

4 AIMS AND OBJECTIVES

4.1 AIMS OF THE STUDY

This research work aims to prove existence of a functional relationship and efficacy of tailored made *yoga* intervention for children with ASD and with ID on improving their psychological health in cognitive, behavioural, and emotional domains by employing a rigorous scientific framework, a well-crafted adaptive course plan and teaching methodology. The purpose is also to involve caregivers that ensures continuity of the practice.

4.2 OBJECTIVES OF THE STUDY

- To implement a Single Case Experimental Design (SCED) and establish the causal relationship between *yogic* intervention and cognitive, emotional, and behavioural changes among children with Autism Spectrum Disorder (ASD) and Intellectual Disability (ID).
- To demonstrate internal and external validity using repetition and replication in the SCED.
- To follow the SCED reporting and documentation standards.
- To perform visual analysis to determine the functional relationship between intervention and outcome, supplement the outcome with quantitative analysis evaluating the magnitude of intervention effect.
- To design and implement the adaptive *yoga* teaching methodologies following the innate principles of *yoga* as prescribed in ancient literature.
- To involve caregivers, clinical psychologists, and *yoga* practitioners in the study.
- To assess the impact of *yoga* on cognitive functions in children with ASD and ID.
- To evaluate the effects of *yoga* on emotional regulation in children with ASD and ID.
- To determine the influence of *yoga* on behavioural health in children with ASD and ID.

- To conduct an ethical, quality research and publish the work in reputed journals.

4.3 JUSTIFICATION OF THE STUDY

This study was first of its kind to apply *yoga* intervention on children with multiple disabilities on their psychological skills. The study was a multi-stakeholder study with involvement of experts from field of multiple disabilities, clinical psychology, and *yoga*. The genesis of this experiment was a joint effort among all stakeholders to test and see any possibilities of benefit that can be derived from *yoga* for children with special needs with multiple developmental disorders. From clinical psychology experts' point of view, the scope of the study was kept simple, limited to the children having ASD and with ID, with mild level of severity and assess the impact on psychological areas using standardized tools - ISAA and BASIC(MR) across sub-domains that do not conflict cross functionally, i.e., cognitive, behavioural, and emotional. From *yoga* experts' point of view, the scope was to design an adaptive *yoga* module and an intuitive teaching methodology that suits the capacity of individual participants with such conditions, keeping the foundational principles of *yoga* intact and simplifying the practice to the level of participants and their caregivers, to ensure continuity of practice in post research context. The anticipated indicators of improvement in cognitive domain were for the participants to be able to follow basic *yoga* instructions, under behavioural domain were to have reduced hyper activity, cooperate to complete daily practice and under emotional domain the indicators were improvement in demonstrating certain level of expression and regulation of emotions. This study was made to be a robust experiment, empirically establishing any outcome as it comes using SCED with continuous assessments that generates adequate data to support the outcome with confidence for internal and external validity.

4.4 HYPOTHESIS AND NULL HYPOTHESIS

A long term, continuous one-to-one adaptive *yoga* intervention can effectively improve the

cognitive, behavioural, and emotional skills of children having co-existing multiple developmental disabilities, in this case having ASD and with ID.

This study is first of its kind, thus not challenging any null hypothesis of *yoga* being effective or ineffective for psychological skills for children with coexisting multiple developmental disorders.