

EXPLORING TEACHERS' PERSPECTIVE ON TWICE-EXCEPTIONAL CHILDREN: A QUALITATIVE STUDY

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Abstract

The current research explored the teachers' perspective on twice-exceptional children. The study aimed to explore the twice-exceptional children, how teachers managed twice-exceptional children, how they addressed learning differences and what kind of barriers they face while dealing twice-exceptional children. An exploratory research design was used in the current study. The total sample was comprised of six teachers (N=6), and data were collected using purposive sampling technique. The twice-exceptional checklist, a demographic sheet, and a semi structured interview protocol were used for sample recruitment and research exploration. Braun and Clarke's (2006) six-step method was used for thematic analysis. Management, learning differences and Barriers experienced by teachers were main theme of the study. Management strategies included balancing the disorder and exceptionality. They used their exceptionality as reinforcement and use their strength to cover their weakness. Learning differences were evident as twice-exceptional children were generally more responsive and engaging, compared to children on the spectrum. The findings revealed that teachers didn't know the term twice-exceptional children, but they know the concept of twice-exceptional children. Furthermore, teachers face barriers such as disorder itself, cultural variations, parental pressure and expectation. This study implied a need for developing better management plan and effective support strategies to address the unique needs of twice-exceptional children.

Keywords: twice exceptional children, teacher's perspectives, management, learning differences, barriers

Introduction

Twice exceptional children also known as "gifted with disabilities." These children have outstanding potential, including intellect, creativity, and leadership qualities in one or more areas, but they also have one or more disorders or impairments in other areas. It can be also challenging to distinguish between gifted children with disabilities, as giftedness hides the disorder and disorder hides the giftedness. The objectives of this qualitative research was to identify twice exceptional children, as most people were unaware of their existence prior to the focus group study. Additionally, the study aimed to explore the perspectives of teachers regarding twice exceptional children, offering valuable insights into the challenges and strategies they encounter when dealing with them.

The children, who exhibit performance that spans both ends of the learning range, are considered twice exceptional. In addition to having one or more impairments, they have exceptional skill in one or more areas. According to Neihart (2008), these children may be gifted with learning disabilities (LD), gifted with Asperger's syndrome, gifted with attention deficit hyperactivity disorder, gifted with major emotional challenges, or gifted with physical disabilities.

Students who exhibit the potential for great achievement or creative productivity in one or more subject areas math, science, technology, social studies, visual, performing, or spatial arts, among other areas of human productivity as well as those who exhibit one or more disabilities as specified by national or local eligibility requirements are considered twice-exceptional learners. According to Reis et al. (2014), these disabilities include particular learning difficulties, emotional/behavioral problems, physical disabilities, autism spectrum disorders (ASD), speech and language disorders, and attention deficit/hyperactivity disorder. Twice-exceptional children have a rare human experience (Szymanski & Corn, 1989), in which giftedness and disability coexist, resulting in distinct psychological, social, and academic obstacles. Silverman (2018) identifies them as a paradoxical group with unique characteristics that neither traditional gifted nor special-needs models adequately handle. Mills and Brody (1999) identify three critical markers: processing deficits, gaps between predicted and actual performance, and remarkable abilities. Assouline et al. (2010) underline their increased sensitivity, intensity, and propensity to underachieve. Baldwin, Omdal, and Pereles (2015), as well as Trail (2012), note that these kids frequently suffer with executive functioning, memory, written language, frustration tolerance, detail orientation, and social defense. Though Newman and Sternberg (2004) warn that educators are still divided on their requirements, and Dole (2001) acknowledges the possibility of several diagnoses, Reis and Rubin (2014) emphasize avoiding overgeneralization and recognizing each child's unique profile.

Savant syndrome characterizes unusual individuals often with autism who exhibit an amazing, restricted ability (e.g., in music, arithmetic, or art) in the face of major cognitive or developmental limitations. (Treffert, 2009). Twice-exceptional (2e) children exhibit both intellectual and creative abilities and learning or behavioral problems, need both remedial help and enrichment (Krochak & Ryan, 2007).

Many teacher education programs include Erikson's eight-stage psychosocial theory, which emphasizes how crises such as trust vs. distrust or identity vs. role uncertainty impact lifetime development (Cross, 2001). Silverman (1997) describes gifted and twice-exceptional children as experiencing asynchronous development, when intellectual growth outpaces emotional or physical maturation. Early crisis resolution might result in emotional lag, causing internal tension, identity uncertainty, or extreme sensitivity (Wiley, 2015). While early ability assessment frequently assumes prior stage mastery, exceptional students may lack the emotional or social resolution expected of their developmental level. Silverman (1997) found that twice-exceptional children with both high potential and learning issues display the deepest asynchrony, highlighting the importance of stage-appropriate care.

Language, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal, intrapersonal, and naturalistic intelligences are among the eight different categories of intelligence that Howard Gardner (1983) argued exist rather than being a single, generic skill. This paradigm encourages teaching and evaluation strategies that take into account the different talents of learners and contradicts conventional IQ-based viewpoints. It has had a significant impact on education. Despite conflicting empirical data, it is nevertheless widely used to assist teachers in adapting instruction to students' diverse cognitive profiles.

This study looked at how perceived external variables such as parental and teacher support, as well as peer influences, influenced the academic success and failure of Singaporean twice-exceptional (2e) children. The study included six 2e individuals from one Singapore secondary school who volunteered to take part. The data for this study was collected using an Interpretative Phenomenological Analysis (IPA) design and semi-structured interviews. The findings revealed that parental, teacher, and peer support improved 2e children's academic progress by moderating three behavioral and psychological variables: strategy usage,

academic engagement, and academic self-efficacy. Peers' encouragement was the most often acknowledged influencer on 2e students' academic performance. This study's findings address a research gap by understanding the relationships between these effects and the twice exceptional children (Wang & Neihart, 2015).

The purpose of this mixed methods study was to look into differences in teachers' perceptions of students with disabilities and willingness to refer them to a gifted and talented programme. In this follow-up to an earlier study, data show that teacher referral judgements are highly impacted by their teaching credentials and the existence or absence of a disability designation. When compared to talented and general education instructors, special education teachers are the least likely to send children to gifted programs, both with and without disabilities. The results also show that all teachers are substantially less reluctant to send children with disabilities to talented programs (Bianco & leech, 2010).

Children who exhibit remarkable learning strengths in certain areas and similarly dramatic learning deficiencies in other areas have baffled parents and educators for a long time. Is there a way to accurately categorize these students—are they learning challenged or gifted? Now that the argument has finally come to an end, teachers are identifying these students as "twice-exceptional." Intelligent instructors are now learning how to provide these children access to the same chances as gifted students while they are studying in their areas of strength rather than trying to utilize data from their weak learning areas to demonstrate that they are not "truly gifted." Teachers are learning to give the same compensatory tactics that other students with learning difficulties utilize when children are studying in their areas of struggle (Winebrenner, 2013).

This study explored the perceptions high school teachers' hold of students who are gifted and also have learning disabilities, identified in the literature as "twice exceptional" learners. Not all teachers have training in gifted education; nor do they all understand the complexities of learning disabilities. National and local gifted organizations and agencies specifically acknowledge the existence of outstanding talents among these diverse groups and the need, therefore, for differentiated services (Bailey & Rose, 2011).

Some brilliant pupils at a local primary charter school were not performing to their full potential. The goal of this narrative research was to learn more about why certain exceptional children struggled academically in the classroom by exploring the perspectives of instructors who dealt closely with these students. The constructivist theory was utilized to capture the instructors' various viewpoints on the subject of interest. Using this conceptual framework, narratives on instructors' experiences working with talented underachieving kids were collected. Five carefully chosen fourth and fifth-grade charter school instructors presented their tales in individual face-to-face audiotaped interviews. This research gathered narratives about their experiences dealing with underachieving talented children. Each narrative was evaluated inductively for themes, followed by a review of the five stories to identify common themes. According to the study's findings, three frequent causes contributed to talented students' underachievement: a lack of drive, inadequate parental/role model support, and a lack of information. Knowledge of the findings can help instructors differentiate instruction and choose and execute effective interventions (Maddox, 2014).

Research Gap

During the study and analysis of extensive literature about twice exceptional children, a significant research gap was identified regarding the awareness and understanding among teachers. Prior to the focus study, it was evident that many teachers were unfamiliar with the term "twice exceptional children" in Pakistan. But they know the concept. Therefore, the study aimed to explore the twice exceptional children, how teachers managed twice exceptional children, how they addressed learning difference and what kind of barrier they

face while dealing twice exceptional children. This exploration of new terminology and its implications for management and learning difference would contribute to filling the identified research gap and enrich the understanding of how best to address the needs of twice exceptional children in the Pakistani context.

Rationale of the Study

The study aimed to address a significant research gap concerning the awareness and understanding of twice exceptional children among teachers. As teachers were familiar with the concept of twice exceptional children, but they were often unfamiliar with the term twice exceptional children. Therefore, the study focused on the twice exceptional children, how teachers managed twice exceptional children, how they addressed learning difference and what kind of barrier they face while dealing twice exceptional children. This exploration and its implications for management and learning difference aimed to fill the identified research gap and enhance understanding of how to best address the needs of twice exceptional children.

Research Questions

1. What are the twice exceptional children?
2. How do teachers manage twice exceptional children and address their learning differences?
3. What kinds of barrier teachers face in managing twice exceptional children and addressing their learning difference?

Methodology

Research design

It is an exploratory research design aimed at exploring the perspectives of teachers on twice exceptional children, providing valuable insights into their understanding and experiences.

Sample and Sampling Strategy

A total of six teachers' perspectives ($N=6$) were taken from different special child education center of Lahore for the purpose of this study. Purposive sampling strategy was used for this study.

Demographic Information

Table 1: Summary Table of Study Sample Teacher ($N=6$)

SNo.	Code Name	Gender	Age	Education	Experience
1	T1F1	Female	24	Speech language pathologist	2 years
2	T2M2	Male	22	BS Psychology	1 year
3	T3M3	Male	27	Master in Special Education	2 years
4	T4M4	Male	25	MS clinical psychology	1.5 years
5	T5F5	Female	24	Master in Special education	1.5 years
6	T6F6	Female	24	BS Psychology	2 years

Note. T= teacher, F= female, M=male

Table 2: Summary Table of Twice Exceptional children ($N=6$)

SNo.	Code Name	Gender	Age	Problem	Exceptionality
1	C1F1	Female	05	Mild Autism	Music singing/ instrument played piano/ guitar
2	C2F2	Female	05	Mild Autism	Exceptional reading skill in English
3	C3M3	Male	05	Mild autism	IQ/ vocabulary/Reading
4	C4M4	Male	06	Mild autism	Abstract art/imagination
5	C5M5	Male	11	Mild autism	Sketches/YouTube channel
6	C6F6	Female	09	ADHD	Exceptional in reading

Note. C= child, M= male, F=female

Inclusion Criteria

Only children who scored on the twice-exceptional checklist and teachers who have worked with twice-exceptional students for at least a year were included in the research.

Exclusion Criteria

The study excluded teachers with insufficient experience or skill with twice-exceptional children, as well as students who had not received a confirmed diagnosis of twice-exceptional.

Data Collection Strategies

Semi-structured interviews were conducted with teachers. Each interview ranged from 20 to 45 minutes. Demographic details of the interviewees, such as gender, designation, and years of experience, were collected to identify the interviewees. The Twice-Exceptional Checklist (Silverman et al., 2016) was used to assess twice-exceptional children. However, this checklist lacks validity and reliability and is used solely as a form to recognize twice-exceptional children.

Procedure

Before starting data collection, ethical approval was obtained from the concerned institutional committee. The participants of the research were selected using purposive sampling, focusing on the teachers who had experience of working with twice-exceptional children. Following the identification process, teachers who had worked with twice-exceptional children were selected for interviews. Twice-Exceptional Checklist (Silverman et al., 2016) to identify these children, despite the checklist lacking formal validity and reliability. Study participants were sourced from various special child centers in Lahore. Each interview, ranging from 20 to 45 minutes, included demographic questions such as gender, designation, and years of experience to provide context about the interviewees.

Data Analysis

Braun & Clarke (2006) describe thematic analysis as a six-step qualitative process that includes data familiarization, first coding, topic identification, review, theme definition, and final write-up. It starts with a thorough absorption in the material, followed by meticulous labelling of relevant parts and grouping these codes into logical themes. The researchers then polish and precisely describe each subject before publishing a thorough report that integrates thematic insights with demonstrative data samples. This technique provides a flexible yet organized framework for analyzing complicated qualitative data in well-defined stages.

Ethical Considerations

Permission letters were provided to the administrators of each special education center to obtain formal approval for data collection. Prior to conducting the interviews, a signed authorization letter from the institution was presented to participants to ensure their informed consent. This letter outlined the purpose of the study and assured participants of the anonymity and confidentiality of all information shared.

As the interviews were to be audio-recorded, explicit permission was also sought from each participant for the use of audio recording during the interview process.

Results

The results of the study “teacher’s perspective on twice-exceptional children” were arranged by providing separate tables and thematic maps of codes, subthemes and main themes discussed on semantic and latent levels. Each section is supported by participants verbatim and researchers’ summation and conclusion supported by literature. The first area explores the definition of twice exceptional children and the perception about twice exceptional children of teachers are analyzed and shown in thematic table below:

Table 3: *Subthemes and Codes of Major Theme of Teacher Perspective (N=6)*

Questions	Main themes	Sub themes	Codes
Do you know the term twice exceptional children?	Twice exceptional children definition	Unawareness	<ul style="list-style-type: none"> • No clarity • Lack of information • Uncertainty
What are their exceptionality and disorder?		Exceptionality vs Disorder	<ul style="list-style-type: none"> • Calculation • Oppositional disorder • Music • Dance
How do you manage that specific twice exceptional child?	Specific Management	Management of Specific Exceptionality/Disorder	<ul style="list-style-type: none"> • Rhyme learning • Interesting • Reading • Spelling • Sentence completion • Reinforcement • Dancing • Mild autism
How was your experience with twice exceptional children?		Experience	<ul style="list-style-type: none"> • Ups and down • Sometimes Tantrum • Good experience • Fixation
Is there any kind of learning difference for twice exceptional children and other spectrum disorder child?		Learning differences	<ul style="list-style-type: none"> • Easy to learn • Friendly • Command following • No socialization • Fast learner • Slow learner
What kind of barrier did you face while managing twice exceptional children?	Barriers	Difficulties	<ul style="list-style-type: none"> • Parental pressure • Time issue • Stubborn • Less resources • Social economics issue • Attention issue

Main Theme-I: Twice Exceptional Children Definition

Twice-exceptional children are those who are exceptional in one or more domain such as science, art, technology, visual, spatial, math along with one or more disorder. These disabilities include language disorder, physical disabilities, specific learning disorder, Attention deficit/ hyperactivity disorder, Autism spectrum Disorder (Reis et al., 2014).

This part of the study explored definition of twice exceptional children from the teacher. The idea was to understand how the teacher defined twice exceptional children. In this regard, the views of all the teacher on the question “what is twice exceptional children? How would you categorized?” were analyzed using thematic analysis. Based on results two subthemes (unawareness, exceptionality vs disorder) were constructed.

Subtheme-I: Unawareness

Teacher were asked about the definition of twice exceptional children. All of them didn't know the term twice exceptional children. So, general consensus was that they are unaware from the term of twice exceptional children.

“No, I didn't know the term, as you told me”T3M3

“I don't know” T4M4

Subtheme-II: Exceptionality vs Disorder

Teacher were cleared with definition of twice exceptional children In other words, twice exceptional children are those who are exceptional in one or more domain and weak in other domain (Brody & Mills, 1997). Now they know the concept. They can define and categorized the twice exceptional children.

“I know a child, who is comorbid with oppositional disorder, trichotillomania, his fine motor skill is not well, but its gross motor is excellent and his exceptionality is dancing”T2M2

Main Theme-II: Management

A study conducted at high School teacher and they find when teacher deal with twice exceptional children, so they don't understand the giftedness and complexities of twice exceptional children (Bailey & Rose, 2011).

So this part of the study explored the management of twice exceptional children from the teacher. The idea was to understand how the teacher manage the twice exceptional children. In this regard, the views of all the teacher on the question “how they manage disorder/exceptionality in twice exceptional children? How was the experience with twice exceptional children?” were analyzed using thematic analysis. Based on results three subthemes (exceptionality/disorder, experience and learning difference) were constructed.

Subtheme-I: Management of Specific Exceptionality/Disorder

Teacher were asked about how they manage their child with exceptionality and disorder, so the general consensus was that they used their exceptionality as reinforcement and use their strength to cover their weakness.

“First we put her on the rhyme, sometimes we also talk in high or low tone, and then she understand and follow the command”T1F1

“I do first reading in order to make her relax, then I try to writing on her, further I can polish her reading skill by making sentence, spelling and different activity”T2M2

Subtheme-II: Experience

Teacher were asked about how their experience with that specific twice exceptional child? So the general consensus was that they have good experience with the child.

“So far so good, but one behavior whenever she see the swing, she run for that, she has a strong fixation with the swing”T6F6

“I think there is ups and down sometime all is good and sometimes, the child show tantrum” ... T1F1

Subtheme-III: Learning Differences

Another question was asked to all of them, is there any learning difference for twice exceptional children and other individual? They mentioned that every individual learning is different, but twice exceptional children are friendly and easy understandable.

“Twice exceptional children are very understandable, friendly, while the other children who are specially in spectrum, didn’t follow the command, their eye contact and social circle is very limited, so it’s very hard to understand those special child as compare to twice exceptional”T4M4

Main theme-III: Barriers

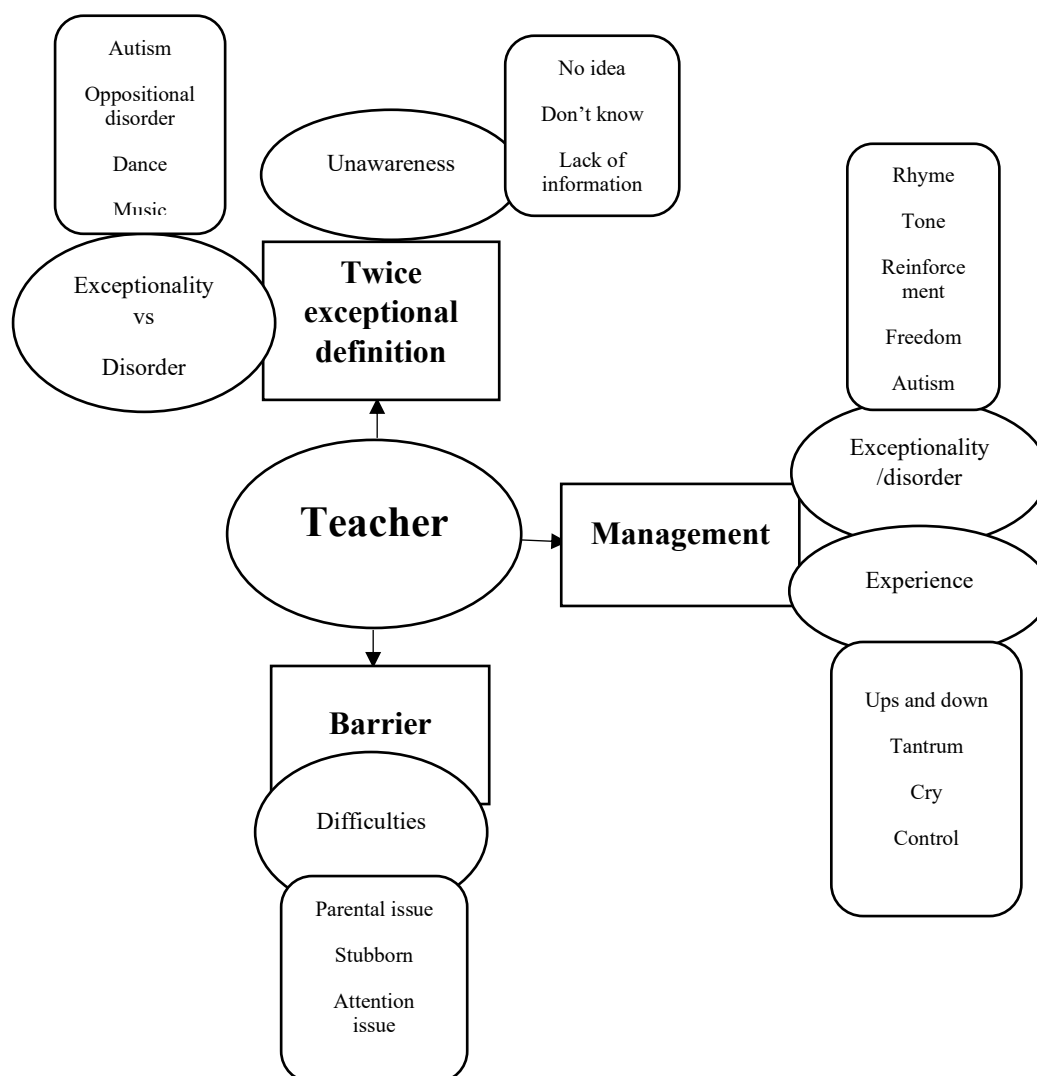
This part of the study explored the Barrier teacher face while dealing the twice exceptional children. The idea was to understand how the teacher face the barrier while dealing with the twice exceptional children. In this regard, the views of all the teacher on the question “what kind of barrier they face while dealing with twice exceptional children?” were analyzed using thematic analysis. Based on results one subthemes (difficulties) were constructed.

Subtheme-I: Difficulties

A question was asked to all of them, what kind of barrier they face while dealing twice exceptional, so they mention some difficulties are:

“I think the major difficulties for us is the time issue, we have just 50 minute of session, and in that session we looked for their exceptionality, their sensory issue, plus occupational therapist work also added, and second is parent pressure, they demand worked more for my child, but child is slow learner as he is in spectrum”T3M3
“I think the major barrier is their resources, recently I am working the child who are twice exceptional, its session is just 45 minute, while other child come here for 4 to 5 hour for session, I think they have low social economic status”T2M2

Figure 1: Thematic map Showing Interlink of Major Themes, Subthemes and Codes Regarding Twice Exceptional definition, Management and Barrier of Teacher (N=6)



Discussion

In this discussion section of the article, we examined teacher's perspective on twice exceptional children.

From teacher's perspective, teachers were unaware from the definition of twice exceptional children, they didn't even know the term twice exceptional children, but they know the concept, once it explained by the researcher. Twice-exceptional children are those who are exceptional in one or more domain such as science, art, technology, visual, spatial, math along with one or more disorder. These disabilities include language disorder, physical disabilities, specific learning disorder, Attention deficit/ hyperactivity disorder, Autism spectrum Disorder (Reis et al., 2014).

Furthermore, teacher were asked about their experience with specific twice exceptional children and how they managed them, so they mentioned that they have a very good experience, but sometime tantrum and fixation on their exceptionality could be challenging and disappointing. A study conducted at high School teacher and they find when teacher deal with twice exceptional children, so they don't understand the giftedness and complexities of

twice exceptional children (Bailey & Rose, 2011). However they manage twice exceptional children by using exceptionality as a reinforcement.

As most of the child assess twice exceptional through checklist while their diagnosing was mild autism, however in Pakistan, the only center for special child's is an autism center, but there are many exceptionality and disorder that define proper twice exceptional children, as one of the teacher mentioned that "I know a child who has a oppositional disorder and trichotillomania but exceptional in dancing". Furthermore, According to (IDEA) the Individuals with Disabilities Education Improvement Act, there are 13 disabilities such as, Autism, ADHD, sensory processing disorder, dyslexia, specific learning disorder, anxiety, executive functioning issue, speech disorder, mood disorder and language disorder, which relates with twice exceptional children.

Teachers were asked about learning differences in both classroom and individual settings for twice-exceptional children; they noted that twice exceptional children frequently exhibit greater engagement and responsiveness than children on the autism spectrum, demonstrating both intellectual vigor and distinct educational challenges. Maddox (2014) mention that some gifted students at a local elementary charter school were not performing at a level commensurate with their abilities. The purpose of this narrative study was to gain insight into why some gifted students struggled academically in the classroom by examining the perceptions of teachers who worked directly with these students.

Furthermore, teachers face various barrier while dealing with twice exceptional children, from teacher's perspective, the main barriers include time constraints during sessions as well as parent expectation.

Implications

The study's theoretical goal is to create models that explain how twice-exceptional children's skills and difficulties change over time. In practical terms, it seeks to guide customized interventions like individualized enrichment and education plans (IEP/IET) incorporate family-centered supports, and encourage cooperative working between educators, experts, and families in order to meet the particular needs and strengths of every child.

Limitations and Suggestions

The study's external validity is restricted as it only included teachers from Lahore. Additionally, the results may be influenced by response and recollection bias, such as self-reporting distortions, which are typical in qualitative research. Resource restrictions also limited sample size and data depth, thereby jeopardizing richness and interpretability. To improve future study, data collection should be broadened to include various Pakistani cities, mixed approaches to eliminate bias, and varied sources such as documents, interviews, and focus groups to increase validity and generalizability.

Conclusion

The current research explored the teacher's perspective on twice exceptional children. The finding revealed that teachers didn't know the term twice exceptional children, but they know the concept of twice exceptional children. Management, learning difference and Barrier experienced by teachers were main theme. Management strategies included balancing the disorder and exceptionality. They used their exceptionality as reinforcement and use their strength to cover their weakness. Learning difference were evident as twice exceptional children were generally more responsive and engaging compared to children on the spectrum. Furthermore, teachers face barrier such as disorder itself, cultural variations, parental pressure and expectation. So the hope from this research is that this study will serve as foundation for future research, generates different kind of theories and specially management of twice exceptional children. By addressing these findings, researchers and practitioners might seek

to increase the well-being and potential of twice-exceptional children by better comprehending and meeting their special needs.

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