AB design

Setting	Learning disabilities	
Design	AB	
Length of baseline (A)	14	
Length of intervention phase (B)	35	
Idiographic measures		**Scale**
Duration of time spent seated during free play		Duration (mins)
Stereotyped behaviour (body rocking) during free play		Duration (mins)
Number of times tugged other children during free play		Count
Control	Count	
Nomothetic measures	**Outcome**	
SLDOM	Parents perception of child's symptoms	

1. **Visual analysis**

Idiographic measure 1: Time seated
- *Plot manually customised using text boxes and shapes in Microsoft Word. See Box 2 in the Analysis Guide for tips.*

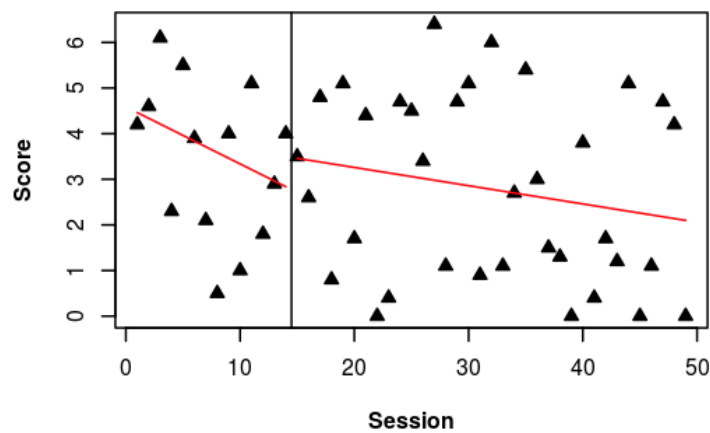**Idiographic outcome: Time spent seated**
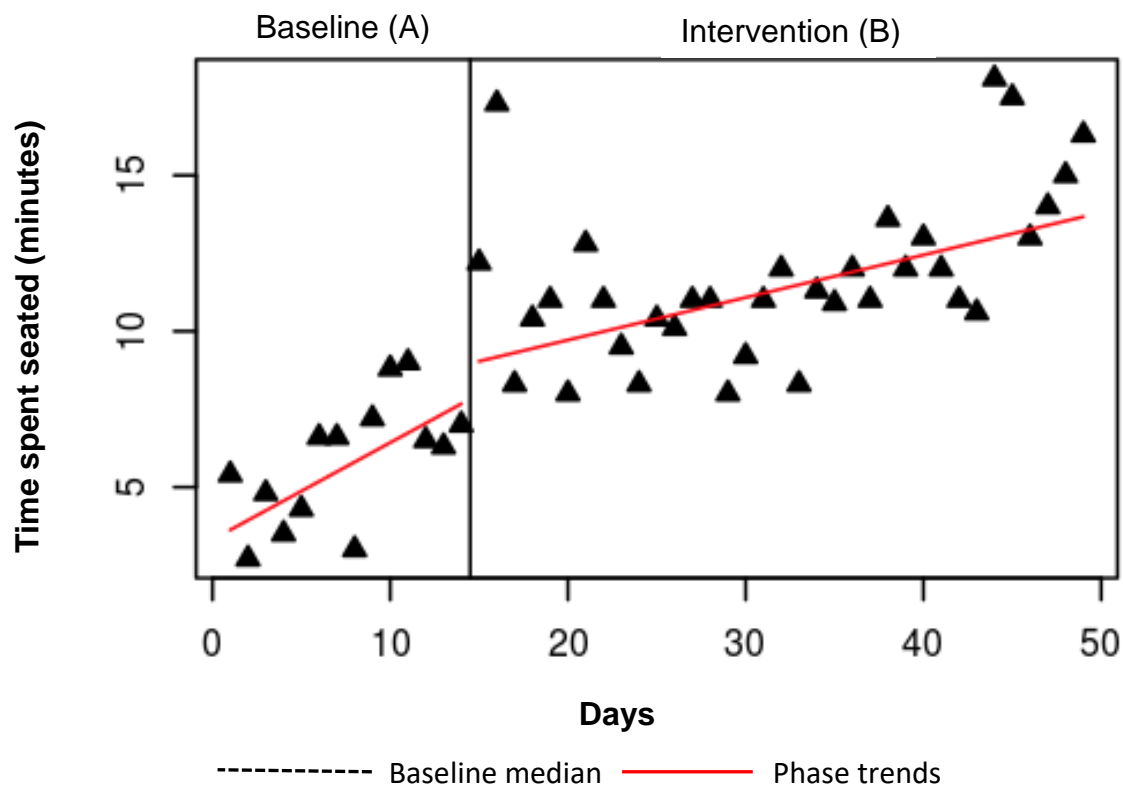
Idiographic measure 2: Body rocking
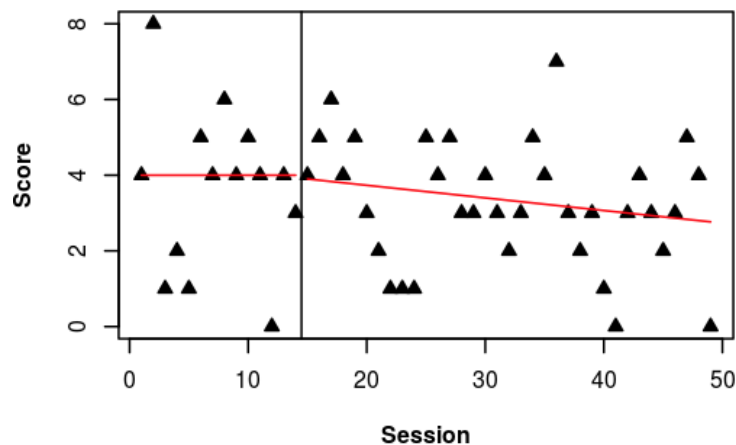- *Cut directly from app with no customisation.*

Best fitting straight line (mean MASE): Theil-Sen

Idiographic measure 3: Tugging other children
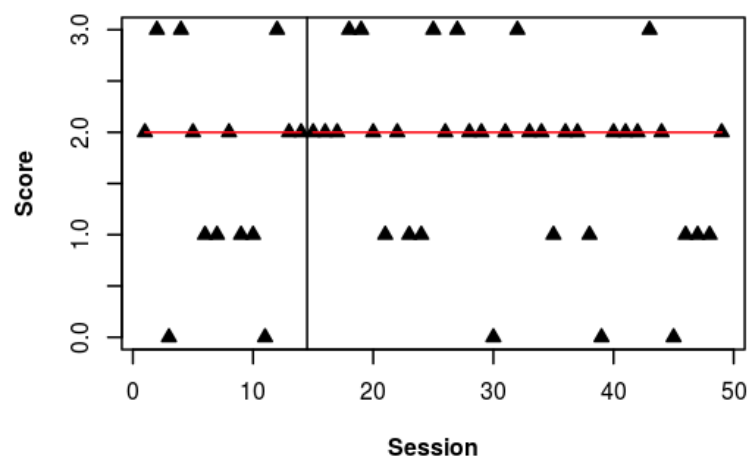- *Cut directly from app with no customisation.*

Best fitting straight line (mean MASE): Theil-Sen

Idiographic measure 3: Control
- *Cut directly from app with no customisation.*

Best fitting straight line (mean MASE): differencing

2. Statistical analysis

Table 1: Nonoverlap effect and Tau-u statistics for ideographic measures between specific phases of SCED

Idiographic measure	Baseline trend ($\tau^{\,trendA}$)	[1]Tau ($\tau^{\,AvsB}$) [2]Tau-U ($\tau^{\,AvsB-trendA}$)	PEM (%)	NAP (proportion)	PND (%)
Time seated	0.418*	0.744* [2]	100	0.98	85.71
Time rocking	-0.242	-0.188 [1]	62.86	0.59	17.14
Tugging other children	-0.099	-0.135 [1]	57.14	0.57	0
Control	-0.077	0.074 [1]	31.43	0.46	0
Interpretation:	Higher $\tau^{\,trendA}$ value indicates more evidence of phase trend – positive or negative values indicate direction of trend (increasing/decreasing). Larger ($\tau^{\,AvsB}$ / $\tau^{\,AvsB-trendA}$) values indicate larger differences between phases. Where improvement = increased scores, larger positive Tau values reflect improvement due to intervention. Where improvement = decreased scores, larger negative Tau values reflect improvement due to intervention.		Higher scores reflect improvement due to intervention.		

* = Significant at p = <.05. [1]If baseline trend is not significant, Tau between phase effect size is reported ($\tau^{\,AvsB}$). [2]If baseline trend is not significant, Tau-U between phase effect size is reported ($\tau^{\,AvsB-trendA}$).

3. **Descriptive analysis**

Table 2: Means and Standard deviations of each phase

	Means (SD)	
Idiographic measure	**Baseline (Phase A)**	**Intervention (Phase B)**
	(14 days)	**(35 days)**
Time seated	5.84 (1.94)	11.75 (2.58)
Time rocking	3.43 (1.66)	2.78 (1.97)
Tugging other children	3.64 (2.13)	3.23 (1.65)
Control	1.64 (1.01)	1.77 (0.84)

4. **Nomothetic measures**

Table 3: Nomothetic measures and reliable and clinically significant change analysis

	Outcomes		Norms		RCSI analysis			
			Mean (SD)		(Pre-baseline to post-intervention)			
Nomothetic measure	**Pre-baseline (A)**	**Post-intervention (B)**	**Community / non-clinical**	**Clinical**	**Reliable change criteria**	**Reliable change (Y/N)**	**Clinical cut-off**	**Clinical change (Y/N)**
SLDOM	20	36	Unavailable	Unavailable	4.56	Y	>25	Y

Describe clinical and reliable change criteria for each measure
SLDOM– measure is not properly validated so no data on reliability and norm SD. For the purposes of this practice analysis, reliable change criteria based on a hypothetical Cronbach alpha value of 0.9 and sample norm SD=5.2. SLDOM recommendations suggest scores above the threshold of 25 indicate positive outcomes – this was used as the clinical change criteria.
For your assignment use a measure that has been properly psychometrically validated.

Summary of findings

Visually – Time seated and rocking behaviour both showed improvement during the baseline that continued into the intervention phase suggesting the intervention did not have a significant effect. Tugging other children remained stable during the baseline, but did not appear to be affected by the intervention. The control variable remained stable over the baseline and intervention phases suggesting it was not affected. Taken together the visual analysis suggests the intervention was not effective.

Statistics – Although the non-overlap statistics for Time seated suggested improvement due to the intervention, there was evidence of a significant baseline improving trend for Time seated (significant Tau^{trendA}). The other three measures did not have evidence of significant baseline trend ($Tau^{trendA)}$, the difference between phases were not significant (Tau^{AvsB}) and the non-overlap statistics were smaller suggesting minimal to no intervention effect. The PEM and NAP effect sizes were similar to each other, however PND was more variable (but has known limitations). While there was improvement in 3 of the outcomes at the end of treatment (ID1, 2 & 3), it is not clear if they were influenced by the intervention. The control variable did not show any change suggesting it was unaffected by the intervention.

Nomothetic – SLDOM showed reliable and clinically significant change from baseline to follow-up indicating her parents had seen an improvement in her symptoms and their ability to cope with them.