Effect of Inclusive Education Awareness Programme on Preservice Teachers

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Abstract
In India, the concept of inclusive education schools is gaining importance to provide equal opportunities for education for all. Aim of schools in India is to include students with special needs in the regular classrooms. However, biggest challenge they face is lack of awareness among teachers about inclusive education. Educationists across India have felt the need to make teachers aware about inclusive education. This research paper discusses about the effect of inclusive education awareness programme, developed to create awareness among preservice teachers. Methodology used was quasi-experimental design-pretest and posttest non-equivalent group along with factorial design to study the interactive effect of moderator variables on treatment. Questionnaire on awareness about inclusive education was prepared. It comprises of 48 items, and its reliability index is 0.85 by Split–Half method and 0.88 by Cronbach Alpha. Purposive sampling technique was used and sample consisted of 77 preservice teachers in the experimental group and 53 in the control group from two colleges offering D.T.Ed (Diploma in Teacher Education) Course. Treatment, inclusive education awareness programme was implemented using different interactive teaching methods for 52 hours across five weeks. Data was analysed using descriptive and inferential statistics t-test, ANNOVA (Two-way), Wolf's test. Findings revealed that preservice teachers from experimental group have gained awareness about inclusive education to a moderate extent. No significant interactive effect of social intelligence, emotional intelligence, socio-economic status and treatment was found. This confirms that treatment given to experimental group was effective.

Keywords: Inclusive Education Awareness Programme, Quasi-Experimental Design, Factorial Design, Preservice Teachers

Introduction

Inclusion as is known today has its origins in special education. The development of the field of special education has involved a series of stages, during which education systems have explored different ways of responding to children with disabilities, and to students who experience difficulties in learning. In some cases, special education has been provided as a supplement to general education, in other cases it has been entirely separate field. In recent years, the appropriateness of separate systems of education has been challenged, both from a human rights perspective and from the point of view of effectiveness in dealing with children with special needs.

In the past 20 years, the issue of inclusion has had a huge impact on development in thinking and practice in the education of children with Special Educational Needs (SEN) both in India and overseas. Legislation of most countries encourages regular schools to adopt a more inclusive approach to education. Today, in India there is a growing importance to provide equal opportunities for education for all. One of the important aims of schools in India has become to include students with special needs in the regular classrooms.

The Government of India has enacted the legislation Persons with Disabilities (Equal Opportunities and Full Participation) Act, 1995 (PWD Act) to achieve the goal of providing access to free education in an appropriate environment to all learners with disabilities till the learner attains the age of eighteen years. The Act endeavors to promote the integration of learners with disabilities in mainstream schools by providing inclusive education.

Inclusive education opposes the practice of separation and it is based on the notion of equity. Emphasis is given to the needs and rights of children, including their right to education. It accepts all children as they are, providing them with adequate resources and support according to their needs. When talking about integration, it refers to the integration of an individual into a school in which learner was not previously accepted. Inclusive education does not simply refer to the placement of children with disabilities into normal schools, but it is also concerned with the conditions under which all children can be educated effectively (Barton, 1997). Sebba and Ainscow (1996) define inclusive education as the process with which schools try to respond to all pupils as individuals, reviewing the organization and provisions in the curriculum.

The Education System in India

The Indian education system is structured as follows:

- **Pre-School**: Education at this level is not compulsory. The Montessori system is especially popular at the pre-school level
- **Kindergarten**: This is divided into lower kindergarten (for three- to four-year-olds) and upper kindergarten (for four- to five-year-olds)
- **Primary School**: First to fifth standard/class/grade (for six- to ten-year-olds)
- **Middle School**: Fifth to eighth standard/class/grade (for 11- to 14-year-olds)
- **Secondary School**: Ninth and tenth standard/class/grade (for 14- to 16-year-olds)
- **Higher Secondary or Pre-University**: 11th and 12th standard/class/grade (for 16- to 17-year-olds) This is when students choose an academic area on which to focus
- **Undergraduate:** Bachelors degree is a three-year degree course in Science, Commerce and Arts.

- **Postgraduate and Professional Courses:** Medicine, Engineering, Management and Teacher Education

Types of Schools

There are mainly three streams of school education in India. Two of these are coordinated at the national level, of which one is under the **Central Board of Secondary Education (CBSE)** named Kendriya Vidyalayas, run by the central government. The second central scheme is the **Indian Certificate of Secondary Education (ICSE).** These are private schools. The third stream of school is Secondary School Certificate (SSC) run by each state government in India. Other schools in India are **National Open Schools** which provide education up to the higher secondary level for children whose schooling has been interrupted and they have been unable to complete formal education and **Special Needs Schools** which provides non-formal education and vocational training to children with disabilities.

Malini Sen (2007) reported that school in India at all the levels need to promote an education system that brings all learners onto a common platform. The curriculum needs to balance what is common for all and at the same time, take into account the individual needs of all the learners. The biggest challenge to inclusion of children with special needs is lack of awareness in school authorities and teachers in India. Most schools do not have the appropriate environment to make children with disabilities feel welcome. "Besides lack of resources and infrastructure, the current education system does not allow for individual development of children at their own pace. Teachers are unable to cope with differences in children, not because they do not want to, but due to lack of training to indentify students with disabilities. All this stems from lack of awareness," asserts Lilly Vishwanathan, Project Manager, Plan India and Delhi.

In a typical Indian class, there are fifty or more children, Firstly, children with disabilities, fall outside the teacher's tolerance level. Secondly, their nondisabled peers do not accept these students. Thirdly, the reason children with disabilities are especially vulnerable, particularly in the Indian milieu, is that teachers do not know how to deal with these children. There is a visible lack of awareness among teachers.
In India, the government and Non-Governmental Organizations (NGOs) are initiating measures to review and plan appropriate strategies for inclusive education. These measures include evolving policy guidelines, analyzing practices, developing teacher-training programmes, and creating resource persons and special teachers by establishing linkages to complement each other.

The National Curriculum Framework for School Education (National Council of Educational Research and Training-NCERT, 2000) has recommended inclusive schools for learners with special educational needs by making appropriate modifications in the content, presentation and transaction strategies, preparing teachers and developing learning friendly evaluation procedures.

Vijaya Prema, head of the education department, Child Study Centre, Spastic Society of Karnataka, Bangalore (as citied in Malini Sen, 2007) feels that children with disabilities can be part of mainstream education with early intervention. "If a child's specific learning difficulty can be detected by class III, then with right support of teacher he or she can overcome the difficulty by the time the child reaches middle school." Therefore, training for teachers at pre-primary and primary levels is most important. In fact, such training should be given to preservice teachers at the pre-service level teacher education course, so that they are trained to cater to children with disabilities when they join the schools as a teacher.

Teacher Education Courses in India

In India for aspiring teachers, several universities, affiliated colleges, private and open universities, provide teacher education courses at different levels along with internship programs in real classroom settings.

There are three levels of teacher education courses

- **D.T.Ed Diploma in Teacher Education:** it prepares teachers for primary school.
- **B.Ed Bachelor of Education:** it prepares teachers for secondary and higher secondary schools for which minimum educational requirement is to pass bachelors degree with 50% marks and Common Entrance test (CET).
- **M.Ed Master of Teacher Education:** it prepares teachers for teaching at B.Ed or D.T.Ed levels. Minimum educational requirement for entering in to the course is to pass Bachelors of Education degree course with 50% marks and Common Entrance Test (CET).

Those working in the field of Teacher Education feel that teacher education programmes in India at all levels D.Ed, B.Ed and M.Ed requires a complete transformation. Teachers need to be sensitized and equipped to help students with different needs. With the need felt to prepare teachers for inclusive education, teacher education courses at B.Ed and M.Ed levels have revised the curriculum and incorporated a course on inclusive education. However, it has been kept as an elective to choose from and therefore, there are not many takers for this course. This indicates that teachers do not seem interested or are not aware of the significance of this course.

In India, State Council of Educational Research and Training (SCERT) Pune in Maharashtra State has designed the curriculum of Diploma in Teacher Education D.T.Ed. The state Government approved the curriculum of D.T.Ed course, which includes subjects like Indian Society and Primary Education, Psychology of Learning and Teaching, Education Evaluation, Educational Management, Child Psychology. Apparently, D. T. Ed course does not offer a course on inclusive education.

Seamus Hegarty and Alur Mithu (2002) have suggested that early detection of disabilities is very important to provide appropriate remedy and help the students to develop in right direction. Therefore, teachers at pre primary and primary levels should have the awareness about different disabilities and inclusive education. The present primary education teacher-training course barely creates to such awareness.

Hence, the researchers' personal interest in this area and the urgency to make the preservice teachers aware about inclusive education, the researcher felt the need to develop an inclusive education awareness programme, implement it at D.T.Ed level, and study its effectiveness. With this, in view the present study was undertaken.

Variables of the Study

1. Independent Variable: inclusive education awareness programme developed by researcher implemented using different interactive methods of teaching.

2. Dependent Variable: awareness of inclusive education

3. Moderator Variables: social intelligence, emotional intelligence and socio-economic status, was considered to see whether they interact with independent and dependent variables.

4. Control Variables: variables held constant by the researcher or eliminated as the potential causes of the effect observed were age, types of institutions and medium of instruction.

Definition of the Variables

A. Operational Definition of Inclusive Education Awareness Programme: It is defined as a plan, which is developed for training D.T.Ed students-teachers to create awareness about inclusive education using various interactive teaching methods such as discussion, case studies, power point presentations, educational video films , conducting field visits and group work activities

B. Operational Definition of Awareness of Inclusive Education: It is defined as the extent of knowledge and understanding among D.T.Ed students-teachers about the following aspects of inclusive education…

1. Concept of Inclusive Education: includes the meaning, philosophy, objectives, characteristics, need and benefits of inclusive education.

2. Legal Aspects of Inclusive Education: refers to the historical perspective, current policies, educational and financial provision that have legal sanction for children with disabilities.

3. Basic Information about Disabilities: refers to the concept of impairment, disability, handicap, types, characteristics, symptoms, and causes of disabilities, approaches and techniques for identification of disabilities.

4. Skills and Competencies Required for Inclusive Education: refers to the skills and competencies required in planning and management of inclusive classroom, use of assistive devices for learner with disabilities and creating barriers free environment.

C. Operational Definition of the Moderator Variables

Social Intelligence: refers to N.K. Chadha and Usha Ganesha's (1986) definition of social intelligence. It comprises of eight dimensions which are as follows…

A: Patience: Calm endurance under stressful situations

B: Cooperativeness: Ability to interact with others in a pleasant way to be able to view matters from various aspects

C: Confidence level: firm trust in oneself and ones chances.

D: Sensitivity: to be acutely aware of and responsive to human behaviour

E: Recognition of Social Empowerment: Ability to perceive the nature and atmosphere of the existing situation

F: Tactfulness: delicate perception of the right thing to say or do

G: Sense of Humour: capacity to feel and cause amusement; to be able to see the lighter side of life

H: Memory: ability to remember all relevant issues; names and faces of people

Emotional Intelligence: refers to Waghmare's definition of emotional intelligence which includes combination of skills such as empathy, self-control, self-awareness, sensitivity to feelings of others, persistence and self-motivation

Socio-Economic Status: refers to Patel's definition of Socio-Economic Status as cited in Pereira Jessica (2006), wherein it refers to the wealth, power, prestige enjoyed by the family. It refers to, students' indication of their material possessions, size of the family, occupational and educational status of the parents and their cultural and recreational activities.

Objectives of the Study:

1. To compare the experimental and control groups scores on the following moderator variables
    a) Social Intelligence
    b) Emotional Intelligence
    c) Socio- Economic Status
2. To compare the experimental and control groups pretest scores on awareness of inclusive education
3. To compare the experimental and control groups pretest scores on awareness of inclusive education in terms of the following components
    a) Concept of inclusive education.
    b) Legal aspects of inclusive education
    c) Basic information about disabilities
    d) Skills and competencies required for inclusive education.
4. To compare the experimental and control groups posttest scores on awareness of Inclusive Education
5. To compare the experimental and control groups posttest scores on awareness of inclusive education in the terms of following components
    a) Concept of inclusive education.
    b) Legal aspects of inclusive education
    c) Basic information about disabilities
    d) Skills and competencies required for inclusive education.
6. To compare the experimental and control groups pretest and posttest scores on awareness of Inclusive Education
7. To compare the experimental and control groups pretest and posttest scores on awareness of inclusive education in the terms of following components
    a) Concept of inclusive education.
    b) Legal aspects of inclusive education
    c) Basic information about disabilities
    d) Skills and competencies required for inclusive education
8. To compare the experimental and control groups gain score (posttest-pretest) on awareness of inclusive education
9. To study interactive effect of following moderator variables and treatment on awareness of inclusive education scores
    a) Social-Intelligence
    b) Emotional Intelligence
    c) Socio-Economic Status
10. To estimate the effect size of the treatment on experimental group on awareness of inclusive education

Hypotheses of the Study: For the present study null hypothesis were formulated

1. There is no significant difference in experimental and control groups scores of moderator variables on
    a) Social Intelligence
    b) Emotional Intelligence
    c) Socio- Economic Status
2. There is no significant difference in experimental and control groups pretest scores on awareness of inclusive education
3. There is no significant difference in experimental and control groups pretest scores on awareness of inclusive education in terms of the following components
    a) Concept of inclusive education.
    b) Legal aspects of inclusive education
    c) Basic information about disabilities
    d) Skills and competencies required for inclusive education
4. There is no significant difference in experimental and control groups posttest scores on awareness of Inclusive Education
5. There is no significant difference in experimental and control groups posttest scores on awareness of inclusive education in the terms of following components
    a) Concept of inclusive education.
    b) Legal aspects of inclusive education
    c) Basic information about disabilities
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    a) Concept of inclusive education.
    b) Legal aspects of inclusive education
    c) Basic information about disabilities
    d) Skills and competencies required for inclusive education
8. There is no significant difference in experimental and control groups gain score (posttest-pretest) on awareness of inclusive education
9. There is no significant interactive effect of following moderator variables and treatment on awareness of inclusive education scores
    a) Social-Intelligence
    b) Emotional Intelligence
    c) Socio-Economic Status

10. To estimate the effect size of the treatment on experimental group on awareness of inclusive education

Design of the Study
Methodology of the Study:
Quasi-Experimental Design: The pretest and posttest non-equivalent group design.

This design is described as follows

O_1	X	O_3
O_2	C	O_4

Where, O_1 and O_2 = Pretest and O_3 and O_4= Posttest
X: Experimental Group (treatment given) and C: Control Group (no treatment given)

***Factorial Design*:** By using factorial design, researcher can determine whether the treatment interacts significantly with some other variables. Therefore, factorial design was used to analyse the interaction effect of the moderator variables with the treatment on the dependent variables.

Sampling Technique and Sample of the Study: For the present study, the researcher has made use of purposive sampling. Two colleges offering D.T.Ed (Diploma in Teacher Education) where chosen. Sample consisted of 77 preservice teachers in the experimental group and 53 in the control group. Intact classes were included in the study.

Tools of Research: Awareness of Inclusive Education Questionnaire was constructed by the researcher, It comprised of 48 questions on four aspects namely concept of inclusive education, legal aspects of inclusive education, basic information of disabilities and skills and competences required for inclusive education. This questionnaire has four options. For each correct option, the score was "1" and for incorrect option, the score was "0". Reliability and validity of the tools was established and the reliability index calculated by Split –Half method was 0.85 and by Cronbach Alpha it was 0.88.

Ready Made Tools: To study the moderator's variables following tools were used…

1. Social Intelligence Scale (SIS) By Dr. N.K.Chadha and Ms. Usha Ganesan. (1986): This scale has three options. The total number of items was 66 in 8 dimensions. For each option in dimensions A, B, C, D the score was 1, 2 or 3 and for dimensions E, F, G and H for correct option score was 1 and for incorrect option, the score was "0".
2. Emotional Intelligence Scale (EIS) By Dr. S. Waghmare (2002): This rating scale consisted of 40 questions both positively and negatively stated on five dimensions such as self-awareness, self-regulation, motivation, empathy, and social skills.
3. Socio-Economic Status Inventory (SESI) By Dr. Patel (1997): This tool has 36 questions with multiple options to answer. Each option has score ranging from 0 to 8.

Development and Implementation of the Inclusive Education Awareness Programme: (Treatment)

Treatment: The content of inclusive education awareness programme was designed based on in-depth review of literature on different areas of inclusive education. The researcher conceptualized the following components necessary for developing awareness of inclusive education among preservice teachers.

Components 1 Concept of inclusive education
Components 2 Legal aspects of inclusive education
Components 3 Basic information about disabilities
Components 4 Skills and competencies required for inclusive education

These components were explained using different interactive teachings methods such as debate, discussion, showing educational video films, documentary films, field visits activity methods using games, case studies, group work and lecture with power point presentations. The total duration of programme including the pre and post testing in both experimental and control group was 52 hours for five weeks.

The rationale for selecting different interactive methods was to create interest among the preservice teachers about inclusive education and provide direct experiences.

Analysis of the Data: Data was analysed using **descriptive statistics** i.e. mean, median, mode, standard deviation, skeweness, kurtosis and **inferential statistics** i.e. t-test, ANNOVA (Two-way), Tukey HSD test and Wolf's Test.

Results of the Study

- **Differences in the Moderator Variables**

Table 1 : Differences in Moderator Variable Scores for Experimental and Control Groups

Moderator variables	Groups	df	Mean	S.D	t- ratios	p values	Level of significance
Social Intelligence	Experimental	128	103.66	8.79	1.16	0.24	Not Significant
	Control		105.07	8.59			
Emotional Intelligence	Experimental	128	114.61	8.40	0.76	0.44	Not Significant
	Control		113.30	10.95			
Socio-Economic Status	Experimental	128	65.19	15.63	0.95	0.34	Not Significant
	Control		68.86	13.48			

From Table 1 it can be inferred that no significant difference was seen in the moderator variables. Preservice teachers from both the experimental and control groups were similar in their **social intelligence ($t = 1.16$; $p > 0.05$), emotional intelligence ($t = 0.76$; $p > 0.05$) and socio-economic status ($t = 0.95$; $p > 0.05$)**. This assured that both the groups were similar before administering the pre-tests on awareness of inclusive education and implementation of the treatment. This helped to remove any biases regarding their social intelligence, emotional intelligence and socio-economic status.

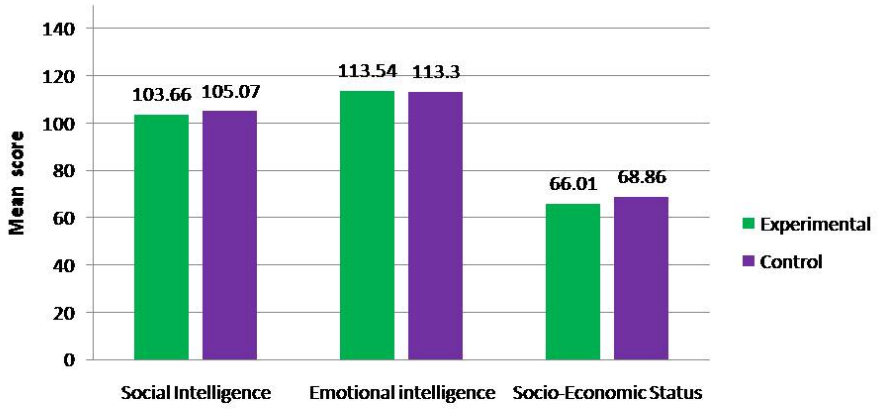


Figure 1: Bar Graph of Mean Scores of Moderator Variables for Experimental and Control Groups

Differences in the Experimental and Control Group Pretest Scores on Awareness of Inclusive Education.

Table 2 : Differences in Pretest Scores of Awareness about Inclusive Education of Experimental and Control Groups.

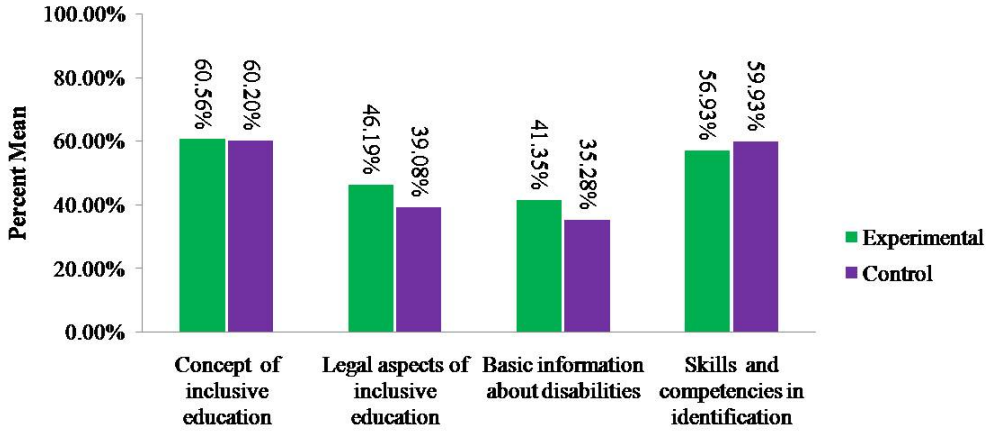
Dependent Variables	Groups	N	Mean	S.D	t- ratios	p values	Level of significance
Awareness of Inclusive Education	Experimental	77	24.93	8.81	0.47	0.63	Not Significant
	Control	53	24.26	6.20			

Table 3 : Differences in Pretest Scores on the Components of Awareness of Inclusive Education for Experimental and Control Groups

Components	Groups	N	Mean	Percent Mean	S.D	t- ratios	p values	Level of significance
A:Concept of inclusive education	Experimental	77	6.66	60.56 %	2.29	0.09	0.92	Not Significant
	Control	53	6.62	60.20 %	2.13			
B:legal aspects of inclusive education	Experimental	77	3.23	46.19 %	1.68	1.75	0.08	Not Significant
	Control	53	2.73	39.08 %	1.44			
C:Basic information about disabilities	Experimental	77	5.37	41.35 %	2.38	1.74	0.08	Not Significant
	Control	53	4.71	36.28 %	1.66			
D: Skills and competencies in identification	Experimental	77	9.66	56.83 %	3.81	0.85	0.39	Not Significant
	Control	53	10.18	59.93 %	2.85			
	Total	**130**						

From Table 2 and Table 3 it can be inferred as no significant difference in the pretest scores of experimental and control groups on awareness of inclusive education was found. **(t = 0.47; p > 0.05).** Also no significant difference in the experimental and control groups was found in the pretest scores on the **four components** of awareness of inclusive education **(t = 0.09, 1.75, 1.74, 0.85; p > 0.05).** This indicates that at the pretest level both the groups had knowledge and understanding of **concept of inclusive education**, **legal aspects of inclusive education**, **basic information about disabilities**, **skills and competencies** required in planning and management of inclusive classroom to the same extent. This assured that both the groups had equal

level of awareness before the intervention of the treatment i.e. the inclusive education awareness programme.



Figures 2: Bar Graph of Pretest Percent Mean Scores on Components of Awareness of Inclusive Education for Experimental and Control Groups

- **Differences in Experimental and Control Groups Posttest Scores on Awareness of Inclusive Education.**

Table 4: Differences in Posttest Scores of Awareness about Inclusive Education of Experimental and Control Groups.

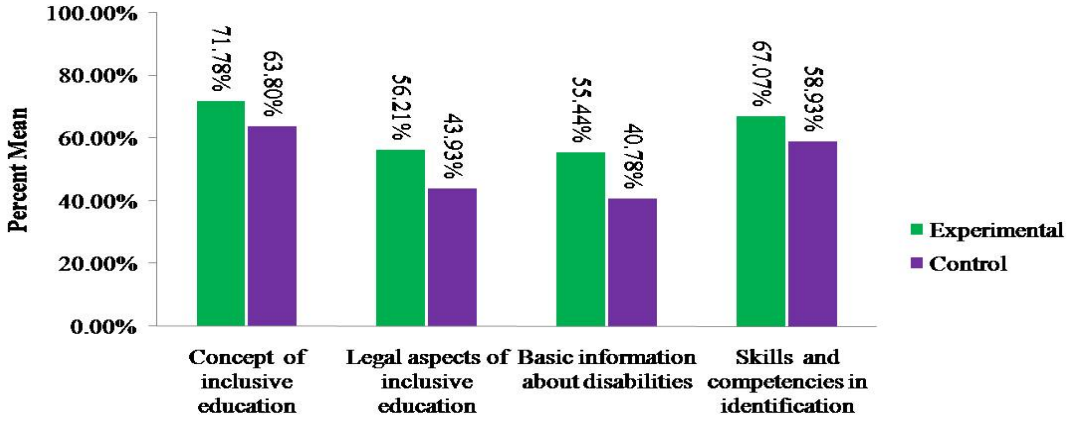
Dependent Variables	Groups	N	Mean	S.D	t- ratios	p values	Level of significance
Awareness of Inclusive Education	Experimental	77	30.44	9.43	3.56	0.00	Significant at 0.05
	Control	53	25.41	6.66			

Table 5 : Differences in Posttest Scores on the Components of Awareness of Inclusive Education for Experimental and Control Groups

Components	Groups	N	Mean	Percent Mean	S.D	t- ratios	p values	Level of significance
A:Concept of inclusive education	Experimental	77	7.89	71.78 %	2.39	2.02	0.04	Significant at 0.05
	Control	53	7.01	63.80 %	2.44			
B:legal aspects of inclusive education	Experimental	77	3.93	56.21 %	2.05	2.79	0.00	Significant at 0.05
	Control	53	3.07	43.93 %	1.45			
C:Basic information about disabilities	Experimental	77	7.20	55.44 %	2.49	4.69	0.00	Significant at 0.05
	Control	53	5.30	40.78 %	2.10			
D: Skills and competencies in identification	Experimental	77	11.40	67.07 %	3.91	2.31	0.02	Significant at 0.05
	Control	53	10.01	58.93 %	2.90			
	Total	**130**						

From Table 4 and Table 5 it can be inferred that a significant difference in the posttest scores of experimental and control groups on awareness of inclusive education was found **($t = 3.56$; $p < 0.05$).** A significant difference in the experimental and control groups was also found in the posttest scores on the four components of awareness of inclusive education **($t = 2.20, 2.79, 4.69, 2.31$; $p < 0.05$).** The mean scores of experimental group were higher than that of the control group. The results indicate

that preservice teachers from experimental group had gained greater awareness of inclusive education than the control group.



Figures 3: Bar Graph of Posttest Percent Mean Scores on Components of Awareness of Inclusive Education for Experimental and Control Groups

• Differences in the Experimental and Control Group Pretest-Posttest Scores on Awareness of Inclusive Education.

Table 6: Differences in Pretest and Posttest Scores of Awareness about Inclusive Education of Experimental and Control Groups.

Dependent Variables	Groups	Tests	N	Mean	S.D	t- ratios	p values	Level of significance
Awareness of Inclusive Education	Experimental	Pretest	77	24.93	8.81	3.66	0.00	Significant at 0.05
		Posttest		30.44	9.43			
	Control	Pretest	53	24.26	6.20	1.23	0.22	Not Significant
		Posttest		25.41	6.66			

From Table 6 it can be inferred that a significant difference in the pretest and posttest scores of experimental group on awareness of inclusive education was seen **(t = 3.66 ; p < 0.05)** However, no significant difference in the pretest and posttest scores on awareness of inclusive education of control group was observed **(t = 1.23 ; p >0.05)**

• Differences in the Experimental and Control Group Pretest-Posttest Scores on Components of Awareness of Inclusive Education

Table 7: Differences in Pretest and Posttest Scores on the Components of Awareness of Inclusive Education for Experimental Group

Groups	Components	Groups	Mean	S.D	t- ratios	p values	Level of significance
Experimental	A:Concept of inclusive education	Pretest	6.66	2.29	3.25	0.00	Significant at 0.05
		Posttest	7.89	2.39			
	B:legal aspects of inclusive education	Pretest	3.23	1.68	2.53	0.01	Significant at 0.05
		Posttest	3.93	2.05			
	C:Basic information about disabilities	Pretest	5.37	2.38	4.59	0.00	Significant at 0.05
Total N=77		Posttest	7.20	2.49			
	D: Skills and competencies in identification	Pretest	9.66	3.81	2.69	0.00	Significant at 0.05
		Posttest	11.40	3.91			

Table 8: Differences in Pretest and Posttest Scores on the Components of Awareness of Inclusive Education for Control Group							
Groups	**Components**	**Groups**	**Mean**	**S.D**	**t- ratios**	**p values**	**Level of significance**
Control	A:Concept of inclusive education	Pretest	6.62	2.13	1.25	0.21	Not Significant
		Posttest	7.01	2.44			
	B:legal aspects of inclusive education	Pretest	2.73	1.44	1.74	0.08	Not Significant
		Posttest	3.07	1.45			
	C:Basic information about disabilities	Pretest	4.71	1.66	1.77	0.08	Not Significant
Total N= 53		Posttest	5.30	2.10			
	D: Skills and competencies in identification	Pretest	10.18	2.85	0.41	0.67	Not Significant
		Posttest	10.01	2.90			

From Table 7 and Table 8 it can be inferred that a significant difference in the pretest and posttest scores of experimental group on all the four components of awareness of inclusive education was found **(t = 3.25, 2.53, 4.59, 2.69; p < 0.05)**. No significant difference was seen in the pretest and posttest scores of control group on the all the four components of awareness of inclusive education **t = 1.25, 1.74, 1.77, 0.41; p > 0.05).**)

- **Differences in the Experimental and Control Group Gain Scores on Awareness of Inclusive Education**

Table 9: Differences in Gain Scores of Awareness about Inclusive Education of Experimental and Control Groups.							
Dependent Variables	**Groups**	**N**	**Mean**	**S.D**	**t- ratios**	**p values**	**Level of significance**
Awareness of Inclusive Education	Experimental	77	5.50	13.18	3.66	0.02	Significant at 0.05
	Control	53	1.15	6.76	1.23		

From Table 9 it can be inferred that a significant difference in the gain scores of experimental and control groups seen **(t = 2.21; p < 0.05)** The gain score of experimental group was 5.50 and for control group it was 1.15. The gain scores of experimental group was thus higher than that of the control group. This indicates that the preservice teachers from experimental group have gained more knowledge and understanding of inclusive education. It means the treatment given in the form of inclusive education programme to experimental group was effective.

- **Interaction Effect of Moderator Variables, Social Intelligence, Emotional Intelligence, Socio-Economic Status and Treatment on Awareness of Inclusive Education Scores.**

Social Intelligence (High, Average, Low)

Table 10 : F-ratios of Interactive Effect of Treatment and Social Intelligence (High, Average, Low) on Awareness of Inclusive Education

Sources of Variance	SS	df	MS	F- ratios	P values	Level of Significance
Rows Factor A (Treatment)	793.14	1	793.14	11.09	0.00	Significant at 0.05
Columns Factor B (Social Intelligence)	40.46	2	20.23	0.28	0.75	Not Significant
A * B (Interaction)	164.47	2	82.24	1.15	0.32	No significant Interaction
Error	8866.92	124	71.51			
Total	9864.99	129				

Table 11: Difference Between the Means of Rows Factor A

Total Mean of Treatment Group (Experimental)	Total Mean of No Treatment Group (Control)	Difference between Rows Total Means	Level of Significance
30.44	25.41	5.03	Significant at 0.01
Critical Values for the Tukey HSD Test at 0.05 level = 2.98 and at 0.01 level = 3.95			

From Table 10 and Table 11 it can be inferred as there is a significant difference in the experimental and control group on awareness of inclusive education **(F= 11.09; p < 0.05)** and difference between the experimental and control group means was significant **(5.03; p < 0.05).** No significant effect of social intelligence was seen **(F=0.28; p >0.05).** No significant interaction was seen between treatment and social intelligence **(F=1.15; p > 0.05)**

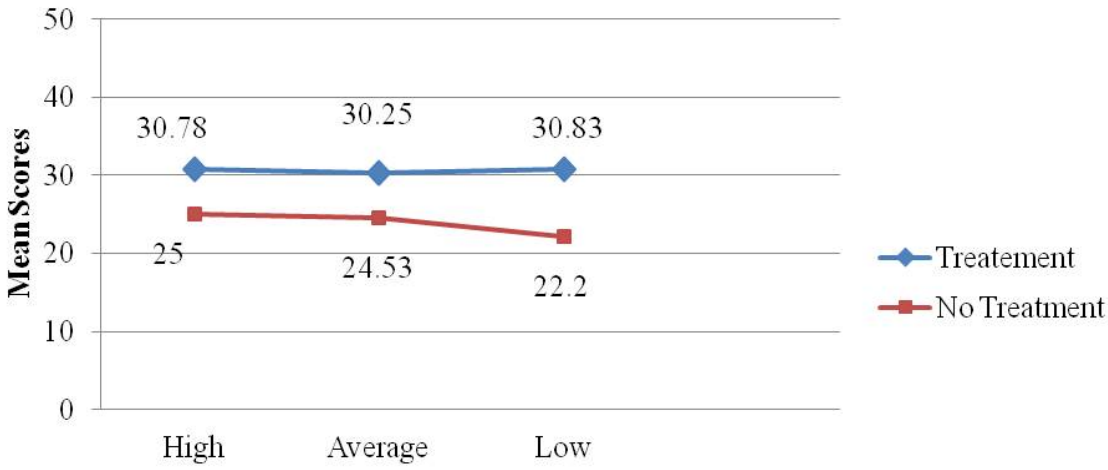


Figure 4: Line Graph Showing Interactive Effect of Treatment and Social Intelligence

Emotional Intelligence (High, Average, Low)

Table 12 : F-ratios of Interactive Effect of Treatment and Emotional Intelligence (High, Average, Low) on Awareness of Inclusive Education						
Sources of Variance	**SS**	**df**	**MS**	**F- ratios**	**P values**	**Level of Significance**
Rows Factor A (Treatment)	701.67	1	701.67	9.44	0.00	Significant at 0.05
Columns Factor B (Emotional Intelligence)	135.88	2	67.94	0.91	0.40	Not Significant
A * B (Interaction)	169.42	2	84.71	1.14	0.32	No significant Interaction
Error	9217	124	74.33			
Total	10223.97	129				

Table 13: Difference Between the Means of Rows Factor A			
Total Mean of Treatment Group (Experimental)	**Total Mean of No Treatment Group (Control)**	**Difference between Rows Total Means**	**Level of Significance**
30.14	25.41	4.73	Significant at 0.01
Critical Values for the Tukey HSD Test at 0.05 level =3.04 and at 0.01 level =4.03			

From Table 12 and Table 13 it can be inferred as there is a significant difference in the experimental and control group on awareness of inclusive education **(F= 9.44; p < 0.05)** and difference between the experimental and control group means was significant **(4.73; p < 0.05),** No significant effect of emotional intelligence was seen **(F=0.91; p > 0.05)** No significant interaction was seen between treatment and emotional intelligence **(F=1.14; p > 0.05)**

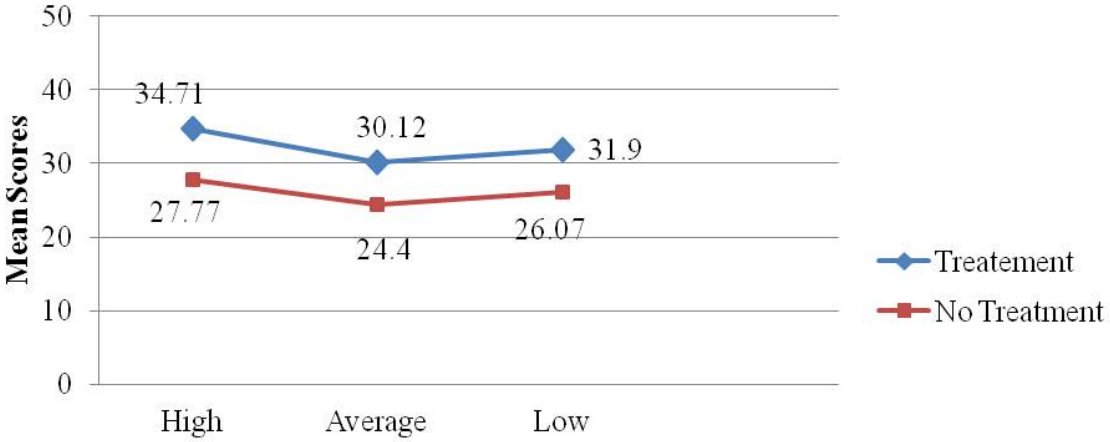


Figure 5: Line Graph Showing Interactive Effect of Treatment and Emotional Intelligence

Socio-Economic Status (Upper, Middle and Lower)

Table 14: F-ratios of Interactive Effect of Treatment and Socio-Economic Status (Upper, Middle, Lower) on Awareness of Inclusive Education						
Sources of Variance	**SS**	**df**	**MS**	**F- ratios**	**P values**	**Level of Significance**
Rows Factor A (Treatment)	793.14	1	793.14	11.05	0.00	Significant at 0.05
Columns Factor B (Socio-Economic Status)	154.15	2	77.08	1.07	0.34	Not Significant
A * B (Interaction)	15.77	2	7.89	0.11	0.89	No significant Interaction
Error	8901.93	124	71.79			
Total	9864.99	129				

Table 15: Difference Between the Means of Rows Factor A			
Total Mean of Treatment Group (Experimental)	**Total Mean of No Treatment Group (Control)**	**Difference between Rows Total Means**	**Level of Significance**
30.44	25.41	5.03	Significant at 0.01
Critical Values for the Tukey HSD Test at 0.05 level = 2.99 and at 0.01 level = 3.96			

From Table 14 and Table 15 it can be inferred as there is a significant difference in the experimental and control groups on awareness of inclusive education **(F= 11.05; p < 0.05)** and difference between the experimental and control group means was significant **(5.03; p < 0.05), No** significant effect of socio-economic status was seen **(F= 1.07; p > 0.05).** No significant interaction was seen between treatment and socio-economic status **(F=0.11; p > 0.05)**

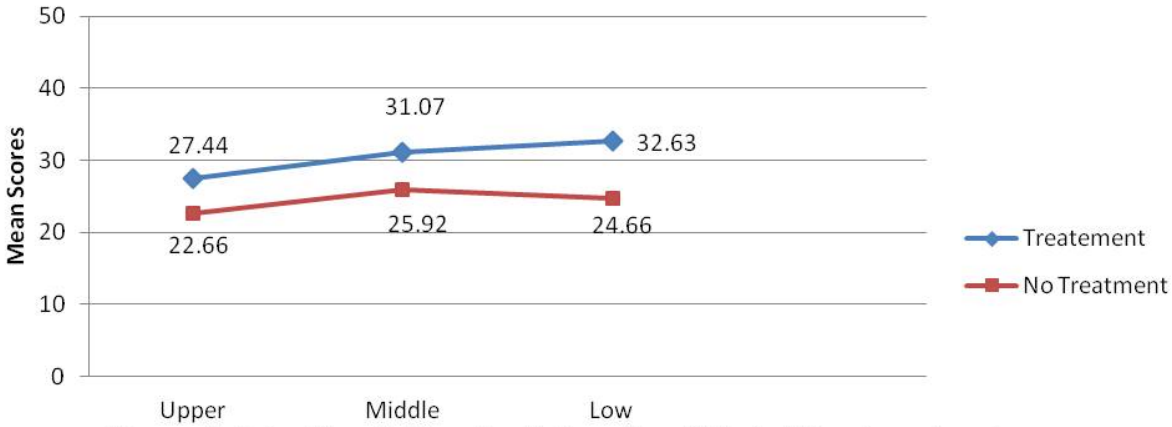


Figure 6: Line Graph Showing Interactive Effect of Treatment and Socio- Economic Status

Results show that moderator variables gender, socio-economic status, social intelligence and emotional intelligence of the preservice teachers did not interacts with the treatment. This confirms that the awareness gained by the preservice teachers is due to the treatment only. This indicates that the treatment given to the experimental group was effective.

Effect Size of Treatment on Preservice Teacher's Awareness of Inclusive Education

The following criteria provided by Wolf's have been used for interpreting the results:

Magnitude	Effect Size
0.2	Minimum Effect
0.5	Moderate Effect
0.8	Maximum Effect

If the obtained Effect Size (d) is greater than 0.8, it indicated that there have been maximum effect of the treatment on the students.

Table 16: Effect Size of Treatment on the Dependent Variables

Dependent Variables	Mean of Experimental Group	Mean of Control Group	S.D of Control Group	Effect size	Magnitude of the Effect
Awareness of Inclusive Education	30.44	25.41	6.66	0.75	Moderate Effect

From Table 16 it can be seen that effect of treatment on awareness of inclusive education was calculated using Wolf's Test and its effect size obtained was **(0.75)**. The treatment had moderate effect. It means preservice teachers from the experimental group had gained awareness about inclusive education to a moderate extent.

Discussion

Preservice teachers in experimental group became aware of **the concept of inclusive education** that all students from any class, gender, disability, religion, culture and language can be a part of the school. Preservice teachers realized that all schools should have inclusive education because it deals with human rights issues and helps in building stimulating relationships. It breaks barriers of prejudice and rejection. Inclusive education will help students with disabilities to educate themselves and develop the ability to earn a livelihood and thereby contribute to society.

Enhanced awareness about **legal aspects of inclusive education** was also seen among preservice teachers of the experimental group. Preservice teachers became aware of different legal acts related to student with disabilities, especially the Person with Disability (PWD) Act, which talks about provisions of equal opportunities, protection of rights and full participation. This act is a comprehensive education scheme provided by Indian government, which specifies free education to children with disabilities in an appropriate environment till he/she attains the age of 18 years. This act also mandates removal of architectural barriers from schools, colleges and other educational institutions for easy access for students with disabilities. It also specifies restructuring the curriculum for the benefit of students with disabilities.

Preservice teachers in experimental group have gained more knowledge and understanding of **the basic information about disability**. They became aware of the meaning of impairment, disability and handicap. They were able to differentiate between them and realized that authorization from a medical authority is necessary to certify any disability. The certificate has to be given to person with disability which indicates person suffering from more than 40 % disability and which has permanent loss of the function of the particular organ.

Preservice teachers in experimental group understood that the **causes of disabilities** can be due to accident, injury, effect of heredity, prolonged illness, improper care of the mother during pregnancy and lack of health and hygiene. They were able to identify different types of disabilities and categorise them according to their characteristics. They also realized that early identification and intervention of students with disabilities is possible with the help of primary health centers, voluntary organizations, and school teachers. They also gained more knowledge and understanding of skills and competencies required for teacher. They realized that in order to handle an inclusive classroom, teachers require various skills such as mentoring, facilitating and should posses the ability to understand the individual needs of the learners.

Preservice teachers also realized that for successful inclusion adaptation in the environment, curriculum and instruction are necessary. This will also help to reduce the psychological and social barriers. They realized that teacher-assisted learning and peer-group learning is the best method useful for students with disabilities.

Since no treatment was given to the preservice teachers in control group, they showed no changes in their awareness about inclusive education. However, preservice teachers from experimental group were more enthusiastic during field visit. They actively interacted with teachers, counselors and students with disabilities. They were motivated to visit the center and volunteer themselves for the various activities organized by the center. They showed willingness to learn more about inclusive education so that they can be well equipped with all the information, knowledge and understanding about inclusive education, which will help them in their job after acquiring their diploma. The content of the inclusive education programme was very informative and in-depth. The preservice teachers in the experimental gained adequate knowledge about various aspects of inclusive education. The results of the present study proved that use of interactive methods or approaches is effective in developing awareness about inclusive education.

Conclusion

The roles of the teachers today are very diverse and they need to understand their contribution towards making a good individual out of every student. To understand the students with disabilities, training of teachers is necessary. The present study revealed that it is possible to develop awareness of inclusive education among preservice teachers. The responsibility to train teacher lies on the preservice teacher education. The present situation demands preservice teachers become confident, competent, and skillful to handle any situation in an inclusive setup.

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