

7 DISCUSSIONS

This was the first study to design and develop an integrated yoga module within a single-case experimental design to evaluate its effectiveness on the psychological health of children with multiple disabilities, specifically those having ASD and with ID, using a long-term intervention, and multi-time point approach. A distinctive feature of this study is the inclusion of caregivers and psychologists who are emotionally involved with the children and can assess them more effectively.

Considering the current condition of ASD and with ID, each child was unique and had respective ways to adapt with a stranger. Involving caregivers and being present in each of the sessions helped significantly to establish the initial connect before start of the intervention making the child feel secured and comfortable. Every day 5–10 min of the session was consumed to understand the readiness of the participant based on cues, like smile when greeted, energy level before the session, hyper activity level etc. The time it took to establish the first connect varied from participant to participant and gradually they got used to the instructor. A flexible, simplified approach made all the difference to establishing the comfort and safety of the participant. As we progress with time the participants start experiencing the comfort and safety and get along cooperating with the teacher. The duration may vary for individual participant. So, based on the readiness for each session only that portions they were comfortable were covered. The use of *yoga* components like movement, chanting, rest were customized to a day keeping function over form. There were few days, where depending on their readiness sessions were also cancelled as required.

The strength of the study lies in its methodological rigor, enhanced by the single-case, multiple-baseline design, and the objective assessments of psychological parameters. The long-term intervention allows for detailed insights into individual responses and trajectories of change

over time. As a single-case experimental design (SCED), this study addresses the need for individualized interventions, which are crucial for mitigating the influence of time-varying social and psychological factors, and thus cannot rely on group statistical inferences. Generalizing group estimates to individuals can be, at best, ineffective and, at worst, potentially harmful (Fisher et al., 2018).

The participants continued with their other regular therapies served as a control environment. This adaptive yoga intervention was only additional change for the participants, strengthens the hypothesis of functional improvement of the behaviours in psychological domains. The possibility of a cross functional effects among interventions was kept out of scope for this study.

Comparing the statistical effect along the functional changes in participants shows mismatch in few instances. The observable significant change in behaviour was not always resulted in equivalent *Cohen's d* significance and/or NAP significance. For example, 'hyperactivity-inattention' was reduced significantly as behaviour for all participants, however, the magnitude of effect supplemented by Cohen's *d* did not reflect as significant as it was. Similarly, a significant Cohen's *d* and NAP score for a parameter did not reflect as actual behavioural improvement. For example, the 'language' skills show statistical significance for most of the participants however, it was only demonstrated by Participant#1 and Participant#6.

The qualitative feedback as observed and shared by the caregivers (mothers) were subjective and experiential. Few caregivers found the *yoga* intervention made a lot of difference in reducing hyper activity, improved quality of sleep, and eye contact during the intervention. One of the participants had shown significant improvement in verbal skills. Even post intervention the mothers were in touch with the interventionist sharing feedback over long term. Few repetitive behaviours in participants while reduced significantly during and post intervention, however, observed to be reversed due to discontinuity in practice later. The

caregiver's involvement and dedication as one of the predictors was not taken into consideration for this study, would be an interesting dimension to research in future.

There was no clear evidence for attendance of practice in home settings. Thus, the results obtained in home settings could be a carry forward effect from institute intervention or due to continued practice. This was inconclusive. There is a scope to consider the factor of change from one setting to another setting and validate the effect in future.