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Peer tutoring an effective strategy in creating support system for children with intellectual disabilities (CWID) in inclusive setting

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Abstract

Significance: It is advisable to create support in inclusive setting for the holistic development of children with intellectual disability. Therefore, an effective instructional strategy; peer tutoring was chosen as an instrument to create support with joint effort of head masters, teachers, peers and parents.

Methods: Rather than moulding individuals into pre-existing diagnostic categories and force them into existing models of service, the support approach evaluates the specific needs of an individual and suggests services to optimize individual functioning. Providing individualized supports can improve personal functioning, promote self-determination, and enhance the well- being of (CWID). School, family and community are three instrumental factors contribute optimum in creating support system for CWID. To find out the effect of peer tutoring in creating a support system for children with intellectual disabilities (CWID) in inclusive setting investigator adopted experimental and descriptive survey research design with purposive sampling technique to draw the sample.

Research tool and Procedure: The sample comprises of 5 head masters, 25 teachers, 15 peers and 15 parents. Support System Assessment Scale (SSAS) was administered to collect the data. Fifteen CwID from five inclusive schools were selected from V, VI & VII grade for peer tutoring. Curriculum Based Mathematical Achievement Assessment Matrix (CB-MAAM) was administered to assess their current level of CwID. Based on the assessment nine skills were selected. Fifteen peer tutors were selected from the same grade and training was given. Peer tutors trained CwID on Math concepts for 30 sessions.

Result: Peer tutoring improves the academic achievement of children with ID and also the acceptance level among peers. Result revealed that there is significant difference in the score of support system for children with ID before and after peer tutoring.

Keywords: Support system, children with intellectual disability, inclusive setting

Introduction

The concept of supports originated one decade ago and has revolutionized the way habilitation and educational services to persons with intellectual disability. Providing individualized supports can improve personal functioning, promote self-determination, and enhance the well- being of person with intellectual disability (PwID). Supports also leads to community inclusion of PwID. Focusing on supports as the way to improve education, employment, recreation and living environments is an important part of a person centered approach to providing care to people with intellectual disability. The individuals need for support must be analyzed in the key areas like human development, teaching and education, home living, community living, employment, health and safety behaviour, school and advocacy. The focus light should be thrown on the above areas for the holistic development of children with intellectual disability in inclusive setting. Learning environment plays a crucial role in providing ample opportunities to imbibe various skills and talents if children with intellectual disability are mainstreamed. School, classroom and teacher are the three instrumental factors contribute optimum in creating support system for children with intellectual disability.

Need and rationale of the study

Rather than moulding individuals into pre-existing diagnostic categories and force them into existing models of service, the support approach evaluates the specific needs of an individual and then suggests and services to optimize individual functioning. Providing individualized supports can improve personal functioning, promote self-determination, and enhance the well-being of (CWID).

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School, family and community are the three instrumental factors contribute optimum in creating support system for CWID. Head masters, teachers, peers and parents play a dynamic role in accepting, enrolling, educating and employing children with ID. It is advisable to create support in inclusive setting for the holistic development of children with intellectual disability. Therefore, an effective instructional strategy; peer tutoring was chosen as an instrument to create support with joint effort of head masters, teachers, peers and parents.

Review of literature
Jayanti Pujari & Annapurna M (2015) [5] explored the existing support system in the primary schools of two Districts of Telengana. The study primarily focused on identifying the available support system in the primary schools which facilitate the learning of CwID. The objective of the study was to find out the support system available in terms of academic support, social support, emotional support and physical support in inclusive setting in the primary schools. A total number of 100 teachers (both regular and resource teacher) and 50 students from 20 primary schools were selected by purposive sampling procedure. The data was generated by administering the questionnaire. The results showed that the academic and social support as perceived by regular teacher was in average level whereas academic and social support perceived by resource teachers is in high level. The emotional support provided by peer is high level. The physical support was studied under three categories i.e. toilet and sanitation facilities, mobility and barrier free environment are in low level. The study concludes that adequate support system is key to the success of inclusive education.

Logesh Kumar S (2017) conducted a study to find out the need for peer tutoring to create support for CwID in inclusive setting in Coimbatore District of Tamil Nadu. Descriptive method of research and purposive method of sampling was employed to select seventy five inclusive education teachers from ten inclusive schools. Investigator administered the need analysis questionnaire on selected samples to collect the data. The results reveal that 90.25% of teachers agreed that peer tutoring is needed to create support system for CwID in inclusive setting. The findings from previous study conducted by Lee, Yeung, Tracey and Barker (2015) [4] found that teachers with training in special education were stronger advocates of inclusion, irrespective of their professional roles (administrator or class teacher) for CwID. The need analysis revealed that there is an excessive need for peer tutoring to create support system in inclusive setting.

The above stated studies firmly states that to make the inclusive education successful practicing/implementing the support system is need of the hour.

Objective
To find out the difference in the support system among head masters, teachers, parents and peers before and after peer tutoring.

Methodology research design
One-group Pre-test-post-test research design for Part I
Descriptive survey method of research for Part II

Sampling technique
Investigator adopted purposive sampling technique to draw the sample from the five inclusive schools. Sample comprises of 15 CwID (tutees) and 15 Children without disabilities (tutors) for part I and 5 head masters, 25 teachers, 15 peers and 15 parents for part II.

Research tool and data collection procedure part I
Curriculum Based Mathematical Achievement Assessment Matrix (CB-MAAM) was administered to assess the selected CwID on Math Skills. Based on the assessment nine skills were selected for tutoring. As stated above fifteen peer tutors were selected from the same grade and training was given. After forming tutoring dyads, peer tutors trained CwID on selected Math concepts for 30 sessions. The pre and post scores were recorded and entered in the excel sheet for data analysis.

Part II
Investigator developed a Support System Assessment Scale (SSAS) comprising 50 items under 4 domains: management support (13 items), teacher support (12 items), peer support (13 items) and peer support (12 items). Each item had 5 choices and the scoring key allotted was, 4 for 'strongly agree', 3 for 'agree', 2 for 'undecided', 2 for 'disagree' and 0 for 'strongly disagree'.

Support System Assessment Scale (SSAS) was administered on the selected samples to collect the data. The responses were entered in the excel sheet and analysed using t-test, to find out difference in the support system among head masters, teachers, parents and peers before and after peer tutoring for children with intellectual disability in inclusive setting.

## Results and Discussion of peer tutoring and support system
In pre-test the mean score is 39.27 and SD is 15.746 whereas in post-test the mean score is 93.33 and SD is 10.012. The calculated' value 23.678 is found to be significant ($p<0.01$). It is inferred that there is significant difference in the pre and post-tests mean scores of experimental group of children with ID in Math skill.

Peer tutoring improves the academic achievement of children with ID and improves the acceptance level among peers. Result revealed that there is significant difference in the score of support system for children with ID after peer tutoring.

Table 1: Comparison of mean scores of support system before and after peer tutoring

Domain	Target group	Support: before/after peer tutoring	N	Mean	SD	Mean gain (%)	t-value
Management support (Max. Score = 52)	Head masters	Before	5	26.00	3.808	32.61 %	21.866**
		After	5	47.20	3.347		
Teacher support (Max. Score = 48)	Teachers	Before	25	21.52	3.441	38 %	25.386**
		After	25	44.32	2.824		
Peer support (Max. Score = 52)	Peers	Before	15	24.00	2.478	42.21 %	25.496**
		After	15	49.33	1.988		
Parent support (Max. Score = 48)	Parents	Before	15	21.67	3.309	31.89 %	25.490**
		After	15	42.40	3.066		

Mean gain (%) = (Post mean - Pre mean)/ Max. score × 100, **-$p<0.01$, Highly significant
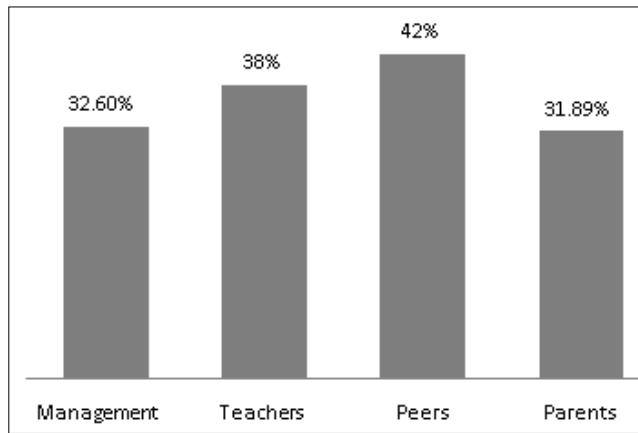
Fig 1: Comparison of mean gain (%) scores of support system before and after tutoring

The mean scores of management support before and after peer tutoring is 26.00 and 47.20 and SD is 3.808 and 3.347 respectively. The calculated mean gain percentage of management support is 32.61. The calculated 't' value 21.866 is significant ($p>0.01$). It is inferred that there is significant difference in the support system with respect to management.

The mean scores of teacher support before and after peer tutoring is 21.52 and 44.32 and SD is 3.441 and 2.2824 respectively. The calculated mean gain percentage of teacher support is 38%. The calculated 't' value 25.386 is significant ($p>0.01$). It is inferred that there is significant difference in the support system with respect to teachers.

The mean scores of peer support before and after peer tutoring is 24.00 and 49.33 and SD is 1.988 and 3.309 respectively. The calculated mean gain percentage of management support is 42.21. The calculated 't' value 25.496 is significant ($p>0.01$). It is inferred that there is significant difference in the support system with respect to peers.

The mean scores of parent support before and after peer tutoring is 21.67 and 42.40 and SD is 3.309 and 3.066 respectively. The calculated mean gain percentage of management support is 31.89. The calculated 't' value 25.490 is significant ($p>0.01$). It is inferred that there is significant difference in the support system with respect to parents. The result strongly proved that there is significant difference in the score of support system for children with ID after peer tutoring.

SSAS was administered before and after peer tutoring session of this research. Among the samples selected for this objective, parents of children with ID witnessed the academic improvement of their children through peer tutoring. Investigator have seen the noticeable change among the school management, teachers. And the peers (children without disabilities) expressed their delight to investigator that they can teach any complex lesson to their peers if they are trained.

Conclusion
Peer tutoring improves the academic achievement of children with ID and improves the acceptance level among peers. School management, teachers, peers and parents expressed that support system can play a crucial role in overall development of CwID in inclusive setting. In conclusion school management, teachers, peers and parents shown high participation at the end of this research. These are the remarkable evidences investigator have seen during this research.

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