blinded to the intervention modifications. The yoga interventionist and caregiver were blinded to the assessment results. After all the assessments were completed, the results were consolidated for analysis.

Overall, 1836 data points generated out of 153 assessments for six subjects. The data points were aggregated and analyzed by subjects, for each parameter within and across phases. A visual analysis tool was developed using MS Excel to consume the data collected and generates respective participant-parameter wise visualization sets (72), supplementing measuring units for within phase and between phase comparison, single comparative view for each parameters across participants (12).

5.8 DATA ANALYSIS

Visual analysis is used to determine the functional relationship between the intervention and observable parameters. A change in percentage score indicates the change in functional behavior as observed during assessment. During visual analysis, if the change is visible to be significant, consistent and aligned to the direction of expected outcome gives a clear indication of functional improvement. The visual analysis is further supplemented with quantitative analysis for evaluating the magnitude of impact using multiple non-overlapping indices for effect size and the statistical effect size was calculated using *Cohen's d t* between baseline to intervention (institute settings) and baseline to intervention (home settings) respectively. The analysis flow is represented in form of a flow chart in Error! Reference source not found.. The internal and external validity is analyzed in this process as an overall outcome.

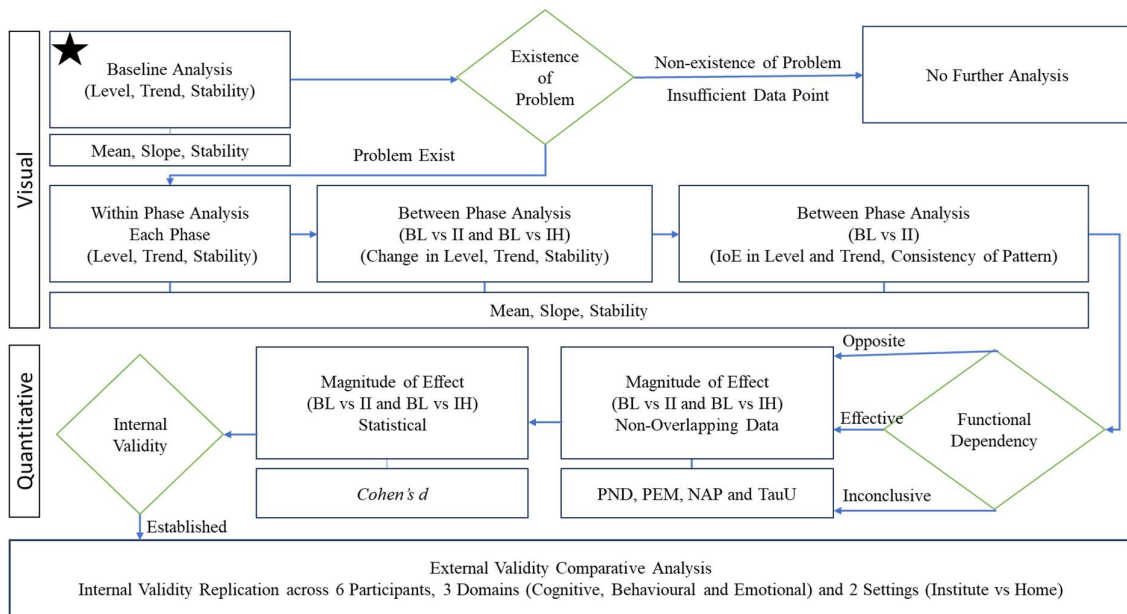


Figure 4: Data Analysis Flow

5.8.1 Visual and Quantitative Analysis

The visual analysis involved evaluating level, trend, and stability of data for within phase and between phase analysis. Further the immediacy-of-effect, consistency of data patterns, and non-overlap of data was compared between baseline and respective intervention phases. When the changes (and/or variability) in level and trend are in the desired direction, immediate, perceptible, and maintained over time, it is concluded that the changes in behavior across phases is a result of the intervention and indicative of functional improvement. This analysis was repeated for all 12 parameters for each participant and across all participants. For internal validity, at least three demonstrations of an intervention effect during visual analysis are necessary for establishing a functional relationship (Kratochwill & Levin, 2014). The visual representation of all the parameters can be referred in **APPENDIX- 6 to APPENDIX-8**.

5.8.1.1 Level

Level of each phase is calculated based on the mean or median value of the data set. For between phase analysis, a shift in the level in a desired direction of outcome is an impact. A

sample graph representing phase wise level and comparative shift in level is depicted in **Figure 5** and **Figure 6**. The level (mean) for all phases across all participants for all parameters is represented in the **Table 7**, **Table 8**, and **Table 9** for cognitive, behavioural and emotional domains respectively.

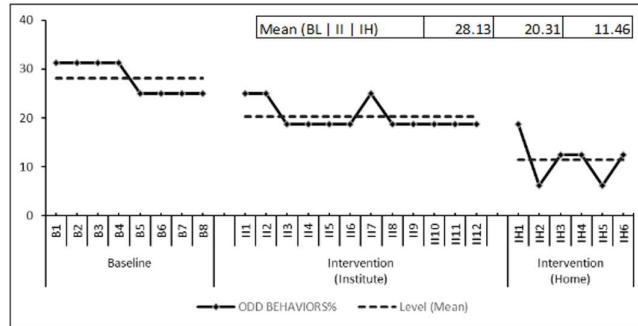


Figure 5: P#1 Odd Behaviour: Level (Mean)

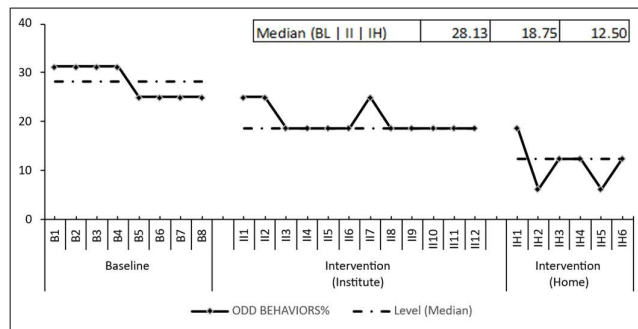


Figure 6: P#1 Odd Behaviour: Level (Median)

5.8.1.2 Trend

Trend of each phase is calculated based on the slope of the data set. For the slope to be in the direction of expected outcome determines impact is positive, inconclusive, or opposite. Change in trend from one phase to other for between phase analysis is an indication of intervention impact. The trend is depicted in **Figure 7**. The trend (slope) for all phases across all participants for all parameters is represented in the **Table 7**, **Table 8**, and **Table 9** for cognitive, behavioural and emotional domains respectively.

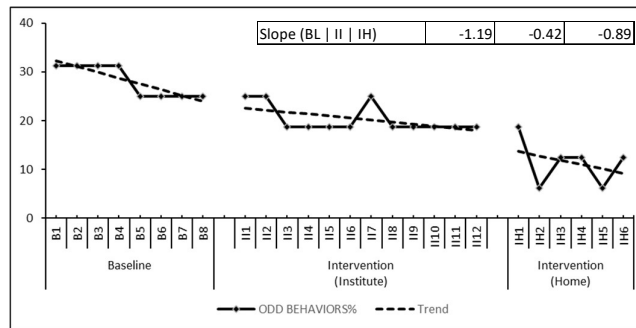


Figure 7: P#1 Odd Behaviour: Trend

5.8.1.3 Stability

Stability of data distribution within phase is evaluated by calculating the percentage of data points within 15% range of the phase **median**. The stability criteria are satisfied if about 85% (80%-90%) of the data in a phase fall within a 15% range of the **median** of all data points for that phase. The change in stability from baseline to intervention phase is an indication of impact. This is also an indicator to assess the consistency of pattern comparing between phases. The visual depiction is in **Figure 8**. The stability (+/- 15% withing across median) for all phases across all participants for all parameters is represented in the **Table 7**, **Table 8**, and **Table 9** for cognitive, behavioural and emotional domains respectively.

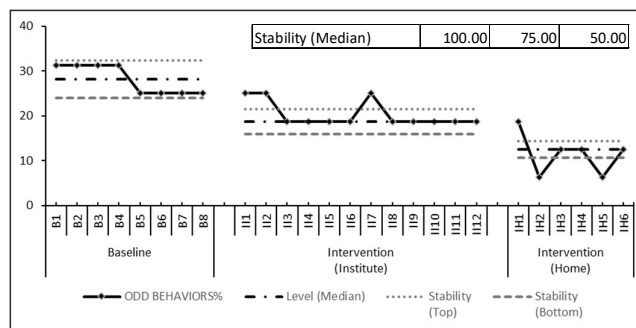


Figure 8: P#1 Odd Behaviour: Stability % (Median)

5.8.1.4 Immediacy of Effect (IoE)

Immediacy of effect is calculated for between-phase analysis between baseline and intervention in institute settings data points. The last three observations of baseline are compared with first three observations from intervention phase for change in level and trend. If the change is

perceivable and in desired direction of outcome then it is considered impactful. A sample of immediacy of effect is depicted in **Figure 9**. Immediacy of effect is not applicable between baseline and intervention phase in home settings, however, between two intervention phases it is assessed but not used for further interpretation.

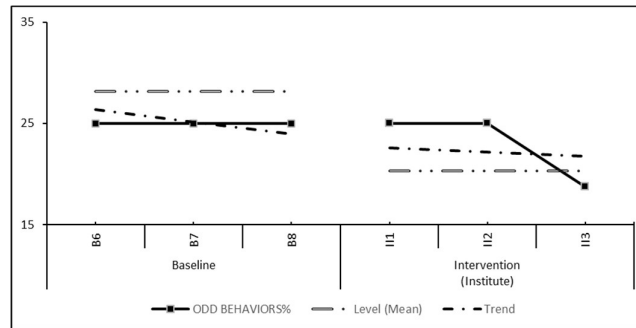


Figure 9: P#1 Odd Behaviour: IoE for Level and Trend between Baseline & Intervention Institute Settings

5.8.2 Magnitude of Effect

5.8.2.1 *Non-overlapping Measures*

Non-overlapping measures were calculated between baseline and respective intervention phases of institute and home settings. Percentage of Non-overlapping Data (PND), Percentage of Data Exceeding the Median (PEM), Non-overlapping of All Pairs (NAP), and TauU were used to quantify the magnitude of effect to supplement the visual analysis (Lenz, 2013) (Lobo et al., 2017).

Percentage of Non-overlapping Data (PND)

Percentage of Non-overlapping Data (PND) metric is conceptualized as the percentage of intervention phase data that exceeds a single noteworthy point (minimum or maximum) within the baseline phase depending on the expected outcome. Minimum is the point if expected outcome is to decrease and maximum is the point if the expected outcome is to increase. One limitation of the PND is that the yielded effect size measure is based on only one data point in the baseline phase and is therefore vulnerable to an outlier that may promote Type 2 error. A PND less than 50 would be considered no observed effect, between 50-70 signifies

questionable effect, and greater than 70 suggests the intervention is effective. The PND is depicted visually in **Figure 10** and **Figure 11**. The supplementing data calculating the PND is represented in **Table 10**.

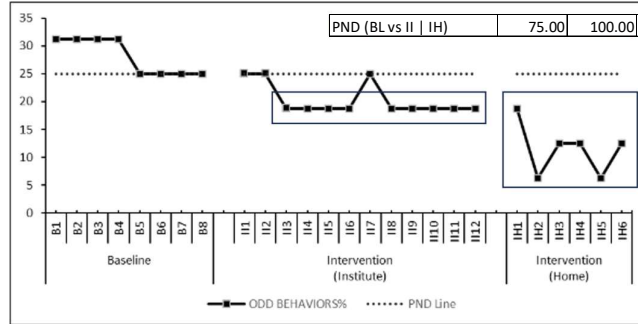


Figure 10: P#1 Odd Behaviour: PND between Baseline vs Intervention Institute and Intervention Home Settings

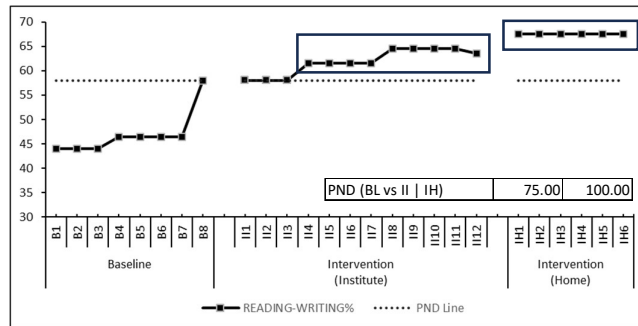


Figure 11: P#1 Reading-Writing: PND between Baseline vs Intervention Institute and Intervention Home Settings

Percentage of Data Exceeding the Median (PEM)

Percentage of Data Exceeding the Median (PEM) procedure is conceptualized as the analysis of intervention phase data that is contingent on the overlap with the median data point within the baseline phase. This is used if existence of any outlier may impact the effectiveness analysis like in PND. PEM assumes that if the intervention is effective, data will be predominately on the positive impact side of the median; if an intervention is ineffective, data points in the treatment phase will vacillate above and below the baseline median. The PEM is graphically represented in **Figure 12** and the corresponding data is represented in **Table 10**.

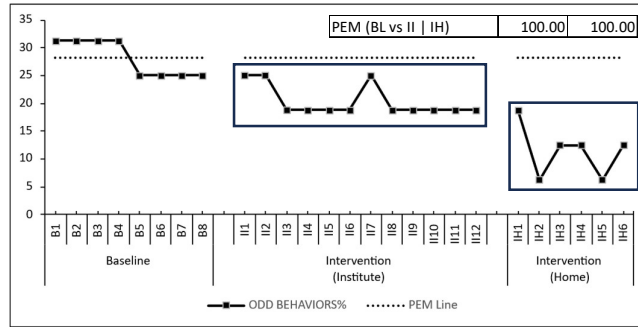


Figure 12: P#1 Odd Behaviour: PEM between Baseline vs Intervention Institute and Intervention Home Settings

Non-overlapping of All Pairs (NAP)

Non-overlapping of All pairs (NAP), for each baseline observation is paired with each intervention phase observation to make n pairs (i.e., $n = n_A * n_B$). Counting the number of overlapping pairs, n_0 , counting all ties as 0.5. Then define the percent of the pairs that show no overlap. Alternatively, one can count the number of positive (P), negative (N), and tied (T) pairs and apply the following calculation.

$$NAP = \frac{n - n_0}{n} * 100 = \frac{P + 0.5T}{P + T + N} * 100$$

This study depicts the NAP as a parameter to show the magnitude effect. The significance associated with the magnitude of effect is classified as greater than 0.90 are indicative of significant impact, 0.89 to 0.70 represent moderately significant and 0.69 to 0.50 are less significant and score less than 0.50 are considered insignificant. The supplementing data calculating the NAP is represented in

Table 11.

5.8.3 Statistical Significance of Effect

The *Cohen's d* is used to generate the effect size between baseline and intervention phases (first and second) respectively (Lobo et al., 2017). The *Cohen's d* is calculated as follows:

$$d = \frac{\overline{X}_A - \overline{X}_B}{s_p}$$

Where, \overline{X}_A is the baseline mean, \overline{X}_B is the intervention mean, and s_p indicating the pooled withing standard deviation. A score greater than 0.80 is considered significant, 0.79 to 0.50 represents moderately significant, 0.49 to 0.20 represent less significant and less than 0.2 is considered insignificant. The polarity of the *Cohen's d* represented the alignment to the expected result, negative for decreased effect and positive for increased effect (Richman et al., 2022). The calculated effect size is represented in **Table 12**.

5.8.4 Overall Analysis

The overall analysis consolidates the outcome across visual and quantitative analyses to summarize the final outcome to establish external validity. The impact established across replication among participants and psychological domains is an indicative of external validity. The visual analysis, NAP analysis and *Cohen's d* analysis respectively uses different scales of interpretation for effectiveness. For overall analysis the scales are unified across analysis as per the **Table 6** for consolidation and interpretation.

Table 6: Unification of scales across visual, NAP and *Cohen's d*.

| Overall | Visual Analysis | NAP Analysis | <i>Cohen's d</i> |
|--|------------------------|----------------------------|----------------------------|
| Absence of Behaviours / Insufficient Data Point | Absence of behaviour | Absence of behaviour | Absence of behaviour |
| | | Insufficient data point | Insufficient data point |
| Opposite Effect | Significantly Opposite | Not effective | Opposite Effect |
| | Opposite | | |
| Inconclusive | Inconclusive | Debatably effective | Not effective |

| | | | |
|-----------------|-------------------------|----------------------|----------------------|
| Positive Effect | Improvement | Moderately Effective | Small Effect |
| | Significant Improvement | Very Effective | Moderately Effective |
| | | | Very Effective |

5.8.5 Qualitative Analysis

Based on the daily diary maintained by interventionist, observations during the intervention and feedback from caregivers a qualitative analysis was done to assess any clinical significance over and above the quantifiable outcome.

Table 7: Cognitive metrics supporting Visual Analysis Within Phase: Level (Mean), Trend (Slope), Stability (% of data between 15% range of Median).

| Parameter | Level/ Trend/ Stability | Participant#1 | | | Participant#2 | | | Participant#3 | | | Participant#4 | | | Participant#5 | | | Participant#6 | | |
|---------------------|-------------------------------|---------------|-------|-------|---------------|-------|-------|---------------|-------|-------|---------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| | | BL | II | IH | BL | II | IH | BL | II | IH | BL | II | IH | BL | II | IH | BL | II | IH* |
| Cognitive Component | Mean | 35.00 | 33.33 | 28.33 | 52.50 | 46.25 | 30.00 | 23.13 | 19.17 | 22.50 | 35.00 | 34.58 | 35.00 | 33.13 | 35.00 | 32.50 | 35.00 | 32.92 | 45.00 |
| | Slope | 0.00 | -0.45 | -0.29 | 1.90 | -2.01 | -2.86 | -0.89 | 0.14 | 1.29 | 2.26 | 0.12 | 0.00 | 0.77 | -0.31 | -1.29 | 0.00 | -0.37 | 0.00 |
| | Stability | 100 | 100 | 83.33 | 50.00 | 41.67 | 83.33 | 62.50 | 83.33 | 100 | 62.50 | 91.67 | 100 | 87.50 | 58.33 | 100 | 100 | 91.67 | 50.00 |
| Language | Mean | 67.50 | 76.04 | 84.40 | 35.88 | 36.92 | 38.00 | 67.06 | 67.67 | 69.25 | 45.94 | 46.00 | 46.50 | 11.31 | 11.00 | 14.00 | 42.00 | 51.17 | 50.50 |
| | Slope | 0.00 | 1.40 | 0.51 | -0.05 | 0.12 | 0.00 | 0.04 | -0.07 | 0.73 | 0.04 | 0.00 | 0.09 | -0.70 | -0.19 | 0.26 | 0.00 | -0.11 | 0.00 |
| | Stability | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 87.5 | 100 | 100 | 100 | 100 | 50.00 |
| Reading- Writing | Mean | 47.00 | 61.79 | 67.50 | 14.19 | 15.67 | 16.00 | 56.00 | 57.46 | 59.33 | 25.81 | 26.00 | 26.00 | 8.88 | 8.29 | 8.25 | 41.50 | 16.83 | 30.00 |
| | Slope | 1.40 | 0.66 | 0.00 | -0.12 | -0.02 | 0.00 | 0.00 | 0.31 | -0.46 | 0.09 | 0.00 | 0.00 | 0.39 | 0.02 | 0.39 | 0.00 | 2.13 | 0.00 |
| | Stability | 87.50 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 87.50 | 100 | 100 | 100 | 66.67 | 50.00 |
| Number Time | Mean | 31.00 | 33.08 | 30.00 | 10.25 | 11.96 | 14.50 | 52.81 | 53.92 | 57.63 | 8.63 | 9.67 | 10.00 | 3.63 | 3.75 | 5.50 | 30.50 | 22.83 | 24.50 |
| | Slope | 0.00 | -0.97 | 0.04 | 0.11 | 0.17 | 0.00 | -0.13 | 0.14 | 0.54 | 0.07 | 0.11 | 0.00 | 0.36 | 0.09 | 0.00 | 0.00 | 0.28 | 0.00 |
| | Stability | 100 | 66.67 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 62.50 | 75.00 | 100 | 100 | 100 | 50.00 |

BL – Baseline; II – Intervention (Institute); IH – Intervention (Home); *Represents aggregate of only three data points.

Table 8: Behavioural metrics supporting Visual Analysis Within Phase: Level (Mean), Trend (Slope), Stability (% of data between 15% range of Median).

| Parameter | Level/ Trend/ Stability | Participant#1 | | | Participant#2 | | | Participant#3 | | | Participant#4 | | | Participant#5 | | | Participant#6 | | |
|-------------------------------|-------------------------------|---------------|-------|-------|---------------|-------|-------|---------------|-------|-------|---------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| | | BL | II | IH | BL | II | IH | BL | II | IH | BL | II | IH | BL | II | IH | BL | II | IH* |
| Behaviour Patterns | Mean | 36.07 | 32.86 | 30.48 | 41.43 | 34.52 | 35.43 | 43.57 | 22.86 | 20.95 | 46.43 | 39.76 | 31.43 | 48.93 | 44.29 | 46.19 | 30.36 | 32.86 | 48.57 |
| | Slope | -0.17 | -0.32 | -0.33 | 0.41 | -0.81 | -2.45 | 0.07 | -0.74 | 0.65 | 1.29 | -1.57 | 0.00 | 1.53 | -1.26 | -4.82 | -0.71 | 0.38 | 0.00 |
| | Stability | 87.50 | 75.00 | 100 | 100 | 66.67 | 83.33 | 100 | 58.33 | 100 | 62.50 | 75.00 | 100 | 75.00 | 75.00 | 33.33 | 87.50 | 91.67 | 50.00 |
| Hyperactivity- Inattention | Mean | 52.08 | 29.17 | 16.67 | 72.92 | 29.17 | 50.00 | 6.25 | - | - | 68.75 | 47.22 | 33.33 | 64.58 | 47.22 | 55.56 | 66.67 | 40.28 | 50.00 |
| | Slope | -1.39 | -0.29 | 0.00 | -6.15 | -0.29 | 0.00 | - | - | - | -8.13 | -2.45 | 0.00 | -2.58 | -3.50 | -7.62 | 0.00 | -1.69 | 0.00 |
| | Stability | 87.50 | 0.00 | 100 | 75.00 | 41.67 | 100 | - | - | - | 62.50 | 50.00 | 100 | 62.50 | 33.33 | 66.67 | 100 | 50.00 | 50.00 |
| Repetitive Behaviour | Mean | 17.97 | 9.38 | 6.25 | 17.19 | 3.13 | 0.00 | 2.34 | - | - | 32.03 | 20.31 | 17.71 | 19.53 | 23.44 | 16.67 | 33.59 | 13.02 | 12.50 |
| | Slope | -0.52 | -0.87 | 0.00 | -2.38 | -1.01 | 0.00 | - | - | - | -3.35 | -0.85 | -0.18 | -0.37 | 0.55 | 1.79 | -1.71 | -0.59 | 0.00 |
| | Stability | 87.50 | 58.33 | 100 | 0.00 | 0.00 | 0.00 | - | - | - | 62.50 | 75.00 | 66.67 | 87.50 | 58.33 | 0.00 | 62.50 | 25.00 | 50.00 |

BL – Baseline; II – Intervention (Institute); IH – Intervention (Home); *Represents aggregate of only three data points.

Table 9: Emotional metrics supporting Visual Analysis Within Phase: Level (Mean), Trend (Slope), Stability (% of data between 15% range of Median).

| Parameter | Level/ Trend/ Stability | Participant#1 | | | Participant#2 | | | Participant#3 | | | Participant#4 | | | Participant#5 | | | Participant#6 | | |
|-----------------------------------|-------------------------------|---------------|-------|-------|---------------|-------|-------|---------------|-------|-------|---------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| | | BL | II | IH | BL | II | IH | BL | II | IH | BL | II | IH | BL | II | IH | BL | II | IH* |
| Emotional Responsiveness | Mean | 44.50 | 37.67 | 36.00 | 42.50 | 31.00 | 21.60 | 36.00 | 32.33 | 80.00 | 35.00 | 39.00 | 42.00 | 30.00 | 49.00 | 45.33 | 53.00 | 44.00 | 40.00 |
| | Slope | -0.90 | -0.35 | 0.34 | -0.05 | -1.05 | -2.97 | -2.76 | 3.26 | 0.00 | 1.24 | 0.63 | -1.03 | -1.05 | -0.32 | -4.57 | 0.67 | -1.15 | 0.00 |
| | Stability | 87.50 | 100 | 100 | 100 | 66.67 | 83.33 | 50.00 | 58.33 | 100 | 62.50 | 75.00 | 100 | 75.00 | 41.67 | 66.67 | 87.50 | 75.00 | 50.00 |
| Violent and Destructive Behaviour | Mean | 12.50 | 6.25 | 6.25 | 10.94 | 4.95 | 0.00 | 11.72 | 5.73 | 0.00 | 26.95 | 21.61 | 17.19 | 18.36 | 16.67 | 14.06 | 67.97 | 13.28 | 12.50 |
| | Slope | 0.00 | 0.00 | -0.27 | -0.52 | -0.34 | 0.00 | -0.60 | -0.22 | 0.00 | -1.23 | -0.86 | -0.63 | 0.48 | -1.07 | -1.88 | 0.52 | -1.21 | 0.00 |
| | Stability | 100 | 100 | 83.33 | 100 | 58.33 | 0.00 | 62.50 | 83.33 | 0.00 | 75.00 | 75.00 | 100 | 25.00 | 41.67 | 0.00 | 100 | 33.33 | 50.00 |
| Temper Tantrums | Mean | 25.00 | 8.33 | 6.25 | 29.69 | 5.21 | 0.00 | 0.00 | - | - | 26.56 | 26.04 | 12.50 | 18.75 | 15.63 | 14.58 | 96.88 | 25.00 | 25.00 |
| | Slope | 0.00 | -0.09 | 3.21 | -8.18 | 0.66 | 0.00 | - | - | - | 0.45 | 0.04 | -6.43 | -1.19 | -2.93 | -6.79 | 1.49 | -0.70 | 0.00 |
| | Stability | 100 | 66.67 | 0.00 | 0.00 | 0.00 | 0.00 | - | - | - | 87.50 | 91.67 | 0.00 | 0.00 | 33.33 | 0.00 | 87.50 | 58.33 | 50.00 |
| Self-Injurious Behaviours | Mean | 5.00 | - | - | 3.75 | - | - | 11.25 | 6.25 | 0.00 | 36.88 | 21.67 | 22.50 | 10.63 | 8.75 | 10.83 | 46.25 | 10.83 | 10.00 |
| | Slope | - | - | - | - | - | - | 0.24 | -0.26 | 0.00 | -4.82 | -2.62 | 3.00 | -0.18 | -1.73 | -2.71 | -0.83 | -1.08 | 0.00 |
| | Stability | - | - | - | - | - | - | 75.00 | 75.00 | 0.00 | 25.00 | 25.00 | 50.00 | 87.50 | 0.00 | 0.00 | 100 | 50.00 | 50.00 |
| Odd Behaviours | Mean | 28.13 | 20.31 | 11.46 | 21.88 | 13.02 | 0.00 | 17.19 | 9.90 | 6.25 | 17.97 | 14.58 | 8.33 | 24.22 | 19.79 | 22.92 | 68.75 | 34.38 | 31.25 |
| | Slope | -1.19 | -0.42 | -0.89 | -3.87 | -1.73 | 0.00 | -0.45 | -0.33 | 0.00 | -1.71 | -0.44 | -3.21 | -2.01 | -1.75 | 5.00 | 0.00 | -1.97 | 0.00 |
| | Stability | 100 | 75.00 | 50.00 | 25.00 | 25.00 | 0.00 | 75.00 | 58.33 | 100 | 0.00 | 75.00 | 0.00 | 37.50 | 58.33 | 0.00 | 100 | 50.00 | 50.00 |

BL – Baseline; II – Intervention (Institute); IH – Intervention (Home); *Represents aggregate of only three data points.

Table 10: Visual Analysis Across Phase BL vs II and BL vs IH: Non-overlap indices using Percentage of Non-overlap Data (PND) and Percentage of Data Exceeding Median (PEM).

| Parameter | PND/ PEM | Participant#1 | | Participant#2 | | Participant#3 | | Participant#4 | | Participant#5 | | Participant#6 | |
|-----------------------------------|-------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------|-------------|---------------|-------------|---------------|-----------------|
| | | BL vs II | BL vs IH | BL vs II | BL vs IH | BL vs II | BL vs IH | BL vs II | BL vs IH | BL vs II | BL vs IH | BL vs II | BL vs IH |
| Cognitive Component | PND | 0.33 | <u>0.83</u> | 0.08 | <u>0.83</u> | 0.17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.08 | NA ^d |
| | PEM | 0.33 | <u>0.83</u> | <u>0.50</u> | <u>0.83</u> | <u>1.00</u> | <u>0.50</u> | 0.25 | 0.00 | <u>0.50</u> | <u>0.50</u> | 0.08 | NA ^d |
| Language | PND | <u>1.00</u> | <u>1.00</u> | <u>0.92</u> | <u>1.00</u> | <u>0.67</u> | <u>0.83</u> | 0.00 | <u>0.50</u> | 0.00 | 0.00 | <u>1.00</u> | NA ^d |
| | PEM | <u>1.00</u> | <u>1.00</u> | <u>0.92</u> | <u>1.00</u> | <u>0.83</u> | <u>0.83</u> | 0.00 | <u>0.50</u> | 0.25 | <u>1.00</u> | <u>1.00</u> | NA ^d |
| Reading-Writing | PND | <u>0.75</u> | <u>1.00</u> | <u>0.92</u> | <u>1.00</u> | <u>0.58</u> | <u>1.00</u> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | NA ^d |
| | PEM | <u>1.00</u> | <u>1.00</u> | <u>1.00</u> | <u>1.00</u> | <u>0.58</u> | <u>1.00</u> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | NA ^d |
| Number -Time | PND | <u>0.67</u> | 0.00 | <u>0.83</u> | <u>1.00</u> | <u>0.58</u> | <u>1.00</u> | <u>0.67</u> | <u>1.00</u> | 0.00 | <u>1.00</u> | 0.00 | NA ^d |
| | PEM | <u>0.67</u> | 0.00 | <u>1.00</u> | <u>1.00</u> | <u>0.58</u> | <u>1.00</u> | <u>1.00</u> | <u>1.00</u> | 0.00 | <u>1.00</u> | 0.00 | NA ^d |
| Behaviour Patterns | PND | 0.17 | 0.33 | <u>0.50</u> | <u>0.50</u> | <u>1.00</u> | <u>1.00</u> | 0.25 | <u>1.00</u> | 0.17 | 0.33 | 0.00 | NA ^d |
| | PEM | <u>0.75</u> | <u>1.00</u> | <u>1.00</u> | <u>0.83</u> | <u>1.00</u> | <u>1.00</u> | <u>0.58</u> | <u>1.00</u> | <u>0.75</u> | <u>0.67</u> | 0.00 | NA ^d |
| Hyperactivity-Inattention | PND | <u>0.75</u> | <u>1.00</u> | 0.33 | 0.00 | NA ^a | NA ^a | 0.33 | <u>1.00</u> | 0.33 | 0.33 | <u>0.92</u> | NA ^d |
| | PEM | <u>0.75</u> | <u>1.00</u> | <u>1.00</u> | <u>1.00</u> | NA ^a | NA ^a | <u>0.83</u> | <u>1.00</u> | <u>0.67</u> | 0.33 | <u>0.92</u> | NA ^d |
| Repetitive Behaviour | PND | 0.42 | <u>1.00</u> | <u>0.58</u> | <u>1.00</u> | NA ^a | NA ^a | <u>0.50</u> | <u>0.67</u> | 0.00 | <u>0.50</u> | <u>0.83</u> | NA ^d |
| | PEM | <u>1.00</u> | <u>1.00</u> | <u>1.00</u> | <u>1.00</u> | NA ^a | NA ^a | <u>0.50</u> | <u>0.67</u> | 0.00 | <u>0.50</u> | <u>1.00</u> | NA ^d |
| Emotional Responsiveness | PND | 0.00 | 0.17 | <u>0.92</u> | <u>0.83</u> | <u>0.58</u> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.08 | NA ^d |
| | PEM | <u>1.00</u> | <u>1.00</u> | <u>1.00</u> | <u>0.83</u> | <u>0.83</u> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | <u>1.00</u> | NA ^d |
| Violent and Destructive Behaviour | PND | <u>1.00</u> | <u>1.00</u> | <u>0.92</u> | <u>1.00</u> | 0.17 | <u>1.00</u> | <u>0.50</u> | <u>1.00</u> | 0.17 | <u>0.50</u> | <u>1.00</u> | NA ^d |
| | PEM | <u>1.00</u> | <u>1.00</u> | <u>1.00</u> | <u>1.00</u> | <u>1.00</u> | <u>1.00</u> | <u>0.83</u> | <u>1.00</u> | <u>0.58</u> | <u>0.83</u> | <u>1.00</u> | NA ^d |
| Temper Tantrums | PND | <u>1.00</u> | <u>1.00</u> | 0.00 | 0.00 | NA ^a | NA ^a | 0.00 | <u>0.50</u> | 0.25 | <u>0.50</u> | <u>1.00</u> | NA ^d |
| | PEM | <u>1.00</u> | <u>1.00</u> | <u>1.00</u> | <u>1.00</u> | NA ^a | NA ^a | 0.00 | <u>0.50</u> | <u>0.58</u> | <u>0.50</u> | <u>1.00</u> | NA ^d |
| Self-Injurious Behaviours | PND | <u>1.00</u> | <u>1.00</u> | <u>0.83</u> | <u>0.94</u> | NA ^a | NA ^a | <u>0.52</u> | <u>0.78</u> | <u>0.58</u> | <u>0.58</u> | <u>1.00</u> | NA ^d |
| | PEM | NA ^a | NA ^a | NA ^a | NA ^a | <u>0.75</u> | <u>1.00</u> | <u>0.67</u> | 0.33 | <u>0.50</u> | <u>0.50</u> | <u>1.00</u> | NA ^d |
| Odd Behaviours | PND | NA ^a | NA ^a | NA ^a | NA ^a | <u>0.75</u> | <u>1.00</u> | <u>0.83</u> | <u>0.83</u> | <u>0.50</u> | <u>0.50</u> | <u>1.00</u> | NA ^d |
| | PEM | <u>0.75</u> | <u>1.00</u> | 0.33 | <u>1.00</u> | 0.42 | <u>1.00</u> | 0.00 | <u>0.50</u> | 0.25 | <u>0.50</u> | <u>1.00</u> | NA ^d |

BL – Baseline; II – Intervention (Institute); IH – Intervention (Home); a: Absence of behaviour; d: Insufficient data point

Table 11: Visual Analysis Across Phase BL vs II and BL vs IH: Non-overlap metric using Non-overlap of All Pairs (NAP).

| Parameter | Participant#1 | | Participant#2 | | Participant#3 | | Participant#4 | | Participant#5 | | Participant#6 | |
|-----------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------|-------------|---------------|-------------|---------------|-----------------|
| | BL vs II | BL vs IH | BL vs II | BL vs IH | BL vs II | BL vs IH | BL vs II | BL vs IH | BL vs II | BL vs IH | BL vs II | BL vs IH |
| Cognitive Component | <u>0.67</u> | <u>0.92</u> | <u>0.71</u> | <u>0.94</u> | <u>0.84</u> | <u>0.56</u> | 0.49 | 0.44 | 0.49 | <u>0.63</u> | 0.46 | NA ^d |
| Language | <u>1.00</u> | <u>1.00</u> | <u>0.97</u> | <u>1.00</u> | <u>0.82</u> | <u>0.83</u> | <u>0.56</u> | <u>0.78</u> | <u>0.54</u> | <u>0.88</u> | <u>1.00</u> | NA ^d |
| Reading-Writing | <u>0.98</u> | <u>1.00</u> | <u>0.98</u> | <u>1.00</u> | <u>0.79</u> | <u>1.00</u> | <u>0.69</u> | <u>0.69</u> | 0.32 | 0.31 | 0.00 | NA ^d |
| Number -Time | <u>0.67</u> | 0.00 | <u>0.99</u> | <u>1.00</u> | <u>0.82</u> | <u>1.00</u> | <u>0.96</u> | <u>1.00</u> | 0.47 | <u>1.00</u> | 0.00 | NA ^d |
| Behaviour Patterns | <u>0.77</u> | <u>0.96</u> | <u>0.89</u> | <u>0.81</u> | <u>1.00</u> | <u>1.00</u> | <u>0.73</u> | <u>1.00</u> | <u>0.71</u> | <u>0.61</u> | 0.16 | NA ^d |
| Hyperactivity-Inattention | <u>0.89</u> | <u>1.00</u> | <u>0.93</u> | <u>0.81</u> | NA ^a | NA ^a | <u>0.78</u> | <u>1.00</u> | <u>0.77</u> | <u>0.63</u> | <u>0.96</u> | NA ^d |
| Repetitive Behaviour | <u>0.96</u> | <u>1.00</u> | <u>0.95</u> | <u>1.00</u> | NA ^a | NA ^a | <u>0.84</u> | <u>0.84</u> | 0.22 | <u>0.70</u> | <u>0.98</u> | NA ^d |
| Emotional Responsiveness | <u>0.86</u> | <u>0.95</u> | <u>0.98</u> | <u>0.89</u> | <u>0.78</u> | 0.00 | 0.33 | 0.22 | 0.06 | 0.10 | <u>0.88</u> | NA ^d |
| Violent and Destructive Behaviour | <u>1.00</u> | <u>1.00</u> | <u>0.98</u> | <u>1.00</u> | <u>0.95</u> | <u>1.00</u> | <u>0.85</u> | <u>1.00</u> | <u>0.64</u> | <u>0.74</u> | <u>1.00</u> | NA ^d |
| Temper Tantrums | <u>1.00</u> | <u>1.00</u> | <u>0.83</u> | <u>0.94</u> | NA ^a | NA ^a | <u>0.52</u> | <u>0.78</u> | <u>0.58</u> | <u>0.58</u> | <u>1.00</u> | NA ^d |
| Self-Injurious Behaviours | NA ^a | NA ^a | NA ^a | NA ^a | <u>0.91</u> | <u>1.00</u> | <u>0.85</u> | <u>0.81</u> | <u>0.65</u> | <u>0.52</u> | <u>1.00</u> | NA ^d |
| Odd Behaviours | <u>0.94</u> | <u>1.00</u> | <u>0.70</u> | <u>1.00</u> | <u>0.93</u> | <u>1.00</u> | <u>0.65</u> | <u>0.82</u> | <u>0.64</u> | <u>0.54</u> | <u>1.00</u> | NA ^d |

BL – Baseline; II – Intervention (Institute); IH – Intervention (Home); a: Absence of behaviour; d: Insufficient data point

Table 12: Effect size across phase - *Cohen's d*

| Parameter | Participant#1 | | Participant#2 | | Participant#3 | | Participant#4 | | Participant#5 | | Participant#6 | |
|-----------------------------------|-----------------|----------------------------|-----------------|-----------------|-----------------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|---------------------------|-----------------|
| | BL vs II | BL vs IH | BL vs II | BL vs IH | BL vs II | BL vs IH | BL vs II | BL vs IH | BL vs II | BL vs IH | BL vs II | BL vs IH |
| Cognitive Component | <u>-0.39</u> | <u>-0.57</u> | -0.10 | <u>-0.38</u> | <u>-0.73</u> | -0.09 | -0.01 | 0.00 | <u>0.04</u> ^b | -0.02 | -0.03 | NA ^d |
| Language | <u>0.41</u> | <u>19.92</u> | <u>5.45</u> | <u>56.10</u> | <u>2.55</u> | <u>1.38</u> | <u>2.83</u> | <u>2.64</u> | <u>-0.09</u> ^b | <u>0.79</u> | <u>53.47</u> | NA ^d |
| Reading-Writing | <u>0.94</u> | <u>1.36</u> | <u>4.27</u> | <u>18.52</u> | <u>1.24</u> | <u>4.42</u> | <u>3.96</u> | <u>3.96</u> | <u>-0.65</u> ^c | <u>-0.62</u> ^c | <u>-0.39</u> ^c | NA ^d |
| Number -Time | 0.16 | <u>-33.94</u> ^c | <u>4.47</u> | <u>42.07</u> | <u>1.58</u> | <u>5.12</u> | <u>5.93</u> | <u>36.30</u> | 0.19 | <u>2.91</u> | <u>-7.15</u> ^c | NA ^d |
| Behaviour Patterns | <u>-0.34</u> | <u>-1.58</u> | <u>-0.30</u> | -0.19 | <u>-2.78</u> | <u>-11.45</u> | -0.09 | <u>-0.21</u> | -0.10 | -0.04 | <u>0.21</u> ^b | NA ^d |
| Hyperactivity-Inattention | -0.15 | <u>-1.44</u> | -0.12 | -0.08 | NA ^a | NA ^a | -0.06 | -0.10 | -0.07 | -0.04 | -0.14 | NA ^d |
| Repetitive Behaviour | <u>-0.66</u> | <u>-3.39</u> | <u>-0.36</u> | <u>-0.46</u> | NA ^a | NA ^a | -0.17 | -0.17 | <u>0.34</u> ^b | -0.15 | <u>-0.47</u> | NA ^d |
| Emotional Responsiveness | <u>-0.33</u> | <u>-0.41</u> | <u>-0.72</u> | <u>-0.34</u> | -0.01 | <u>1.05</u> ^c | <u>0.11</u> ^b | <u>0.22</u> ^c | <u>0.25</u> ^c | <u>0.19</u> ^b | <u>-0.27</u> | NA ^d |
| Violent and Destructive Behaviour | NA ^c | <u>-5.43</u> | <u>-1.01</u> | <u>-5.54</u> | <u>-1.08</u> | <u>-2.16</u> | <u>-0.40</u> | <u>-0.98</u> | -0.05 | -0.14 | <u>-1.54</u> | NA ^d |
| Temper Tantrums | <u>-0.62</u> | <u>-0.57</u> | -0.07 | -0.09 | NA ^a | NA ^a | -0.03 | -0.11 | -0.03 | -0.02 | <u>-0.74</u> | NA ^d |
| Self-Injurious Behaviours | NA ^a | NA ^a | NA ^a | NA ^a | <u>-0.95</u> | <u>-2.97</u> | -0.12 | -0.10 | -0.06 | <u>0.01</u> ^b | <u>-1.71</u> | NA ^d |
| Odd Behaviours | <u>-0.80</u> | <u>-0.95</u> | -0.06 | <u>-0.28</u> | <u>-0.77</u> | <u>-1.85</u> | -0.11 | -0.20 | -0.10 | -0.01 | <u>-0.51</u> | NA ^d |

BL – Baseline; II – Intervention (Institute); IH – Intervention (Home); a: Absence of behaviour; b: Opposite effect insignificant; c: Opposite effect significant; d: Insufficient data point; e: Inconclusive