

A Health Educational Program for Teachers toward the Inclusion System in Primary Schools

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Abstract: Background: Inclusion system is designed to ensure that all students, regardless of diverse backgrounds, abilities, and needs, have equal access to quality learning opportunities. This approach embraces the philosophy that every student is a valuable member of the school community, deserving of the same respect and opportunities. An effective inclusion system involves adapting teaching methods, curricula, and learning environments. Aim: This study aimed to evaluate the effect of health educational program for teachers toward the inclusion system in primary schools. Research design: A quasi-experimental research design was used in this study. Sample: Convenient sample included 200 teachers in primary school for inclusion system in Ismailia city. Setting: 48 governmental primary school for inclusion system in Ismailia city. Tools for data collection: Two tools, 1st tool Interview questionnaire included three parts, 1st part: Socio-demographic characteristic, 2nd part: Teachers' knowledge related to inclusion system, 3rd part: Teachers' reported practice, 2nd tool included two parts 1st part: Attitude rating scale to assess teachers' attitudes toward students with disabilities, 2nd part: Attitude rating scale to assess teachers' attitude towards inclusion system. Results: 5.0 % of studied teacher had good total knowledge pre apply education program, become 77.0 % of them had good total knowledge post apply educational program. While, 89.0 % of them had unsatisfactory total reported practice pre apply educational program, which improved and become 5.0 % of them unsatisfactory total reported practice post applies educational program. While, 13.0 % of them had positive total attitude pre apply health education program, which improve and become 80.0 % of them had positive total attitude post apply health education program. Conclusion: The teacher's total knowledge, total reported practices & total attitude about inclusion system improved post apply health educational program. Recommendations: Apply further research in large sample and other setting for generalization.

Keywords: Health Educational Program, Inclusion System, Primary Schools, and Teachers.

1. INTRODUCTION

An inclusive education system fundamentally transforms how schools operate, aiming to eliminate barriers to learning and participation for all students. This system advocates for flexible teaching strategies, differentiated instruction, and the integration of assistive technologies to meet diverse learning needs. Professional development for educators is crucial, equipping them with the skills and knowledge to support students with varying abilities effectively. An inclusive environment also emphasizes the importance of social-emotional learning, ensuring that every student feels valued and understood [1]

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Inclusion education make collaboration between teachers, parents, and support staff is key, fostering a team approach to problem-solving and personalized education planning. Additionally, inclusive policies and practices extend beyond the classroom, influencing extracurricular activities and school culture to ensure that all students can engage fully in school life. By prioritizing inclusivity, schools not only enhance academic outcomes but also promote empathy, understanding, and respect among students, preparing them to become compassionate and socially responsible citizens [2]

In low and lower-middle-income countries around the world in 2021, nearly 40% of children with disabilities are out of school at the primary level, and 55% are out of school at the lower secondary level. The Ministry of Education in Egypt is responsible for offering 85 % of primary school start to application of inclusion education in free education at all levels, and there have been efforts to increase accountability and autonomy in the education system. The application of inclusion education can vary across countries and even within different schools and districts. Factors as parental school choice, availability of resources, and support services can impact the level of inclusion in schools [3]

Teachers' knowledge about students with special education needs (SEN) is pivotal in fostering an inclusive and supportive learning environment. This knowledge encompasses understanding various disabilities and learning differences, recognizing early signs of SEN, and implementing appropriate instructional strategies. Well-informed teachers can tailor teaching methods to accommodate the unique needs of each student, utilizing techniques as differentiated instruction, multisensory learning, and individualized education plans (IEPs). Additionally, awareness of assistive technologies and adaptive tools can significantly enhance the learning experience for students with SEN [4]

Practices for teachers regarding students with special education needs ensuring an inclusive and equitable learning environment. One key approach is differentiated instruction, which involves tailoring teaching methods and materials to accommodate diverse learning styles and abilities. Developing and implementing Individualized Education Plans (IEPs) in collaboration with special education professionals, parents, and the students themselves is crucial for setting specific goals and providing necessary accommodations. Utilizing assistive technologies, such as speech-to-text software and audiobooks, can enhance accessibility and support diverse learners. Additionally, creating a positive behavioral support system helps in managing classroom behavior through proactive strategies and positive reinforcement [5]

Teacher attitude plays a pivotal role in the success of an inclusive education system, serving as the foundation for creating a welcoming and supportive learning environment for all students. A positive, open-minded, and proactive attitude from teachers fosters an atmosphere where diversity is celebrated, and every student feels valued and included. Teachers who embrace inclusivity are more likely to employ innovative teaching strategies, differentiate instruction, and adapt their methods to meet the diverse needs of their students .[6] Their willingness to collaborate with special education professionals, parents, and students themselves is crucial for developing effective individualized education plans and support services. Furthermore, a positive attitude helps in managing classroom dynamics, promoting empathy, and encouraging peer interactions that enhance social integration. By modeling respect and understanding, teachers can inspire their students to adopt similar attitudes, creating a school culture that supports inclusion at all levels [7]

Creating a health educational program for teachers towards the inclusion system involves developing comprehensive training that equips educators with the knowledge, skills, and attitudes necessary to support diverse learners effectively. This program should cover a wide range of topics, including understanding various disabilities, recognizing early signs of special education needs (SEN), and implementing inclusive teaching strategies as differentiated instruction and Universal Design for Learning (UDL). The program should focus on the use of assistive technologies to enhance learning accessibility [8]

The role of school health nurse is great importance in supporting the inclusion of students with disabilities. School health nurses play a pivotal role in ensuring the overall health and well-being of all students, including those with disabilities. Nurses provide specialized health care services, as administering medications, managing medical emergencies, and conducting health assessments, tailored to the unique needs of students with disabilities. Moreover, school health nurses collaborate closely with educators, parents, and healthcare professionals to develop and implement individualized health plans that support students' educational goals and participation in school activities. Nurses serve as advocates for inclusive practices, promoting a supportive and accessible school environment where every student can thrive academically, socially, and emotionally[9]

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Significance of the study:

Sixty-seven million children of primary school age are out of schools; of which one third live in South Asia and Sub-Saharan Africa where Children with Disabilities (CWDs) make one third out of school children. Over 90% of CWDs in rising countries are not able to access schools and only 50% of them enrolled can reach high school. Pakistan has 5.5 million out of school children which is highest in the world after Nigeria. Situation of CWDs in Pakistan is not diverse from the rest of the developing countries. [10] In Egypt, Ministry of Education (MOE) declared that there are 108,224 children with mild disabilities and learning difficulties enrolled in 19,005 Egyptian inclusive public schools. However, 1116 special schools serve 43,719 children with severe and multiple disabilities [11]

School health nurse is crucial in advancing the inclusion of students with disabilities within the school environment. These healthcare professionals are instrumental in bridging the gap between health and education by providing essential medical care and support to students with disabilities. Nurses conduct health assessments, develop individualized care plans, and monitor the ongoing health needs of these students, ensuring that medical conditions do not hinder their educational experience. School health nurses work collaboratively with teachers, parents, and other school staff to educate them on specific health conditions and necessary accommodations, fostering a more inclusive and understanding school culture [12]

AIM OF THE STUDY

This study aimed to evaluate the effect of health educational program for teachers toward the inclusion system in primary schools through:

1. Assessing teachers' knowledge, attitude, and reported practice regarding the inclusion system in primary schools.
2. Designing health education program in the light of the actual need and assessment of teachers
3. Implementing health education program in the light of the actual need and assessment of teachers
4. Evaluating the effect of health educational program on teachers' knowledge, attitude, and practice about the inclusion system in primary schools.

Research Hypothesis

A Health educational program will improve teachers' knowledge, attitude, and reported practices about the inclusion system in primary schools

2. SUBJECTS AND METHODS

I. Technical design

Research Design:

Aquasi-experimental research design was used in this study.

Research Settings:

This study was conducted at all governmental primary school which applied inclusion system in Ismailia city equal 48 schools.

Sampling:

Convenient sample was used to choose (200) total number of teachers in primary school which applied inclusion system in Ismailia city, Egypt.

Tools of data collection:

Data for this study collected by using the following two tools include:

Tool I: An interview questionnaire: Data for this study collected by using a questionnaire sheet which designed by the researchers after reviewing related literature it included three parts: **Part I:** Demographic characteristics of teachers consisted of 9 items as: age, gender, marital status, monthly income, place of residence, ...etc.

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Part II: Teachers' knowledge about inclusion system included 18 closed ended questions as (pre – post format): Meaning of inclusion system, objectives of the inclusion system, types of inclusion system, meaning of educational inclusion system, criteria for selecting an educational inclusion system student, ...etc.

Scoring system

it included 18 questions; the answer score 2 point for correct answer and complete, 1 point for a correct answer and not complete and zero point to wrong or no answer.

•The total scores for teachers' knowledge 36 points regarding inclusion system divided into three levels as the following:

Poor knowledge < 50 % (< 23 score)

Average knowledge 50 -70 % (23:28 score)

Good knowledge > 70% (> 28 score).

Part III: Teachers' reported practices questionnaires (pre – post format): The scale is constituted of questions and divided into 9 sub items as:

1- Flexible grouping included 4 closed ended questions as: Students are distributed into small groups, the student sits alone, etc.

2- Classroom responsiveness included 5 closed ended questions as: There is rule creation, teacher uses yelling/negative comments. (“Just forget it and sit down!”), ...etc.

3- Organized classroom included 4 closed ended questions as: There is a class/day schedule, teacher has lessons planned, ...etc.

4- Curriculum, instruction, & assessment included 6 closed ended questions as: Teachers incorporate visual, tactile and kinesthetic materials and activities to meet a variety of learners 'needs, ...etc.

5- Attention to children included 4 closed ended questions as: Listening to him and not rushing to speak, give the child your attention and listen to him even if you do not understand everything, ...etc.

6- Specifications of the classroom and the place of the hyperactive student in the classroom included 8 closed ended questions as: The student sits in a place away from noise and influences that may distract the student, such as sitting next to the door or window, etc.

7- Maintaining the attention of a hyperactive student included 10 closed ended questions as: Providing a safe atmosphere for the student inside the classroom, such as study chairs that provide a comfortable session for the student so that he is not preoccupied with any source of tension, ...etc.

8- Dealing with the undesirable behavior of a hyperactive student included 7 closed end questions as: Overcoming minor mistakes such as hand movement, not paying attention to trivial matters, and focusing on major problems, ...etc.

9- Effective mentioned practices with Asperger syndrome included 10 closed end questions as: Protect the student from ridicule and harm by other students, educating other students about what Asperger's disease is and that it is a problem that requires everyone's help for the injured student. etc.

Scoring system: it included 58 questions; 2 points for done, 1 point for sometimes answer and zero point to not done answer.

The total score of teachers 116 points reported practices about inclusion system classified into two levels:

- **Satisfactory practices ≥ 60 % (≥ 70 point).**
- **Unsatisfactory practices < 60 % (< 70 point).**

Tool II. Attitude Rating Scale:

Part 1: It adopted from Sokolowski, K., (1998)[13] and used to assess teachers' attitudes toward students with disabilities included 25 closed ended questions as:

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Students with disabilities make every effort to complete their assignments, inclusion of students with disabilities requires a large number of teachers, ...etc.

Part 2: It adopted from Institute of Special Education Studies, (2009) and used to assess teachers' attitude towards inclusion system application as Classroom behavior of the student with a disability generally included 13 closed ended questions as: All students should be educated in regular class, some students' disabilities are an obstacle to achieving academic improvement in the inclusion system, etc.

Part 2: It was adopted from **Institute of Special Education Studies, (2009)** and would be used to assess teachers' attitude towards inclusion system application included (13) questions such as the student with a disability will classroom than in a special classroom.

Scoring system

The answers to these questions were scored as "2" for Agree, "1" for sometimes," and "0" for disagree. Total attitude scores (76) were classified as follows:

The total score attitude divided into the following:

Negative attitude <50%

Positive attitude ≥50%

Scoring system: The total score of teachers 38 questions teachers' attitude about autism classified into two levels:

The answers scored as 2 points for agree answer, 1 point for not specified answer and zero point to disagree answer.

The total score of teachers 76 points for attitude about inclusion system classified into two levels:

- **Negative attitude ≥ 50 % (≥ 38 point).**
- **Positive attitude < 50 % (< 38 point).**

Tool validity and Reliability:

A) Content Validity:

The revision of the tools for clarity, relevance, comprehensiveness, understanding and applicability was done by a panel of five experts from the community health nursing specialty Helwan and El-Minya universities to measure the content validity of the tools and the necessary modification done accordingly through add some question to assess the teacher's knowledge about inclusion system. All recommended modifications were applied. field of community health nursing, at the faculty of nursing Helwan University to test the content validity.

B) Tool Reliability:

Reliability was applied for testing the internal consistency of the tool, by administration of the same tools to the same subjects under similar conditions two times. Answers from the repeated testing were compared (Test- re- test reliability was 0.82 for knowledge), Cronbach's Alpha reliability was 0.890 for practice and 0.778 for attitude.

Operational Design:

Preparatory Phase:

It included reviewing of related literature and theoretical knowledge of various aspect of the study using books, articles, internet and magazines to develop tools for data collection.

Pilot Study:

The pilot study done on 10 % of the sample equal 20 teachers to examine the clarity of questions and time needed to complete the study tools. Teachers in the pilot study were included in the main study sample because no modifications were done

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Fieldwork:

A written approval letters obtained from the Dean of faculty of nursing, Helwan University for practice the study in the faculty of nursing. Written letter should be sent to the directorate of education and director of governmental primary school which applied inclusion system in Ismailia city for conducting the study including the aim of the study to obtain the permission to visit the school and conduct the study, including the aim of the study, obtained from teachers after the researchers introduces her for them and after explaining the purpose of the study.

The researchers collected data 2 day per week, (Tuesday and Wednesday) to identify the number of teachers who are attend to school. Then, teachers who matched the inclusion criteria and were willing to participate in the study were interviewed; teachers' formal acceptance to be included in the study was obtained, after explaining the purpose and the nature of the study.

The interviewing questionnaire collected about 40 minutes according to teacher's tolerance and every teacher was allowed to ask any question to clear any misunderstanding and to fill out the interviewing questionnaire. Regarding this sheet, every interviewing questionnaire was given to the teachers at beginning of the work after explanation of the purpose of this sheet and gave them time to answer these questions.

Ethical Considerations

An official permission to conduct the proposed study obtained from the Scientific Research Ethics Committee, faculty of nursing, Helwan university Participation in the study is voluntary and the informed consent and acceptance of director of governmental primary school which applied inclusion system in Ismailia city. The ethical considerations include explaining the purpose and nature of the study, stating the possibility to withdraw at any time, confidentiality of the information where it was not be accessed by any other party without taking permission of the participants. Ethics, values, culture and beliefs respected. Subjects given complete full information about the study and their role before signing.

Health education program conducted in following phases

Preparatory phase tool of data collection based on review of the past & current related literature reviewing various aspects of teachers educate at inclusion system school done using available books, periodical articles and magazines. The aim was acquainted with the research problem to develop the study tool.

Assessment phase by using pre-testing questionnaire to assess the teachers' knowledge, reported practices, and attitude about inclusion system. The researchers first introduced herself and explained the purpose of the study briefly to the teacher. Teachers were assured that the obtained information confidentially and used only for the purpose of the study.

Planning phase Based on the result obtained from the assessment phase, the researchers designed the health education program zoom meeting contents according to the teacher's needs. Detected needs, requirements and were clarified and discussed in the form of booklet. Contents of the booklet were selected on the base of identified needs. The booklet consisted of knowledge about inclusion system such as meaning, types, objective, meaning of educational inclusion system, advantages of the educational inclusion system, disadvantages of the educational inclusion system, students to whom the educational Inclusion System applies, and Asperger's syndrome in an autistic student. Teaching methods used as lecture, open discussion, and brain storming demonstration were frequently applied during zoom meeting. Media such as PowerPoint, data show, pictures, video and booklet prepared by researchers.

Implementation phases: after developing the health education program contents.

- Actual field work carried out in the period from September 2022 up May 2023 years, two days per week (Wednesday and Tuesday) from 7 pm -10 pm and make zoom meeting according to available time of teachers to provide their education program.

- Health education program was improved teachers' knowledge, reported practices, and attitude about inclusion system and aimed explained to all participants. Based on the result of the pre-test questionnaire the researchers utilized 5:7 zoom meeting each meeting needs from 30-40 minutes and meeting 33 teachers two days per week.

- Post-test done after applies zoom meeting. The study sample equal 200 teachers divided to 5 groups contained about 33 teachers and one group contained about 35 teachers.

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* Health education program include 6 zoom meeting (four theoretical zoom meeting and two practical zoom meeting).

- Four theoretical zoom meeting by the end of this zoom meeting each teachers known the knowledge about inclusion system such as defining the integration system in primary schools, defining the process of educational integration in primary schools, objectives of the integration system, types of integration system, criteria for selecting a merger applicant, positives of the merger process, disadvantages of the merger process, who are the students to whom the educational integration system applies, and what is Asperger syndrome for autistic students.

- Two practical zoom meeting by the end of this zoom meeting teachers applied practices related to flexible grouping, classroom responsiveness, organized classroom, curriculum, instruction, & assessment, attention to children, specifications of the classroom and the place of the hyperactive student in the classroom, maintaining the attention of a hyperactive student, dealing with the undesirable behavior of a hyperactive student, practices with Asperger syndrome, teacher attitude towards inclusive education, and teacher attitudes toward students with disabilities.

- By the end of each zoom meeting, the teachers was intended about the content of next meeting and its time.

Health Education Program Booklet:

A booklet including all content of the program it was design and given to patient as an educational reference during and after the program implementation. Contents of booklet including (defining the integration system in primary schools, defining the process of educational integration in primary schools, objectives of the integration system, types of integration system, criteria for selecting a merger applicant, positives of the merger process, disadvantages of the merger process, who are the students to whom the educational integration system applies, and what is Asperger syndrome for autistic students, flexible grouping, classroom responsiveness, organized classroom, curriculum, instruction, & assessment, attention to children, specifications of the classroom and the place of the hyperactive student in the classroom, maintaining the attention of a hyperactive student, dealing with the undesirable behavior of a hyperactive student, practices with Asperger syndrome, teacher attitude towards inclusive education, and teacher attitudes toward students with disabilities.

Evaluation phase: This phase aimed to evaluate the teachers' knowledge reported practices, and attitude after applying a health educational program for teachers toward the inclusion system in primary schools.

III. Administrative Design:

After explanation of the study aim and objectives, an official permission was obtained from the Dean of faculty of nursing and the general director of the governmental primary school which applied inclusion system in Ismailia city asking for cooperation and permission to conduct the study.

IV. Statistical Design:

Upon completion of data collection, data computed and analyzed using Statistical Package for the Social Science (SPSS), version 24 for analysis. The P value set at 0.05. Descriptive statistics tests as numbers, percentage, mean standard deviation (SD), used to describe the results. Appropriate inferential statistics such as "F" test or "t" test used as well.

Significance of the results

- Non-significant (NS) if $p > 0.05$.

- Significant (S) if $p < 0.05$.

- Highly significant (HS) if $p < 0.01$.

3. RESULTS

Table (1): Shows that, the mean age of studied teacher was 32.4 ± 7.8 years & 77.5 % of studied teacher was male. Also, 82.5 % of the studied teacher had bachelor in education level. Moreover 100.0 % of the studied teacher were resident in urban. Additionally, 71.00 % of the studied teacher's years of extensive experience in teaching were from five to ten years, and 47.5 % of the studied teacher's years of extensive experience in the inclusion classes from 1 > 3 years. 79.00 % of the studied teacher took training courses on how to deal within the inclusion classes.

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Figure (1): Shows that, 77.0 % of studied teachers had good total knowledge post apply educational program. While 22.0 % of studied teachers had average total knowledge post apply educational program. While 1.0 % of studied teachers had poor total knowledge post applied education program where P value 0.000 and paired t test = 29.54.

Figure (2): Illustrate that, 89.0 % of studied sample had unsatisfactory with total reported practices pre apply health educational program. While 95.0 % of studied sample had satisfactory total reported practices post apply health educational program where P value 0.000 and paired t test =24.9.

Figure (3): Shows that, 87.0 % of studied teacher had negative with total attitude pre apply health education program. While 80.0 % of studied teacher had positive total attitude post apply health education program.

Table (2): Shows that, there was positive correlation between studied teacher's total knowledge regarding to inclusion system and their total reported practices. Moreover, there was highly significance improvement in studied teacher's total knowledge and total reported practices.

Table (3): Shows that, there was highly statistically significant relation between studied teacher's total knowledge about inclusion system post- health educational program with level of education and age. Moreover, there was statistically significant relation between studied teacher's total knowledge about inclusion system post- health educational program with their age and level of education where p value = 0.005 respectively.

4. DISCUSSION

An inclusive education system is one where every student is allowed to study in one class. It is a place where students are not divided on the basis of disability. Every student is equal when it comes to learning. Having all kinds of children in one classroom is the idea behind inclusive education. The education system has different institutions for children of differing abilities[14]

Schools for disabled students as well as for those with mental health conditions are also present. It means that schools have divided the type of learning offered to different students. In the 1990s, students with disabilities were sent to separate schools, and these schools were later called the disabled institutes[15]

One of the most important roles that an inclusion teacher plays in a diverse classroom is identifying their students properly. The teachers identify their special students' social, emotional, behavioral, physical, and academic strengths. Teachers consult the students' parents or guardians to get more information about their needs[16]

The teachers create education plans and proper accommodations based on this information. For instance, a visually impaired student would require course material in larger print, or another student might need preferential seating based on their ability to focus in the classroom. Similarly, teachers provide varied levels of classroom assistance to the students to learn without feeling overwhelmed[17]

Concerning to studied teacher's sex, the present revealed that more than two third of studied sample were male and this finding was similar with Berg (2022) who conducted published study at Australia under title of " From Structural Dilemmas to Institutional Imperatives: A Descriptive Theory of the School as an Institution and of School Organizations " Reported that 78.1 % of studied subjects were males.[18]

Concerning to studied teacher's age, less than two third of studied sample had 31 to 35 years, and this finding was in agreement with Berger & Luckmann, (2022) who conducted published study at Penguin United Kingdom (UK) entitled as " The Social Construction of Reality: A Treatise in the Sociology of Knowledge. " Reported that 63.2 % of studied subjects were 20 to 21 years. From researchers point view, this might be due to Being a young teacher, or even looking like a young teacher, is a shared experience amongst many in the profession. The Organization for Economic Cooperation and Development (OECD) defines a young teacher as those under 40 years old.[19]

Concerning to studied teacher's marital status and place of resident the present study revealed that, more than two third were married and all studied teacher's place of residence was urban. This result was in accordance with Burner et al., (2023) who conducted published study at Palestine entitled as " Critical Perspectives on Perceptions and Practices of Diversity in Education the West Bank, Palestine" reported that 81.3 % and 100 % of studied subjects were married and all studied sample's place of residence

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was urban., respectively. From researchers point view, this might be due to the government raises teacher awareness towards student with special needs, how to provide them with all means with the support of the state and towns and cities appeal to people for a lot of reasons through improved public transport, a mix of cultures, job opportunities and easy access to shops and amenities. [20]

Concerning to studied teacher's level of education of the present study revealed that, more than two third of studied teacher's had bachelor this finding was similar with **Carrington et al., (2020)** who conducted a published study at Vietnam entitled as " "What Universal Design for Learning Principles, Guidelines, and Checkpoints are Evident in Educators' Descriptions of Their Practice When Supporting Students on Inclusion System?" in Southeast Asia in Vietnam " conducted cross-sectional study directed among the teachers on inclusion system in Vietnam and founded that 83.2 % participants had level of education was bachelor. From researchers point view, this might be due to bachelor's degree is the most common level of education achieved by those in careers related to grade specific[21]

Concerning to studied teacher's monthly income of the present study revealed that less than two third of studied teacher had not sufficient for basic needs and this finding was in agreement with Caspersen et al., (2021) who conducted a published study at Kaduna State in Nigeria entitled as " Measuring Learning Outcomes. Kaduna State, Nigeria. " Stated that 62.1 % of studied subjects were not sufficient for basic needs. From researchers' point of view, this might be due to increase in prices and the large number of basic needs for people with special needs and the large number of requirements.[22]

Regarding to studied teacher's years of experience in teaching, present study finding revealed that more than two third of studied teachers were years of experience in teaching from five to ten years. This result was in accordance with Danforth & Rhodes, (2022) who conducted published study at Northwest Ethiopia entitled as "Deconstructing Disability: A Philosophy for Inclusion, Northwest Ethiopia" reported that 72.5 % of studied subjects were years of extensive experience in teaching from five to ten years. From researchers point view, this might be due to giving equal access and opportunities and getting rid of discrimination and intolerance (removal of barriers). It affects all aspects of public life.[23]

Regarding to studied teacher's taking a training course on how to deal within the inclusion classes, present study finding revealed that, more than two third of studied teachers were taking a training course on how to deal within the inclusion classes, this result was in accordance with Devarakonda & Powlay, (2020), who conducted published study at London entitled as " "Diversity and Inclusion." In A Guide to Early Years and Primary Teaching" reported that 76.2 % of studied subjects taking a training course on how to deal within the inclusion classes. From researchers point view, this might be due to training on inclusive practices for teaches about how to create environments where all students feel safe and can thrive, and how to work with each other in a way that helps everyone achieve more positive outcomes through increased staff confidence and attitudes in working with diverse students. [24]

The following paragraphs answered research hypothesis a health educational program will improve teachers' knowledge, attitude, and practice about the inclusion system in primary schools:

Regarding the effective of the program on total knowledge studied teachers, the present study revealed that there was statistically significant difference improvement between pre and post program in all knowledge items and this finding was in the same line with McDevitt, (2023) whose conducted published study at Botswana under title of " How effective is the cascade as a method for disseminating ideas? A case study in Botswana " revealed that, their significant improvement in the knowledge of studied subjects after application of the health education program.[25]

Regarding the effective of the program on studied teacher's reported practice revealed that their statistically significant difference between pre and post implementation program in all practice items and this finding was similar with Harmon et al., (2023) who conducted published study at Russia under title" The Returns to Education: Microeconomics of Central Russia " shows that there is significant improvement of uses of practice items toward inclusion system's students and significant improvement in the practice total score.[26]

Regarding the effective of the program on studied teacher's attitude revealed that their statistically significant difference between pre and post apply health education program in all attitude items and this finding was similar with Juvonen et al., (2021) who conducted published study at Hindu Kush, under title" Ethnic Diversity and Perceptions of Safety in Urban Middle Schools of

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Central Hindu Kush " shows that, there is significant improvement of uses of attitude items toward inclusion system’s students and significant improvement in the attitude total score.[27]

The present study clarified that there statistically significant relation was between knowledge and practice post apply health education program and this finding supported by Karoly & Gonzalez (2021) who conducted published study at British under title" Early Care and Education for Children in Immigrant Families " who reported that there was a significant and direct relation between knowledge and practice. From the researchers' point view, a targeted educational program was needed to promote knowledge of students about inclusion system. Teachers foster an inclusive classroom environment by promoting respect, understanding, and collaboration among students, which helps to reduce stigma and build a sense of community.[28]

Concerning correlation between total percentage of knowledge and practices post apply health education program, the present study show significant correlation between total score knowledge and practice and this finding was supported with Kart & Kart (2021), who published study at Mbare Musika and Mutoko, Zimbabwe under title of " Academic and Social Effects of Inclusion on Students without Disabilities in Mbare Musika and Mutoko, Zimbabwe " reported that there was significant correlation observed between teachers and inclusion system and knowledge and practices. From a researchers' point view, this might be inclusion teachers create curriculum adaptations to support every student's academic, physical, emotional, behavioral, and social development in the best way possible. Students achieve this by first identifying their students' strengths and special needs.[29]

Regarding relationship between total knowledge and teacher’s demographic characteristics pre apply health education program, the present study showed no significant relation between them and this finding was in agreement with Lee & Burkam, (2023) [30] .who published study at American under title “Dropping out of high school: The role of school organization and structure”, who reported no statically significant relation between total knowledge and student’s demographic characteristics pre apply health education program. In addition, this finding in accordance with Laurence, (2023), who published study at Britain and London under title “Wider-community Segregation and the Effect of Neighborhood Ethnic Diversity on Social Capital: An Investigation into Intra-Neighborhood Trust in Great Britain and London” who reported non-significant relation between total knowledge level among the studied subjects and demographic characteristics. From a researchers' point view, a positive, supportive, and proactive attitude from teachers can significantly enhance the learning experiences and outcomes of inclusion system students. Teachers who embrace inclusivity demonstrate patience, empathy, and flexibility, adapting their teaching methods to cater to the varied needs of all students.[31]

Table (1): Frequency Distribution of the Studied Teachers Socio-demographic Characteristics (N=200).

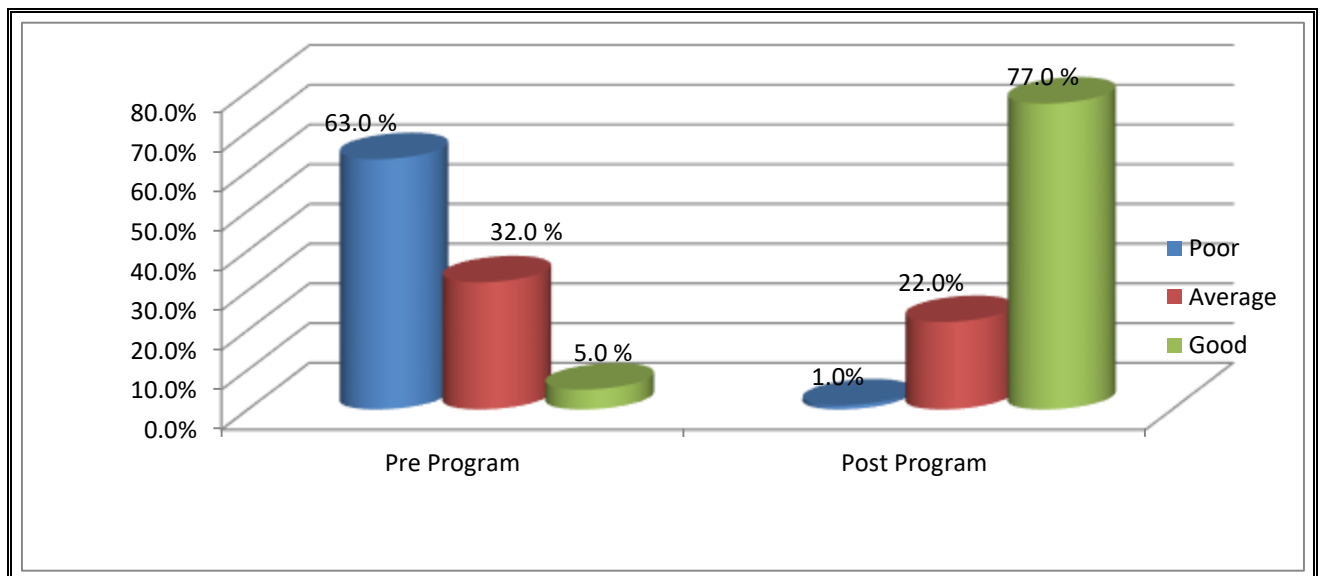
Item	No.	%
Age		
25 -30 years	20	10.00
31 - 35 years	128	64.00
36 - 40 years	10	5.00
More than 41 years	42	21.00
Mean ± SD		32.4 ± 7.8 years
Gender		
Male	155	77.5
Female	45	22.5
Marital status		
Single	18	9.00
Married	162	81.00
Divorced	8	4.00
Widow	12	6.00

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Place of residence		
Urban	200	100.0
Monthly Income		
Sufficient and saving	24	12.00
Not sufficient for basic needs	122	61.00
Suffices basic needs	54	27.00
Level of education		
Diploma Teachers	30	15.0
Bachelor	165	82.5
Postgraduate	5	2.50
Years of extensive experience in teaching		
Less than one year	9	4.50
From one to five years	39	19.50
Five to ten years	142	71.00
More than ten years	10	5.00
Years of experience in the inclusion classes		
>1 years	24	12.00
1 > 3 years	95	47.5
≤ 3 years	81	40.5
Training courses on how to deal within the inclusion classes		
Yes	158	79.00
No	42	21.00

Figure (1): Percentage Distribution of Total Knowledge among Studied Teachers regarding Inclusion System Pre & Post Applying Health Educational Program (N=200).

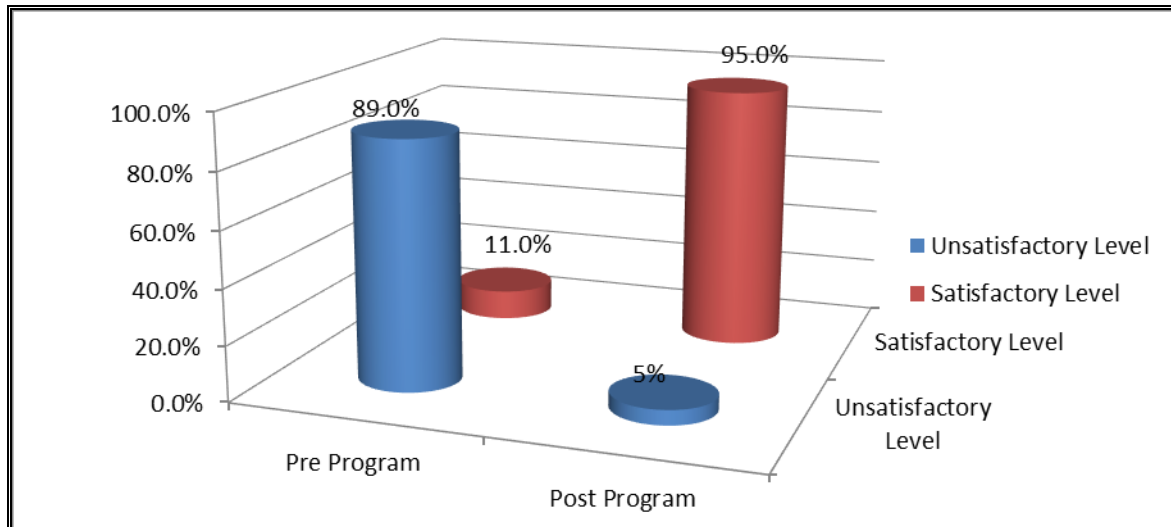


** $\chi^2=29.54$ **P value=0.000

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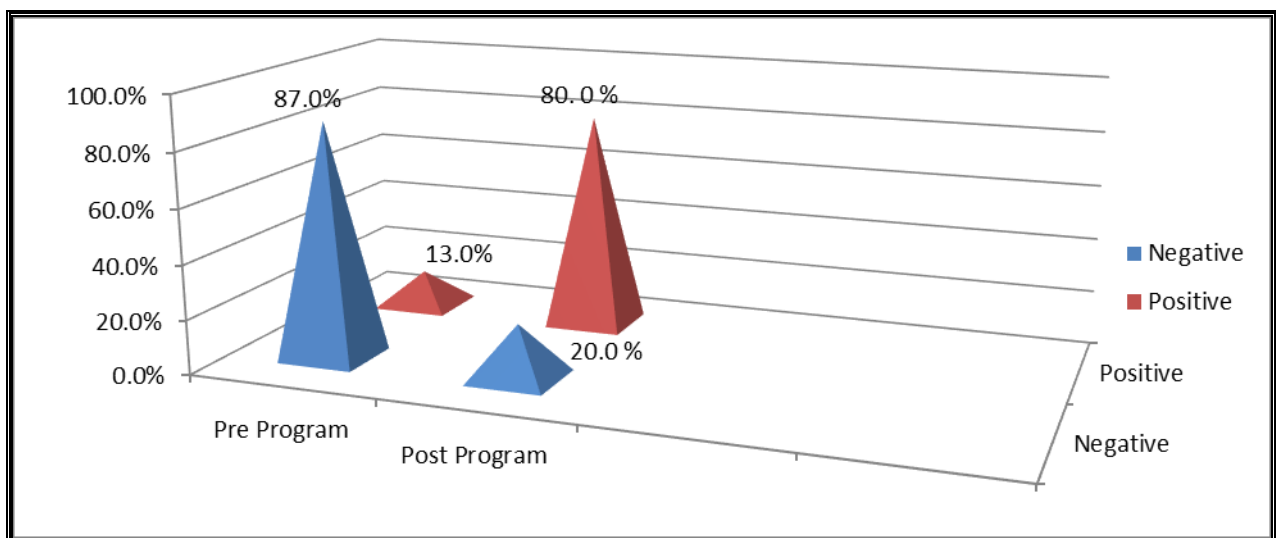
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Figure (2): Percentage Distribution of Total Reported Practices among Studied Teachers regarding Effective Instruction in Inclusion System Pre and Post Health Educational Program (N=200).



**** $\chi^2=24.9$ **P value=0.000**

Figure (3): Percentage distribution of Total Attitude among Studied Teachers regarding Attitude toward Inclusion System Pre and Post Applying Health Educational Program (N=200).



$\chi^2=30.7$ **P value=0.000

Table (2): Correlation between Total Score Knowledge and Reported Practices of Studied Teachers Pre & Post Health Education Program (N= 200).

Item	Total practice			
	Pre- program		Post -program	
	R	P value	R	P value
Total Knowledge	- 0.028	0.763	0.353	0.000**

(*) statistically significant & (**) high statistically significant $P \leq 0.00$

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Table (3): Relation between Demographic Characteristics and Total Knowledge of Studied Teachers Post-Health Educational Program (N=200).

Items	The studied teacher						χ^2	P value
	Post -Educational Program							
	Poor N=2		Average N=44		Good N=154			
	No.	%	No.	%	No.	%		
*Teachers age								
25 -30 years	2	100.0	8	18.2	10	6.5	7.255	0.000
31 - 35 years	0	0.0	32	72.7	98	63.6	8.023	0.000
36 - 40 years	0	0.0	2	4.5	8	5.2	7.225	0.001
More than 41 years	0	0.0	2	4.5	40	24.7	8.225	0.005
* Gender								
Male	0	0.0	40	90.9	115	74.7	6.325	0.002
Female	2	100.0	4	9.1	39	25.3	8.256	0.005
* Marital status								
Single	0	0.0	8	18.2	10	6.5	6.321	0.005
Married	0	0.0	30	68.2	132	85.7	8.147	0.000
Divorced	0	0.0	6	13.6	2	1.3	14.258	0.001
Widow	2	100.0	0	0.0	10	6.5	9.258	0.000
* Place of residence								
Urban	2	100.0	44	100.0	154	100.0	5.214	0.002
* Level of education								
Diploma Teachers	2	100.0	8	22.7	20	13.0	6.325	0.002
Bachelor	0	0.0	34	77.3	131	85.7	4.258	0.001
Postgraduate	0	0.0	0	0.0	5	3.3	7.102	0.000
* Years of extensive experience in teaching								
Less than one year	2	100.0	7	15.9	0	0.0	9.321	0.005
From one to five years	0	0.0	30	68.2	9	5.8	8.012	0.005
Five to ten years	0	0.0	7	15.9	135	87.7	7.001	0.001
More than ten years	0	0.0	0	0.0	10	6.5	5.225	0.005
*Years of experience in the inclusion classes								
>1 years	2	100.0	20	45.5	2	1.3	12.255	0.005
1> 3 years	0	0.0	24	54.5	71	46.1	16.235	0.001
≤ 3 years	0	0.0	0	0.0	81	52.6	17.258	0.005
*Training courses on how to deal within the inclusion classes								
Yes	0	0.0	4	9.1	154	100.0	13.025	0.002
No	2	100.0	40	90.9	0	0.0	16.012	0.001

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5. CONCLUSION

Based on the results of the present study and research hypothesis the following conclusion includes:

Teachers' knowledge, less than tenth percent had good total knowledge pre apply educational program which improve and become more than two third of them had good total knowledge post apply educational program. While less than two third of studied teachers had poor total knowledge pre apply educational program which improve and become less than one percent of them had good total knowledge post apply educational program. Most of studied teachers had unsatisfactory with total reported practices pre apply health educational program. While all of them had satisfactory total reported practices post apply health educational program. Majority of studied teachers had negative with total attitude pre apply health education program. While more than two third of them had positive total attitude post apply health education program. There was positive correlation between studied teachers' total attitude regarding to inclusion system and their total reported practices. Moreover, there was highly significance improvement in studied teachers' total attitude and total reported practices.

6. RECOMMENDATIONS

In the light of the findings of this study, the following points are recommended:

- 1- Make posters and banners about reported practices of inclusion system and put in governmental primary school which applied inclusion system in Ismailia city under observation of school health nurse.
- 2- Wide distribution booklet to teachers on primary school for inclusion system that contain about meaning, objectives, types of inclusion system then applied in other places to generalize the results.
- 3- Continuous health education program for teachers about inclusion system.
- 4- Apply further research in large sample and other setting for generalization.
- 5- School health nurse provides training program for teachers on how to deal with students in inclusion system with attention-deficit hyperactivity disorder.

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