



**CLUSTER INNOVATION CENTRE
(UNIVERSITY OF DELHI)
M.Sc. (Mathematics Education)
A Joint Degree under the Meta University Concept
University of Delhi & Jamia Millia Islamia**



**A STUDY TO EXPLORE THE PREVALENCE OF STUDENTS AT RISK OF
DYSCALCULIA IN ELEMENTARY GRADE**

(A Research Dissertation submitted at Cluster Innovation Centre, University of Delhi)

ABSTRACT

This dissertation explores the prevalence of students at risk of dyscalculia in elementary grades, focusing on fifth-grade students. Dyscalculia, a specific learning disability, significantly impairs mathematical abilities, making early identification and intervention essential for ensuring academic success and emotional well-being. The study employed a mixed-methods approach, utilizing standardized assessment tests and self-reported checklists to identify at-risk students. The findings revealed that approximately 4-5% of the students were at high risk of dyscalculia based on the assessment test, while the checklists did not identify any students at risk. This discrepancy underscores the limitations of self-reported tools and highlights the necessity of multi-method diagnostic approaches to accurately identify students with dyscalculia. The literature review emphasized the multifaceted nature of dyscalculia, involving cognitive deficits in number sense, arithmetic skills, working memory, and processing speed, along with the influence of environmental and emotional factors such as instructional quality and mathematical anxiety. The study advocates for the development of culturally relevant assessment tools, particularly an Indian standardized assessment tool, to provide more accurate diagnostic outcomes and address the unique educational contexts in India. The dissertation also discusses the importance of early and accurate identification of dyscalculia to implement targeted interventions that can mitigate the adverse effects on students' academic performance and emotional health. The study recommends expanding research to include larger and more diverse samples across different grades and educational levels. It also calls for integrating cognitive sciences, psychology, and didactics to provide a more comprehensive understanding of the disorder.

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