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An Exploratory Study on Inadequacies in Examination System for Visually Impaired Children in Punjab

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Muhammad Akram Shakir[2]
Farah Shafiq[3]

Abstract

Dispensing quality of education is constitutional responsibility of every country across the world. Provision of quality education to visually impaired children is a motive endorsed by special education experts in Pakistan. From the previous few decades, the newly created informational technologies have introduced a myriad of assessment tools in the area of Examination system. This paper explores inadequacies in the existing examination system for visually impaired children. Accordingly, researcher constructed achievement test for students and Five point Likert scale type instrument. This research design was a survey. The sample for the study involved visually impaired students and teachers who teach such institutions. It was purposively sampled. The data collected from the respondents was analyzed by using SPSS software. The major objectives included: (1) to investigate the defects of the existing examination system for visually impaired children,(2) to identify the inadequacies in the conduct of Braille examination of visually impaired children. It was concluded that inadequate arrangement and facilities by the concerned assessing agencies intercept students with visual impairment for concerned exams. Respondents' illustrated perceptions' in the current study would provide feedback to administratively higher authorities, parents, assessment agencies and examiners.

Keywords: assessment, examination system, visually impaired children, special education

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Introduction

Special Education is a mechanism which exhibits the idea of dispensing education to the entire strata of special needs within formal educational institutions (Nilholm, 2020). Mentioned education system recognizes the polarization and innovative requisitions of learners and have belief on the students' competencies. Adjusting in the classroom and teaching learning process, systematical arrangements and imparting education through specialized equipments are fundamental principles of education system for students with visual impairment (Walton, 2016).

In Pakistan, there exist a few educational institutions where visually impaired children are registered along with other students with disabilities. The historical background of special education dates back to the PL. 94 – 142 demanding the dissemination and communication of openly adequate special educational instructions for entire strata of special needs beyond and dissimilarity in exclusively cognitive and physical disability (Lammichhane, 2017) . In this contextual scenario, Salamanca slogan appreciated the statement of Education for All (EFA) and reiterated that special educational institutions require to provide it to all individuals without discriminations of physical, cognitive and educational abilities. Additionally, Government of Pakistan has currently signed understanding of memorandum for promulgation of sustainable developmental goals (SDG) as a national statement. So educational agencies are trying to introduce adequate services to establish special educational institutions for students with visual impairment particularly (Boardman & Ranger, 2018).

There are two types of classification in terms of visual impairment i.e. blindness and low vision. Vision indicates significant role in performing routine work in daily life of an individual. Eighty (80 %) of individual's perception is banked on what he sees and is correctly important for communication. Partially segment of all correspondence is facial expression incorporating body language, clues, signs and facial outlook (Banyard, Dillon, Norman & Winder, 2015).

Accordingly, individuals with visual impairment experience difficulties and inadequacies during their life routine. Empirical work carried out in African contextual scenario exhibits that learners with visual impairment are inclined to adverse experience with their peer groups and

mentors. Their fundamental requisites leg unfulfilled and they are not bestowed bounties to demonstrate their hidden talents.

Pakistani individuals with visual impairment have rights to claim their educational and constitutional provisions as others in daily routine work. Along with individuals with normal vision, students with visual impairment fundamentally have right of improved and altered educational assessment mechanism. Individuals with visual impairment need large print and electronic services, Braille and substantial amended supports in education system. Accordingly, the researcher made mind to conduct empirical study to explore inadequacies in existing examination system for visually impaired children in Punjab.

The alteration and development in examination mechanism for students of VI is not adequately appropriate in seclusion. Examination difficulties and irregularities are bonded with educational programs. A substantial improvement in examining mechanism may be just by making betterment in the entire education sector. If the standard of pedagogical development is below satisfaction and excellence, the academic outcome of institutions will not be effective. In order to develop and enhance the standard of instructional programs, professional development and teaching faculties'entegrity must be sustained. In addition to that the entire system of conducting exam i.e. paper construction, scripts evaluation and issuing of certificates need to be revamped entirely (Rehmani, 2003).

Students with low vision face numerous problems from preparation to attempting their exams. As per the obtained responses, the challenges the students face while preparing for their examination can be classified into two major categories: Dependency and the built environment. Thirteen out of the fifteen participants reported, often, they depend on others in taking exams due to low vision. Though the participants are provided with the writer during exams, they feel dependent on the writer in such cases. For example, a participant stated, it is challenging to prepare for exams on an individual ground (Khalid, Muhammad, & Masood, 2021).

Statement of the Problem

Significantly impact of examination system for students with visual impairment on academic achievement is greatly recognized

throughout the world. Without systematical examining system, scholastic and professional development cannot be explored and outcome of educational institution may not be successfully determined. Accordingly, there is dire need to explore inadequacies of examination system for students of VI in Punjab. Specifically focus of this empirical work is to identify difficulties and problems faced by the students during Braille examination conducting.

Research Questions

i. What are the defects of present examination system for Visually Impaired Children?
ii. What are the inadequacies in the conduct of Braille examination for Visually Impaired Children?
iii. What model examination system do the teachers suggest for Visually Impaired Children?

Research Methodology

The present study was quantitative in nature and was a descriptive research. Descriptive research is usually described as a sort of quantitative research. It is ostensibly conducted for the purpose of descriptive illustration. This type of research design is manipulated and managed in order to determine and validate the results and findings. All the special education institutions in Punjab and students studying in these institutions were involved in population of the study. The sample comprised (25) twenty five visually impaired children of 8^{th} grade at elementary and Secondary school from each district Okara and Lahore were selected by using purposes sampling Technique with equal allocation. One hundred (100) teachers were randomly with equal allocation selected from elementary and secondary schools / Centers at district Okara and Lahore. Before conducting the actual study, the researcher visited the institutions of above mentioned districts. For retrieval the relevant data, 50 students were consulted through head of the institutions as well as question papers. And that, 100 teachers were consulted through questionnaire to assemble perceptions regarding existing examination system of visually impaired children. Subsequently, the researcher went through regarding review of literature comprising bookish material, official documents, reports, policies, projects and evaluations reports, the researcher constructed one questionnaire and two question papers. A Questionnaire consisting of 60

items for the teachers of special education institutions. An objective type question paper comprising of 50 MCQ items in the subject of English for 8th grade students was developed. An objective type question paper covering 50 MCQ items in the subject of social study for 8th grade students was also constructed by the researcher himself. The instruments were developed with the help of supervisor and other consultants. The questionnaire for special education teachers was developed on five point likert scale and tests for 8th grade students in the subjects of social studies.

Table 1

Description of the sample size of students school wise.

Ser.	*School Name*	*No of Students*
1	F G Gunj_e_Shakar OKARA	5
2	Home for Blind Chack No=6	5
3	SEC Depal Pure	5
4	Covent Special. Education	5
5	SEC Renalakhurd	5
6	Govt.Sp. Ed.Se.School Sheran Wala Lhr.	5
7	Aziz Jahanara Trust. Lahore	5
8	Govt. SP.Ed.School Khyber Block Lhr.	5
9	F G Alhajvery Sp. Ed.Center Lahore	5
10	Govt. SpEd. School S.Rise Lahore	5

Five (5) students were selected as sample from each mentioned above schools with equal allocation.

Table 2

Description of Frequency and Percent in terms of Gender

Gender	*Frequency*	*Percent*
Male	33	66.0
Female	17	34.0
Total	50	100.0

There were fifty (50) visually impaired students of which 33male and 17female students in sample. As for as percentage is concerned, 66% male and 34% female students.

Findings

Q. No 1

What are the defects of present examination system for Visually Impaired Children?

Table 3
Preparation for exam instead of knowledge.

Statement	*Options*	*Frequency*	*Percent*
It focuses the preparation for exam instead of giving knowledge.	S A	28	28.0
	A	40	40.0
	U D	6	6.0
	D A	26	26.0
	S DA	0	0
	N R	0	0

Strongly Agree (S A), Agree (A), Un Decided (U D), Dis Agree (D A), Strongly Dis Agree (S D A) , Not Respondent (N R)

The above table shows that 68 % respondent supported the statement that it focuses the preparation for exam instead of giving knowledge. Whereas only 26% denied it. The existing examination system for visually impaired children confirms the special children in the preparation to get good marks by adopting a variety of means. It can be concluded that visually impaired children not only prepare for examination but also widen their knowledge.

Table 4
Arrangements are ineffective.

Statement	*Options*	*Frequency*	*Percent*
Arrangements of exam are ineffective.	S A	26	26.0
	A	39	39.0
	UN D	9	9.0
	DA	22	22.0
	S D	1	1.0
	N R	3	3.0

The above table shows that 66 % respondent supported the statement that arrangements of exam are ineffective. Whereas only 23% denied it. The study revealed that the arrangements of examination for visually impaired children in all aspects are in effective.

Table 5

Weakness of teachers is also measured.

Statement	*Options*	*Frequency*	*Percent*
Weakness of teachers is also measured more effectively through examination system	S A	21	21.0
	A	60	60.0
	UN D	6	6.0
	D A	10	10.0
	S D	3	3.0
	N R	0	0

The above table shows that 81 % respondent supported the statement that weakness of teachers is also measured more effectively through examination system. Whereas only 13% denied it.The examination also evaluates the performance of special teachers. The study concluded that in the existing examination system for visually impaired children, the weaknesses of special teachers also come soon. Thus special teachers cover their weaknesses very soon.

Q. NO 2

What are the inadequacies in the conduct of Braille examination for Visually Impaired Children?

Table 6
Examination in Braille leads to segregation.

Statement	*Options*	*Frequency*	*Percent*
The examination in Braille leads to segregation.	S A	28	28.0
	A	37	37.0
	UN D	15	15.0
	DA	14	14.0
	S D	3	3.0
	N R	3	3.0

The above table shows that 65 % respondent supported the statement that the examination in Braille leads to segregation. Whereas only 17% denied it.

Table 7
Write and Braille are commonly used for VIC.

Statement	*Options*	*Frequency*	*Percent*
Write and Braille system are commonly used for visually impaired children.	S A	30	30.0
	A	46	46.0
	U D	6	6.0
	DA	2	2.0
	S D	6	6.0
	N R	10	10.0

The above table shows that 76 % respondent supported the statement that write and Braille system are commonly used for visually impaired children. Whereas only 8% denied it.

Table 8
No formal examination system for Visually Impaired Children.

Statement	*Options*	*Frequency*	*Percent*
There are no formal examination Procedures for visually impaired children.	S A	23	23.0
	A	37	37.0
	UD	21	21.0
	DA	4	4.0
	S D	5	5.0
	N R	10	10.0

The above table shows that 60 % respondent supported the statement that there are no formal examination procedures for visually impaired children. Whereas only 9% denied it.

Q. NO 3

What model examination system do the teachers suggest for Visually Impaired Children?

Ho1: There is no significant difference in the mean achievement scores on examination system for visually impaired children scale of male and female teachers.

Table No 9.
t-test for Gender

Gender	*N*	*Mean*	*df*	*t-value*
Male	*48*	*209.29*	*98*	*0 .21**
Female	*52*	*219.67*		

** Significant ato .05 level*

The above table with t valve .21 with df 98 reflects that null hypothesis," No significantly difference in the mean achievement scores on examination system for visually impaired children scale of male and female teachers" is rejected and hence it can be concluded that female teachers were more concerned (mean score 219.67) than male teachers (mean score 209.29) about the examination system for visually impaired children.

Ho 2: There is no significant difference in the mean achievement scores of male and female students in sum of two tests.

Table 10
t-test for Gender

Gender	*N*	*Mean*	*df*	*t-value*
Male	*33*	*59.18*	*48*	*0 .21*
Female	*17*	*58.70*		

Not significant ato .05 level

The above table with t valve .21 with df 48 reflects that null hypothesis," There is no significant difference in the mean achievement scores of male and female students in Sum of two tests" is accepted and hence it can be concluded that there is no significant difference in the mean achievement scores of male and female students in Sum of two tests. So we can say that male and female students performed equally in Sum of two tests.

Discussion

Sustained Examination mechanism is pivotal ingredient of educational programs of any country and nation. When examining mechanism has inadequacies and fails to bridge the gap.It adversely affects the standard of educational instructions. The prime and foremost purpose of examination is to promote teaching learning process and determine

students' achievement. Ostensibly, Examination looks the horrible and burdensome but intriguely, it motivates for purposeful teaching and education. Students with visual impairment basically require conducive physically environmental scenario, appropriately administering and conduction of exams. The present work is linkage with inadequacies in examination for students of VI. Accordingly, the data and results retrieved from the study highlighted a few difficulties and challenges combated by students during exams (Amaele,2013).

Saleem (2012) and Saddiqi (2012) reported in his literature review and findings of the research work that responses from teachers, teaching to students with visual impairment experiencing to some extent a few difficulties and discomfortable arrangements during the examinations. Close related findings have been found and explored in the present research work where teachers of students with visual impairment have revealed unfair means, distant examination centers, overcrowded rooms without facilities for students with visual impairment. Examination system in Pakistan is not conducted as per latest communication technology and still inadequate and inappropriate. Non accessibility to students with special needs, load shedding, unfriendly environmental scenario in the exams are great and grim issues for students with visual impairment (Banyard, Dillon, Norman, & Winder, 2015).

It was suggested by the teachers that students with visual impairment may be affiliated with special arrangement, suitable ,appropriate, adequate and conducive environment as well as cooperative behavior of supervisory staff and examining entity. Pakistani existing examination system for students with visual impairment requires some changes and modifications under dire and emergent reforms. Accordingly, community, parents and school administration desire excellent performance and satisfactory results from the students with visual impairment in Pakistan (Rehmani, 2003).

Conclusions and Recommendations

The current research work presented the perceptions of students with visual impairment and their teachers concerning the difficulties, inadequacies and Braille examination system for visually impaired children. Mostly participants reflected the lack of supportive services and inaccessibility to required process of their exam preparation and have far-

reaching effects that go beyond exam preparation. The process of their exam preparation has far-reaching effects on their language development, abstract thinking, problem-solving and reasoning skills, altogether affecting their quality of life. Almost the maximum teachers reported that write and Braille system was commonly used for visually impaired children. Whereas only 8% denied. It was also concluded that in Sum of two tests, no significant variance was found in the mean achievement scores in terms of gender. So we can say that all the students with V I performed equally in existing examination system for visually impaired children. Further more, teachers reported that there were no formal examination procedures for visually impaired children.

On the basis of findings of the present research work, underlying implications for policymakers are devised: Policymakers should determine that institutions with Visual impairment students provide adequate and sufficient arrangements to facilitate the learnings and teaching process. These facilities include; braille's, tactile diagrams, large-print materials, audiobooks, among others.

The students of VI needs to be permitted to appear in the examination in such types, as, by an audio recording, Braille, writer, and computer. Entire supporting services, textbooks, key documents, perspective views, and other documentations may be managed both in Braille and soft form. If learners and candidates are provided with these facilities in taking the examination, students' experiences can be researched using qualitative methods.

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A Study on Barriers Faced by School Heads in the Implementation of Inclusive Education in Sindh, Pakistan

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Abstract

Several research studies have already been conducted since the inception of the Salamanca Declaration in 1994 till to this time. It has been found on the basis of available literature that implementation of inclusive education is still a challenge for different under-developed and developed countries of the world. Keeping this in view, it is essential to find out the barriers faced by the school heads in the implementation of inclusive education in Sindh, Pakistan. The current study aims to identify three types of barriers 1) policy-level barriers, 2) institution-level barriers and 3) community-level barriers. The population of the current study was 30 public primary-level schools in Karachi, Sindh from which 16 schools were randomly selected as the sample of study. A self-developed quantitative questionnaire consisting of 15 close-ended items was developed and distributed among the selected schools. The collected data were analyzed with the help of Statistical Package for Social Sciences (SPSS) software. The findings of the study revealed that there is no clear policy regarding the implementation of Inclusive Education in Sindh, Pakistan. The issues like untrained teaching staff and available facilities create problems for heads of ordinary primary level schools in order to implement inclusive education.

Keywords: barriers to inclusive education, school heads, implementation of inclusive education

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Introduction

Inclusion is fastened to the fundamental right to education for all types of children with and without special needs. Article 24 of The United Nations Convention on the Rights of Persons with Disabilities (CRPD), emphasized on the global shifting towards inclusion of differently abled children by improving education system and undertaking measures to fulfil the desired needs of differently abled persons (UN, 2006). The Government of Pakistan is an equal signatory of all universal education declarations including Education for All (EFA). Education for All is providing a guarantee of equal education opportunities to all types of children with and without special needs in the country. The population of Pakistan is about 208 million which is the sixth most population in the world (UNICEF, 2019). The country practiced significant transformation over the years which influenced its social, economic, and political development. After the approval of the 18th amendment in 2010, the powers of educational institutions were decentralized from the federal to the provincial level (UNICEF, 2017). The function of education institutions was connected to provincial governments (UNESCO, 2013-2017). After devolving of education institutions to the provinces various challenges were identified in the education system of the country. The challenges included the lack of expertise and capacity to implement programs and develop plans at the provincial level (Ibid). Moreover, vital steps were taken by the government of Pakistan towards the right to education for all children aged 5-16 years, the government seriously concentrated on reforming of curriculum, capacity building of teachers, and refining governance in the education sector (World Bank, 2019). These challenges directly or indirectly impact the inclusion of children, especially children with special needs, who face difficulties accessing ordinary schools, non-availability of good learning material, and trained staff. The key aim of this study was to know about the existing educational barriers faced by school heads for promoting inclusive education and principles of inclusion in general classroom settings. The key difficulties and challenges also remained the focus of this study.

Literature Review

Innovations Of Pakistan Towards Inclusive Education in Pakistan

- National Policy for Persons with Disability was adopted by the government of Pakistan in 2002.
- In 2005, Islamabad Declaration was signed by the Government of Pakistan with the consultation of provinces.
- In 2006, the accessibility of Persons with Disabilities was adopted in view of the Islamabad Declaration.
- In 2008, Convention was signed on the Rights of Persons with Disabilities.
- In 2011, the convention was ratified on the Rights of Persons with Disabilities.
- In 2013-2014, Laws were passed by Baluchistan, Punjab, and Sindh provinces in support of Inclusive Education.
- In 2017, National Education Policy was adopted, National Curriculum Framework was approved. Free Compulsory Primary and Secondary Education Act was adopted by Khyber Pakhtunkhwa.
- In 2020, the Government of Pakistan passed the ICT Rights of Persons with Disabilities Act.

Moreover, Pakistan made efforts to the placement of legislative frameworks to achieve the outset goals of international conventions on the rights of differently abled children and inclusive education (UNICEF, 2021). Policy legislation and framework in Pakistan regarding Inclusive Education

The Constitution of Pakistan (1973) amended in 2012 delivers a strong framework for equal rights to education without any discrimination in education (Article 26). Article 25-A of the Constitution of the Islamic Republic of Pakistan bounds the sitting government to free and compulsory education for all types of children aged 5-16 years (The Constitution of Pakistan, 2012). Pakistan has made desirable efforts to the United Nations Conventions on the Rights of every child to put in place a legislative framework for achieving the international convention goals. Moreover, the Government of Pakistan outlined a common framework for the inclusion of differently abled children in general education through policies at the national level.

1. In the light of the Biwako Framework, the Federal government approved the National Policy for Persons with Disabilities 2002, functionalized after the National Action Plan in 2006. The policy outline goals were to empower the persons with disabilities by providing facilities to them in society for their full integration, to ensure their participation in the programs and planning related to them, to make sure the safety and security of their rights like other citizens, and provide equal rights in the field of education, medical psychological, social, vocational training, rehabilitation, and employment without, any discrimination. However, the Office of the United Nations High Commissioner for Human Rights states that until 2015, the set-out long-term strategies of the action plan had not been implemented yet.
2. In 2005, a declaration was signed by the federal government and provincial government heads with the title of Islamabad Declaration on Inclusive Education. The declaration ensures that "all children regardless of gender, abilities, disabilities, and socio-economic, cultural, and ethnic backgrounds are treated with dignity and respect; have equal access to education, health services, work and all other aspects of life; are enabled to develop their full academic, physical, emotional and social potential; have access to learning material through appropriate media and technical devices; and develop confidence in their abilities, skills and prospects" (Ministry of Social Welfare, 2005).
3. While the National Education Policy (2009) titled differently abled children as handicapped children. The utilized term is against and problematic for inclusive education terminology. The key aim of the policy was to "equalize access to education through the provision of special facilities for girls and boys alike, underprivileged/marginalized groups, and handicapped children and adults" (NEP, 2009). Hence, the National Education Policy (2009) did not provide clear strategies to this end. In 2017, a new National Education Policy was approved, the focus of that was particularly on inclusive and special education. The policy aimed to expand the access of differently abled children in the education system and bring 50% of all differently abled children into the existing general education institutions at all levels (NEP, 2017).
4. The Government of Sindh passed The Sindh Right of Children to Free and Compulsory Education Act (2013) which rebounds the goals of education for all children aged 5-16 years (The Rights of Children to Free and Compulsory Education Act, 2013) but the

> Act did refer to inclusion or inclusive education or special attention towards from segregation of differently abled children and their transition to inclusive education.

The frameworks apply for intervention in the education system while policies emphasize, particularly the disadvantaged group, including differently abled children.

The above literature highlighted that there is still a need for a clear policy and legislation for the implementation of inclusive education in Sindh, Pakistan for the successful inclusion of differently abled children in the formal education system.

School-level barriers to the implementation of Inclusive Education

The heads of general schools are facing lots of barriers in starting of inclusive education process some of them are given below:

Curriculum Transmission Barriers

The delivery of curriculum and teaching methods depend on the teachers or educators and it plays a pivotal role in an inclusive classroom. While implementation of a rigid and inflexible curriculum that does not allow and meet the learning needs of individuals can lead to learning collapse (Motitswe, 2012).

The irrelevant subject content, inappropriate learning materials, inadequate teaching methods, and resources, improper classroom management, and inadequate assessment methods can negatively affect on the education of children with and without special needs. Motitswe (2012) stated that one of the most important barriers to learning for differently abled children found the curriculum of general schools itself and the inflexible nature of the curriculum as well. Hence, the curriculum should be modified as per the needs of different learners especially children with needs and the curriculum should be learner-centered.

Zimba (2011) discovered that the existing curriculum was not modified as per the learning needs of differently abled children and to accommodate learners with a wide range of educational needs. The teaching of differently-abled students and the use of mainstream teaching

methods in an inclusive class create problems and challenges for learners and teachers as well.

Inadequate Assessment Process

The term assessment is used to check the performance of students in a specific subject, area, or field. Assessment is providing required information regarding learners and their progress and it also strengthens the teaching and learning process (Muller, 2004).

Hence, assessment methods should also be considered as per the needs of differently-abled children.

Untrained And Teachers' Training Barriers

The role of teachers is very important in quality education and it cannot be improved without quality training. Hull (2005) echoes that training provides continued assistance with various instructions and modified and adapted curricula to meet the needs of children with special needs. The continued absence of teacher training leads to ambiguity, low self-worth, insecurity, and a lack of modern technology-based practices in the class (Muller, 2004). This may develop hindrances toward inclusive education and enabling mechanisms.

The above literature suggests that the role of trained teachers is mandatory in the field of inclusive education because it needs particular attention to different teaching methods.

Inadequate Teaching and Learning Material

Le Fanu (2005) stated that teachers should have information of knowledge about the different forms of disabilities that occur among children. The common differences include gender disparity, ethnic and cultural, linguistic diversity, academic and cognitive differences, social disparity, and sensory (retrieved from Research http://www.ajod.org).

Most of these differences are interrelated with each other and also implanted in different contexts. For example, without consideration of traditional beliefs, the understanding problems faced by girls' students is very difficult. Mukhopadhyay et al., (2013) observed that a school offering inclusive education with a long history of regular classes took to support and collaborate with special educators. They used ideal strategies for teaching in

an inclusive classroom such as large and bold fonts for visually disturbed students, peer tutoring for visually impaired students, and team teaching.

The culture of Pakistan is different from other countries, so the problems faced by children with special needs are different. Pakistan is trying to achieve a 100% enrollment rate in the country but still failed to do so because there is no inclusive education institution in the rural context of Sindh, province. Except, the education of differently abled children and fully ensuring of inclusive education in rural contexts of the country, especially in Sindh achieving a 100% enrollment rate is a dream for the Pakistani community.

Community Level Barriers

The involvement of community members and parents of differently abled children is very essential for the implementation and decision-making of inclusive education in general schools. The involvement and interest of parents can be increased with motivation sessions, seminars, workshops, and offering the right of their participation in decision-making of schools. The community-level barriers simply are:

1. Lack of information about the education of differently abled children and inclusive education in the community.
2. The reluctance of parents of children with special needs to explore their disability and make early decisions for their education and rehabilitation.

Purpose of the Study

The current study aimed to explore the barriers which create hurdles in the process of inclusive education in province of Sindh, Pakistan. The main focus of the study was on policy, school, and community level barriers.

Methodology

A quantitative approach was used in the current study. The study was descriptive. A self-developed close ended questionnaire was administered among the 20 heads of public primary level schools in Karachi, Sindh to know their ideas related to barriers to inclusive education in general schools.

Population, Sample and Sampling Technique

30 heads of public primary-level schools in Karachi city were population of current study from which 16 public primary level schools and their heads were randomly selected as sample of this study. Keeping in view the prefix or gender of schools, the researcher selected an equal number of schools from both (boys and girls) sides.

Ethical Consideration

All ethics related to this study were highly considered by the researcher. Gender, race, ethnicity, age, and institution were excluded because these have no direct or indirect relevance to the study. Moreover, the collected data was only used for the research purpose and provided information regarding the topic kept confidential and secret.

Data Collection

The data was collected with the help of close ended questionnaire which comprised of 15 items. The main researcher visited all selected schools himself and described the purpose of the study to the participants. Each item was briefly explored with participants. The collected data was only utilized for research. Enough time was provided to the participants on their demand as they can easily explore their views and opinions related to the study.

Data Analysis

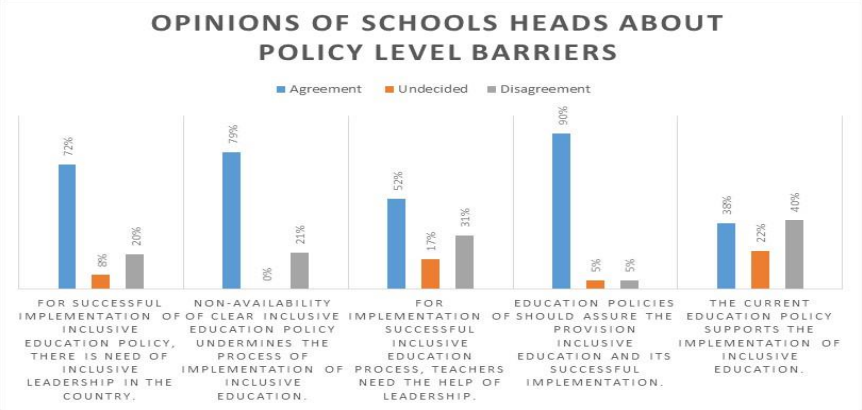

Figure :1 Graphs were used to analyses the collected data

The aforesaid graph shows that existing educational policy which is being implemented at public primary level schools does not support the successful implementation of inclusive education. The graph also illustrates that participants were in favor of a new and clear education policy for inclusive education.

Analysis: It is analyzed that government should design a new education policy with clear strategies for the successful implementation of inclusive education. If the government is sincere and tries to get 100% enrollment and meet the purposes of all national and international declaration then the implementation of inclusive education cannot put be aside.

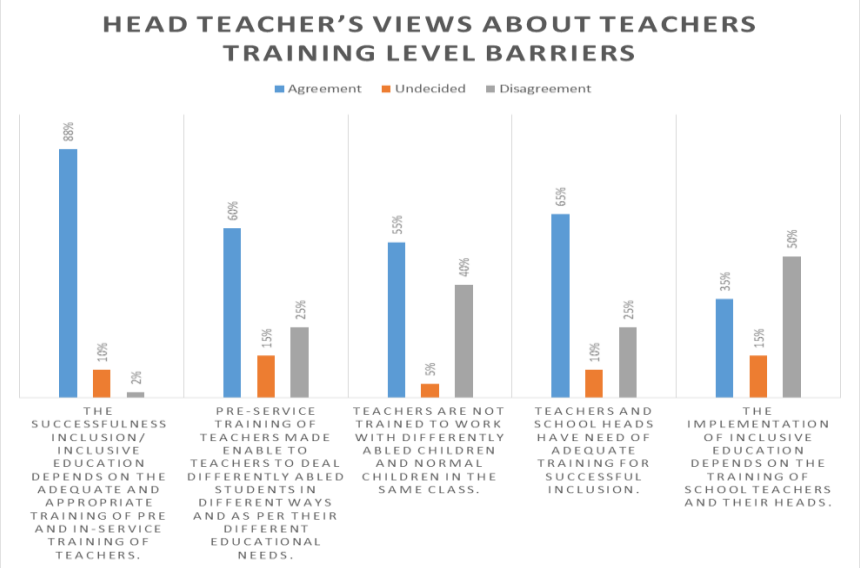

Figure 2: Head Teachers view about teachers training level barriers

The above graph shows that the successful implementation of inclusive education is depending on the competency of teachers, training of school heads and teachers and different teaching strategies of teachers.

Analysis: it has been found that proper implementation or process of inclusion is impossible without trained teachers and trained school heads. Moreover, the training of school heads and teachers is equally important for successful implementation.

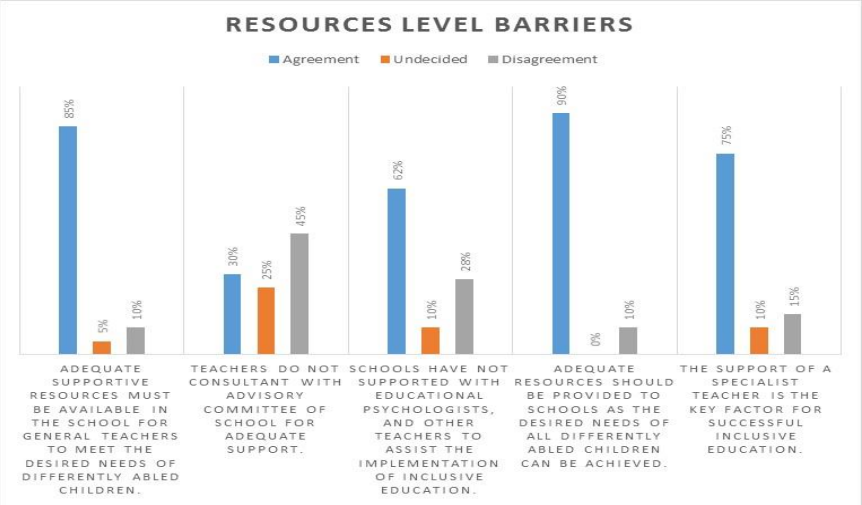

Figure 3: Resources Level Barriers

The above graph shows that the availability of adequate resources as per the needs of differently abled children is essential for the inclusion of normal and differently abled children in an ordinary classroom.

Analysis: It has been found that the availability of adequate resources, special education teachers, supported staff, and an advisory committee for consultation of teachers is very essential for the execution of the inclusive education process. Despite, basic facilities and resources the implementation of inclusive education is like dream.

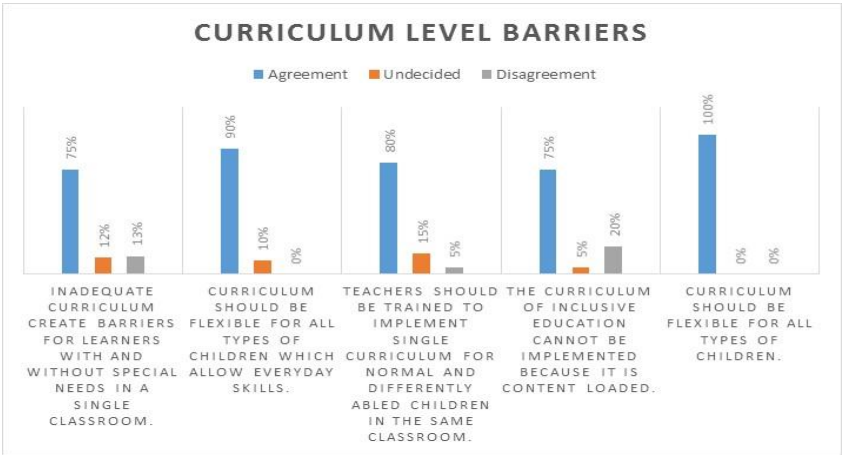

Figure 4: Curriculum Level Barriers

The aforementioned graph shows that the existing curriculum that is being implemented in primary level schools of Sindh is not flexible and inadequate for inclusive education. The existing curriculum needs modification as per the needs of differently abled students.

Analysis: As per views of respondents, implementation of an inclusive education curriculum is not an easy task. It is content-loaded for all types of children. It should be flexible for all children at the same level. Through the existing curriculum implementation of inclusive education is a little bit challenging.

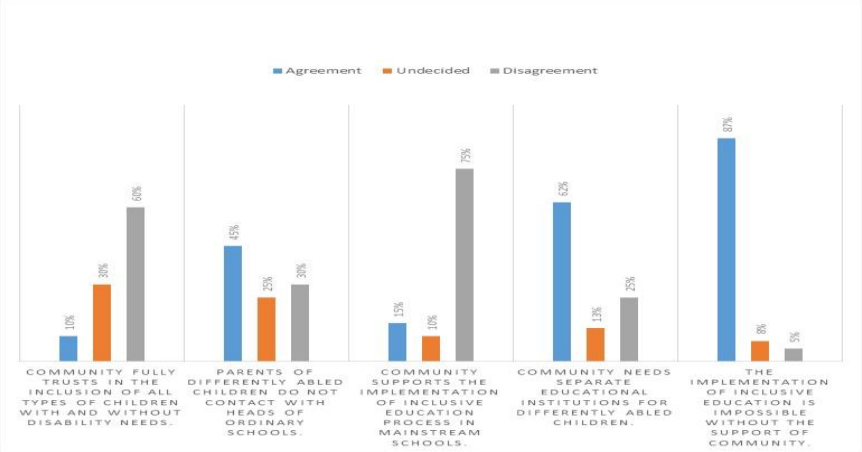

Figure 5: Community Level Barriers

The graph illustrates that the community has no trust in the inclusion of differently abled children with normal children. According to the responses of respondents parents of differently abled do not contact the heads of normal schools they believe in separate educational institutions as per the needs of their children. The respondents viewed that the successful process of inclusive education cannot be achieved without the support of the community or parents of differently abled children.

Analysis: It has been found that participation of parents of differently abled children and trust of the community is essential for the successfulness of inclusive education.

Findings

1. It has been found that the existing curriculum was not flexible for all types of children with and without special needs in the same class in Sindh.
2. Teachers were not trained as per the needs of differently abled children and implementation of an inclusive education curriculum.
3. The policy did not support the implementation of inclusive education.
4. A separate educational policy along with clear strategies was required for the successful implementation of inclusive education in Sindh.
5. Flexible building, basic facilities such as ramps, wheelchairs, availability of washrooms, required teaching and learning material and curriculum were not provided to mainstream schools for differently abled children.
6. The community did not believe in the inclusion of normal and differently abled children in a single classroom.
7. Parents of differently abled children did not communicate with heads of ordinary schools for the education of their children.
8. Seminars, workshops, training programs, awareness drives, and other awareness acts were not arranged for parents of differently abled children and their parents.

Recommendations

1. It is recommended that awareness about inclusion or inclusive education should be included in pre-service and in-service teacher training manuals.
2. A clear inclusive education policy should be developed for the successful implementation of inclusive education in Sindh.
3. Adequate teaching and learning materials should be provided to the school for the offering inclusive education.
4. The buildings including all basic facilities as per the needs of differently abled children should be upgraded.
5. Awareness programs should be arranged in schools for parents of differently abled children in Sindh.
6. The community should be invited and mobilized for the inclusion of differently abled children in ordinary schools.

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Challenges in Accessing Health Care Management for People with Disability in Pakistan

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Abstract

This study examines how the lives of disabled people are challenged physically, financially and due to specialists' attitudes towards them while accessing health care management in disability centers of Rawalpindi and Islamabad. These challenges must be accommodated them in society and uphold their rights by enabling the disabled with a peaceful and productive life. Moreover, for develop firm recommendations for future policy implications and provide the researchers with a better understanding of the demographic characteristics of disabled persons in Pakistan. This qualitative, cross-sectional, descriptive study was conducted to identify the challenges confronted by physically challenged persons visiting the disability centers. A convenient sample of 100 men and women of age 15-60 years with crippling physical conditions were as sample. Data was gathered thorough questionnaire. It was concluded from the results, that they are satisfied from the disabilities centers. As the analysis showed remarkable unsatisfied results. Further the findings of the study that disabled persons are facing challenges in accessing quality health care in disability centers. Existing policies should be revised with the main focus on the accessibility of physically disabled persons in terms of building, transport, education, employment and quality affordable health services hence combating the iniquitous attitudes of agencies towards the disabled. The pre-eminent limitation is the small sample size hence not reflecting the entire disabled community of Pakistan.

Keywords: quality healthcare, accessibility, challenges, physically disabled person

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Introduction

Disability is a global issue that occurs more frequently in developing countries than it does in developed countries (WHO global disability action plan 2014-2021). The worldwide research proposes that hurdles are confronted by Persons with Disabilities (PWDS) in attaining quality health care and experience stigma, inequality and discrimination throughout their lives (Holanda, Andrade & Bezerra, 2015). Approximately 15 percent of the world's population has some kind of disability, according to statistics compiled by the World Health Organization (WHO) and almost one-half of those disabled persons are even unable to afford quality health care (Becky, 2021). Persons with disabilities are usually challenged in three aspects such as physically, financially and due to a negative attitude which greatly hinders their participation in society. These challenges must be addressed in order to enable the disabled with peaceful productive life (Krahn, Walker & Correa-De-Araujo, 2015). An estimated 14 percent of the individuals with disabilities in developed countries are employed. The rest of those with disabilities are dependent on their families for financial support (Ashok, Shetty, & Mayya, 2015).

Improving the quality of existing health care programs and services, combined with the development of new ones, is essential to ensuring better health outcomes. Inequity in health care services exacerbates health inequalities are commonly faced by disabled people which lead to worse health outcomes (Imoro, 2015). Access to health facilities is regarded as an asset of citizens whereas on the contrary lack of quality care and health facilities result in an increased risk of functional decline of a person's health which leads to an increase in work-limiting disabilities. These circumstances arise when a person wants quality care but are unable to afford it (Baptiste, 2013).

Healthcare access has been studied by researchers around the world in order to understand global health disparities and improve care. The World health organization (WHO), the international labour organization (ILO) and the United Nations educational, scientific and cultural organization (UNESCO) are the United Nations expert organizations with a resolution to endorse the objective of rehabilitation and to equalize opportunities for disabled persons. These organizations are trying to advance their participation

keeping in mind the end goal to advance multi-sectoral joint effort at the national level for disabled persons (Barnes, 2011).

Persons living with disabilities encounter frequent barriers that limit their access to basic needs and increase the likelihood of living in poverty. Unemployment, as well as the cost of medical care for persons with disabilities, cause people in this situation to be at a higher risk of becoming impoverished (Palmer, 2011). Thus, an inclusive approach is important for disabled persons to have the same rights and opportunities and to attain their full potential as sanctioned by the UN conventions on human rights and rights of people with disabilities (UNCRPD) and is signed by Pakistan (Ahmad, 2013).

Article 25 of the Convention on the Rights of Persons with Disabilities (CRPD) demands that signatory countries guarantee disabled people access to health services, including reproductive health. In addition, these countries must implement population-based public health programs with the same range and quality standards as those presented to non-disabled people. Pakistan as being the signatory country of this convention had taken several steps to aid disabled persons. In 1981, the National Council for the Rehabilitation of Disabled Persons (NCRDP) was established to carry out government policy on employment and social welfare for disabled people (Ahmed, 2021).

In 2002, Pakistan's first-ever national policy on the subject of disability has been stated. This policy of equal opportunities affirmed to provide disabled persons with equal opportunities in all spheres of life, not only by providing better health services but also by providing prosthetic limbs and supportive braces/splints to disabled persons. An effective referral system, quality health care, and barrier-free access are key to providing health services in developing countries (Arsh, 2019).

Whereas in 2003 Pakistan's government policy reserved a 2% quota for persons with disabilities (PWDS) in Zakat. Lately, many amendments were made in National Policy (2015) to further strengthen the constitutional rights of disabled persons in Pakistan but they are still deprived of their rights in Pakistan. Present laws and government regulations should be improved since the main law for the prosperity of disabled persons was last ratified in 1981.

Though, in response to significant data gaps, worldwide researchers have been tracking changes in information sources for disabled persons over the past decade. There is a Lack of peer-reviewed literature regarding attaining quality health care by persons living with disabilities, especially in developing countries. Efforts are required to bridge the gap between developed policies for the disabled and new effective policies and laws should be created to normalize such laws. Importance should be given to work on literature covering all the aspects of the challenges faced by disabled persons. This research article is primarily focused on physically disabled persons who have crippling conditions with an aim to evaluate the quality of health care management in disability centers in Pakistan.

Literature Review

According to Krahn (2015), almost 60 definitions of disability have been presented by disability researchers globally. Generally, the word "disability" has been used in various contexts but the Global Burden of Disease (GBD) refers to "A methodological framework for quantifying the impact of diseases on people's health based in part on their ability to function. They regard disability as the loss of health, using a measurement scale to look at functioning in five key areas: mobility, cognition, hearing, vision, and self-care."

Concept of Disability

Disability is an ancient concept and is existed for as long as mankind has existed. Even though disability has been remained unchanged but our opinion regarding the concept of disability has changed over time for the better. According to the WHO disability report (2021), the developmental history of disability had many stages but mainly it is divided into main three stages depicting the gradual change in the views of people towards disability. The below table shows the stages of the evolutionary history of disability.

Table 1
Stages of History of Disability

Stage 1	*Stage 2*	*Stage 3*
Medieval Era	*1800's Era*	*Modern Era*
• The oldest time where disability was considered as an act of evil or deeds of the past (Karma). • Disability was considered as an inability and disabled persons were considered as a burden on their families and to the community as a whole. • No views of disability as a medical condition.	• In this era, disability began to be considered as a condition that had personal, public, social and policy consequences. • Disability was considered as a medical condition arising because of disease, trauma, or health issue. • No disability model has been introduced.	• Disability has been considered as a limitation in the ability of the persons due to environmental or societal factors that restrict their ability to participate in their societies or families or to access the services they required. Thus, disability is viewed as a result of an inaccessible environment.

Fellinghauer and colleagues (2012) defined Physical Disability, as "Difficulty in one or more areas of functioning, including both activities and participation."

Theoretical Framework

The theoretical framework provides a solid base for confirming the researcher's empirical observations and helps the researcher to expand on those observations. Disability models are governmental and societal tools designed to help people with disabilities. Although there are many ways to conceptualize disability, there is a lot of disagreement about which model to use. These models give an overview of ableist attitudes and the resulting limitations placed on disabled people.

Medical Model of Disability

Historically, the only model used regarding health and disease was the medical model, which attributed an individual's illness to disease, and treatment was solely medical. In more recent times, Modern thinkers have

adopted a more functional model. The medical model of disability focuses on three factors:

i. Disease and impairment, which defines disability as a matter of a health disorder
ii. Injury or trauma to a person's body or mind
iii. Prevention or treatment of the Health status

Social Model of Disability

The Social Model of Disability states that disability is created by barriers in society, such as inaccessible buildings and negative attitudes. By identifying these barriers and taking steps to remove them, we can eliminate the disability. This dynamic model has outlined the challenges and suggests the solution to overcome those challenges. It states that impairment is a social construct and that therefore the only rational solution is to change the way how society views disability and to socially include disabled persons.

Amponsah-Bediako (2013) describes the social model of disability postulates that society is organized in such a way that people with disabilities are marginalized as a result of stigma and discrimination. Therefore, the removal of these barriers would not only improve the lives of disabled people but give them equal opportunities as non-disabled people. By following this, there would be no obstacles faced by disabled persons in the community. He describes that problem lies in the environment and society, not in PWDs and mentioned in his study about following challenges/obstacles in society:

i. Inadequate Health Care Services
ii. Transport inaccesibility
iii. Environment inaccessibility
iv. Dependency
v. Poverty And Economic Dependency
vi. Isolation, Segregation
vii. Un-Employment
viii. Illiteracy
ix. In-Equity
x. Stigma

The social model takes a proactive approach to disability. This model doesn't see disabled persons as passive and believes that there is a

need to change society rather than disabled persons. Furthermore, this model suggests that it's the responsibility of society to provide support so that disabled persons can be on an equal footing as everyone else. While the Medical Model focuses on a person's impairment and assumes that disabled persons have identical needs, the Social Model focuses on a person's abilities and strengths.

Economic Model of Disability

Economic models of disability assess the degree to which disability affects an individual's ability to contribute productively to a workforce and the costs, such as health care expenses, that result from that disability. Such costs, in turn, affect both workplace productivity and the profitability of companies and can influence government funding for health care among other things (Forrester, 2017). This economic model emphasizes that to eradicate poverty and reduce the financial burden on PWDs and their families, policies should be revised to balance the rights of the disabled with others in society.

Bio-Psychosocial Model

The Biopsychosocial Model of disability was developed with the goal of integrating the medical model and social model into a more comprehensive understanding of disability. According to a model known as the biopsychosocial model, to understand a person's medical condition, all factors--biological, psychological, and social must be considered. The bio-psychosocial model of disability is a more holistic approach to understanding disability than medical and social models. Disability researchers felt the medical model was oversimplified whereas the social model of disability took the disabled person's point of view into account (Shakespeare, Cooper & Poland, 2018).

Challenges Confronted by Physically Disabled Persons

In the context of disability, many challenges have been faced by Pwds due to social inequity which can evoke different feelings from different people. Several cultures around the world view disability as a spiritual curse. Even though there are medical explanations for the existence of a disability, these explanations are less common and more prone to being misunderstood.

In the West, disability is typically viewed through the lens of medical theories such as those surrounding the polio outbreak. In the East, however, disability is not seen as a natural phenomenon and is explained differently. Such different perceptions from people, therefore, involve government differently depending on the country.

In Pakistan, disabled persons have confronted many diverse challenges, including structural issues such as workplace design, emotional issues such as stigma, and economic barriers such as inaccessible workplaces. This is largely due to the fact that society lacks awareness and equity. It is also because government policies fail to protect the constitutional rights of disabled persons. The ultimate goal of the disability movement in Pakistan is to remove hurdles that restrict disabled persons from living a full, active life (Rathore et al., 2011).

Physical Challenges

Physical challenges refer to physical limitations that make it hard or impossible to do activities like a normal person, or to access buildings and public transportation. There are several challenges faced by people with disabilities, regardless of the nature of their disability. In most cases, disabled persons have a hard time moving about in public places and offices. This is not because they cannot move but simply because of the inaccessible environment. The unavailability of wheelchairs and artificial limbs for some disabled people results in them crawling or being carried on the backs of others (Fiorati & Elui, 2015).

Healthcare Accessibility

Accessibility is generally referred to as the ease of access to a location, service or device. In other words, accessibility is the ability to access and get benefits from something. To make things accessible to all people (regardless of their disability), it's best to make them universally designed. In the case of disabled persons, assistive devices can help achieve accessibility via indirect means such as assistive devices or infrastructure such as the availability of ramps and rails (Gudlavalleti, 2018). Physically disabled persons face various types of accessibility challenges. A few of them are:

Access to Healthcare Buildings

Disabled persons encounter physical barriers when maneuvering through buildings, which are in violation of the law regarding access for people with disabilities. This is because building codes have not been updated to accommodate disabled persons. However, there are some efforts to change typical infrastructure practices so that new buildings incorporate basic accessibility features such as adequate ramps and door widths (Gudlavalleti, 2018).

Access to Healthcare Services

Many people assume building accessibility only means wheelchair ramps, but actually, a much more important issue is ensuring that all people, including those with other disabilities, have access to all environments without having restrictions. A true understanding of accessibility means considering how people with different disabilities could be affected by your organization. This should not only include physical space but also communication and attitude of specialists or health care providers towards disabled persons. By changing the attitude or the way specialists communicate with disabled persons, we can increase accessibility (Vergunst, Swartz & Hem, 2017).

Access to Transport

In the context of transportation, accessibility is that all disabled persons can easily reach any destination. If you have more accessibility, you'll be able to reach many other activities or destinations quicker. As the majority of the population are persons without disabilities, public transport does not cater for disabled people or those with mobility problems. This makes Public transportation inaccessible to disabled persons (Bascom & Christensen, 2017).

Economic Challenges

Viewing disability in economic terms, disabled persons require special assistance that is different from others. For instance, they may need special medicine or wheelchairs. They may also need personal caretakers. In other words, to fulfil the needs of disabled persons extra costs is required. Even with help from the government and other people, disabled

people still have a difficult time surviving in this competitive world (Palmer, 2015).

It has been concluded from the above discussion there have been very few studies regarding the challenges confronted by physically disabled persons in accessing quality healthcare in disability centres. The present study was mainly based on foreign studies. The researcher review previous studies and cited them in the study. In the view of the literature studied by a researcher, it is the first study in accessing the challenges faced by physically disabled persons in attaining quality health care at disability centers in Pakistan. This study provided basic information's to policymakers regarding the current situation of physically disabled persons in Pakistan and also laid the foundation to improve the right to justice and equal opportunity.

Objectives of the Study

During this study our primary objectives are:

i. To explore the demographic characteristics of disabled persons.
ii. To evaluate the quality of health care in disability centres.

Selection Criteria of the Study

This study includes only those participants who fulfilled the following criteria:

Inclusion Criteria Patients were included in the study if they having

i. 15-60 years of age
ii. Physical disability with crippling conditions
iii. Both Male and Female gender

Exclusion Criteria Patients were excluded from the study if they having

i. Any other type of disability (e.g. intellectual disability, learning disability).
ii. Psychological issues/ depression

Methodology

The study used a survey method to collect data, and the data were analyzed descriptively. Following procedural steps were adopted to accomplish the goal.

Sampling Techniques

Researchers used convenience (or accidental-volunteer) sampling to recruit participants from disability centres that have certain inclusion criteria. The participants were recruited who met the selection criteria as they enter the main entrances of each disability center. The researchers surveyed 100 people from four different disability centres. According to Gall et al., (1996) for smaller populations, say N=100 or fewer, it is usually not worth conducting a survey of the population as a whole. As the targeted population size of the present study was smaller, therefore small size was considered.

Instruments: For data collection, questionnaires were developed after studying the relevant literature. The factors of a social and economic model of disability were included in the study as explained above. These models pointed out different challenges encountered by PWDs such as environmental, attitudinal and economic barriers. Factors of these models are Inadequate Health Care Services, Inaccessible Transport, Inaccessible Buildings, Poverty and Economic Dependency, Isolation, Segregation, Un-Employment, Illiteracy, In-Equity and Stigma. For this research study, an instrument was developed that would focus on these factors. In part-11 of the questionnaire, five main factors were selected for this study are Health Services Accessibility, Accessibility of Specialists, Specialist Attitude, Cost Effectiveness and Overall Satisfaction. These main factors are sub-divided and a total of 28 items are studied in this research. A researcher decided on a descriptive research strategy and designed a questionnaire survey to analyze the challenges in accessing quality healthcare management in disability centres of Rawalpindi and Islamabad.

Validity and Reliability: The researcher consulted experts throughout the questionnaire development and modification of the items. After modification of the items, the reliability analysis shows that Cronbach's alpha for the questionnaire is 0.871, signifying that the questionnaire was internally consistent. The values of Alpha for each sub-indicators was:

Front Desk process (FDP), .83; Environment of Disability Centre (EDC) .89; Availability of Facilities (AF), .83; Accessibility of Specialist (AS), .87; Specialist Attitude (SA), .78; Overall Satisfaction (OS), .89. The alpha coefficient results indicated that the instrument was reliable.

Results

Demographic Characteristics of Respondents

The physically disabled persons' demographic and responses to a structured questionnaire are presented here. Information regarding demographic characteristics of respondents in terms of age, gender, family income, employment status, education, type of disability, age at which disability arose, type of mobility aid disabled persons is utilizing analyzed and presented in the following tables.

Table 2

Demographic Characteristics of the Study

Variables	*F*	*Mean (SD)*
Age		2.15(0.936)
15-25	26	
26-35	44	
36-45	19	
46-60	11	
Gender		1.56(0.498)
Male	44	
Female	56	
Education Level		3.07(1.578)
Illiterate	28	
Elementary	10	
High School	15	
College	21	
University	26	
Vocational	28	
Employment Status		1.91(1.12)
Employed	23	
Seeking employment	10	
Student	16	
Un-employed	51	
Marital Status		1.98(0.994)
Married	35	
Un-married	47	
Divorced	15	

Widow	3	
Cause of Disability		1.27(0.446)
Congenital	27	
Acquired	73	
Type of Mobility Aid		3(1.082)
Crutches	17	
Wheelchairs	8	
Artificial Limbs	35	
Orthosis (Brace/Splint)	40	
Family Income		1.38(0.582)
20,000 or below it	67	
20,000 to 50,000	28	
Above 50,000	5	

Results Based on Challenges Faced by Physically Disabled Persons

In this section, responses to challenges faced by physically disabled persons are analyzed. The researcher identifies 5 main challenges (Health Services Accessibility, Accessibility of Specialist, Specialist Attitude, Cost Effectiveness and Overall Satisfaction) and these main factors are sub-divided and a total of 28 items are studied in this section of research. This table shows a detailed, quantitative analytical framework of challenges faced by disabled persons visiting disability centres in Rawalpindi and Islamabad. The below table presents responses in the form of a percentage, standard deviation and mean. In order to simplify the description, strong agreement (SA) and agreement (A) were combined into one category. Similarly, strongly disagree (SDA) and disagree (DA) were also combined into one category.

Table 3

Disabled Persons' Response on the Challenges Confronted by Physically Disabled Persons

Responses on the Challenges Confronted by Physically Disabled Persons						
Variables	*Items*	*SA*	*N*	*SDA*		
		%	**%**	**%**	**S.D**	**Mean**
	Simplicity	37	7	56	0.96	2.54
	Speedy	31	3	66	0.9	2.7
Front Desk Process	Polite	43	4	53	0.89	2.46

	Confidentiality	32	9	59	0.56	2.86
	Waiting Time	30	2	68	0.77	2.43
Environment of Disability Centre	Room temperature	47	5	48	0.51	2.76
	Noise	44	12	44	0.6	2.45
	Cleanliness	40	7	53	0.64	3.04
	Bathroom facility	17	6	77	0.62	3.24
	Canteen facility	23	9	68	0.71	3.36
Availability of Facilities	Ramps	20	8	72	0.88	3.08
	Side rails or Grab rails	25	5	70	0.9	2.93
	Elevator/lift	18	10	72	0.96	3.01
	Adequate doorway	14	4	82	0.75	2.89
	Space for wheelchair	25	5	70	0.99	3.26
	Seating Provision	15	2	83	0.98	3.18
Accessibility of Specialists	Difficult to connect	62	9	29	0.85	2.96
	Difficult to ask questions	61	2	37	0.71	2.23
	Devotion of proper time	31	4	65	0.74	2.78
	Guidance to avoid abnormal gait	40	6	54	0.78	2.56
	Guidance of donning and doffing of appliance	64	11	25	0.86	3.01
Attitude of specialist	Helpful	38	2	60	0.74	1.86
	Polite	38	6	56	0.66	2.1

	Caring	22	3	75	0.59	1.89
	Professional	42	8	50	0.57	1.74
Overall Satisfaction	Affordability	18	10	72	0.53	1.64
	Information Provision	39	7	54	0.64	1.87
	Brace/splint or artificial limb provision	64	15	21	0.66	1.97

In the above table first column presents the significant variables. The second column of this table shows the 28 sub-items studied in this paper. The third, fourth and fifth column indicates the percentage of responses collected from respondents. The sixth and seventh column of this table indicates the standard deviation and mean of sub-items.

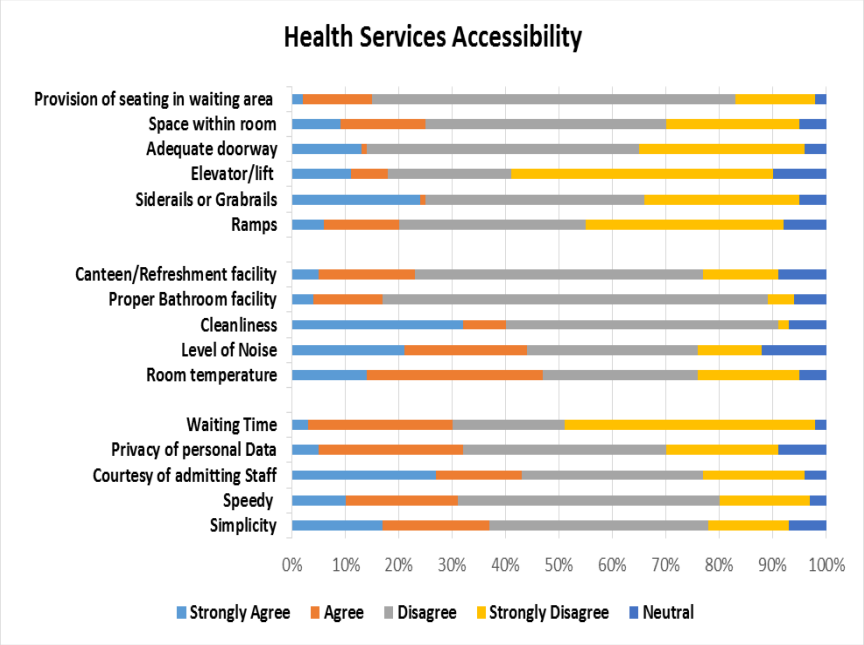

Figure 1 Graphical Representation of Disabled Persons' Response on Health Services Accessibility

As shown in the above figure, the respondents were given five choices: “Strongly Agree (SA)”, “Agree (A)”, “Neutral (N)”, “Disagree (D)”, and “Strongly Disagree (SDA)”. In order to simplify the description in the table, Strong Agree (SA) and Agree (A) were combined into one category. Similarly, Strongly Disagree (SDA) and Disagree (DA) were also combined into one category. The overall results revealed that the percentage of satisfaction about the Health Services Accessibility, Specialists Accessibility, Specialists Attitude and Overall Satisfaction from disability centres was remarkably low which showed that physically disabled persons were continuously facing challenges in attaining quality health care.

Conclusions

The results of the study revealed that physically disabled persons faced various challenges while visiting disability centres of Rawalpindi and Islamabad. Following were the major conclusions of the said study:

1. It was found that a considerable strength of respondents faced challenges in the front desk process when visiting the disability centres. All these negative experiences can lead to a feeling of isolation among disabled persons.
2. This result clearly shows disabled persons were dissatisfied with the present environmental adaptations on the four studied disability centres. Based on the findings of the present study, it is believed that there is a severe defect in the accessibility of the facility for the physically disabled.
3. Buildings have not been constructed in a way that can be used by the disabled, rather they want disabled persons to use the same way with the ‘abled’.
4. The availability of facilities in disability centres was not satisfactory and disabled persons had faced challenges in this aspect while accessing disability centres.
5. Accessibility of specialists is another major challenge faced by physically disabled persons. It is revealed that the patient's communication difficulties or lack of confidence, affected their ability to express their concerns to the specialists. But at the same time, this also included the failure of specialists to inform patients to

avoid abnormal gait patterns and devote proper time. It might be due to the overwhelming workload on specialists but the results also indicated that the number of respondents also agreed that specialists did guide them about donning and doffing of the appliance. Overall, results suggest that lack of information or understanding between specialists and respondents led them to become frightened or feel pressured to seek treatment.

6. The study found that some of the respondents felt that health professionals held negative attitudes toward disabled persons, while others felt that health professionals held a positive attitude toward disabled persons; however, all of the respondents believed that health specialists should be educated about the disabled population. According to them, specialists did not either pay attention to them or did not attend to them promptly. Research has shown that negative attitudes or perceptions regarding disabled people have led to negative outcomes in rehabilitation services.
7. It is important to note, however, that the attitudes of healthcare workers toward people with disabilities may simply reflect attitudes toward people with disabilities in Pakistani society at large. Most healthcare workers have not received training or awareness initiatives to alter broader social attitudes and perceptions.
8. The results exhibit that a majority of the respondents were not satisfied with the disability centres in terms of affordability and information provision but on the other hand, they were satisfied with the brace/splint or artificial limb provided by the disability centres.

Recommendations

The conclusions lead to the following recommendations:

1. Existing policies need to be revised with the main focus on the accessibility of physically disabled persons in terms of building, transport, education, employment and quality affordable health services hence discrimination against people with disabilities was combated.
2. The findings suggest that the disability program and authority of disability service centres provide accessible facilities, quality services with a positive attitude, and a respectful attitude toward people with disabilities through developing disability-friendly infrastructure, recruiting professionals with a disability studies background.
3. A seminar may kindly be held to address the challenges confronted by physically disabled persons.
4. The study recommended that building codes should be revised to ensure that all new buildings and renovations meet the needs of the disabled community.
5. The media should take an active role in helping to break down the barriers of prejudice and discrimination against the disabled community.
6. Raise public awareness about the different definitions of disability.
7. Authorities need to solicit the views of disabled people about their needs, the development and implementation of disability programs, to ensure better services.
8. Training sessions and workshops shall be conducted at regular intervals to train the health specialists in dealing with disabled persons.

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Effects of Parental Sign Language on Academic Achievements of Children with HI in Inclusive classroom

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Abstract

This study was aimed to find out the level of parental expertise in sign language and its role for academic achievements of children with HI (HI). The study was descriptive in nature. The participants of this study were 100 children with HI and their hearing parents. These children were studying at secondary and higher secondary schools which providing inclusive education. The data was collected through a questionnaire named as, 'Questionnaire on Parental Sign Language for Expertise' (QPSLE) and 'Academic Records' of children with HI. The google forms were used to collect data from different parts of country. On the bases of findings it was concluded that there are three categories of parental level of expertise, i.e. Expert, to some extent Expert and not Expert. Results indicates the significant impact of parental sign language on academic achievements of children with HI.

Keywords: parental sign language, academic achievements, hearing parents of children with HI, inclusive classroom.

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Introduction

The first teacher in the life of a child are their parents. They remain their best teacher throughout the life. The learning experiences of children are based on parental interactions. Roy & Giraldo-García (2018) explained that various developmental growths like physical, social, emotional and intellectual groeths of children are highly influenced by parental interaction. Calderon (2012) found that parent participation in children's school education programs is an important positive predictor of early learning for a significant change in student achievement.

The same conclusion was drawn by Đurišić, and Bunijevac (2017) that the amount of parental involvement determines the several factors for achievement of children in their academics like an increase rate of student success, greater amount of parent and teacher satisfaction, and better school climate. Parental involvement is also an important factor for children with HI. Only parents are able to understand their needs in spite of everything else. But it is also a bitter reality that most of the parents are not aware of raising their child with true spirit.

Marschark, Shaver, Nagle and Newman (2015) explained that 96% of population of deaf babies have hearing parents who are not informed about their deafness in the beginning, so they are not prepared to raise their deaf child. From these, 72% parents have no mastery in sign language (GRI, 2011 cited in Lenihan, Voss, White, & Salvucci, 2020). Thus, children with HI in general are academically at risk. Sign language is an important and significant mode of communication for children with HI with the rest of the world. Humphries, Kushalnagar, Mathur, Napoli, Rathmann and Smith (2019) results from studies that recommended that the parents should be more engaged and involved with their children with HI for making a sign language community. Poor sign language skills of parents becomes a reason of communication gap between parents and children. Humphries, et al., (2019) also reported that the communication gap between parent and children is one of the problems for both because something was not fully explained. Weisel and Kamara (2005) reported that the poor communication skills of hearing parents of children with HI may become a reason for insecure relationship between them.

The parental interactions are also considered parents as the first teacher and closest individuals to interact with the child (Cordry & Wilson,

2004). Therefore, parents need to master in sign language so that the meaningful information can be passed on to the children with HI. Parental support and guidance are always needed for children with HI in their daily activities including their communication needs. Parental support is also required to children with HI in their academic activities like other children. For this, parents should spend more time with their children in various activities such as reading or talking. Such activities may create a positive impact in different areas of development of these children (Akellot & Bangirana, 2019). Thus, learning sign language skills is necessary for parents of children with HI. Various research pointed out the difficulties for the parents of children with HI facing in learning sign language skills being their second language (Humphries, et.al., 2019; Ali, Braithwaite, Dhanoolal, & Snoddon, 2021). This makes it difficult for children with HI to interact with their parents as well as other people who are unable to understand sign language. It develops a gap between parents and their children with HI. Furthermore, Parents often feel frustrated, angry and dissatisfied when they are unable to express their feelings and understand their conversations due to this gap. The parental frustration and emotional instability creates negative influence on children with HI and negatively affects the development of cognitive, intellectual, emotional, social and behavioural areas of these children (Quittner, A. L., Barker, D. H., Cruz, I., Snell, C., Grimley, M. E., Botteri, M., & CDaCI Investigative Team., 2010). Moreover, parental poor communication skills causes psychological problems in children with HI (McCullough & Duchesneau, 2016).

Academic difficulty is another challenge for children with HI. The poor command of sign language leads towards the academic difficulties in children with HI while studying in inclusive classroom (Ngobeni, Maimane, & Rankhumise, 2020). It happens due to poor sign language skills in hearing parents (Kimbley, 2019). Lack of parental sign language become a reason of poor focus in children with HI while interacting with their parents (Lieberman, Hatrak & Mayberry, 2014). Parents may help them to understand the hearing world by using sign language especially in an inclusive classroom.

Sign language is a source for transmission of information through movements of hands, lips and body gestures. Sign language is a major source to facilitate deaf community in their daily affairs being a communication mode (Sidig, Luqman, Mahmoud, & Mohandes, 2021). Communication disruption is caused a lack of interaction (Rose & Conama, 2018) and

expression of thoughts which is necessary for daily family functioning (Humphries, Mathur, Napoli, Padden, & Rathmann, 2022).

The current study was designed to identify the impact of different levels of parental sign language for the academic achievements of children with HI studying in inclusive education. The daily interactions of these children with hearing world are based on sign language. These children used it for daily interactions and sharing of information with each other (Koptseva, Liia & Kirko 2015). The learning of sign language is essential for these children and their parents as early as possible. Learning of sign language (being an only mode of communication) for hearing parents is difficult but important to comprehend the information between their children with HI and them (Ali, Braithwaite, Dhanoolal, & Snoddon, 2021). Parental sign language proficiency becomes a reason for better parental involvement as well as improved academic activities and social life of children with HI (Marippan, & Yasin, 2020). Thus, the importance of sign language skills for hearing parents can be seen in terms of better communications and guidance for children with HI in their life activities. It also help them to perform better in inclusive classroom.

Objectives of the Study

The study was aimed as follows:

i. To find out the parental level of sign language while communicating with their children with HI.
ii. To analyze the role of parental sign language for academic achievements of children with HI.

Research Questions

These were the research questions of the current study:

1. What is the parental level of sign language in communicating with their CWHI?
2. What is the effect of parental sign language on academic achievements of CWHI studying in inclusive classroom?
3. How does the parental level of sign language affect the educational achievements of CWHI?

Research Methodology

The current study was descriptive in nature. It was conducted to study the role of different levels of sign language expertise and their impact on academic achievement of children with HI. For this, 100 students with HI who were studying in inclusive education at secondary and higher secondary school levels randomly selected. Only those children were participated who have hearing parents.

Instrumentation

The present study was conducted by using following research tools.

i. *Questionnaire on Parental Sign Language for Expertise* (QPSLE)
A questionnaire was developed for parents to establish the different levels of parental sign language in the present research .It was developed on Likert type scale (five point).The questionnaire was based on five response categories from strongly disagree to strongly agree in 20 items. The name of developed questionnaire was, "Questionnaire on Parental Sign Language for Expertise' (QPSLE)**.** It was developed to find out the level of parental sign language which were expert level, to some-extent expert level and not expert level. For development of questionnaire following sources were used; a) Literature review, b) Teachers, c) Parents, d) Supervisor.
The judgmental approach was used to examine the content validity of QPSLE. For this, a questionnaire was given to experts in the field to judge the item. These experts helped to determine the content validity and construct validity of the tool. The internal consistency of the measurement was examined on SPSS. The Cronbach's alpha value was 0.90.

ii. *Academic Record*
The student's academic records were taken from the different schools of special education from secondary higher secondary level of students. The purpose of the academic records was to find the impact of parental sign language on academic achievements of children with HI. The data was collected by using questionnaires in google forms.

Results

Table 1
Frequencies and percentages for Levels of expertise

Levels of expertise	*Frequency*	*Percent*	*Valid Percent*
to some extent expert	82	82.0	82.0
not expert	04	4.0	4.0
Expert	14	14.0	14.0
Total	100	100.0	100

Table1 indicates that the descriptive analysis showed that only 14 parents (14%) were found by sign language experts. Whereas 82 parents (82%) where to some extent sign language experts and only 04 parents (4%) has no expertise in sign language**.**

Table.2
Mean and standard deviation (parental sign language expertise)

Levels of expertise	*N*	*Mean*	*S. D*	*Std. Error*
no expertise	04	69.00	9.31	4.66
to some extent expert	82	44.57	4.89	0.54
Expert	14	82.00	2.48	0.66
Total	100	50.79	14.36	1.44

Table 4.2 indicates that the means of 14 parents who were experts in sign language was 82.00. Whereas the mean of 82 parents who have to some extent expertise in sign language was 44.57 and the mean of 04 parents who has no expertise in sign language 69.00. There were significant variations found among experts, to some extent experts, and no expertise in sign language on the academic achievements of children with HI in inclusive classroom.

Table.3
ANOVA for parental sign language expertise and academic achievements

	Sum of Squares	*df*	*Mean Square*	*F*	*p*
Between Groups	18132.53	2	9066.27	385.70	.000
Within Groups	2280.06	97	23.51		
Total	20412.59	99			

Table.3 indicates that there was a significant role of parental sign language on the academic achievement of children with HI. In order to observe the difference between two variables, an ANOVA was conducted. There was statistically significant difference found between groups as demonstrated by one-way ANOVA (F (2, 97)) = 385.70, p = .00). Thus, the significant effect was observed of parental sign language on the academic achievements of children with HI in inclusive classroom. In order to compare the effect level of different expertise of parental sign language a multiple comparison was conducted by applying post hoc LSD in table 4.

Table. 4
Multiple Comparisons

Dependent Variable: Academic Achievement					
	(I) levels of expertise	(J) levels of expertise	Mean Difference (I-J)	Std. Error	Sig.
LSD	Not Expert	to some extent expert	24.43	2.48	.000
		expert	-13.00	2.75	.000
	Expert	to some extent expert	37.43	1.40	.000

Table. 4 indicates multiple comparisons by applying LSD in Post Hoc between different levels of expertise with academic achievement. The significant difference was observed in level of expertise, like not expert with to some extent expert and expert; and expert with to some extent expert. From these, the comparison between expert and to some extent expert have greater significant difference (37.43, p=.000). It shows a

greater effect of parental sign language (who were expert in it) on academic achievement of children with HI.

Discussion

Language is a source of expression of thoughts and ideas. People normally communicate with each other by using any language as a medium. But in deaf community, the only mode of communication is sign language. It connects the deaf community with whole world as well as with their parents. Thus parental sign language is an essential component to eliminate communication barriers for the parents to communicate with their children with HI.

Parental sign language is an essential part in the family life of children with HI. Thus, it is recommended for hearing parents to enhance the communication with children with HI (Humphries, et.al., 2019). Parents especially mother is more close to their children. Maternal sign language skills is a robust predictor of language, reading, social and emotional development of children with HI (Calderon, 2000). This study was aim to explore the role of various levels of parental sign language expertise for academic achievements of children with HI. For this, secondary and higher secondary school children with HI along with their hearing parents were participated in the study. The results of current study indicates significant influence of different levels of parental sign language expertise on academic achievements of these children. These results are similar as indicated in different studies like; the significant positive effect of parental sign language on academic achievements of children with HI (Geers, Mitchell, Warner-Czyz, Wang, & Eisenberg, 2017). There are several factors like parental level of education, parental involvement and interaction with deaf culture (Akellot, & Bangirana, 2019; Kimbley, 2019), low socio-economic status (Macaulay & Ford, 2013), early intervention or early exposure to sign language (Hermans, Knoors, H.,Ormel, & Verhoeven, 2018) etc., which contributes a positive role play of parental sign language on academic achievements of these children. Although communication is a greater need of children with HI who are studying in inclusive classroom. They have only mode of communication for these children is sign language. In order to deal their daily life problems, there was a greater role of parental sign language who may help them to adjust with hearing world.

Conclusions

It is concluded that all the three levels of parental sign language (no expertise, to some extent experts, and experts) have significant contribution in the academic achievements of children with HI. Whereas parents who have expertise in sign language showed there greater contribution in academic achievements of children with HI. Parental sign language plays a significant role in academic achievements of children with HI studying in inclusive classroom.

Recommendations

Following recommendations were made on the basis of findings and conclusions

i. The present research was conducted to find out the impact of parental sign language on the academic achievements of children with HI. There are still several aspects are still needed to explore like role of parental sign language for moral, social, and emotional development of children with HI. Therefore, future research should be conducted to explore these variations.
ii. Parents of children with HI should learn sign language because it helps to develop the confidence in their children, and they can communicate with their parents. It also helps them to express their feeling and emotions for their parents.
iii. Seminars and awareness campaigns should be organised for parents at government level to motivate them to learn sign language.
iv. Training workshops and sessions should be conducted for parents to learn sign language.
v. Trained Teachers of sign language should be provided to children with HI.
vi. The government should develop a sign language translation software application which can convert the signs into speech and vice versa. It will be helpful for the parents, teachers and children with HI as well as the general public to communicate with each other.
vii. Parents of children with HI and teachers' meetings should be organized for learning sign language.
viii. A sign language channel should also establish on television or social media to facilitate the children with HI and their parents.

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Inclusive Education of Children with Special Needs: Practices, Opportunities and Barriers

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Abstract

The study was to explore the status of inclusive education, its opportunities and barriers in primary schools in Punjab. The objectives of the study were to (i) Find out inclusive education practices in primary schools in Punjab, (ii) Find out opportunities of inclusive education in primary schools in Punjab and (iii) Explore the barriers of inclusive education in primary schools in Punjab. The null hypotheses were about no significant difference of perception of rural and urban, male and female primary schools head teachers, with respect to qualification, and teaching experience. This study was conducted in district Sargodha; the random sampling technique was used to select 300 head teachers of girls and boys primary schools to collect data through questionnaire and analyzed through percentages, mean scores, standard deviation, and t-test. Major conclusions were; building structure of schools was not suitable for children with special needs. School education department had not conveyed policy steps to and special funds for inclusive education. Teachers were not trained and do not understand the individual needs of the children with mild disability. The main suggestion was that Directorate of Staff Development (DSD) should provide comprehensive training to the teachers about inclusive education.

Keywords: inclusive education, practices, barriers, opportunities, primary schools

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Introduction

Each child is special and incomparable, have distinctive abilities and learn in various ways and in many steps. Many children are not normal physically or with respect to learning abilities. Inclusive learning provides cooperative and user-friendly settings in schools and society all over the globe to such an extent that every child may be empowered to evolve their entire educational, societal, sentimental, and physical capacity (Alquraini & Gut, 2012). It is compulsory to understand for teachers that a child's educational capacity cannot be evolved independently from his/her societal, sentimental and physical capacity, because they are socially dependent upon other students. In the absence of approach to broad support structure, several physically handicapped children's will never join school, will leave the school, or will continue the school; still they are stopped to attain their goals. Class teachers should give separate attention to the person with disabilities. Still, he/she may also require support from school dependent support structure that the teachers should make sure that the children are interested to receive standard support, particularly relying on their individual learning requirements (Solis, Vaughn, Swanson, & Mcculley, 2012). Most children with disabilities are not attending schools in developing countries, at the same time several physically disabled children's are registered in special schools that are far away from their house, siblings, parents, and companions. Still, large number of physically disabled children's is attending regular schools. In regular schools all of their learning, playing and growing activities are combined with their physically fit companions (Foreman, 2016).

Inclusive education means a technique of responding as well as addressing the various requirements of every learner by involving contribution in study as well as by decreasing exclusion in and out of education (UNESCO, 2016). Inclusive education aims at providing the education for all, including particulars highlighting on curbing obstacles to partaking and learning for disadvantaged groups, females, physically disabled children' and without schooling children. The aim of a school is to involve all children and treat them equally (Sharma, 2015).

Inclusive education varies from earlier existing philosophies of unification and generalization, that are likely to be related with unfitness as well as 'compensatory educational requirements' and understood learners' fluctuations or being 'qualified for' or eligible of adjustment by the normal stream whereas inclusion is related to the child's willing to get admission and the school's responsibility to welcome the child. Concept of inclusive education negates the practice

of separate schools or study halls to isolate physically disabled students from normal students. An exceptional child can be placed for full participation with other students regarding their societal, domestic, and academic rights. Inclusion provides physically disabled children's proficiencies which can be used both inside the classroom as well as outside the classroom (Ford, 2013).

Review of Literature

Necessity for Inclusion in Education

UNESCO (2003) explained that formal schools with an inclusive setting are more significant in resisting prejudiced attitude, building an inclusive community and achieving education for all. Practices of inclusive education has useful effect towards educational production of special needs children. According to UNICEF (2005) India has managed to include nearly 70% of mildly disabled children e.g. slight mental deficiencies, in normal schools depending upon the situations as well as the willingness of school administration to help them. Moreover, to preserve language, traditions and culture of the society, play beneficial role in society etc. inclusive education is necessary (Brusling & Pepin, 2003)

Inclusive Education in Pakistan

To promote inclusive education, Islamabad Declaration on Inclusive Education was held on April 27, 2005. It was declared so that all provincial and federal governments will apply this model of inclusive education to develop child in friendly learning environment in all formal public and private schools from pre-primary to higher education all over Pakistan. It was additionally narrated that entire group of stake-holders will guarantee that all teachers and school administrators will be trained and prospective teachers will also be trained to fulfill and boost the diverse abilities and needs of children by developing and implementing flexible curriculum and assessment methods by use of technology and improvement in teaching-learning process (Malik, et al., 2014).

Inclusive Education in Punjab

Government of Punjab has initiated a strategy of inclusive education setup for the physically disabled children so that these children may obtain education in normal schools with normal students in different areas of the Punjab within basic framework and

educational standards. Instead of this, Punjab government is also adhering to the "Islamabad Declaration on Inclusive Education" that aimed that the head teacher of any school cannot refuse to give admission to the children with special needs. This initiative was taken to alleviate the sense of deprivation in individuals of average and light physical unfitness for example limbs affected by polio, incomplete eye damage and hearing, to enable such children to be educated in a good environment. To accomplish this target, government of Punjab selected government schools with highly qualified staff and excellent basic framework. Primary schools as well as elementary schools were nominated, and instructors coaching's were given in special education department, where special education instructors had given coaching to normal education teacher. The Department has guaranteed to provide education without any cost, registration and entry, free of cost convenience service and food products every week. The Department has also constructed enjoyment areas for the individuals with special needs only. Schemes are started to find out physically disabled school age children at small town and *MOHALLAHS* for their inclusion in education system and found that Government of Punjab has taken several initiatives to overcome hindrances in implementation of inclusive education (Thakur, & Abbas, 2017).

Methods to Implementation of Inclusive Education

There are three methods of inclusive education, discussed as under.

i. Societal and Education System

It is the partnership among government organizations, non-government organizations, instructors, mother, father, companions, and school employees, and societal organizations to carry out changes at every step of community for creation of suitable and encouraging system in which devoted instructors should promote qualities in children with special needs and allowing them to become work power (Dyson & Millward, 2003).

ii. School Level

So, to find out the intensity to which institutes provide inclusion, pair of different school-level points are dashed with the help of this research: the significance of institutes traditions showing the principles and point of views owned by school team and administration and executive heads of institutes (Bates, 2013). According to Schuelka (2018) school culture, structure, school leadership and teachers,

focusing on the facilities, resources, study programs and classrooms to facilitate inclusion of mildly disable students.

iii. Classroom Level

Inclusive education is interested in all the information of classroom, students concern and their variations. Inclusive education not only manage scheme for individuals with disability but also have separate schemes for normal students, they manage ever student. It gives permission of leaner based teachings, a discriminating method of syllabus-based information's, and make sure the collaboration among normal class instructors, specialists like special instructors, assistant teacher, analyst, and parents' help (Mitchell, 2015). According Mangope, Otukile-Mongwaketse, Dinama, & Kuyini, (2018) available instruction time, teaching methods, teachers' attitudes, the knowledge and skills of teachers and materials are important requirements for education of special need children within formal schooling.

Opportunities and Barriers of Inclusive Education

Major opportunities or benefits of inclusive education are psychological, social and academic benefits. The problems in practicing inclusive system of education are; negative attitude of community, lack of resources, social discrimination, unequal learning opportunities, and system of education (Johnson, Johnson & Newton, 2014)

Thakur, & Abbas (2017) describes that in Pakistani, National Education Policy was proposed in 2009 to provide equal access of education through providing basic accommodations to boys and girls with special needs. Then "Islamabad Declaration on Inclusive Education" was signed by all the provincial and federal governments on 27th April 2005. In Punjab all heads of the government and public schools had been directed not to refuse the admission of children with special needs (Fully or mild disabled). But still there are still major challenges such as keeping standard of education without affecting the standards of education and the time of the normal students, the teaching methodology in schools at present is not inclusive, teachers are not trained and have essential skills of teaching so that they may take in students with mild disabilities in their classrooms. Moreover, the management and teachers face a big problem in dealing with students of low vision and students with severe disabilities. The major necessity is accessible infrastructure and designated staff to assist the mild disabled students (Thakur, Nader, Idris, & Batool, 2021).

Statement of the Problem

The government of Punjab has the policy that no one should be inhibited from attending the school even they are children with special needs. According to the government data, 0.24% children have some mild disability (UNICEF, 2021). Government of Punjab passed inclusive education act (2012) that "students with mild to moderate levels of disabilities to be admitted mainstreaming primary and lower secondary schools and teachers of such schools will be trained" (Nawaz, Fazil, & Ahmad, 2021). In order to find out whether in actual circumstances inclusive education is being practiced or not, the study opted to explore the opportunities and barriers for Inclusive Education at Primary Level in Punjab.

Objectives of the study

Objectives of the study were to:

i. Find out inclusive education practices in primary schools in Punjab
ii. Find out opportunities of inclusive education in primary schools in Punjab
iii. Explore the barriers of inclusive education in primary schools in Punjab

Methodology of the Study

The purpose of the present study was to explore the situation of inclusive education of children with special needs in primary schools in Punjab with respect to practices, opportunities and barriers for inclusive education. This exploratory study followed the descriptive-quantitative research design. Due to financial and time constraints the study was delimited to one district (Sargodha).

Population and Sampling

According to School Information System of Punjab Government, there are 1202 primary schools in Sargodha District. Therefore, all the 1202 male and female primary school head teachers of district Sargodha constituted the population of the study. Sample of 300 male and female primary school head teachers working in primary schools of district Sargodha was selected through random sampling technique.

Instrument Of the Study

As any suitable research instrument with respect to Pakistani context was not available so after the review of literature, the indicators of the study necessary for the practices, opportunities and barriers of inclusive education of special need children were identified. A three-point rating scale questionnaire was designed to collect relevant data with responses "Yes", "To some extent" and "No". Validity of the questionnaire was ensured by five experts two form social work and three from education department as the topic was about inclusive education in primary schools. Opinion of Experts was taken about instrument with respect to face and content validity. The suggestions of experts were incorporated and the instrument was pilot tested on 100 head teachers of primary schools not included in actual sample. To establish the reliability of the research tool, Cronbach's Alpha reliability co-efficient was used. Its value was 0.76 which was in acceptable range (Livingston, 2018).

Data Analysis

Collected data through self-visit from boys primary schools and from girls schools through a trained female research assistant, were analyzed through applying descriptive analysis, frequencies and percentage and inferential statistics e.g. t-test, and one-way ANOVA.

Table 1

Opportunities for Inclusive Education

S#	*Opportunities*	*Yes*	*To some extent*	*No*	*Mean*	*Graph*
1	Children with special needs in school	50 16.7%	Nil	250 83.3%	Nil	Nil
2	Transport is available for access to school.	48 16%	34 11.3%	218 72.6%	2.6	
3	Availability of wheelchair or other tools	Nil	2 7%	298 93%	2.99	
4	School building structure is feasible for children with special needs.	45 15%	41 13.6%	214 71.3%	1.43	
5	The children with special needs easily access to classrooms	39 13%	49 16.3%	212 70.6%	1.42	
6	The children with special needs comfortably sit in classrooms.	140 46.6%	103 34.3%	57 19%	1.92	
7	Separate washroom available for the children with special needs.	Nil	Nil	300 100%	3.0	

8	Children with special needs have access to recreational facilities.	39 13%	65 21.6%	196 65.3%	2.41	
9	Special staff is available for special need children	Nil	5(1.7%)	295 98.3%	2.98	
10	There is arrangement for children with special needs to easily move around in the whole premises of school	38 12.6%	49 16.3%	212 70.6%	2.28	
11	Environment of the classroom is feasible for children with special needs.	32 10.6%	46 15.3%	222 74.0%	1.38	
12	The Government has formulated a comprehensive policy for the Education of special needs children in normal school.	Nil	21 7%	279 93%	2.93	
13	The government is issuing special fund for Inclusive Education of children with special needs.	Nil	16 5.3%	284 94.7%	2.65	
14	The government issues scholarships for children with special needs.	Nil	7 2.3%	293 97.7%	2.68	
15	The government provides medical aid to children with special needs.	12 4%	28 9.3%	260 86.6%	2.73	

Table 1 shows that according to responses of head teachers, 83.3% schools do not have enrolled special needs children while only 16.7% schools have special needs children. Many schools 72.6% with supporting mean score 2.50 and SD = 0.799 do not have transport for especial need children in their school, while 16% schools have transport facility. Most of the schools (93%) with mean score 2.99 and SD 0.082 have no wheelchair or other tools available for children with special needs.

Moreover, majority (71.3%) of schools building structure (with mean score 2.36 and SD = 0.817) was not feasible for children with special needs while 15% schools have this facility and only 13.6% schools had this facility 'to some extent'. Majority of schools (70.6%) with supporting mean score 2.27 and SD= 0.916 special needs children have no easy access to classes while 13% schools provide access and only 16.3% schools were in access 'to some extent'. In many (46.6%) schools (with mean score 1.92 and 0.808) children with special needs can comfortably sit in classrooms, while in 34.3% schools 'to some extent' space was for comfortable seating of special needs children and 29.0% schools do not have. On the other hand in all the (100%) schools (with mean score 3 and SD = 0) have no separate washroom available for the special needs children. In considerable number (54%) of schools (with supporting mean 2.41 and SD= 0.710) children with special needs have no access to recreational facilities, while in 21.6% schools have 'to some extent' and 13% schools do not have.

Furthermore, in majority (98.3%) of schools (with mean score 2.98 and SD=0.128) special staff is not available to help to special

needs children. In majority (70.6%) of schools (with mean score 2.28 and SD = 0.814) have no arrangements of moving around for special needs children in premises of school, while 16.3% schools have 'to some extent' and 12.6% schools have such arrangements. In majority (74%) of schools (with supporting mean 1.38 & SD .701) environment of the classroom is not feasible for special needs children whereas in 15.3% school environment is feasible 'to some extent' and in only 10.6% school's environment is feasible.

On the other hand, majority (93%) head teachers (with supporting mean 2.93 & SD 0.262) stated that Government has not formulated a comprehensive policy for the Education of special needs children in normal school. Majority (94.7%) head teachers (with supporting mean 2.65 & SD .225) also stated that government has not issued special fund for inclusive education of children with special needs. It is also stated by majority (86.6%%) head teachers (with supporting mean 2.73 & SD .589) that government is not providing medical aid to children with special needs.

Table 2
Practices of inclusive education in schools

S#	*Practices*	*Yes*	*To some extent*	*No*	*Mean*	*Graphs*
1	Teachers are specially trained to teach the children with special needs.	Nil	4 1.3%	296 98.7%	2.99	
2	Teachers find it difficult to teach children with special needs.	214 71.3%	61 20.3%	25 8.3%	2.63	
3	Teachers encourage the children with special needs.	243 81.0%	43 14.3%	14 4.7%	1.24	
4	Teachers' use loving tone for children with special needs.	222 74.0%	49 16.3%	29 9.7%	1.36	
5	Teachers make a fun of children with special needs.	77 25.7%	53 17.7%	170 56.6%	2.31	
6	Teachers discuss the learning problems of special needs children with their parents to find the way of improvement.	243 81.0%	43 14.3%	14 4.7%	1.24	
7	Normal children are motivated to study with special needs children.	167 55.7%	107 35.7%	26 8.6%	1.53	
8	Children with special needs are encouraged by other class fellows.	213 71 %	58 19.3%	29 9.6%	1.74	

9	Classmates help the children with special needs in educational activities.	213 71%	55 18.3%	32 10.6%	2.6	

Table 2 depicts that in majority of schools (98.7%) with mean score 2.99 and SD = 0.115 teachers are not specially trained to teach the children with special needs. In majority of schools (71.3%) with mean score 2.63 and SD = 0.63 teachers find it difficult to teach children with special needs whereas in 20.3% schools teachers were to some extent able to teach and in only 8.3% schools teachers were able to teach special need children. In majority of schools (81%) with mean score 1.24 and SD = 0.524 teachers encourage the children with special needs, in 14.3% teachers to some extent encourage the students while in only 4.7% schools teachers do not encourage the children with special needs. In majority of schools (74%) with sporting mean score 1.36 and SD = 0.651 teachers' use loving tone for children with special needs whereas in 16.3% schools teachers use loving tone 'to some extent', while only in 9.7% schools teachers do not use loving tone for children with special needs. In many of schools (56.6%) with sporting mean score 2.31 and SD = 0.854 teachers do not make a fun of children with special needs whereas in 17.7% schools teachers 'to some extent' make fun of special needs children while in only 25.7% schools teachers make a fun of children with special needs. In majority of schools (81%) with sporting mean score 1.24 and SD = 0.524 Teachers discuss the learning problems of special needs children with their parents to find the way of improvement whereas in 14.3% schools teacher discuss 'to some extent' while in only 4.7% teachers do not do that.

Moreover, in many schools (55.7%) with sporting mean score 1.53 and SD = 0.651 normal children are motivated to study with special needs children whereas in 35.7% schools normal children are motivated 'to some extent' while in only 8.6% schools it is not done. In majority of schools (71%) with sporting mean score 1.74 and SD = 0.675 children with special needs are encouraged by other class fellows whereas in 19.3% schools it is done 'to some extent' while in only 8.6% schools it is not done. . In majority of schools (71%) with sporting mean score 2.6 and SD = 0.723 classmates help the children with special needs in educational activities whereas in 18.3% schools it is "to some extent' while in only 10.6% schools it is not done.

Table 3
Barriers of inclusive education in schools

S#	*Barriers*	*Yes*	*To some extent*	*NO*	*Mean*	*Graphs*
1	Any person is available to bring children with special needs to school.	45 15.0%	62 20.7%	193 64.3%	2.49	
2	School is at distance from the house of children with special needs.	220 73.3%	20 6.6%	60 20%	2.5	
3	Often teacher do not understand the individual needs of children with special needs.	214 71.3%	48 16%	38 12.6%	2.58	
4	Society takes children with special needs as burden.	175 58.3%	78 26.0%	47 15.7%	1.57	
5	People do not pay special attention on education of children with special needs.	175 58.3%	93 31.0%	32 10.7%	1.52	
6	Often people make fun of children with special needs when they come to school.	135 45.0%	97 32.3%	68 22.7%	1.78	
7	People do not help the children with special needs to attend school.	215 71.6%	35 11.6%	30 10%	1.78	
8	People abused children with special needs on the way to school.	230 76.6%	50 16.6%	20 6.6%	2.70	
9	The government does not make syllabus by keeping in view children with special Needs.	291 97.0%	6 2%	3 1%	1.04	
10	The Government has not setup any system for educational awareness of children with special needs in normal school.	255 85%	33 11%	12 4%	1.19	
11	Institutions have no helping tool for the education of children with special needs.	294 98%	6 2%	Nil	1.02	
12	Other classmate's heartache children with special needs.	197 35.7%	43 27.7%	60 36.6%	2.01	

Table 3 shows that in majority of schools (64.3%) with mean score 2.49 and SD = 0.74 children with special needs have no person available to bring them in school whereas in 20.3% schools 'to some extent' person is available while in only 15% schools children with special needs have a person available to bring them in school. Majority of schools (73.3%) with mean score 2.5 and SD = 0.74 are at distance from the house of children with special needs whereas 6.6% schools are at some distance while 20% schools were not at distance. In majority of schools (71.3%) with mean score 2.58 and SD = 0.77 often teachers do not understand the individual needs of children with special needs whereas in only 16% schools teachers understand the individual needs of children while only in 12.6% schools teachers understand it. In majority of schools (71.6%) with mean score 1.78 and SD = 0.79 people do not help the

children with special needs to attend school whereas in 11.6% schools people help the special needs children 'to some extent'. In majority of schools (76.6%) with mean score 2.7 and SD = 0.63 people abuse children with special needs on the way to school whereas in 16.6% schools abusing of people is 'to some extent'. Majority of the head teachers (97%) with supporting mean score 1.04 and SD .242 stated that Government is not making syllabus by keeping in view children with special Needs. Majority of the head teachers (85%) with supporting mean score 1.19 and SD .484 that Government has not setup any system for educational awareness of children with special needs in normal school. Majority of the head teachers (98%) with supporting mean score 1.02 and SD .140 that institution has no helping tool for the education of children with special needs.

Table 4

Overall comparison of inclusive education in Primary schools with respect to Gender

Type of School	*N*	*Mean*	*SD*	*t*	*df*	*Sig.*
Female head teachers	158	82.2215	5.95805	-.619	298	.537
Male head teachers	142	82.6479	5.95872			

Table 4 indicates the comparison of primary school with respect to gender. There exists no significant difference with respect to inclusive education facilities between the responses of male and female had teachers as indicated by t= -.619, df = 298 and Sig.=.537> α= .05. Hence the null hypothesis "there is no significant difference of perception of male and female head teachers about Inclusive education in primary schools" was accepted.

Table 5

Comparison of total Opportunities with Respect to Primary school Type

Type of School	*N*	*Mean*	*SD*	*t*	*Df*	*Sig.*
Girls Primary School	158	38.0696	4.48794	-.352	298	.725
Boys Primary School	142	38.2535	4.54206			

Table 5 indicates the comparison of total opportunities with respect type of primary schools. There exists no significant difference of total opportunities of inclusive education between Girls and Boys primary schools as indicated by t= -.352, df = 298 and Sig.=.725> α= .05 and the null hypothesis H_6: "There is no significant difference of opportunities of Inclusive education in and girls' primary schools and boys Primary schools" was accepted.

Table 6
Comparison of gender wise responses about inclusive education practices in primary schools

Type of School	*N*	*Mean*	*SD*	*t*	*df*	*Sig.*
Girls Primary School	158	23.6519	3.11137	-1.185	298	.237
Boys Primary School	142	24.0915	3.31321			

Table 6 indicates the comparison of total practices with respect type of primary schools. There exists no significant difference of practices about inclusive education between Girls and Boys Primary Schools as indicated by t= -1.185, df = 298 and Sig =.237> α= .05. Hence the null hypothesis "There is no significant difference of practices of Inclusive education in and girls' primary schools and boys Primary schools" was accepted.

Table 7
Comparison of gender wise responses about barriers of inclusive education

Type of School	*N*	*Mean*	*SD*	*t*	*df*	*Sig.*
Girls Primary School	158	24.8924	3.41519	.102	298	.918
Boys Primary School	142	24.8521	3.38739			

Table 7 indicates the comparison of total barriers with respect type of primary schools. There exists no significant difference of barriers about inclusive education between Girls and Boys Primary Schools as indicated by t= .102, df = 298 and Sig =.918> α= .05 and the null Hypothesis H_7 "There is no significant difference of barriers of Inclusive education in and girls' primary schools and boys' Primary schools" was accepted.

Conclusions and Discussion

1. In primary schools, according to head teachers, practices of inclusive education are moderate but not outstanding as teachers are not specially trained and find it difficult to teach the children with special needs; but teachers' use loving tone, encourage and do not make a fun of children with special needs rather teachers discuss their learning problems with their parents. In class normal children are motivated and encouraged to help special needs children in studies. This is in line with the findings of Khan,

Hashmi, & Khanum (2017) that "inclusive education is considered to be a desirable practice"; and similar to the findings of Ehsan (2018) that the environment of the regular classes needs to be made conducive so that the students with disabilities are able to become a part of learning process".

2. In primary schools as reported by the head teachers, opportunities for inclusive education are not sufficient as special needs children do not have transport to reach their school; no wheelchair or other tools available; schools building was not suitable for them; no easy access to classes; no comfortable seating in classrooms; no separate washroom; no access to recreational facilities; special staff is not available to help them; no arrangements of moving around. This is in line with the finding of Farooq (2012) that "there were structural problems faced by students with special educational needs in general schools".
3. On the other hand Government has not conveyed any comprehensive policy, not issued special fund and even not providing medical aid, no such syllabus developed by keeping in view children with special Needs, not providing helping tools and has no setup any system to make people aware for education of special needs children. This also in line with the findings of Farooq (2012) that "insufficient government leadership, non-availability and quality of human and material resources, fragmented approaches, lack of appropriate role models".
4. There are many barriers for children with special needs for education as they have no person available to bring them in school, schools are at distance from their houses; teachers do not understand their individual needs; people do not help the children and abuse them. It is in line with the findings of Mprah, Amponteng, & Owusu, (2015) who conducted a study in Ghana, that "support or pupils with special needs in the general schools was inadequate".
5. Inclusive education facilities in male and female schools are equivalent; similarly, practices opportunities and barriers about inclusive education are also similar in male and female schools. This is also in line with the findings of Jahanzaib, Fatima, & Dur-e-Nayab (2019) that "there is no significant difference in inclusive education facilities between male and female secondary schools"

Recommendations

Based on the results and analysis of the study here are recommendations.

1. It is evident form the responses of head teachers that Govt. has not conveyed any policy, not provided any funds / scholarship; so it is recommended that Education Department of the Government of Punjab should take serious steps to promote inclusive education.
2. School Education department of Punjab should take special measures taking the help of local government to develop infrastructure according to the needs of children with special needs and design the syllabus of the schools by keeping in view the children with special needs with the collaboration of Special Education Department.
3. The head teachers and teachers should setup the environment of the classrooms to facilitate the children of special needs.
4. The school education department and Directorate of Staff Development (DSD) should provide comprehensive training to the teachers about inclusive education.
5. The School Education Department by the collaboration of social welfare department or other donors should provide Educational and mobilization helping tools (Wheelchairs, hand sticks etc.) to the children with special needs.
6. School Education Department with the help of Special Education Department of Punjab should collectively design the syllabus of the schools by keeping in view the children with special needs.
7. The School Education Department should launch awareness program through electronic and print media to educate the parents and other members of society for the education of children with special needs.

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Online Classes and Motivation of Special Students at Higher Education Level during Covid-19: Phenomenological Study of Inclusive Education

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Abstract

This phenomenological study was conducted during the COVID-19 outbreak to explore the impact of the pandemic situation on physically special students studying at university level. Special emphasis was given to the aspect of motivation of special students at higher levels during COVID-19. For this purpose, a sample of 19 students from two universities of Islamabad, Pakistan was selected. The required data were collected through a questionnaire followed by an interview. The data were afterwards analyzed through the application of frequency technique in SPSS 2.0. Findings of the study show that mostly students with physical disability showed liking towards online modeof classes in spite of abrupt change in traditional method of educational. Students appreciate mostly the aspect of flexibility of timings, saving money and exertion on travelling in online classes, while the least liked elements were poor network and connectivity issues. It was also reported that teachers were unable to support some disabled students, and they were unable to address issues like online safety and security.It is recommended that in this new challenging situation, education needs to be tailoredaccording to the needs and wishes of students especially for special students, and teachers need to put more efforts to comprehend the individualized needs and challenges of students with disabilities in order to include them in online learning environments.

Keywords: online mode of education, motivation, special/disable student, COVID-19, higher education

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Introduction

COVID-19 pandemic struck the world resulting lockdown and other social and academic changes affecting learning of millions of students worldwide. As on March 10, 2020, the WHO has reported 1, 13,702 globally confirmed cases and 4,012 deaths (Rasheed,2021). In this scenario educational institutes of all levels need to bring about abrupt changes to academic practices and teaching methods to ensure physical safety and continuity education of students. The advantage of face-to-face teaching with students thatare motivated by a teacher in conventional classroom education is accepted by research worldwide (Barkley & Major, 2020) but creating the same motivating environment for development of academic as well as social skills was a challenge for teachers teaching specially at higher education level. This challenge became even greater when dealing with physically special students Online education techniques help students become more autonomous at advanced levels of education (McBrien , 2009).

Along with the challenges, online education achieved enormous prominence and created many opportunities to young generation. Adaptability and accessibility that coursesat higher education provide are of great value for online learners. Students appreciated the fact that online classes provided the opportunity to be arranged according to their schedule so they can continue their other activities as jobs, trainings, internship or domestic responsibilities as family care. Online education also provides timeto special students to learn and practice their academic material. Distance or non-formal education has been available for many years with these advantages, but technology made ithighly flexible and reliable for students in terms of accessibility and digital self-learning. Traditional formal education system is now experiencing an increased expansion due to virtual materials and online courses (Mayadas, 2009). It is also evident from research that among traditionally operated school systems and curricula, those schools are considered as more successful and accepted that adopted the changing scenario according to social demands and parental expectations and changing needs of students. But the question arisesthat if online educational experiences are more accepted in present times, what are its repercussions for traditional schooling? But the focus of academic discussions should be making this online learning experience more conducive and addition of online learning inharmony with traditional classrooms rather than focusing on pros and cons of online learning.

Education is considered as an influential force on every aspect of student's life. Before the outbreak of COVID-19 pandemic this was provided in face to face, traditional manner but the requirement of

social distancing, quarantine and lock down situations madeit difficult and challenging to continue with the same process. The sudden and severe outburst of pandemic resulted in social isolation and quarantine (Hasan & Khan, 2020). The steps taken by different countries and nation included lock down, shutting down publicplaces and controlling social gatherings. Due to these activities educational institutions that were previously providing head-on academic services needed to shut down impacting almost all the students in the whole world without any discrimination. This act affected academic, research, and other learning activities on a larger scale. UNESCO's 2020 Global Educational monitoring report highlights reports that almost 1541 million students across 190 countries were facing educational issues on different levels of education. It was the foremost priority of every govt. to plan for providing safe environment and also highlighting and improving the role of education and ensuring impartial growth and development of individual as well as nations (Crawford et al., 2020). In this scenario educational departments needed to decide for a substitute educational service that can helpstudents in continuing their academic activities. In this way provision of system along with provision of equipment for conducting online classes created a great challenge for countries especially underdeveloped and developing countries. It also created many problems of thepart of learners as provision of proper environment and internet became a necessity for poor even. The internet companies also needed to make plan for coping up with severely increased load and reachability of internet to rural and far-flung areas all over the country in Pakistan.

As like any other situation, COVID-19 also had impact on different parts of societyand persons in terms of physical as well as psychological aspects. People with disabilitiesare usually a sensitive group as they have to face the disability (physical or mental) along with sensitivity of emotional grounds. The study intends to create such awareness that willhelp the normal members of society to understand and help these special members. The outburst of COVID has opened new venues for blended learning and hybrid form of education (Education world, 2020).

Special education is a branch of education that is specially designed to overcomeproblems and demands of the physically special students. But in developing countries like Pakistan these facilities cannot be provided on a larger scale. So in this situation inclusive education is a better solution that allows special students to join the main stream education.

Special students face many problems and issues in their academic quest as lack ofhomogeneity in school system providing the same academic experience to all facing specialissues, physically and

mentally. Special students are more prone towards facing barriers and problems in their educational quest especially during COVID 19 (Ahmed, 2022). Higher education scholars were affected rather more. The number of special students studying at higher education institutions in Pakistan is not very large. According to Nasir and Hameed, (2021) physical and mental disabilities create more challenging situation at higher education level for special students. As a result many special students discontinue their education that is not designed according to their special needs and requirements. Thereare diverse nature of barriers faced by special students at higher education level. Generally observed barriers are the inaccessible structure of buildings that does not follow the universal structure. The other main barrier that affects the education of special students athigher education level is the strategies of teaching used in classrooms are mainly focused on normal students rather than inclusive approach (Sharma and Loreman, 2008 & Zhang, Rosen, Cheng and Li (2021) . For this purpose it is important to provide special training toteachers dealing with special students. Among many other barriers training of staff is an important factor. Some other factors include insensitivity towards disabilities and stigmatization from normal students along with lack of accessibility to academic and co- curricular activities (Mosia and Phasha, (2020).

Nissman, (2020) states that students with special disabilities feel relaxed when findsupport in physical or emotional manner. Especially during COVID-19, students at highereducation level were more in need of the support from their peers, teachers and family members. This support was expected from family and specifically parents to make such arrangements that can facilitate students physically, emotionally and even in mental operations such as learning, understanding etc. Nissman, (2020) suggests teachers and institutions to have meetings with students, their parents and other individuals involved intheir learning process to talk about and infer about the situations in classes in which they feel comfortable and successful. Teachers and institutional administration need to find out which interventions were found more helpful for them in making adjustments for coping up with challenging situations created by COVID 19.

Research in the field of online education have reported that online classes have a strong impact on motivation and learning patterns of normal students (McBrien et al., 2009;&Mayadas et al., 2009) but still a gap exists in literature on the perceptions, ideas and meanings that special students connect with online and hybrid mode of teaching and learning on higher education level. To fill this gap, this phenomenological study was designed to explore the perceptions and meanings that physically special students connectwith educational

scenario during COVID-19 the impact of online classes on their motivation.

Research Objectives

The main objectives of the study were:

i. to explore the perceptions of gifted students about the educational conditions during the emergency of COVID-19.
ii. to analyze the effects of online classes on motivation of gifted students at highereducation during COVID-19

Research Questions

What are the effects of online mode of classes on motivation level of specialstudents studying at higher education during COVID-19?

Theoretical Framework

Learning in online and hybrid mode is becoming the new common especially after COVID-19. Students with physical disabilities are also affected by this change. Special education is also becoming more challenging in uncertain times of different waves of COVID 19. In this scenario it is important to design and utilize interesting and engaging learning experiences. Student's satisfaction in any learning situation is already considered as an influencer in their learning. This study aims at assessing the impact and meanings of online learning experiences of students with special needs during tough times of COVID 19. The study intended to explore the perceptions of students with special needs about they experience and problems in online mode of learning. For this purpose, the theoretical framework adopted for the study is deals with the aspects of intrinsic and extrinsic motivation and Value construct (Eccles, 2009).

The model consists of two layers of motivation (i) "Intrinsic Motivation" and (ii) "Extrinsic Motivation". Intrinsic motivation is defined by Sansone and Harackiewicz, (2000) "the enjoyment of an activity for an activity's sake". This definition reflects the engagement and pleasure in a learning activity that is designed and conducted for students.Hulleman et al., (2015) describes that intrinsic motivation is considered as optimal reason for individual's engagement in a proposed task. While extrinsic motivation requires such elements in environment that can engage and motivate students for their academic

activities. Rewards and punishments are considered as a very common example of this typeof motivation. This is more dependent on environment rather than self-determination of student

Online Teaching Method

Eccles (2009) theoretical model of Intrinsic and Extrinsic Motivation and Value construct

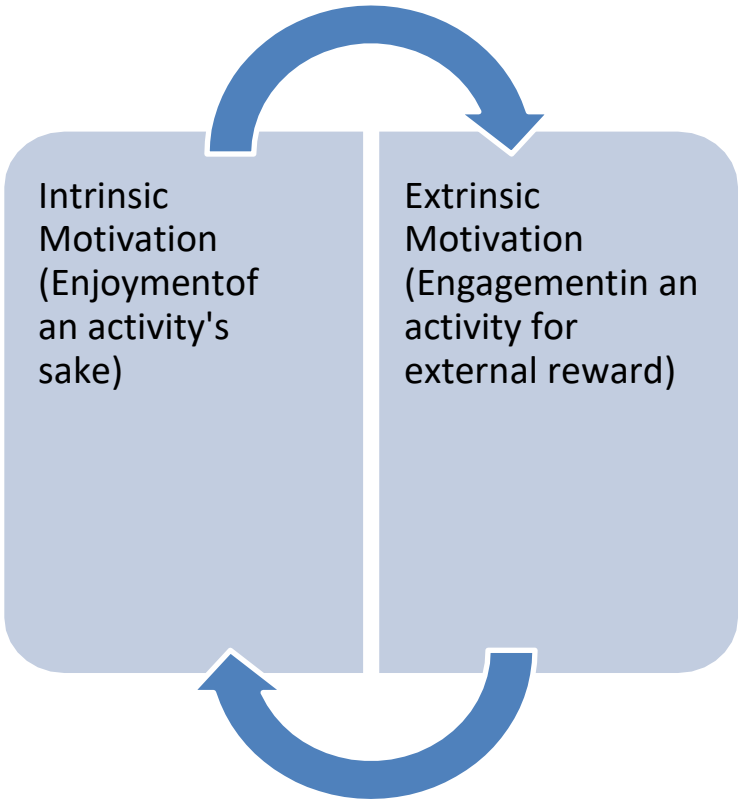

Figure 1: Theoretical model of Intrinsic and Extrinsic Motivation and Value construct

Methodology

The study under consideration was a phenomenological study aimed at exploring the perceptions and meanings gifted students connect with the online learning experience studying at higher education level introduced during COVID-19 situation.

Participants

Participants of the study consisted of gifted students studying in two universities ofIslamabad. Total 18 Students were selected through convenient sampling technique

Table 1 shows the demographic distribution of the participants for the study.

Table 1.
Demographic details of the gifted students

Total	*Male*	*Female*	*Age*	*Rural*	*Urban*	*Disability*
18	11	7	18-30	4	14	Physical Type

Research Instruments

For collection of required data for the study, two instruments were prepared. One questionnaire and second tool used for data collection was a structured interview. The questionnaire consisted of two main sections. Section one was meant to collect demographic information about students. This section consisted of data about gender, age,residential area. And type of disability. While section two consisted of items that aimed at exploring the perceptions and meanings that special students connect with the online learning scenario created due to COVID-19 situation. The questionnaire was converted intoGoogle form and link for it was shared with students through email, what Sapp and SMS.

Participants needed to respond in five point Likert Scale. Aspects covered in different subsections of questionnaire were related to comfortable and enjoyable learning , devices and platforms commonly used for joining and attending online classes, most liked and dis-likedaspects in online learning mode, modes used for delivering the content effectively, preferences of teachers and students in using these online modes, internet related issues asavailability and quality

of internet, and students perceptions about advantages and disadvantages of using online teaching and learning modes.

Findings

Data were collected from 19 participants to examine special students' experiences with online learning during the COVID-19 pandemic and to find answers to the research questions. The results of the current study are given in table 2. The table below provides the details of the student's responses according to the areas covered and items asked. The responses were recorded and interpreted in percentages to provide an overall pictorial description of the perceptions of the gifted students related to the online learning phenomena. The table covers their perceptions about their comfort level during online classes, enjoyment, devices and platforms commonly used for participation in online classes etc.

Table 2.
Analysis of the experiences of special students concerning online learning duringCOVID-19 pandemic

S.N	*Statements*	*YES*		*No*		*Total*
		F	*%*	*F*	*%*	
1	Comfort with Online learning during COVID-19 pandemic	12	63.15	7	36.84	19
2	Enjoyment with online learning during corona virus crisis	12	63.15	7	36.84	19
3	Mobile	14	73.68	5	26.31	19
4	Computer	0	0	19	100	19
5	Devices used for online learning op	3	15.78	16	84.21	19
6	Tablet	2	10.52	17	89.47	19
7	Digital platforms used for online learning	16	84.21	3	15.78	19
	Zoom					
8	Google Classroom	0	0	19	100	19
9	Google Hangouts	0	0	19	100	19
10	WhatsApp	3	15.78	16	84.21	19
11	Facebook	0	0	19	100	19

12	You Tube	0	0	19	100	19
13	Knowledge about the use of Devices and Digital platforms	19	100	0	0	19
14	Accessibility of Good Internet Connectivity	4	21.05	15	78.94	19
15	Most liked features of online platforms	17	89.47	2	10.52	19
	Flexibility					
16	Accessibility of					
17		16	84.21	3	15.78	19
18	content materials					
19	Interaction with					
20		18	94.73	1	5.26	19
	teachers and peers					
21	Comfort	12	63.15	7	36.84	19
22	Self-paced	14	73.68	5	26.31	19
23	Poor network and					
	Most disliked elements of online platforms	4	21.05	15	78.94	19
24	connectivity					
25	Distractions	7	36.84	12	63.15	19
26	Lack of interaction	1	5.263	18	94.73	19
27	Poor					
28	comprehensibility of	0	0	19	100	19
29	content					

		Lack of support	2	10.52	17	89.47	19
1	Content delivery modes used by teachers	Teacher-made Text	4	21.05	15	78.94	19 12
		Materials					
		Video conferencing	0	0	19	100	19
		Textbook or					
		Reference book	13	68.42	6	31.57	19
		materials					
		Teacher-made video	0	0	19	100	19

		Video from online source	0	0	19	100	19
		Teacher made audio file	19	100	0	0	19
		Audio from internet	0	0	19	100	19
2	Students' preferred content delivery modes	Teacher-made Text Materials	19	100	0	0	19
		Video conferencing	3	15.78	16	84.21	19
		Textbook or Reference book materials	19	100	0	0	19
		Teacher-made video	19	100	0	0	19
		Video from online source	6	31.57	13	68.42	19
		Teacher made audio file	0	0	19	100	19
		Audio from internet	0	0	19	100	19
3	Students' perceived advantages of online learning	I can learn anytime according to my convenience	18	94.73	1	5.26	19
		I can learn from anywhere	12	63.15	7	36.84	19
		I can access materials provided by instructors	15	78.94	4	21.05	19
		It is highly flexible for me	17	89.47	2	10.52	19

		I feel more autonomous while learning online	18	94.73	1	5.263	19
		Teachers are more friendly online than face-to-face teaching	11	57.89	8	42.10	19
		Proper guidance for online safety and security is given	2	10.52	17	89.47	19
		Others: Save travelling expenses	16	84.21	3	15.78	19
4	Students' perceived disadvantages of online learning	Poor connectivity	4	21.05	15	78.94	19
		Lack of time	0	0	19	100	19
		Lack of support	0	0	19	100	19
		No opportunity for interaction	4	21.05	15	78.94	19
		No clarification of doubts and queries	0	0	19	100	19
		No supportive materials are provided	7	36.84	12	63.15	19
		No guidance is given for online platform	0	0	19	100	19
		Lack of					

	comprehensibility of the concept	2	10.52	17	89.47	19
	Learning is teacher directed only	16	84.21	3	15.78	19
	Learning is one-sided	16	84.21	3	15.78	19

When students were asked to rate their comfort level in online learning mode the responses showed that 64% students showed comfortable in online learning mode. The responses of students regarding comfort and enjoyable experiences students considered it as positive experience. Students stated a satisfied and comfortable experience provided by teachers and university. It was found encouraging that students were satisfied and were also enjoying their learning during online learning experience. As this enjoyable experience may lead to more practical and meaningful learning for students.

Students used different devices for online learning such as mobile, computers, and laptop and tablet computers. Students were supposed to provide their feedback and perceptions for all of these devices. Findings proved that 73% students were using mobile phone for joining, attending and responding to online classes for online learning while none of them used desktop computer. Laptops and tablets were also rarely used by students. Multiple platforms were used by different institutions for conducting online classes. Rather students were encouraged to get used to all platforms. Frequency table for using these platforms showed that majority of students (84%) respondent students were using Zoom video conferencing application for online learning. All of them were aware about the use of devices and platforms.

Findings showed that majority of the students were facing problem in availability of good internetconnectivity. This resulted in problems as difficulty in accessing content materials, incomplete comprehension, and less chances to interact properly with teachers and students. The findings supported that mostly liked aspects of online learning included online learning interactivewith peers and teachers during COVID-19 pandemic. Similarly, majority of the students found online classes schedule more flexible in terms of time and specially place as they were not supposed to be physically present in specific rooms of university rather, they were even able to jointheir classes during traveling, shopping and job as well. When students were asked to give open ended responses about disliked aspects of

online learning mode. Findings showed that some students were not found comfortable due to inaccessibility of internet facilities. They mentioned the high level of difficulty in getting good signal strength, and speed of internet in rural areas. While 61% students responded as they considered online learning mode more distracting due to unavailability of proper environment at home, environmental distractions, noise, and family distractions.

As far as content delivery of content by teachers and instructors is concerned, it was reported that 69% teachers were providing their students with teacher prepared, text-based material. While 100%students agreed that teacher's voice-based material was useful. Students also shared that a combination of PPT and teacher's oral explanation was considered as useful in their learning. Least popular and useful modes included audio messages through email or another source. Students presented the idea that written text (either on PPTs or messages) along with the audio explanationof the teachers were designed according to the requirements of the students. Some students also suggested that teachers need to utilize many platforms for distribution of materials. When studentswere inquired about the most preferred mode of content delivery. Mostly student's preferred teacher made texts and videos recorded by teachers along with textbooks and links of online resources were considered as most preferred. Students preferred audio files least.

Table 2 aimed at presenting students' perceptions about advantages of online learning mode. The majority of students (19%) considered as online learning mode provides freedom of place. They value the benefit most that in online mode they do not need to go anywhere.

Along with positive aspects students were asked to enlist negative aspects of online mode of learning. Majority of students (85%) considered online mode as non-engaging. These students considered as one-sided flow of communication as teacher was more dominant in this mode. The reasons these students considered were shortage of time in online classes, but this created a furtherproblem that their queries and questions left unanswered. Students also suggested that teachers need to make arrangements for decreasing the workload of students as in the time of crisis it students need to retain their mental as well as emotional energy to cope up with the ever changingsituations. A sense of support and togetherness, guidance and planning of engaging activities can also be helpful. Students had the idea that gifted students feel more difficulty in adjusting with this new scenario as teachers were unable to accommodate all the students. It created more challenging situation to visually impaired students as when

teachers were sharing their screens with power point presentations, they assumed that all students could gain required information. Though some teachers tended to read the text but sometimes for saving their time they may not read every word on the screen.

When students were asked to respond to the question about their willingness to continue with online learning mode after COVID-19 situation, their responses varied. Majority of students (84%) favored blended mode or hybrid mode than purely online learning mode. As face-to-face learning was considered as still the favorite mode. In face-to-face mode students enjoyed workingin groups and interacting with their peers boosts students' motivation and involvement. This mode also helps in cultivation of social skills, collaboration, and interactive skills of the students.

Students' perceptions about the negative aspects of online learning activities students felt ignored by teachers specially classes where majority of students was normal. Students consideredonline learning mode that it misses the element of engagement, successful and involving due to distracting activities involved in it. Students demanded more interactive and social way of learning rather than isolated activity of sitting alone and listen the one-way communication of teachers.

Conclusions and Discussions

Special students' learning requires special arrangements as modification in environment, course learning materials and teaching mode. In this way it requires special care forteachers and institutions to make such arrangements that can facilitate gifted students in their academic learning course. Especially in the time of the crisis as COVID-19 universities are tryingto alter hybrid and blended learning mode. But this scenario is challenging in the way that it requires two types of arrangements to make. 1. Physical and equipment provision 2. Motivationaland training arrangements for individualized needs. Shah et al ,(2004) states that disability is nota static term rather it is relative and varies on the basis of time period, location and social settings of the gifted person. The term disability is described in convention on Human Rights (2008) as "physical, mental, psychological or sensory" impairment in any individual who needs support to contribute to the development of the society in social, economic or political manner (Matonya, 2016).

Students with disabilities are commonly denied participating in

social, educational, economic and cultural activities. Groce, (2004) calls them "most disadvantaged" and poor people as they cannot participate in the activities that may be would not be considered as a problem for them. Though charter of human rights clearly declares that education is "extremely important" for every member of society irrespective of age, gender, socio economic status ethnicity and abilities.

Gifted students are often considered as useless or burden on the society. As a result, their chances to participate in the social, economic and educational activities are blocked. So, they are unable to enjoy the social status and advantages that are their right. Barnes, (2010) considers it a social andeducational loss. Lack of infrastructure, and shortage of professional and educational opportunities are another reason for such negation of gifted students. Another issue that mostly gifted students were facing and highlighted was the lack of identification and solution of problems faced by gifted students. Mantonya, (2016) stated that similar situations are also faced by special students even inSub-Saharan African Countries. World Health Organization, (2011) states that in spite many treaties gifted students still face difficulty in access to the right of education.

The findings of the present study also support the same idea that though gifted students aresuffering more than normal ones but still they are making more effort to cope up with this new educational emergency and also seeking motivation by enjoyment of new learning scenario. It was encouraging to find that students considered the brighter side of the scenario in which they considered the advantages of online learning even in the disappointing times of social isolation and distancing during COVID-19. Khan et al, (2020) several gifted students reported to face difficulty during a paradigm shift in the traditional learning environment to digital learning environment and also requirements of additional skills in this scenario. These difficulties include missing the physical presence and support from their friends, lacking of social skills, coping up with complexities of academic and social life, and modification in social behavior during online classes. Students also reported to feel difficulty in organization of life activities as well as their economic affairs.

Many studies supported the view that physical presence of students in their classrooms withtheir peers creates satisfaction and supportive environment, while lack of physical support and isolation can create feelings of loneliness among students in general and gifted students specifically(Bullen, 1998; Hara and Kling, 2000; Zembylas et al., 2008).Tinto, (1997) presented the view point that collaborative learning opportunities can play important role in motivating students'

encouragement and can enhance their involvement in their learning. Robert, (2005) concluded that majority of gifted students do not get chance to get engaged in learning. They inferred that in online learning adjustment of students becomes even more challenging for teachers and there are more chances that some students may be neglected or overlooked, and majority of such students were gifted or impaired students. This situation resultedas feeling of dis-satisfaction and happiness among students especially online learning mode.

It is suggested by many studies that, to involve students more actively and efficiently duringonline classes proper training of both teachers and pupils, awareness sessions about the functionsand modes of online teaching and learning tools, and motivational speeches by teachers and otherspeakers can play an important role. Madriaga, (2011) stated that teachers and institutions and teachers need to ensure true and active inclusion of gifted students in learning and co-curricular discussions in online mode as it is helpful in creating sense of normalcy among gifted students. Madriaga, (2011) further states that ensuring the involvement of students in interaction can enhance the quality of online learning. For this purpose, it is necessary to build customized onlineplatforms with more possibilities and modes of student's involvement during online classes (Phipps, 2015). Another report that supports the findings of the present study reported that 4.5% students from rural area while 24% of urban students own their personal computers but still it is not very encouraging figures NSO (2019). Lack of electricity, internet or other equipment related to conduction of online classes can be another reason for non-involving behavior of gifted studentsin online learning mode.

During their interview some students stated that using computer without special software designed for visually impaired students becomes difficult for them. They required specially designed computers or applications that made it easy for these students to use normally designed computers. As most of the information available on internet was in text form and the use of applications as WhatsApp or SMS required textual mode of transfer of knowledge. Students suggested that teachers need to keep this problem in mind while sharing any kind of information to avoid any inconvenience for students and families.

Hehir, (2002) stated that to enhance the access of students to all the resources, it is suggestedthat specially designed content and equipment is required for both gifted and normal students. Education can be helpful for parents and students themselves for arranging accessible language and other sources to the gifted students.

During the pandemic of COVID 19, internet accessibility was used as most effective tool as savior for educational institutions to overcome effects of worldwide lockdown and sudden closure of educational institutions. Along with being responsible for closure of educationalinstitutions around on global level, COVID-19 also created rather introduced the opportunity of practicing online and digital platforms for teaching and learning activities. Sudden closure of institutions for safeguarding life and health of students and teachers affected educational activitiesin a drastic way. Findings of the study showed that this situation created some tension but along with this student took it a positive opportunity and enjoyed online learning mode. it would becomemore positive and enjoyable if proper facilities and sometime technical support was provided to students.

Recommendations

In the light of findings, it is recommended that institutions, with special students need to beclosed as these are on high risk of becoming sick but along with these institutions need to detain some teachers or every teacher with some special students for provision of academic and technicalsupport required by these students.

Universities need to conduct need analysis surveys to find out more acceptable platforms ofconnecting and attending online classes such as telephone, Whats App, e mail, and other institution based facilities as LMS and CMS etc.

Teachers may design and adopt trainings for online teaching strategies and assessment in more dynamic and individualized manner. In this way they will get more confident in dealing with students and specially students with physical and mental disabilities.

Creation of student-centered learning environment in online classes may also be helpful for involving all types of students. Teachers need to be careful for involving all students in interactionas they try to provide opportunities to all students in face –to-face classroom activities. In this wayattendee sheets of lists of students may be used to call students' name for different activities.

Teachers and institutions need to devise a flexible schedule of classes for students with lesstechnological knowledge. Teachers can record mini clips for guidance of students in using differentfunctions during online classes. Further teachers and institutions can make arrangements for providing recorded lectures to students through e mail or USB on weekly or monthly basis.

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Prevalence for Identification of Learners with Certain Learning Disorders at Elementary Grade: A Case of Province of Punjab

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Abstract

Students with certain Learning Disorders in Punjab at elementary were the focus of this study. Regarding speaking, reading, writing, and mathematics for students with learning impairments, there may be difficulties. Students with certain Learning Disorders in Punjab were the focus of this study. Students at Punjab's elementary schools were the focus of the study. Approximately 1500 pupils participated in the study. Data was collected with KTEA-II. Reading composite, composite math, composite, fluency reading, oral composite, oral composite. Composite. As described in the article, 60% of children suffer learning difficulties in a variety of areas. As a result, it is advised that special support services be formed and frequent in-service trainings for school staff be conducted to raise awareness of the problem.

Keywords: certain learning disorders, factors affecting, teacher planning, gender difference, elementary grade

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Introduction

Individuals with learning disorders have considerable, unanticipated, unique, and persistent challenges, despite the traditional education, normal intellect, appropriate desire and social-cultural learning chances, to acquire and use the reading, writing, and mathematics abilities (dyslexia, dysgraphia, dyscalculia). A child with a learning problem is one who does not perform as expected in school, while having a normal IQ. German physician Dr. Kussmaul documented a guy with normal intellect who was unable to read despite having received an "appropriate" education in 1878 (Habib,2000).

"Specific Developmental Disorders of Scholastic Skills (SDDSS)" is the ICD-10 code for learning disorders. This group includes specific reading disorders, specific language disorders, specific mathematics disorders and combined academic disorders. DSM-IV TR includes three different types of learning disorders. There is a reading disorder, a math disorder, and a writing disorder. Language abilities are affected, not "scholastic" skills, therefore the phrase "specific learning disorders" is acceptable. and moreover, the presumed etiology of being “developmental “is not needed for diagnosis. Similarly, the use of word “disorder” is inappropriate as some children may only have “difficulty” (Lagae,2008).

In elementary school, learning problems are quite frequent. As a result, primary school students need a lot of care and attention (Specht, 2004). Learning problems are major factors in the rising percentage of school dropouts. It's no secret that learning problems are one of the most significant and contentious concerns in educational institutions, particularly (Lyon, 1996).

Children that suffer from learning difficulties are hard to spot because of how common they are. Especially in elementary school, parents often overlook signs of LD in their children. Elementary school children in Pakistan have not been the subject of nearly enough academic study on the topic of learning disabilities. There is a pressing need to understand more about learning disorders in the elementary school setting (Aftab, 2018).

Karande et al., (2009) also stated that there is a paucity of studies on learning disorders particularly in elementary students. Therefore, the aim of this study is to explore the prevalence of certain learning disorders (CLDs) among elementary school children in Punjab. The purpose of this study is to uncover the truth about this issue.

Literature Review

The effects on children of various types of learning disabilities are far-reaching. Because it follows them throughout their lives, it has a negative influence on children's chances of success at every stage of life. In order to understand more about the specific learning problems, related literature is examined. Due to the lack of research on the incidence of LD in Pakistan, this study represents a first in Pakistan.

Definition of Learning Disorder

When compared to the average IQ of the child population as a whole, a lack of educational progress in reading, writing, or mathematics is considered to be indicative of a learning impairment in young children and adolescents. The DSM-IV-TR criteria for a learning disorder require that there be a significant disparity between a child's or teenager's academic progress and IQ level, as well as their progress in reading, writing, or mathematics in comparison to their classmates. This is one of the requirements for the diagnosis of a learning disorder (Sadock et al., 2007).

There are certain educational sectors where children with learning disorders cannot compete with their classmates, while there are others where they excel. Children's talents and educational chances do not support the assumption that a learning problem will result in no advancement in school (Sadock et al., 2007).

Causes of specific Learning Disorders

A child's capacity to succeed in school is harmed by learning difficulties. When this happens, there is a danger of low self-esteem, low self-confidence, a large sense of irritation, and poor peer connections. Learning issues are linked to a lack of focus, hyperactivity (ADHD), communication difficulties, and depression. Factors that influence in the development of learning disorder *Family history and genetics*. A child's risk of acquiring a learning issue is increased if there is a family history of learning difficulties.

Prenatal and neonatal risks. Poor uterine growth (severe intrauterine growth restriction), alcohol or drug use before pregnancy, premature delivery, and extremely low birthweight have all been linked to learning disorders.

Psychological trauma. A child's brain development might be affected by psychological trauma or abuse in early life, increasing the likelihood of learning disorders *Trauma to the body*. It's possible that head traumas or illnesses of the nerve system have a role in learning disorders.

Exposure to the environment. Learning disorders have been related to high amounts of pollutants such as lead. (Dunn et al, 2004).

Characteristics of Learning Disorders

There is a wide variety of signs and symptoms that have been linked to children who have learning difficulties. According to Keogh (1971), the following are the ten characteristics that are mentioned most frequently:

- Children that have hyperactivity move around a lot, are unable to stay still for long periods of time, and act without giving much thought to what they are doing.
- Perceptual-motor deficits are difficulties in linking a visual or auditory information with a motor act. These deficiencies might manifest as difficulty in seeing, interpreting, and comprehending the world around them.
- Emotional lability refers to emotional outbursts that are perceived by onlookers to be illogical in light of the situation or the child's most recent experience. These swings in mood are almost always attributable to a particular event or circumstance. There are several potential causes, including having a challenging day at work, being anxious about one's money or a deadline, or simply not getting enough sleep the night before.
- Clumsiness or awkwardness can be described as a general lack of coordination. A kid who has a learning problem may have difficulty with activities such as cutting, buttoning clothing, tying shoelaces, copying from the chalkboard, and sorting items according to their shapes and sizes.
- Attention deficit disorder is characterized by either distractibility, in which a person pays attention to something that they shouldn't, or perseveration, in which a person focuses on something for an excessive period of time.
- The term "impulsivity" refers to behaviors that are carried out without prior planning or consideration.
- A disorder of memory or thinking characterized by difficulties recalling information that ought to have been learned as well as an inability to grasp concepts that are abstract. A kid who has a learning disability can have difficulties remembering the sounds, letters, or words that he or she has previously learned. Additionally, this disease has an effect on one's capacity for comprehension. The youngster can have the order of the sounds or letters in words mixed up; for instance, they might write "stop" when they meant to write "tops."
- A person who has a speech or hearing condition may have trouble understanding or remembering what was said, may have difficulty

articulating words correctly, and may struggle to communicate their thoughts verbally while using the correct terminology.

- Symptoms of neurological impairment: A child who has a learning issue may exhibit symptoms of neurological impairment, such as a lack of fine motor coordination, poor balance, clumsiness, and poor speech, in addition to behavioral evidence of brain injury known as "soft signs."
- It is essential to keep in mind, however, that not every kid who has a learning condition will struggle with each and every one of the problems described above. It is also not sufficient evidence to conclude that a kid has a learning disability just because they have one of these conditions. The majority of children who are treated in educational settings for learning impairments exhibit more than one of the characteristics listed below. Once the characteristics of LD have been recognized, teachers need to have a solid understanding of how LD may be categorized in order to correctly classify students and take remedial action (Keogh, 1971).

Process of Identification

Teachers need help understanding the causes behind each difficulty, as well as how they may classify and reorganize them (Samoel & Vegalager, 2003). Most learning abnormalities are not found until the third or fourth grade because teachers do not know enough about learning disorders (Lyon, 1996).

Teachers criticize students as lazy, irresponsible, and lacking in motivation because they believe this problem is inevitable. Students with learning difficulties, such as laziness, irresponsibility, and a lack of enthusiasm, are more prone to have typical social and emotional issues and to be denied access to suitable educational opportunities (Klassen & Linch, 2004).

Screening by DSM-5

According to the Diagnostic and Statistical Manual of Mental Disorders 5 (DSM-5): (e.g., reads single words aloud incorrectly or slowly and hesitantly, frequently guesses words, has difficulty sounding out words).

- Lack of comprehension of the words that are uttered to you
- Inability to read and write in the English language such as omit, substitute the words
- I'm having a hard time getting anything down on paper such as punctuation errors or grammatical mistakes, written expression of ideas lacks clarity).
- Problems with math or an inability to perform fundamental arithmetic (e.g., has poor understanding of numbers, their

magnitude, and relationships; counts on fingers to add single-digit numbers instead of recalling the math fact as peers do; gets lost in the midst of arithmetic computation and may switch procedures).
- Mathematical reasoning issues.

IDEA altered the standards when it came to identifying and categorizing children with certain learning problems. A child is only deemed to have a learning disorder under IDEA if he or she fails to meet the state's grade level criteria in one or more of the following areas:
- Listening comprehension is a skill that requires you to be able to understand what you are hearing.
- Nonverbal expressiveness and verbal expression are two types of expression.
- Basic reading skills linked to basic reading skills related to basic reading skills related to basic
- Calculation of numeric values
- Problems involving mathematic
- Fluency in reading (National Joint Committee on Learning Disabilities, 2015)

Specific Learning Disorder and Co morbidity

Sahoo et al., research suggests that (2015). The existence of delinquency and other behavioral and psychological disorders, such as anxiety disorder and depression, makes specific learning disorder a far more problematic condition to treat.

Learning Disorder Prevalence

School age children in the ratio of 5-10% are diverse in their culture and language have particular learning disorders in reading, writing, and mathematics. Among adults, the prevalence is unclear, although it looks to be around 4 percent. (APA,2013).

The prevalence of writing disorders is unknown, although it is believed that 4 percent of school students suffer from it. It appears to be more than three times frequent in boys than in girls (Sadock et al., 2007). According to Piaget's theory of development, a primary cause of issues in education is a student's inability to complete certain procedures. Because students need to acquire particular abilities and knowledge in specific disciplines (such as arithmetic, reading, and writing) before they can benefit from lessons.

Teenagers with learning disorders that drop out of schools likely more 1.5 times, and roughly 40% of them do. When it comes to job and social compatibility, adult students with learning impairments

are at risk. Five percent of school-age children have learning problems (Sadock et al., 2007).

All public-school pupils make up 5% of the student population. This group of pupils receives excellent educational assistance in the United States. Children with outstanding health care have a high rated ratio of learning disorders (28%) than children with normal development (5.4%), according to recent epidemiological studies (Sadock & Sadock, 2009).

Approximately 4 % children in the United States have a reading disorder, according to the National Reading Panel. According to studies, this issue affects 2-8% of the population. Boys are more likely than females to suffer from learning difficulties due of behavioral issues (Margalit, 1997). It is believed that only 1 percent of school children have an arithmetic skill issue. It is estimated that 1 in 5 children with a learning disorder has this exact issue. This condition is more frequent in girls (Sadock & Sadock, 2009).

As the prevalence of learning disorders spans from 3% to 12%, teachers with 15 to 20 students may have one, two, or even more pupils with learning challenges (Hallahan et al 2005). The prevalence of learning difficulties in the school community ranges from 2% to 20% to 40%. Elementary school students with learning disabilities are a typical occurrence. Children who struggle academically in elementary school should be identified by their teachers who are trained to use scientific criteria and the most effective methods for doing so (Solis et al 2011).

Professors must pay particular attention to students with learning disabilities so that they can develop the necessary skills and prepare for the next learning stages. A disturbance in cognitive functioning, such as comprehending, language usage, and memory, is the cause of a learning issue. When teaching, a teacher's knowledge of these disorders should be considered due to the disparity in cognitive abilities of pupils in the end, the optimal learning method should be chosen (Karthigeyan, 2019).

Methodology

Research Design: In order to conduct this research, a quantitative approach was utilized as the type of research design. Quantitative research is a method of data collecting that is used to provide answers to queries on the present standing of the subject being studied.

Population: The purpose of this research study is to investigate the prevalence of particular learning impairments among children who

are enrolled in elementary school, the population of this study consists of the children who are enrolled in elementary school in the province of Punjab. For the purpose of study and generalization, group of elements from which statistical sample is selected is termed as population (Siddique et al., 2021).

Sample: Multistage sampling method was utilized in the collection of the sample. The information was gathered from 1,500 students who were attending elementary schools in the state of Punjab with the assistance of their instructors (Siddique et al., 2021).

Instrument: The K-TEA-II was the instrument that was utilized to gather the data from the children in this study. For the purpose of determining the extent to which children are affected by a variety of learning impairments, the instrument was structured with six distinct sections. Expert validates the instrument with respect to content and constructs validity. Hair et al, (2010) defines the criteria to assess the internal consistency reliability as if the values will be 0.6 or lower the poorer the internal consistency. As the checklist was comprised of six sections, so the Cronbach's alpha was calculated section wise. Section RC reliability is .86, MC is .78, WLC is.83, RFC alpha is.67, OFC Cronbach's alpha is.74 and OLC value is.87. The questions that are asked of youngsters vary depending on the segment. These six sections and the questions of each section are described in detail.

Reading Composite: Reading comprehension questions about the words "apple," "ball," "cat," "dog," "elephant," and "frog" were used to test children's initial reading skills.

Math omposite: Children's mathematical aptitude was tested by having them perform calculations such as adding and subtracting 11 and 15, multiplying and tabulating 6 and 6, counting from 1 to 100, and dividing 25 by 5.

Written Language Composite: Children's written language composites were evaluated by having them write answers to questions on how to spell common words and phrases, such as "apple," "elephant," "alphabet," "1 through 50," and "your name."

Reading Fluency Composite: I have __ Cats (1, 2, 3), My cat is __ (White, Brown, Black), Cat has a __ tail (Short, Large, No), Cat eyes are __ (Black, Brown, White), Cat likes __ (Milk, Butter, Biscuits), and I love to play with my___ Cats are examples of the types of questions used to evaluate children's reading fluency composites (Cat, Dog, Toys).

Oral Fluency Composite: I have a cat; my cat is white; my cat's tail is long; her eyes are brown; my cat enjoys milk; and I love to play

with my cat; these are some of the question's children were asked to read as part of an oral fluency composite assessment.

Oral Language Composite: Questions such as "what is your name?" "what is your father's name?" "which alphabet comes after F?" "which alphabet comes before F?" "what is the Spelling of the word apple?" "tell me the story of Rabbit and Tortoise," "what is the name of our prophet," and "how many times did we offer prayer in a day" are examples of the types of questions that are asked during an evaluation of a child's ability to communicate verbally.

The Gathering and Examination of Data

The procedure of collecting data was finished so that the learning difficulties of the kids could be evaluated. A screening checklist was given out to the students so that their observations on their academic achievement in the class could be recorded. In order to get at the results, the data had to be organized and evaluated.

Table 1

Responses of the Students Kaufman Test of Educational Achievement (K-TEA-II)

Sr#	*Description*	*Correct (%)*	*Wrong (%)*	*Not Responded (%)*	*Score (%)*
1	Reading Composite	67.18	22.04	10.78	100
2	Math composite	76.24	14.78	8.98	100
3	Written Language Composite	59.92	30.60	9.48	100
4	Reading Fluency Composite	37.11	58.16	4.73	100
5	Oral Fluency Composite	37.04	46.63	16.32	100
6	Oral Language Composite	37.22	50.33	12.44	100
	Overall Achievement	44.96	31.79	8.96	86

Table 2

Reading Composite

Sr. No	*Item*	Correct		Wrong		Not Responded		Total	
		f	%	*F*	%	*f*	%	*f*	%
1	R.C 1	800	(53.33)	440	(29.33)	260	(17.33)	1500	(100)
2	R. C 2	600	(40.00)	550	(36.67)	350	(23.33)	1500	(100)
3	R. C 3	1230	(82.00)	200	(13.33)	70	(4.67)	1500	(100)
4	R. C 4	1150	(76.67)	250	(16.67)	100	(6.67)	1500	(100)
5	R C 5	968	(64.53)	452	(30.13)	80	(5.33)	1500	(100)
6	R. C 6	1302	(86.80)	108	(7.20)	90	(6.00)	1500	(100)
7	R .C 7	1146	(76.40)	257	(17.13)	97	(6.47)	1500	(100)
8	R.C.8	968	(64.53)	452	(30.13)	80	(5.33)	1500	(100)
Total		8164	(544.27)	2709	(180.60)	1127	(75.13)	12000	(800)

Table 2 indicate that the participants which were 800 (53.3%), 600 (40%), 1230 (82%), 1150 (76.7%), 968 (64.6%), 1302 (86.9%), 1146 (76.4%), 968 (64.6%) responded correctly to the items R.C.1, R.C.2, R.C.3, R.C.4, R.C.5, R.C.6, R.C.7, and R.C.8 respectively.

Table 3

Math Composite

Sr. No	*Item*	*Correct*		*Wrong*		*Not Responded*		*Total*	
		f	*%*	*F*	*%*	*f*	*%*	*f*	*%*
1	M.C 1	1302	(86.80)	108	(7.20)	90	(6.00)	1500	(100)
2	M.C 2	1150	(76.67)	250	(16.67)	100	(6.67)	1500	(100)
3	M.C 3	1220	(81.33)	204	(13.60)	76	(5.07)	1500	(100)
4	M.C 4	980	(65.33)	189	(12.60)	331	(22.07)	1500	(100)
5	M.C 5	980	(65.33)	379	(25.27)	141	(9.40)	1500	(100)
6	M.C 6	1230	(82.00)	200	(13.33)	70	(4.67)	1500	(100)
Total		6862	(457.47)	330	(88.67)	808	(53.87)	9000	(600)

Table 3 indicate that the participants which were 1302 (86.9%), 1150 (76.7%), 1220 (81.3%), 980 (65.3%), 980 (65.3%), 1230 (82%) responded correctly to the items M.C.1, M.C.2, M.C.3, M.C.4, M.C.5, and M.C.6 respectively.

Table 4

Written Language Composite

Sr. No	*Item*	Correct		Wrong		Not Responded		Total	
		f	%	*F*	%	*f*	%	*f*	%
1	W.L 1	579	(38.60)	700	(46.67)	221	(14.73)	1500	(100)
2	W.L 2	850	(56.67)	462	(30.80)	188	(12.53)	1500	(100)
3	W.L 3	900	(60.00)	448	(29.87)	152	(10.13)	1500	(100)
4	W.L 4	890	(59.33)	400	(26.67)	210	(14.00)	1500	(100)
5	W.L 5	1165	(77.67)	266	(17.73)	69	(4.60)	1500	(100)
6	W.L 6	1009	(67.27)	478	(31.87)	13	(0.87)	1500	(100)
Total		5393	(359.53)	2754	(183.60)	853	(56.87)	9000	(600)

Table 4 indicate that the numbers of participants which were 579 (38.7%), 850 (56.7%), 900 (60%), 890 (59.3%), 1165 (77.7%), 1009 (67.2%) responded correctly to the items W.L.C.1, W.L.C..2, W.L.C.3, W.L.C.4, W.L.C.5, and W.L.C..6, respectively.

Table 5

Reading Fluency Composite

Sr.No	*Item*	Correct		Wrong		Not Responded		Total	
		F	%	*f*	%	*f*	%	*f*	%
1	R.F.C 1	670	(44.67)	750	(50.00)	80	(5.33)	1500	(100)
2	R.F.C 2	457	(30.47)	942	(62.80)	101	(6.73)	1500	(100)
3	R.F.C 3	240	(16.00)	1215	(81.00)	45	(3.00)	1500	(100)
4	R.F.C 4	560	(37.33)	880	(58.67)	60	(4.00)	1500	(100)
5	R.F.C 5	323	(21.53)	1132	(75.47)	45	(3.00)	1500	(100)
6	R.F.C 6	1090	(72.67)	315	(21.00)	95	(6.33)	1500	(100)
	Total	3340	(222.67)	5234	(348.93)	426	(28.40)	9000	(600)

Table 5 indicate that the participants which were 670 (44.7%), 457 (30.4%), 240 (16%), 560 (37.3%), 323 (21.6%), 1090 (72.7%) responded correctly to the items R.F.C1, R.F.C.2, R.F.C.3, R.F.C.4, R.F.C.5, R.F.C.6 respectively.

Table 6
Oral Fluency Composite

Sr. No	*Item*	Correct		Wrong		Not Responded		Total	
		f	%	*F*	%	*f*	%	*f*	%
1	O.F.C 1	232	(15.47)	1143	(76.20)	125	(8.33)	1500	(100)
2	O.F.C 2	678	(45.20)	590	(39.33)	232	(15.47)	1500	(100)
3	O.F.C 3	754	(50.27)	554	(36.93)	192	(12.80)	1500	(100)
4	O.F.C 4	500	(33.33)	790	(52.67)	210	(14.00)	1500	(100)
5	O.F.C 5	670	(44.67)	460	(30.67)	370	(24.67)	1500	(100)
6	O.F.C 6	500	(33.33)	660	(44.00)	340	(22.67)	1500	(100)
Total		3334	(222.27)	4197	(279.80)	1469	(97.93)	9000	(600)

Table 6 indicate that the participants which were 232 (15.4%), 678 (45.2%), 754 (50.2%), 500 (33.3%), 670 (44.7%), 500 (33.3%) responded correctly to the items O.F.C.1, O.F.C.2, O.F.C.3, O.F.C.4, O.F.C.5, and O.F.C.6 respectively.

Table 7
Oral Language Composite

Sr. No	*Item*	Correct		Wrong		Not Responded		Total	
		f	%	*f*	%	*f*	%	*f*	%
1	O.L.C 1	600	(40.00)	790	(52.67)	110	(7.33)	1500	(100)
2	O.L.C 2	590	(39.33)	700	(46.67)	210	(14.00)	1500	(100)
3	O.L.C 3	650	(43.33)	720	(48.00)	130	(8.67)	1500	(100)
4	O.L.C 4	370	(24.67)	940	(62.67)	190	(12.67)	1500	(100)
5	O.L.C 4	590	(39.33)	610	(40.67)	300	(20.00)	1500	(100)
6	O.L.C 5	550	(36.67)	770	(51.33)	180	(12.00)	1500	(100)
Total		3350	(223.33)	4530	(302.00)	1120	(74.67)	9000	(600)

Table 7 indicate that the participants which were 600 (40%), 590 (39.3%), 650 (43.3%), 370 (24.7%), 590 (39.3%), 550 (36.7%) responded correctly to the items O.L.C.1, O.LC.2, O.L.C.3, O.L.C 4, O.L.C 5, and O.L.C. 6 respectively.

Table 8
Comparison of Specific Learning Disorder on the basis of Kaufman Test of Educational Achievement (K-TEA-II) among Gender.

Gender	*N*	*Mean*	*Df*	*T*	*Sig.*
Male	653	6.54	5172.406	-2.938	.060
Female	847	6.03	2114		

*P > .05 Level of Significance

Table 8 indicate no significant difference in the Comparison of Specific Learning Disorder based on the Kaufman Test of Educational Achievement (K-TEA-II) among Gender.

Table 9

Comparison of Specific Learning Disorder based on Kaufman Test of Educational Achievement (K-TEA-II) among Living Area

Living Area	*N*	*Mean*	*df*	*T*	*Sig.*
Rural	743	7.01	3104	-3.401	.005
Urban	757	6.69	2086		

*P < .05 Level of Significance

Table 9 indicate a significant difference in the Comparison of Specific Learning Disorder based on the Kaufman Test of Educational Achievement (K-TEA-II) among Living areas.

Findings and Conclusion

Data Analysis indicates that the numbers of students, which were 800,600, 1230, 1150, 968, 1302, 1146, and 968 responded correctly to the items RC-1, RC -2, RC -3, RC -4, RC -5, RC -6, RC -7, and OL-8 respectively responses on *Kaufman Test of Educational Achievement (K-TEA-II)*. The number of students, 1302,1150, 1220, 980, 980, and 1230 responded correctly to the items MC-1, MC -2, MC -3, MC -4, MC -5, and MC -6 respectively responses on *Kaufman Test of Educational Achievement (K-TEA-II)*. The number of students, 579, 850, 900, 890, 1165, and1009, responded correctly to the items WLC-1, WLC-2, WLC-3, WLC-4, WLC-5, and WLC-6 respectively responses on *Kaufman Test of Educational Achievement (K-TEA-II)*. The number of students, 670, 457, 240, 560, 323, and 1090, responded correctly to RFC-1, RFC-2, RFC-3, RFC-4 RFC-5, and RFC-6 respectively responses on *Kaufman Test of Educational Achievement (K-TEA-II)*. The number of students, 232, 678, 754, 500, 670, and 500, responded correctly to OFC-1, OFC -2, OFC -3, OFC -4, OFC -5, and OFC -6 293 respectively responses on *Kaufman Test of Educational Achievement (K-TEA-II)*. The numbers of students, 600, 590, 650,370, 590, and 550, responded correctly to the items OLC-1, OLC -2, OLC -3, OLC -4, OLC -5, and OLC -6 respectively responses on *Kaufman Test of Educational Achievement (K-TEA-II)*.

A lack of suitable curriculum may be the reason why some children in school experience learning difficulties that are inconsistent with their developmental stages. According to the phases of development described by psychologists and researchers, it must be improved. Inadequate teaching and educational procedures may be to blame for students' difficulties in the areas of speech and writing, reading, and mathematics. Many factors contribute to this, the most important of which is a breakdown in the central system. The teacher's knowledge of the subject matter is the most important part of the education, which is often lacking in most schools. Female primary school teachers are more likely than male teachers to have a poor grasp of kids' comprehension of specific learning difficulties.

Discussion and Recommendations

According to the findings of the Kaufman Test of Educational Achievement (K-TEA) II, there is no discernible difference between the sexes in terms of the presence or severity of some learning impairments. Comparisons of some learning disorders using the Kaufman Test of Educational Achievement II (K-TEA-II) have shown that results from various locations might be very different from one another. The purpose of this experimental study was for the researchers to test the efficacy of the Kaufman Test of Educational Achievement (K-TEA-II) and ensure the internal consistency of the screening checklist for pupils with certain learning disorders in various aspects of life such as difficulty in reading, writing, and learning. In addition, the researchers wanted to ensure the internal consistency of the screening checklist for students with certain learning disorders. A group of acknowledged authorities in the field at hand got together to share their observations. The K-TEA-II was applied in the data analysis process in order to define the reliability of the screening checklist for students in the classroom who may have Certain Learning Disorders. – (De La Paz & Wissinger, 2017). The following suggestions were proposed in light of the data and inferences drawn from the research:

1. As a direct result of the findings of this study, students in secondary and upper secondary schools are being encouraged to conduct more research at the macro level.
2. In order to determine the unique learning obstacles faced by children, teachers should employ the diagnostic tool that has been given.
3. Educational policies and procedures that promote the integration of children with certain learning disorders into mainstream schools should be assured to exist in order to facilitate the inclusion of these students. It's possible that the admission and management regulations, as well as the curriculum, infrastructure, and evaluation and assessment procedures, need to be updated.
4. In order to be in a position to provide the necessary help, extraordinary support services will need to be established.
5. The higher authorities should conduct in-service training for the school administrators and teachers in order to raise awareness.

6. The establishment of advocacy and awareness programs is an absolute necessity if one wants to see a rise in the number of parents and other family members who have children with certain learning difficulties.

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Psychosocial Challenges Faced by Albinos in Inclusive Societies and Coping Strategies Practiced by them to address these challenges. A case of Lahore City

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ABSTRACT

Albinism is a genetic condition characterized by the complete or partial lack of melanin, a pigment responsible for the color of skin, hair, and eyes. Albinism, like all other groups of disabilities, is associated with certain psychosocial challenges in an or inclusive society. The present study aimed at examining the psychosocial challenges faced by persons with albinism in our inclusive society and the coping strategies used by them to address these challenges. For the study, the interpretive phenomenological research design was used. The data was collected from five individuals who were purposively selected from different areas of Lahore. Semi-structured interviews were conducted for each individual based on the interview protocol developed as a tool of research. The data was analyzed by thematic analysis. The findings of the study revealed that Albinos are facing psychosocial challenges in our inclusive society due to a lack of knowledge about albinism. Many myths and misconceptions about albinism were found in the local inclusive community. The most common psychosocial challenges faced by albinos in our inclusive society were variable social attitudes of the people; fear of rejection anxiety, stress, anger, and negative self-perception. Moreover, they have very limited social circles due to fewer chances of social inclusion because of their limited vision and sensitive skin. The study revealed defense mechanisms, acceptance coping, and religious coping strategies used by Albino in an inclusive society.

Keywords: inclusive society, albinism, psychosocial challenges, coping strategies.

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Introduction

The concept of inclusive society explains the idea of a society where inequalities are reduced and full educational, social and cultural participation is advanced for individuals with albinism and other disabilities (Dillenburger, et al, 2015). Inclusive societies are required to promote equality, flourish in the inclusion of marginalized groups, and learn from diversity (Shore & Chung,2022; Bernstein & Bilimoria, 2013). Unfortunately, due to stigmatization, low literacy rate, and social prejudice, the inclusion of Persons with visual impairment has not been fully achieved in the local inclusive societies. There are certain reasons for the low level of social inclusion of persons with Albinism in inclusive societies. The stereotypical behavior of people living in society, the limitations due to impairment, and their unique looks are some of the major reasons.

The literature reveals that the physical aspect of personality has a great deal with its psychosocial aspect, thus albinism, being an apparent condition greatly influences the behaviors of the persons with albinism as well as the other members of their society. People with albinism face numerous challenges in their lives and it is thought that the reason behind these challenges is the physical appearance and social behaviors of others (Kromberg, 2018). People usually don't have knowledge about albinism, so they associate it with many myths and superstitions and creating difficulties for people with albinism to adjust to society in a normal manner (Tambala-Kaliati, et.al., 2021).

Albinism is a genetic condition characterized by the mal production of melanin, a pigment responsible for color in the hair, skin, and eyes (Kromberg, & Kerr, 2022). The word "Albinism" has been derived from the Latin word "Albus" meaning "white". It refers to their white milky skin. People with albinism are usually called "albinos". People with albinism usually have white skin, white to golden hair, and hazel to light blue or light brown eyes) Albinism is always associated with visual impairment and some skin problems (Estrada-Hernandez & Harper, 2007). People with albinism are at high risk of skin cancer or sunburn. The health factors of albinism lead to psychological and social problems. The management of albinism is incomplete without addressing these issues as it is suggested that among all the groups of disabilities, psychological problems are most common in persons with albinism (Hernandez, 2007).

Albinism has many psychosocial effects. Psychosocial is the combination of two words "psychological" and "social". Thus, psychosocial challenges refer to the challenges that are related to the psychological aspect of personality and have a social basis (Richard, 2016). The psychosocial challenges are related to mental health, personality traits, self-beliefs, and social and environmental factors that lead to anxiety, stress, or other behavioral issues. To cope with these challenges, people with albinism use many strategies such as defense mechanisms, intellectualization, isolation, or religious practices (Wan, 2003). Coping strategies are the ways to deal with challenges (Richard, 2016).

Albinism is found all over the world and its prevalence rate is 1 in 17,000 worldwide (Wright, et. al.,2014). The ratio of albinism is different in different regions of the world. It is most common in African countries and hence, many types of research related to Albinism are from an African context. In Pakistan, there is very little research on Albinism and all of them are about the medical or clinical aspects of albinism. Hardly one or two researches could be found that throw light on the psychosocial aspect of albinism. Thus, the present study is the first one of its nature as the gist of this study is to examine the psychosocial challenges faced by people with albinism and their coping strategies.

Literature Review

Much research is being conducted on the psychological aspects of disabilities to improve rehabilitation services (Zamani Varkaneh, et. al., 2022). As albinism is a visible characteristic, it holds the interest of many researchers in countries where it is found in a greater ratio. The literature reveals a thorough understanding of the concept of "albinism" and its associated aspects such as factors that affect the personal and psychological development of people with albinism and become the basis for social attitudes and behaviors (Masanja, 2020).

Albinism is caused by the deficient or complete lack of pigmentation from skin, hair, and eyes due to mutation in one or more genes, depending on the type of muted gene, albinism has many types. In the past, albinism was classified into two categories, "Oculocutaneous Albinism/ OCA" affecting eyes, skin, and hair, and "Ocular Albinism" affecting only eyes (Hovnik, et. al.,2021). Albinism could be syndromic or non-syndromic. OCA and OA are non-syndrome types of albinism while "Hermansky Putlak syndrome type 1, 2, 3, and 4" and "Chediak Higashi syndrome" are syndromic (Estrada & Harper,

2018). With time, doctors continued their studies, and currently, seven phenotypes of oculocutaneous albinism have been discovered in Pakistan (Shah, et. al., 2018).

Researchers have conducted studies on many aspects of people with albinism such as their self-concept, anxiety level, their intelligence, and attitudes towards albinism but Hernandez (2018) concluded that none of the research was linked with the psychosocial factors of albinism. He conducted most of his studies in countries where the lack of knowledge was the basis of how albinism was perceived there. According to Aborisade (2021), the self-concept of persons with albinism is lowered when they are subjected to unreliable information about albinism or when he fails to meet their social needs. The failure in meeting the social criteria, the persons with albinism go through psychological distress.

According to Chu, et. al., (2021)), albinism is associated with many myths and superstitions in the history of the African context. These myths have changed over time but are often associated with folk stories and tales. Some studies suggest that albinism is a blessing and is associated with unusual powers; others say that it is the result of evils and punishments. The general reason behind all these beliefs is the lack of knowledge about albinism.

Albinism is associated with many psychosocial challenges as revealed by the study conducted by Estrada-Hernandez (2018). According to this study, physical differences play an important role in determining interaction patterns with albinism which affect their psychological development and quality of life. In inclusive societies, people have a typical look and physical appearance, and structure. As explored by the researcher, a lack of knowledge about albinism contributes to the discouraging attitude toward albinism by sighted people (de Groot, et.al.,2022).To lessen the rate of discrimination against people with albinism, the members of society should be aware.

A study was conducted by Sarah (2016) on psychosocial challenges and coping strategies among people with albinism in Tanzania. The findings of her study suggested that stigmatization and social discrimination by the people of inclusive societies are the most common psychosocial challenges among albinos in inclusive societies and they use "social isolation" and "social avoidance" as coping strategies. In her study, she used the social model of disability to explain the challenges of

albinism. This study also became the basis for the present study as the researcher also wanted to address the same issues.

According to Mutasa (2014), people with albinism face discrimination at educational and employment levels in inclusive societies. This discrimination is generally conceived by the social model of disability. The findings of the study also suggest that albinism is associated with some myths and superstitions. The elements of aggression and depression were also found in the participants of the study. The study concluded that albinism is associated with psychosocial challenges. However, the study provides recommendations to change societal attitudes such as awareness campaigns about the rights of persons with albinism. The study suggests that family plays an important role in accommodating persons with albinism.

The research studies on albinos have highlighted that people with albinism face many medical and social issues (Lund & Gaigher 2002). The studies showed a greater risk of skin problems and reduced visual acuity among people with albinism (Wilhelmsen, et. al.,2022). Another study conducted by Samdani & Khoso (2009) conducted an epidemiological study on people with albinism from a rural area of Sindh, Pakistan. Their study aimed at exploring the medical and financial issues of albinos. The results of the study found that all the participants were at risk of skin problems, especially during the summer season. Albinism has many financial issues as well as there is a burden of medication and protection needs. The study found that besides these challenges, people with albinism also face many social and psychological challenges which are needed to be addressed by separate research studies.

The psychosocial challenges of persons with Albinism increase the challenges of their life in inclusive societies (Ngula & Bitso, 2021). The studies have explored that persons with Albino (PWA) faced attitudinal problems in the inclusive society which promote their social exclusion. The exclusion from inclusive society refrains them to participate in social events and reduce their social roles as a member of this society. Living with Albinism is not living an ordinary life in our local inclusive societies as highlighted by the experiences of persons with Albino (Inyango,2021). The most common challenges faced in inclusive societies as highlighted by the study conducted by Tambala-Kaliati, et. al., (2021) lack of community support, labeling, superstitions, and discrimination. These challenges have a positive correlation with their psychological problems and tilt them to use certain coping strategies

to survive in this world of normal people with typical physical features. The use of coping strategies is essential for the PWA as it will help them to reduce their psychosocial challenges and will enable them to be an integral part of larger inclusive societies (Zamani Varkaneh, et.al., 2022). Hence, PWA will be able to get benefits from inclusive education (Inyango, 2021) and professional institutions to become productive citizens and share their financial burden as PWA are suffering from financial issues globally and locally due to social exclusion and marginalization within inclusive societies.

The above literature presents a holistic idea about the challenges faced by persons with albinism across the world. Most of the research is from the African context, few are from the Pakistani context. All the research has recommended the need for further research in the addressed field. The present study was also conducted in light of the above research. Because of its nature, the study is of great significance in the field of albinism as such studies are highly needed to be conducted to raise awareness about albinism at a mass level for their proper inclusion in inclusive or inclusive societies.

Purpose of the Study

The present study identified the gaps in the previous studies in this field and tried to bridge those gaps by addressing the psychosocial challenges faced by persons with albinism in becoming part of an inclusive society in the context of Pakistan. The study also explored the coping strategies employed by albinos to cope with their challenges and keep themselves socially included within an inclusive society. The study also aimed at raising awareness about albinism so that the issues of albinism could be brought to the national level. The study will also help the general public to modify their behaviors toward albinism. The present study will add to the existing literature on albinism.

Research Objectives

The objectives of the present study were to

1. Highlight the psychosocial challenges faced by people with albinism in an inclusive society in the local context.
2. Observe the coping strategies used by people with albinism to deal with psychosocial challenges in an inclusive society.

Research Questions

The main research questions for the present study were;

1. What type of challenges are faced by persons with Albinism in an inclusive society?
2. What is the cultural and ethnic background of albinism in Pakistan?
3. What type of coping strategies are used by Albino to meet the psychosocial challenges in an inclusive society?

Methodology

The following research methodology was used to conduct this study.

Research Design

Selecting the methodological procedure is the most important step in research work. Keeping in view the nature of the problem, the qualitative research approach was found to be the most suitable under which phenomenological interpretive research design was used. The population for the study was persons with albinism living in the city of Lahore. To study the underlying phenomenon, detailed interviews with five albinos were conducted. A purposive sampling technique was used to approach the sample.

Participants

All the participants were from the central and peripheral areas of Lahore. Among the participants, there were three young adult females, one adult male, and one adolescent male. All the participants were educated. All the participants knew the biological basis of albinism except one male adult who was unfamiliar even with the term "albinism". The following table presents the general description of the participants;

Table 1
Demographics of the participants of the study

No of participants	*Gender*	*Age (years)*	*Birth order*	*Marital status*	*Family type*	*Siblings without albinism*
1	Male	24	1	single	Joint	4
2	Female	25	1	single	Nuclear	1
3	Male	17	5	single	Nuclear	1
4	Female	21	2	single	Joint	1
5	Female	22	3	single	Nuclear	2

Data Collection Procedure

The data was collected with the help of the interview protocol. In addition to demographics, the interview comprised two sections, the first section was comprised of questions about the psychosocial challenges faced by persons with albinism to be part of an inclusive society, and the other section was comprised of questions about the coping strategies used by them to cope with their challenges facing the inclusive society. A questionnaire was designed for the interviews; both open-ended questions were included in the questionnaire. The interview was framed keeping in view the research questions of the study.

The interviews were conducted in the first language of the participants i.e. in the Urdu language. Before the formal beginning of the interviews, an informed consent form was signed by the individuals. Then, the demographic information of the participants was collected. The responses of the participants were recorded on the answer sheets. The researcher also took field notes from the familial context of the participants.

Ethical Considerations

All of the participants were willing to be part of this study without any pressure.

The interviews of the respondents were cast off after the completion of the study to keep the secrecy of the information shared by the respondents. The respondents were allowed to refuse any question if they consider it undesirable.

Data Analysis

Thematic analysis was used to analyze the data gathered from the interviews. Themes emerged from both sections of the interviews. The researcher analyzed the data in an unbiased way to present the actual results of the study. The researcher did not add his point of view in analyzing the data and followed all the research ethics.

Limitations

The limitations of the study are the following;

1. The study was conducted on a small sample due to the nature of the sample.
2. All the participants of the study were single, so the study could not present challenges for the married individuals
3. The findings of the study could not be generalized to the population living in the other areas of the province without considering their cultural and social context.
4. Due to less availability of local research conducted on the research topic, few local research studies are cited here.

Results

This section presents the thematic responses based on participants' interviews.

Table 2

Psychosocial challenges faced by the persons with albinism

Chunks	*Codes*	*Themes*
1. The people of my society do not know about albinism, so, they associate it with myths.	do not have knowledge associated with myths	Knowledge and attitude
2. I don't know what albinism means but I live with it.	don't know	
3. People ask abrupt questions about my white skin and golden hair.	ask abrupt questions	
4. Sometimes, people laugh at my physical appearance.	laugh at me	

5.	People make fun of my white color and call me by the wrong names such as "Bagga" or "Gora".	make fun call by wrong names	
6.	Some people like my golden hair and white complexion and praise me.	like me praise me biological basis	
7.	When I tell people about the biological basis of albinism, they don't believe it. Rather they deny and say that it is a disease.	don't believe disease gaze strangely	
8.	People gaze at me strangely.		
1.	I get irritated when being stared at strangely.	Get irritated Get angry	Psychological issues
2.	I get angry at people's teasing compliments about my different physical appearance.	Teasing compliments Get Anxious	
3.	I get anxious in new situations by thinking that how people would behave toward me.	Awkward-looking personality Emotional	
4.	I perceive myself as having an awkward-looking personality.	Stressing Do not express needs	
5.	I get emotional very soon.	Fear of rejection	
6.	I remain in stressing condition all the time.	Become sad	
7.	I do not express my needs because I have fear of getting rejected by other people.	Different physical appearance, the biggest challenge Worthless	
8.	I become sad when my needs remain unfulfilled.		
9.	My different physical appearance is the biggest challenge for me.		

10.	I don't think I am of any worth in society.		
1.	I have very few friends which are with me since my childhood.	Few friends Don't like me	Social issues
2.	I think that people do not like to keep me with them.	Hesitate	
3.	I hesitate in making new relationships.	new relationships relatives don't trust	
4.	My relatives do not trust my ability to participate in many social activities.	parents do not understand	
5.	My parents do not understand my needs, thus, do not make any effort to satisfy my social needs.	did not play	
6.	Children of my neighbor did not use to play with me.	cannot communicate non-verbally	
7.	I cannot take part in many social activities due to my reduced vision.	make fun	
8.	I cannot understand the non-verbal cues and gestures of other people.	depend on others	
9.	I do not like to go to school as my fellows make fun of me.		
10.	I cannot go outside due to my sensitive skin.		
11.	I have to depend on others for many activities.		

Knowledge and Attitude

It is the first theme that emerged from the data gathered from the interviews of the participants. It revealed that the common people do not know about albinism; even the families of the people were unaware of the needs of their albino children. The lack of knowledge was the primary reason for the unaddressed needs of albinos and the strange attitudes and

beliefs of people of inclusive societies towards persons with albinism. There is a variety among the social behaviors of people toward albinism. Some people take it as an element of beauty. Others perceive it as an illness or disease and dislike the white complexion of albinos.

One of the participants expressed “People do not have an idea of our abilities and strengths, the only thing they know about albinism is its association with low vision. Even being aware of this fact they ask abrupt questions like "Why are you seeing like this?" or "Why don't you respond to non-verbal cues?" People also ask questions like "Why are you so white? Such questioning attitudes negatively impact the self-concept of people with albinism and led them to think that they are not part of this inclusive society ……. rather something different from inclusive society.

The global theme of knowledge and attitude reflects that one of the major reasons for the psychosocial problems of Albino while living in an inclusive society is a lack of knowledge about the characteristics of Albino and the nature of the disability they are facing.

Psychosocial Issues

The other two themes "Psychological issues" and "Social challenges" emerged from the responses of the participants. These two themes present the psychosocial challenges faced by people with albinism due to their impairment and perceived image by society. These challenges lead to their distorted self-image and other behavioral issues such as anger, anxiety, and fear which results in improper psychosocial development. One of the participants said, "

Besides educational and economic challenges, we also face several social challenges in an inclusive society e.g. we cannot participate in all social activities and if we want to do so, other people never let us do so. Such kind of situations also makes us weak psychologically but no one cares. This behavior of an inclusive society hinders us to become part of this society.

On one side, our medical problems limit our abilities and on the other side, the discriminatory social behaviors of people of our inclusive society restrict our opportunities to intermingle with an inclusive society, thus what can we do?

Table 3

Coping Strategies used by the persons with albinism

Chunks	*Codes*	*Themes*
1. I try to accept myself with albinism.	Accept albinism	Acceptance coping
2. I have accepted my physical difference and I try to adjust in all situations being an albino,	Accept physical difference	
3. I have made up my mind that I have to support myself as an albino.	Support me	
4. I have accepted that people's attitudes can't change so life cannot be ruined for them.	Accepted, can't change people's attitudes	
5. I ignore the negativity about albinism and accept it as a part of my life.	Ignore negativity	
6. I try to take part in all social activities to present myself as a normal human being.	Normal human being	
1. I suppress my feelings.	Suppress	Defense mechanism
2. I hide my needs because I know, that even after disclosing them, they will remain unaddressed.	Hide feelings	
3. I do not share my issues with my parents because in that case, they will think that I am disabled.	Do not share	
4. I never let my emotions out as I pretend to be strong.	Pretend, strong	
5. I sublimate my feelings in other forms rather than through direct discussion.	Sublimate feelings	
6. If I become overwhelmed with negative thoughts, I push them back to my unconscious.		
1. I seek support from God to cope with my challenges.	Seek support from God	Religious coping
2. I pray to God for lessening my worries.	Pray	

3.	I pray to God to guide people on the right way of dealing with other people like us.	Pray, guide people
4.	I tell people that physical differences cannot be the basis of discrimination as mentioned in Islam.	The religious basis of equality
5.	I follow the concept of equality described by Islam to satisfy myself.	Share problems with God
6.	I spend more time in solitude and discussing my problems with God.	
7.	I request God to make me able to bear people's bad attitudes.	

Coping Strategies

Three themes emerged from the second section of the interviews "Coping strategies used by the people with albinism". Each of the three themes presents the coping strategies used by persons with albinism to cope with their challenges. Acceptance coping and religious coping were found in all the individuals but the defense mechanisms were found more in females than in males. As all the individuals were Muslims, they used to seek light from Islam to cope with their psychosocial challenges.

One of the participants said, "The verses of the Holy Quran and the sayings of the Holy Prophet (PBUH) are a source of satisfaction for me and they are enough for me to adapt to this challenging condition of life". Social avoidance and social isolation were found as the coping strategies employed by persons with albinism in Africa but they are found at a moderate level in Pakistani albinos.

Discussion on Major Findings

Research has revealed that persons with disabilities have to meet many human development needs in addition to managing the impacts of disability (Estrada-Hernandez, 2018). These needs range from personal, social, psychological, educational, and medical needs to the acquisition of the correct knowledge about their disability (Bosques-Barreto et al, 1992). Persons with albinism are not excluded from this experience. The studies

on albinism have thrown light on such experiences but the majority of the studies are from the context of Africa. In Pakistan, many studies are being done on the medical aspect of albinism but its psychosocial aspect is not being addressed. The current study ought to examine the psychosocial challenges faced by persons with albinism and explore the coping strategies employed by them. In this way, it is the first study of its type.

The study was conducted on a very small sample of five individuals who were purposively selected from a rural area of Lahore. The prevalence of albinism is very rare in the context of Pakistan. The prevalence of albinism is 1 in 20,000 worldwide. A semi-structured interview was planned for every participant. The participants described the challenges faced by them in society. The interview reports revealed that the challenges faced by Pakistani albinos are different from those who belong to African regions. The very first issue that rose was the knowledge about albinism. 1 out of 5 individuals was even unaware of the term "albinism". The people were unaware of the biological basis of albinism. They accepted the different phenotypes of persons with albinism only as a natural phenomenon or as a will of God. Lack of knowledge was the basis of my attitude towards albinism.

The physical difference leads to several challenges while socializing (Hernandez, 2018). The self-concept is also affected. The current study found that there exists a gender difference on a personal basis for adapting to albinism. Girls showed positive and satisfactory responses when asked about their personal opinion about their skin complexion. However, boys were found inconvenient and unsatisfied with their white skin. A common point between them was they feel strange when being compared to other members of their society (Muckler & 2020). The attitudes of other people toward their white skin vary in nature. Some people dislike the white color and associate it with some illness or disease. Others associate it with superstitions (Dapi, et al, 2018). Most women associate it with beauty and appreciate individuals with albinism. Some people make fun of the physical appearance of albinism and call them by the wrong names such as "Gora" or "Bagga" the synonyms of "white" in the Urdu language. Some people taunt some hate and some tease. Such behaviors impact negatively the psychological development of albinos.

The participants also described the interaction between the physical traits of albinism and social reactions(Masanja, 2020). The negative attitudes of people toward albinism create challenges for them in society and this is why they cannot socialize like all other people (Masanja,

et al, 2014). Very few opportunities for socialization are given to them but in each case, their needs are not addressed. They can also not describe their needs as the common people cannot understand. Besides this, there is a fear of rejection from inclusive society or exclusion from the sighted community therefore, albinos do not express their needs. Such situations create a state of imbalance in their personalities. This situation impacts their socialization with normal people and leads them to form a segregated group within inclusive societies(Dapi, et al., 2018).

According to Smart (2009), scholars of disabilities have described that the quality of life s not measured by the same criteria across disabilities yet, based on functional limitations, some common elements could be found such as social independence, educational opportunities, access to healthcare services and familial and social support. The interviews of the participants reflected that their social activities are also affected by the medical aspect of albinism e.g. greater risk of sunburn can limit their social activities (Lund, 2001). Moreover, people with albinism have reduced visual acuity for which their abilities are underestimated and they are not expected to participate in many social activities resulting in a lack of independence in society.

People with albinism face many psychological challenges (Hernandez, 2018). The majority of the psychological problems are associated with social issues and thus are termed "Psychosocial challenges". The participants told that the major psychological problems faced by them are stress and anxiety. Distorted self-image, poorer self-confidence, anger, hesitation, and fear were also found in the interview reports of the participants (Zamani, et al., 2022). Social stigmatization and discrimination (the most common challenges faced by persons with albinism according to the literature) are found in the Pakistani context and that is also contributing to the social exclusion of the Albino in the inclusive society.

To cope with the challenges, people with disabilities develop mechanisms that can lead to their successful survival in an inclusive society (Sarah, 2016). Acceptance coping and religious coping is found as the most common coping strategies among Pakistani individuals with albinism to deal with their psychosocial problems due to the behavior of the sighted community. A defense mechanism is also observed in the interviews of the participants. As Pakistan is a Muslim state, religion plays a very important role in dealing with the challenges of life. There was a gender difference in responding to the social behaviors toward albinism. Boys had a lesser tendency to bear negative attitudes, they sometimes engage in quarrels and fights for their rights but girls used to beet such attitudes.

All the individuals who were interviewed stated that they have accepted themselves with albinism. Although they feel bad about

themselves when being teased, they need extra support from parents, their needs remain unaddressed but they do not share such things with anyone and share with the researcher for the first time only for the sake of spreading awareness about albinism. There is a need to take serious steps for the welfare of people with albinism. The general public, school teachers, and healthcare providers are needed to be awards of the challenges of albinism, and such platforms should be created where people with albinism can seek help.

Conclusion

In this study researchers have tried to explore the psychosocial challenges faced by persons with Albinism in their native inclusive societies. The participant of this study overall expressed societal attitudes and stigmatization as the main factors causing their psychosocial problems. The lack of knowledge about persons with Albinism is expressed by the participants of the study. The respondents use acceptance and religious-focused coping strategies more as compared to simple defense strategies. The study highlighted the need to create awareness among the masses to increase the knowledge about disability and to bring a positive change in the attitudes of inclusive societies' members. Persons with Albinism cannot cope with their disability-specific challenges without the support of an inclusive society until they become an integral part of the inclusive society.

RECOMMENDATIONS

The study gives the following recommendations;

1. It will open new gates of research in the field of albinism.
2. It will help the policymakers to understand the needs of the people with albinism.
3. It will help people with albinism cope with their challenges.

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Readiness of General Education Teachers for Implementation of Universal Design for Learning in General Education Classrooms for Differently able Students

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Abstract

This descriptive study was aimed to investigate "readiness of general education teachers for implementation of universal design for learning in general education classrooms for students with disabilities". Main objective of the study was to investigate the readiness of prospective and in-service general education teachers for implementation of universal design for learning in general education classrooms for students with disabilities. The population of the study was prospective and in-service general education teachers from which a sample of 200 (80 in service and 120 prospective) was recruited by purposive sampling technique from various educational institutions in Lahore. A validated five-point rating scale comprised of 28 questions was constructed (α=0.939). The researchers personally approached to the participants to collect the data. Data was analyzed by using inferential analysis techniques. It was concluded that prospective teachers were more ready to implement universal design for learning in general education classroom for differently able students as compare to in service teachers.

Keywords: readiness, universal design for learning, general education teachers and differently able students**.**

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Introduction

Various teaching professionalism approaches reinforce teaching profession that has strong qualities in it. Many social and political circumstances become the cause of advancement in teaching. Now the concept of teaching profession is perceived in new ways rather than to accomplish a bundle of extra duties i.e. being overloaded, numerous tasks and working under objective mechanism of professionalism (Demirkasımoğlu, 2010).

Teacher Education programs play vital role in nourishing the purpose of social justice and equity in schools. This purpose can be achieved by preparing in-service and pre-service teachers to comprehend the true meanings of equity and diversity with the provision of activity based professional development training courses and to avoid the deficient knowledge regarding potential of students with different needs. In the field, prospective teachers apply their viewpoints, attitudes and knowledge which are influenced by learning experiences through these programs. Tertiary education institutions by following these suggestions can produce such teachers devouring concerned potential to elevate the standpoints, paradigms and content for the rights of students with special needs to assure education for all which is still needed (Nieto, 2000).

Developing countries are struggling realistically for the inclusive education of students with special needs who are mostly disadvantaged of even basic education. Significant factors such as categories, numerical numbers, strategic plans, provision of material and financial capitals and professional development as well as reliable and coherent method are seriously needed for inclusive education being accomplished fruitfully (Bines, & Lei, 2011).

In modern ages, inclusive education philosophy, demands both students and teachers equipped with 21st century skills for depicting the true picture of the transformation of the focus of instruction from the teacher to the student in classrooms by incorporating UDL principles (Dunn, & Pérez 2012).

All students with diverse needs can be benefitted in different general or segregated setups due to the flexible teaching-learning approaches of UDL (CAST, n.d., para. 2).

Teachers and students have to face challenges in general education classroom because of the rigidity in curriculum that is not designed by focusing the individual needs of the students in the classroom (Ralabate, 2011).

Loyola Marymount University, Los Angeles, California presented an agenda having multiple approaches already used in the schools and professional development courses by integrating UDL in digital and instructional paradigms. It stimulates higher education institutions for mutual cooperation in designing different training courses and programs by focusing practicability and feasibility of UDL framework. There is an issue to utilize UDL as a standard elucidation; educational institutions are in dire need of appropriate plan of action (Jiménez, Graf, & Rose, 2007).

The role of higher educational institutions is highly required in equipping pre-service teachers effectively to influence the workplace using adapted learning experiences (Jiménez, 2006).

In teachers' education courses for in-service and pre-service, many aspects are uncovered and need to be studied. Continuing involvement in education of students with diverse needs develops understanding of UDL and social justice. By focusing on the integration of teaching learning process and content courses, consistency and actual implementation can be achieved for more hands-on experiences and teaching expertise to deal with different educational setups (Venkatesh, 2015).

Proficient one hour UDL treatments integrated with adapted Bloom's taxonomy enabled future general education teachers to adapt their planning as well as teaching strategies for students with insignificant learning disabilities. It is needed to uncover the usefulness of adaptations through UDL based interventions (Chen, 2014).

UDL enables more educators to provide equitable and quality education to address the needs of all learners successfully. Both using UDL framework as well as the evaluation of teaching methods are necessary for student's higher achievements (Gawronski, 2014).

UDL principles benefitted all disabled or non-disabled students to practice English language arts. Schools and districts administration are aware of the usefulness of UDL in challenging philosophy of inclusive education. Teachers' readiness to participate is highly significant (Gravel, 2017).

Adaptability and differentiation according to the individuality of all learners is the utmost attribute of UDL in promoting inclusion (King-Sears et al. 2015).

The Higher Education Opportunity Act (2008) defined Universal Design for Learning (UDL) as a "scientifically valid framework for guiding educational practice" changes the circumstances everywhere. Curriculum itself bears the responsibility of change. By flexible and reactive curriculum development and execution, UDL demonstrate the best ways of information delivery, applying learning experiences, ways students can be best involved in learning process. Its implementation fosters all students to be successful achiever in the general education curriculum by having friendly environment.

Early civil rights and special education legislation with the perspective of supporting principles of FAPE and LRE provide basis for UDL (Hitchcock, Meyer, Rose, & Jackson, 2005). In the late 1980s, researchers at the Center for Applied Special Technologies (CAST) considered UDL in the effect of the coordination of 3 theoretical moves: development of architectural designs, education technology and neuroscience.

UDL Principles

Diversity is emphasized by designing inclusive curriculum dynamically far way the barriers to achieve educational attainments for all learners in general education classroom.

3 learning networks are addressed by UDL linked with the notion of curriculum includes goals, materials, methods, and assessment (Hitchcock et al., 2005).

There are three principles of UDL having different learning networks, demonstrate numerous, wide-ranging, and flexible opportunities of representation, expression, and engagement by all aspect of curriculum:

i. Provision of wide range of modes of representation (recognition network).
ii. Provide multiple means of action and expression (strategic network).
iii. Provide multiple means of engagement (affective network).

The four interrelated components of the UDL curriculum require further explanation.

Goals Learning expectations that estimate the students' mastery level for skills, concepts and knowledge linked with state standards. The critical importance of connecting goals in Individualized Education Programs (IEPs) with national standards and classroom prospects have heightened in recent national discussions about Common Core Standards.

Evidence based instructional methods should be flexible and reliable according to the individual needs of students by educators.

Multiple instructional resources or media found in UDL for presenting content and demonstrating learning.

UDL provides the variant options for measuring learning outcomes truthfully, in upholding the relevance of the idea with the elimination of disrupting factors to maintain the assessment validity (Ralabate, 2011).

In 1997, a 10-member group led by Mace drafted the seven principles of universal design. These concepts are being reevaluated after a decade. In June 2007, the original committee will combine with others to solicit opinions from the public. This endeavor will be led by Edward Steinfeld, director of the Idea Center at the University at Buffalo.

"Equitable use" demonstrates the idea of provision of same or equitable opportunities for all learners without any discrimination in inclusive set up to the maximum possible extent.

"Flexibility in Use" means that UDL consider wide range of individual needs, interests and strengths in the selection of methods to reach the outcome.

"Perceptible Information" means it caters the effective way to provide important information to the user by considering sensory limitations in a variety of modes (modes (pictorial, verbal, tactile).

"Tolerance of Errors" UDL assembles the elements to bear the errors by needful attentiveness.

"Low Physical Effort" UDL model can be used by using a neutral physical effort in an efficient and contented way.

UDL allows user to manipulate the resources by providing appropriate size and space for movement.

Objectives of the Study

The objectives of the study were to:

1. Investigate the readiness of prospective and in-service general education teachers for implementation of universal design for learning in general education classrooms for differently able students.
2. Investigate the readiness of male and female general education teachers for implementation of universal design for learning in general education classrooms for differently able students.
3. Investigate the readiness of in-service general education teachers from public and private sector for implementation of universal design for learning in general education classrooms for differently able students.

Questions of the Study

The questions of the study were:

- What is the difference in readiness of prospective and in-service general education teachers for implementation of universal design for learning in general education classrooms for differently able students?
- What is the difference in readiness of male and female general education teachers for implementation of universal design for learning in general education classrooms for differently able students?
- What is the difference in readiness of in-service general education teachers from public and private sector for implementation of universal design for learning in general education classrooms for differently able students?2901188

Methodology

Research Design

Descriptive research design was used to investigate the "Readiness of general education teachers for implementation of universal design for learning in general education classrooms for differently able students"

Population of the Study

The population of the study will be the in-service and prospective general education teachers from different educational institutions of Pakistan.

Sample of the Study

From different educational institutions of Lahore, a sample of 200 general education teachers (80 in service and 120 prospective) was selected through purposive sampling technique. Male and female teachers were included in this project.

Instruments

A questionnaire was developed as research instrument. Questionnaire was comprised of 28 statements with five-point rating scale. First part of questionnaire was comprised of demographic variables i.e. gender, age, knowledge about UDL, educational sector. Second part comprised of 28 items. Questionnaire was used to assess the readiness of general education teachers for implementation of universal design for learning in general education classrooms for differently able students. Questionnaire was piloted on sample of 30 in-service and prospective general education teachers and validated by field experts. Reliability Coefficient was $\alpha = .93$ that was considerable.

Data Collection

Researchers visited universities and schools to collect the data. After getting consent from the university and school administration data was collected from the respondents.

Data Analysis

Data was analyzed by using inferential analysis techniques. Independent sample t -test was applied to find out the difference in readiness of prospective and in-service, male and female general education teachers for implementation of universal design for learning in general education classrooms for differently able students. Independent sample t -test was also applied to find out the difference in readiness of in-service general education teachers from public and private sector for implementation of universal design for learning in general education classrooms for differently able students.

Results

The results of the study are given below.

Table 1

Difference in readiness of prospective and in-service general education teachers for implementation of universal design for learning in general education classrooms for differently able students.

Teachers	*N*	*Mean*	*S.D*	*t*	*Sig.(two tailed)*
In-service	80	3.13	.77	-3.28	.001
Prospective	120	3.47	.63		

Table 1. Shows that there is a statistical significant difference ($p<.05$) between readiness of prospective and in-service general education teachers for implementation of universal design for learning in general education classrooms for differently able students. Mean value showed that prospective teachers (M= 3.47, SD= .63) were more ready than in-service teachers (M= 3.13, SD= .77) to implement UDL (universal design for learning) in general education classrooms for differently able students.

Table 2

Difference in readiness of male and female general education teachers for implementation of universal design for learning in general education classrooms for differently able students.

Gender	*N*	*Mean*	*S.D*	*t*	*Sig. (two tailed)*
Male	80	3.16	.67	-2.93	.004

Female	120	3.45	.71		

Table 2. Shows that there is a statistical significant difference ($p<.05$) between readiness of male and female general education teachers for implementation of universal design for learning in general education classrooms for differently able students. Mean value showed that female teachers (M= 3.45, SD= .71) were more ready than male teachers (M= 3.16, SD= .67) to implement UDL (universal design for learning) in general education classrooms for differently able students.

Table 3

Difference in readiness of in-service general education teachers from public and private sector for implementation of universal design for learning in general education classrooms for differently able students.

Sector	*N*	*Mean*	*S.D*	*t*	*Sig. (two tailed)*
Public	132	3.39	.692	1.52	.13
Private	68	3.23	.744		

Table 3. Shows that there is no statistical significant difference ($p>.05$) between readiness of public and private general education teachers for implementation of universal design for learning in general education classrooms for differently able students.

Discussion

Prospective teachers were more ready than in-service general education teachers for implementation of universal design for learning in general education classrooms for differently able students. The study of Chen (2014) supported this finding as the UDL training treatments enable teachers to adapt teaching learning process to fulfill the needs. This finding is also parallel to the extent with the study of Gawronski (2014) showed that UDL empowers educators to deal with individual needs of the students and the study of Gravel (2017) depicted teachers' readiness to participate is highly significant regardless of being prospective or in-service, male or female, and public or private teachers. One study revealed that prospective teachers highly required to be equipped to influence the field in higher education institutions (Jiménez, 2006).

Conclusions

Prospective teachers were more ready than in-service general education teachers for implementation of universal design for learning in general education classrooms for differently able students. Course work of prospective teachers comprised a subject of inclusive education including content of UDL. In-service general education teachers did not know about UDL as compared to prospective general education teachers. However, in-service general education teachers from public and private sector were not ready for implementation of universal design for learning in general education classrooms for differently able students. Female teachers were more ready to implement UDL in their classrooms as compared to male teachers.

Recommendations

On the basis of findings, the following recommendations have been made.

- General school education department should arrange in-service training programs for their teachers to make them ready for implementation of UDL in general education classrooms for differently able students.
- Awareness programs and seminars should be arranged at school level about UDL implementation for in-service and prospective teachers as well.
- Teaching practice of prospective teachers should be arranged at special education schools as well as in general education schools to give them real life experiences about implementation of UDL.
- Complete and comprehensive UDL based courses should be the part of degree for prospective teachers at university level.

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Situation Analysis of Awareness of Assistive Technology of Teachers for Children with Special Needs in Punjab

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Abstract

The primary goal of this research was to examine the current state of knowledge regarding assistive technology among Punjab educators who work with students who have special needs. The population of the study was honorable teachers of the department of special education Punjab. The questionnaire was established as a tool to record the opinions of the special education teaching staff against the required information. The population sample participated and provided their valuable opinions were 100 teaching staff from all over Punjab. Awareness of teachers towards assistive technology is in appropriated because assistive technology is very expensive and not easily accessible. Due to the unawareness of the teachers about the usage of available assistive technology, our institutions are unable to operate these technologies in daily base studies of children. Assistive technology is very necessary and helpful for a person with a disability. They speed up the working ability of the person and create a proper and easy environment. Key recommendations made by the researchers are aware of assistive technology should be increased and also aware the students about the significance of assistive technology (AT) in the lives of special needs students.

Keywords: technology, assistive technology (at), braille, daily living skills, awareness about at, working of at

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Introduction

Due to the digital revolution, the world of education is facing a major transition. Because of digital revolution "internet era," making use of technology's availability and usability when planning instructional or training programs is both essential and realistic. People with disabilities who utilize the numerous assistive technologies that are now available are able to fully engage in society, join the workforce, and live fulfilling and independent lives. People who use assistive technology have less needs for long-term care, institutional health and support services, and uncompensated caregiving. Illness and disability have already had catastrophic consequences on people, families, and communities; however, these disadvantages are exacerbated in the absence of assistive technology. This is the situation, according to Collins and Halverson (2009).

Students with disabilities must be well prepared for the rigors of higher education, and several types of technology may make this possible. In certain cases, it can save time and money to change appropriate support devices for disabled pupils. If students who suffer from special needs are unable to realize their full potential by ignoring the resources and programs available in order to promote and optimize their success and academic advancement, or at the very least from increasing their trust when performing activities that can be accomplished effectively with low-tech assistive technology (Stodden, Conway, & Chang, 2003).

Students who are struggling academically may find that using technology in the classroom benefits them in a variety of ways. The goal of this research was to see whether utilizing coding software may assist children with writing difficulties improve their written language skills. The study followed seven children with minor differences through three stages: pre-study examination, intervention using a speech processor, and post-study assessment with word prediction software and a word processor. The students continued to write using the word processor for the next three stages (Intervention 1), including the following: They used Outload to create all of their samples, and they combined writing with the usage of word prediction tools to function as co-writers: The quantity of work that was performed for each research throughout the last three weeks. During the first week of class, pupils had no choice but to complete everything manually (baseline) (Intervention two). Only two of the children in the study showed a decline in the number of words they

generated throughout the intervention when compared to the number they made at the start of the procedure, while the other five saw an increase. When there were more members in a group, there were more words stated during the meeting on average. The frequency of misspelled phrases decreased in both the internal and external settings. According to the data, five out of seven pupils took advantage of the opportunity (Cullen, Richards, and Frank, 2008).

For students suffering from learning disabilities, technology has a more than one ability to improve quality of life. The use of technology in education is indispensable; only because schools are not up-to-date will it be a matter of time before they come behind. Is it fair to believe that students will come to school to explore and attract a world without technology? Is it fair to expect students to come to school and discover a world without technology and be drawn to it? Aside from the allure, there's the efficacy of utilizing technology, which has been shown in many trials (Wehmeyer, Palmer, Smith, Davies, & Stock, 2008).

In Pakistan teachers are not much aware of the assistive technology. Because Pakistan is still a growing country and its economy is not so well to adopt assistive technology at big scale but there is a need to create awareness between the teachers of special education so that they could enhance and nourish their knowledge to serve the students with disabilities. The aim of this research was situation analysis of awareness of assistive technology teaching the students with special needs. This will help the teachers to take a step forward toward the technology so that they could efficiently and effectively teach the students with special needs.

Statement of the Problem

The study's goal was to measure teachers' understanding of assistive technology for children with special needs in Punjab. It investigated the implications of assistive technology for a future researcher in the life field.

Objective of Research

The study's objectives were as below:

1. To assess teachers' current awareness of assistance technology for children in Punjab.
2. To emphasize the importance of assistance technology for disabled children.

Research Questions

1. What is the level of awareness of assistive technology for technology for teachers in special education schools?
2. Why AT is necessary for the effective studies of students with special needs?
3. What are the common types of assistive technology that are currently used in special education institutions of Punjab?
4. What are the effects of assistive technology on students with special needs?

Literature Review

Assistive technology

Assistive technology is an adaptive system or service that improves a student's engagement, achievement, or independence due to a disability (AT). Adaptations can range from a basic pencil grip to a complex computer device**.** The use of AT must be incorporated in a school district's Individualized Education Program (IEP). Any kid with special needs is entitled to a free public education, and it is the IEP team's responsibility to determine what sort of special education services are required to make that a reality for the student. The school board shall provide the appropriate supplies and equipment as the team decides that the student wants AT. The AT skills and knowledge relating to that provision must be learned by staff, teachers and other service services.

The Assistive Technology Act of 1998, which defined the legal definition of the word "assistive technology," made the Technology-Related Assistance Act of 1988 outdated. This established definition is contained in all applicable legislation, such as the Individuals with Disabilities Education Act (IDEA), which was enacted in 2004 and requires proper educational opportunities and support for children with a broad spectrum of exceptionalities (IDEA, 2004).

An assistive technology system is any item, device or product scheme that is used to enhance, sustain or enhance a disabled child's functional capacity whether purchased commercially off the shelf, enhanced or updated. The concept does not involve a surgically implanted medical device or its replacement. (IDEA, 2004).

Raskind (1994) proposes to support students with special needs through text editors, spell correcting applications, evidence editing, brain storming, expression acknowledgement, abbreviation expansions, voice processing, proofreading, visual character recognition systems, and free-form databases. Spellcheckers are supposed to assist students with special needs to correct the spelling problems. Collins (1990) found that the writing skills of students with special needs have been enhanced with word processors. Students were able to increase their written language performance by using speech synthesis and word processing (Brown, 1987).

Mildly disabled students often struggle with one or more facets of the writing process. Sometimes, it is difficult for students to easily organize their ideas (De La Paz & Graham, 1997) and restrict the number of ideas they can submission to paper. According to Graham (1990), some students with minor special needs struggled with the ability to process text because the principles of writing restricted the amount and accuracy of their writing. Composing orally can make it possible to escape issues of transcription and text development (e.g., handwriting, orthographic, and punctuation) for individuals with specific learning needs, enabling them to concentrate on issues such as strategy and content production" (De La Paz, 1999). Both of these items would prevent you from writing (Behrmann & Jerome, 2002).

Barriers to access to assistive products that people with special needs face have not yet been adequately considered. People with ID are also stigmatized and devalued around the world, and health inequities are to blame for at least some of their negative health outcomes. When it comes to using or obtaining health care and assistive products, people with ID are also at a disadvantage. It is not certain how many individuals with IDs worldwide have access to appropriate assistance devices. People who have ID were suggested to have a high level of undiagnostic and error of diagnosis, which means they do not get the correct care, and because of inadequate, or in-existing, health facilities, the need for treatment arises. Healthcare services can be overwhelming to deal with people with the atypical presence of ID. The proper diagnosis and treatment can not only

allow and promote the use of assistive products, but may also change people's lives and opportunities (Boot, Dinsmore, Khasnabis & MacLachlan, 2017).

Since its renewal in 1997, the Individuals with Disabilities Education Act has required that adapted technology be included in all students' individualized education plans (IEPs) (IDEA). The regulation was problematic for the education sector for several reasons, the most important of which were as follows: (a) more than 3.8 million children with moderate disabilities have failed since their IEPs were first written (Edyburn, 2004), and (b) teacher training for best practice assistive technology services remained insufficient (Lahm, 2003; Wojcik, Peterson-Karlan, Watts & Parette, 2004).

Person with Disability and Assistive Technology

The Technology Act of 1988 emphasized the vital role that assistive technology (AT) plays in supporting persons with impairments in carrying out their daily activities. As a consequence of the act's passing and the subsequent rise of technology-related services, the general public is now generally aware of how assistive technology may be utilized to enhance the quality of life for persons with special needs (Wallace et al., 1995). As a result of the amendments that were made to the Technology Act in the year 1994, policies were developed for persons with special needs that center on the use of assistive technology (AT) in educational, occupational, and community contexts. This was a deviation from the medical isolationist goals that had been established before (Wallace, et al., 1995). The Technology-Related Assistance for Individuals with Disabilities Act of 1988, as revised in 1994, introduced terminology and/or programs that were specified and expanded upon in the Assistive Technology Act of 1998. The Assistive Technology Act of 1998 was signed into law by President Bill Clinton. The Assistive Technology Act of 1998 became a law on July 1, 1998, after being signed into effect by President Bill Clinton (P.L. 105-394).

An "assistive technology system," as defined by the Technology Act of 1998, is any item, piece of equipment, or product plan used to enhance, maintain, or improve the capacities and functions of disabled people. This term encompasses any object, piece of machinery, or product plan. Disability is a natural reality that does not in any way decrease the self-determination right of an individual. a) be self-sufficient; b) have

autonomy and capacity to take decisions, c) reap the educational benefits, d) seek meaningful employment; and e) to be completely incorporated and included in American society's economic, political, legal, technological, and educational mainstream. Technology has been an important driver of growth in the economy, learning, and new ideas in the United States and around the world. Impact of technology on lives of more than 50 million Americans with special needs is strong evidence of America's leadership in technological development and adoption. Technology has played an important role in the daily lives of all Americans, in both private and public endeavors, in facilitating communication, facilitating commerce, and facilitating education. Any technological innovation will lead to far-reaching implications for disabled Americans. Important improvements have been made, including changes to digital technologies that enable daily tasks to support individuals of any age with special needs, and the creation of supporting technology tools. Such devices and adjustments increase attendance and reduce expenditure on services and events such as early intervention, childcare, rehabilitation and education, healthcare, housing, independent living and leisure activities and other elements of daily life (Abner, & Lahm, 2002).

To better accommodate students with disabilities, the IDEA was revised in 1997 to include AT in the Individualized Education Program (IEP) planning process (IDEA 97). Inclusion and adapted technology (AT) might help many of these pupils greatly improve their abilities (Zhang, 2000). The Education Improvement Act of 2004 stresses the need of providing all students with equal access to a rigorous and challenging general education curriculum in order for them to reach their full potential and become effective leaders.

Assistive Technology and How do They Work for Children With Special Needs?

Assistive technology refers to the tools and services necessary to maximize the involvement and progress of a pupil in a classroom. Any agency that directly helps a disabled child collect, buy or use of an assistive technology device is known as a technology support service. It's a smart thing to classify AT according to the job that the student should do. The following is a selection of possible AT structures. It does not however cover anything available AT options (Network, 2008).

Positioning & Seating

If the chair includes a slip-on surface (like Dycem), students may have additional options for participating in educational activities by using a towel or bolster for support, a modified or replacement chair, a rolling wheelchair, a custom-made wheelchair, a customized desk/table, or head supports (Network, 2008).

Activities for Daily Living (ADLs)

Adaptive feeding utensils, drinking machines that adapt to your needs, dressings that adapt to your requirements, toilet seats with a unique design, adaptations of bathrooms, aids to grooming, feeders that are robotic or mechanical, adapted kitchen utensils helps and supports the people with special needs in everyday activities (Adebisi et al., 2015).

Controlling the Environment

Interfaces for device turns (e.g., VCRs, tape recorders), timers for transfer latches, Switches that can be turned on and off in a variety of ways, Switch access through remote control, for battery-operated computers, there is a transfer interface which allows students to operate in the classroom and at home separately (Bouck, & Flanagan, 2009).

Mobility

Walkers, wheelchairs, handrails, engine leisure vehicles, structural changes and adjustments may be useful for students with physical special needs who need assistance navigating to the school and their classes. White canes and electronic imprinting may be required for students with vision impairments to navigate the school (Chmiliar, 2007).

Assistive Listening Devices & Techniques

Assistive listening device, amplification in the classroom, FM radio, display screen flashing, Telecommunications Device for the Deaf (TDD) /Teletypewriter (TTW) and flashing display screens assists students in obtaining educational knowledge by the auditory presentation (Flanagan, Bouck, & Richardson, 2013).

Aids to Visualization

Increased contrast allows students with visual impairments to learn knowledge from educational events. magnified pictures, tactile and auditory objects, audiobooks, Spectacles, low-vision aids, magnifier, wide print books, closed-circuit television (CCTV), video magnifier, screen amplification software, Reader of the screen, Touch or notebook braille, Apps for Braille Interpreter, Printer/pregnant braille, Screen literacy and Readers with optical character (Zhou et al., 2011).

Improvement in Communication

When spoken communication fails, these tools assist students in effectively communicating; 1) photo, phrase, or letter communication boards and wallets, 2) contact-enhancement applications, 3) computer-based communication systems, 4) eye look board, 5) electronic communication devices, 6) clear voice-output unit and 7) speech synthesizers for typing (Network, 2008).

Physical Education

Recreation and Play are all important components of a healthy lifestyle. Toys and games that have been modified, adapted puzzles, battery interrupter turns activations, adapting sport devices, crayon-carrying universal cuff, stickers, enhanced stamping and shearing, drawing arm, beeping balls, painting applications Improve social contact and involvement in recreational activities among students (Network, 2008).

Adaptations to reading materials that make them more available

Adaptations to reading materials that make them more available includes text size and color, spacing, and background color can all be altered, books on tape, CD, or MP3, highlighted text, captured content, electronic textbooks, digital display formats, optical character recognition, Braille books, scanner with talking word processor, Closed-circuit television, talking electronic dictionary and text reader (Maushak et al., 2001).

Writing

Text content is created using modified modes like adaptive grips updated pencil, adaptive notebook, slant sheet, typewriter, portable word printer, adaptive lines (e.g., elevated lines, highlighting), walking word processor, computer with word processing and prediction of words (Network, 2008).

Access to computer

On a normal computer, a keyboard with built-in usability options may help the disable person which are arm support, trackball/trackpad, on-screen keyboard with joystick, touch-Screen, application for speech recognition and switching morse code (Network, 2008).

Methodology

Research Design

The survey approach will be used for the design of this research study. This kind of research is quantitative by its nature. In order to discover the facts and numbers, a questionnaire was filled out.

Population & Sampling

This research study is based on a situation analysis of teachers' understanding of assistive technology for special needs children; our population includes all Punjab Govt. school special education instructors. Simple Random sampling was used. Google form gathered data from 100 government special education instructors.

Instrumentation

In Punjab, data were collected via a self-made questionnaire that was uploaded to Google form.

Data Collection and Analysis

The information was gathered with the help of Google Docs, and after that, it was tabulated and analyzed using SPSS. Both descriptive and inferential statistical methods were used in the process of arriving at these results. The demographic items and questions are provided using frequencies and percentages, and the variations in the viewpoints of the instructors are indicated using an independent sample t-test as well as a One-way ANOVA. The results provided the basis for drawing conclusions and making recommendations.

Table 1

Sample Description Based on Demographics

Sr#	*Description*	*Frequency (f)*	*Percentage (%)*
Gender			
1	Male	23	23
2	Female	77	77
	Total	100	100
Designation			
1	SSET	33	33
2	JSET	40	40
3	Educator	6	6
4	Psychologist	2	2
5	Speech Therapist	8	8
6	Other	11	11
	Total	100	100
Area			
1	Rural	31	31
2	Urban	69	69
	Total	100	100
Experience			
1	1 to 5 years	77	77
2	6 to 10 years	16	16
3	11 to 15 years	4	4
4	Greater	3	3
	Total	100	100
Divisions of Punjab			
1	Lahore	9	9
2	Multan	32	32
3	Rawalpindi	3	3
4	Sargodha	4	4
5	Bahawalpur	6	6

6	Dera Ghazi Khan	22	22
7	Faisalabad	9	9
8	Gujranwala	5	5
9	Sahiwal	10	10
	Total	100	100

Section-1: Awareness of Assistive Technology

Table 2

Sr.#	*Statements of Questions*	*Agree f (%)*	*Undecided f (%)*	*Disagree f (%)*	*M*	*SD*
1	Technology is broadly applicable and simple to replicate and reuse	92(92)	4(4)	4(4)	1.12	0.43
2	Technology is reflected in the machinery or means of producing a specific product	79(79)	11(11)	10(10)	1.32	0.66
3	Assistive technology is an adaptive system that improves a student's engagement in studies	91(91)	7(7)	2(2)	1.16	0.52
4	Assistive technology is any service that improves a student's achievements in academics	97(97)	3(3)	0(0)	1.06	0.34
5	Assistive technology (AT) is an	80(80)	17(17)	3(3)	1.37	0.76

	amenity that rallies a student's independence due to a disability.					
6	Assistive technology device is used to increase or enhance the functional capabilities of a child with disability	87(87)	12(12)	1(1)	1.25	0.65
7	All students with special needs must have their AT needs to be recognized as part of the IEP planning process, according to IDEA.	79(79)	15(15)	6(6)	1.36	0.73
8	AT can help the student learn how to complete the task and it can help to bypass an area of difficulty.	96(96)	2(2)	2(2)	1.06	0.31

Section-2: Characteristics of Assistive Technology

Table 3

Sr.#	*Statements of Questions*	*Agree* f (%)	*Undecided* f (%)	*Disagree* f (%)	*M*	*SD*
9	Read Aloud is characteristic of AT for VI Childs	78(78)	17(17)	5(5)	1.39	0.76
10	AT provide great support to children with special needs	96(96)	2(2)	2(2)	1.06	0.31
11	AT is flexible enough according to needs of the disabled students	89(89)	8(8)	3(3)	1.19	0.56
12	AT act like eyes for the blind in the case of disabled children	94(94)	5(5)	1(1)	1.11	0.44
13	Fact Mapping is also the feature of AT	74(74)	24(24)	2(2)	1.5	0.85
14	AT is the road to get the aims of life for disabled children	90(90)	7(7)	3(3)	1.17	0.53
15	Without AT it is very difficult to get educate children with special needs	85(85)	7(7)	2(2)	1.22	0.56
16	An adaptive system adjusts itself to suit a particular learner	93(93)	3(3)	3(3)	1.09	0.37

17	Assistive technology is fast and easy to use	91(91)	5(5)	4(4)	1.14	0.47

Section-3: Usage of Assistive Technology

Table 4

Sr.#	*Statements of Questions*	*Agree f (%)*	*Undecided f (%)*	*Disagree f (%)*	*M*	*SD*
18	Rolling wheelchairs offer students more opportunities to participate in educational events	87(87)	9(9)	4(4)	1.22	0.59
19	Adaptive feeding utensils allow for self-sufficiency in everyday activities.	89(89)	8(8)	3(3)	1.19	0.56
20	Toilet seats with a unique design Make provisions for self-sufficiency in daily activities.	88(88)	8(8)	4(4)	1.2	0.56
21	Remote control switch access allows students to use equipment in the classroom and at home separately.	89(89)	10(10)	1(1)	1.21	0.6
22	Wheelchairs can be considered for the students with physical special needs to help them navigate the classroom and school environment	92(92)	2(2)	6(6)	1.1	0.36
23	For children with physical	79(79)	9(9)	12(12)	1.3	0.62

	difficulties, handrails can be considered to assist them in navigating the classroom and school setting.					
24	White Canes may be required for students with vision impairments to navigate the school.	90(90)	6(6)	4(4)	1.16	0.5
25	For students with vision impairments, electronic imprinting may be helpful.	90(90)	6(6)	4(4)	1.16	0.5
26	Assistive listening devices assist students in obtaining educational knowledge by the auditory presentation.	93(93)	4(4)	3(3)	1.11	0.42
27	In the school amplification auditory presentation aids students in gaining educational knowledge.	91(91)	5(5)	4(4)	1.14	0.47
28	Captioning helps students gain educational awareness through the auditory presentation.	84(84)	13(13)	3(3)	1.29	0.68
29	Magnified pictures increased contrast allows students with visual	87(87)	10(10)	3(3)	1.23	0.67

	impairments to learn knowledge from educational events.					
30	Increased contrast in low-vision aids helps children with visual impairments to benefit from instructional experiences.	82(82)	5(5)	3(3)	1.11	0.39
31	Braille helps visually impaired pupils to learn through the sense of touch.	93(93)	5(5)	2(2)	1.12	0.45
32	When spoken communication fails, electronic communication devices assist students in effectively communicating.	94(94)	2(2)	4(4)	1.08	0.33
33	Speech synthesizers for texting help students communicate more efficiently.	93(93)	6(6)	1(1)	1.13	0.48
34	Adapted sports equipment improves social contact and involvement in recreational activities among students	97(97)	2(2)	1(1)	1.05	0.29
35	Electronic textbooks make them more available for reading	92(92)	6(6)	2(2)	1.14	0.49

Description on the Base of Gender

Table 5
Independent Sample T-Test at the basis of Gender of Respondents

Gender	*N*	*Mean*	*SD*	*Df*	*Sig.*	*t*
Male	23	40.1	5.6	98	0.353	-1.2
Female	77	41.9	6.1	39.1		

*P > .05 Level of Significance

Table indicates the results that there is no significant difference in the opinion of respondents at the basis of gender regarding awareness of assistive technology for the children with special needs in Punjab.

Table 6
Independent Sample T-Test at the basis of Area of Respondents

Area	*N*	*Mean*	*SD*	*df*	*t*	*Sig.*
Rural	31	40.12	3.3	98	-1.53	0.004
Urban	69	42.13	6.8	97.3		

*P < .05 Level of Significance

Table indicates the results that there is a significant difference in the opinion of respondents at the basis of area regarding awareness of assistive technology for the children with special needs in Punjab.

Table 7
One-way ANOVA at the Basis of Designation of Respondents

Designation	*Sum of Squares*	*Df*	*Mean Square*	*F*	*Sig.*
Between Groups	104.9	18	5.82	2.78	0.001
Within Groups	169.8	81	2.09		
Total	274.75	99			

*P < .05 Level of Significance

Table indicates the results that there is a significant difference in the opinion of respondents at the basis of designation regarding awareness of assistive technology for the children with special needs in Punjab.

Table 8
One-way ANOVA at the Basis of Experience of Respondents

Experience	*Sum of Squares*	*Df*	*Mean Square*	*F*	*Sig.*
Between Groups	6.164	18	0.342	0.66	0.838
Within Groups	41.946	81	0.518		
Total	48.11	99			

*P > .05 Level of Significance

Table indicates the results that there is no significant difference in the opinion of respondents at the basis of experience regarding awareness of assistive technology for the children with special needs in Punjab.

Table 9
One-way ANOVA at the Basis of Division of Respondents

Division	*Sum of Squares*	*Df*	*Mean Square*	*F*	*Sig.*
Between Groups	88.692	18	4.927	0.67	0.835
Within Groups	600.218	81	7.41		
Total	688.91	99			

*P > .05 Level of Significance

Table indicates the results that there is no significant difference in the opinion of respondents at the basis of division regarding awareness of assistive technology for the children with special needs in Punjab.

Findings & Conclusions

The goal of this study was to determine the extent to which education professionals working in the province of Punjab now have an understanding of additional help. This research used a survey with a Likert scale that had three points to inquire about the use of assistive technologies by instructors, students' perceptions of the benefits of assistive technology, as well as the general influence of the role that assistive technology plays in the lives of students with special needs. After doing this investigation, the researchers came to the conclusion that TA is beneficial since it gives

students the chance to gain new skills. There were a variety of distinct evaluations that were put down. It has been hypothesized that around 92% of educational professionals are familiar with ATI. The experts who were questioned were unanimous in their view that the use of assistive technology would result in an improvement in the academic performance of pupils, with 97% of respondents agreeing with this assumption. The overwhelming majority of the educators and professionals asked expressed the belief that the implementation of the AT would be beneficial to the overall performance of the student. This figure came in at 96%. The vast majority of industry professionals believe that having access to assistive technology is on par with providing a student with a disability with a second pair of eyes. This is because of the positive impact that this technology can have on the student's academic performance (94 percent). When given their opinion, experts unanimously agreed that access technology (AT) is the single most critical aspect in determining whether or not a person with a disability is successful in achieving their life goals. The great majority of industry experts, which accounts for 93% of the total, are of the view that the tactile benefits that braille has to offer are significant for youngsters. The vast majority of instructors, ninety percent, agreed that it is acceptable for students who need the use of a white cane to go about the school premises to bring one with them. When it comes to providing students with access to textbooks, the vast majority of educators believe that making such textbooks accessible online is the best option. This percentage sits at 92%. Ninety-four percent of those who participated in the survey are of the opinion that computer-generated speech is ineffective.

Discussion and Recommendations

The purpose of this study was to investigate the current state of knowledge on assistive technology among teachers of special education in the province of Punjab. The researchers participated in a spirited discussion on the teachers' knowledge of assistive technology and the advantages of using assistive technology in the day-to-day lives of individuals with disabilities, which was led by experts in the field of

special education. According to the findings of the survey, teachers have a good understanding of assistive technology, and the study also found that the use of assistive technologies for disabled students in public places and schools is actively supported. It was unanimously agreed upon by professionals that assistive technology improves the capabilities and productivity of students with disabilities. The requirements of students with impairments may be accommodated well by AT thanks to its adaptability. Without the support of OT or PT, teaching children who have special needs is a very challenging endeavor. At schools and other facilities for students with special needs, a variety of assistive technologies, such as braille and white canes for students who are visually impaired, wheelchairs for students who have physical disabilities, and other helpful technology, are employed. It has been suggested that workshops and seminars on assistive technology for children with special needs be presented to special education teachers who are employed by the special education institution run by the government of the Punjab. This is so that these teachers can gain a greater understanding of the topic. There should be a legislation that requires the free supply of assistive technology and free maintenance of such equipment for children who have special needs. To properly educate students who have unique requirements, there should be an ongoing training program for teachers on how to make use of various forms of assistive technology.

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