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Insights into Behavioral Challenges in ASD Children in Peshawar Autism Centers and Parental Perspectives on its Management: A Mixed Method Study

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Abstract

Introduction: Autism spectrum disorder (ASD) is a complex brain development condition that includes repetitive behaviors, limited interests, and challenges with social skills and communication. To understand common behavioral issues in children with autism and to learn how parents view the available treatments and their effectiveness. **Methods:** A mixed method study was conducted on Autistic children in Peshawar Autisms center in which a CBCL questionnaire were filled by parents of total sample 250(Open epi with 95%confidence interval) in first phase within 3 months (Nov/2023-jan/2024) while 20 in-depth interviews of 09 questions were taken from their parents in 2nd phase within 15 days (Feb /2024). Random sampling was used for quantitative data while purposive sampling was used for quantitative data collection. The qualitative data was analyzed using Virginia Braun and Victoria Clarke's thematic analysis method through NVivo 14, while the quantitative data was analyzed using SPSS 26 for measuring frequency, mean and total score. **Results:** In all, 250 questionnaires were filled by parents of Autistic children with mean age of 3.5years. Among them the most prevalent behavioral issues were aggression (24%), attention problems (19%), withdrawal (16%), and somatic problems (15%). 44 codes were generated from the qualitative interviews, which further divided into 15 categories and emerged into 4 themes. (1) Parental Challenges in Rearing ASD Children, (2) Goals and Effectiveness of early intervention in ASD, (3) Key Components of Successful Autism Management, (4) Parental Satisfaction & Suggestions. Majority of parents (70%) expressed full satisfaction with the available resources for managing autism, and they have observed improvements in their children's behavior like Attention & verbal communication through various early interventions. **Conclusion:**In Peshawar, early intervention at autism centers helps manage common behavioral issues aggression and attention issues in autistic children. Parents advise seeking timely support and awareness for better outcomes.

Keywords: Autism Spectrum Disorder; Child; Parent; Therapies.

Introduction

Background

Autism Spectrum Disorder (ASD) is a complex neurodevelopmental condition marked by social communication difficulties, repetitive behaviors, restricted interests, and challenges with sensory processing and social interactions [1]. The causes of ASD are multifactorial, involving both genetic vulnerabilities and environmental factors

that contribute to the development of its symptoms [2, 3]. Emerging research has emphasized the importance of gene-environment interactions, where environmental exposures—such as prenatal infections, air pollutants, or toxins—can influence genetic expression through epigenetic mechanisms, playing a pivotal role in the manifestation of ASD [4, 5]. Early exposure to environmental toxins or infections during critical periods of brain development has been shown to increase the likelihood of ASD [6].

The core symptoms of ASD often coexist with other behavioral challenges, including aggression, attention problems, anxiety, depression, and social withdrawal, which can complicate the management of ASD and affect children's developmental trajectories [7, 8]. These behavioral issues are critical to address, as they not only exacerbate difficulties with communication and social interaction but can also lead to long-term mental health challenges, poor academic outcomes, and adverse impacts on family dynamics [9].

Studies have shown that early diagnosis and timely intervention can significantly reduce the severity of these behavioral problems and improve outcomes, particularly in areas like communication and social engagement [10]. The Child Behavior Checklist (CBCL) has been widely used to assess behavioral challenges in children with ASD, providing insights into both internalizing behaviors (such as withdrawal and somatic complaints) and externalizing behaviors (such as aggression and attention problems) [11].

This study aims to explore the behavioral challenges faced by children with ASD in various autism centers in Peshawar, and to understand parental perspectives on the management of these challenges. By examining both quantitative and qualitative data, we hope to contribute to the ongoing efforts to improve autism management and parental satisfaction through early interventions and targeted therapies

Methodology

Mixed method (Sequential Explanatory study) was conducted on parents of autistics children in autism centers in Peshawar (Autism jewels center, Talha autism center, The autism paradise, Bridges Autism center Peshawar, Paraplegic Center Peshawar, franklin autism diagnostic and research center) with in 3month of duration (dec/2023 - Feb/2024), with random sampling for quantitative part and purposive sampling techniques for qualitative part. All available parents of autistic children were included

in our study with samples size of 250(calculated through open epi with (95% confidence interval and 5% margin of error. Only children with autism spectrum disorder with the age of 1.5-5 years were include while children's above 6 years with Asperger syndrome, ADHD, speech delay and Cerebral palsy were excluded in this study.

Data Collection Tools: Child behavior checklist (**CBCL 1 ½ - 5 yrs.**) is a component of the Achenbach system of empirically based assessment (ASEBA) which is used to detect emotional and behavioral problems in children and adults. Its Cronbach alpha is 0.95 and consist of 100 questions, scored on three-point Likert scale (0=absent,1=occur sometimes,2=occurs often) will be distributed to the parent of children with Asian which Percentile scores below the 95th percentile (approximate t score of 65 and below) are considered to be in the normal range. Percentile scores between the 95th and the 98th percentile (approximate t scores of 65 to70) are considered to be in the borderline range while score above 70 will have high behavioral problems. Furthermore, 09 open ended questions will be asked from their parents

Data Analysis: For quantitative we summed all score of CBCL of individual response manually by CBCL hand scoring profile or by MS EXCEL to find mean scores to individual behavior and then we put all data in Latest version of IBM SPSS to find frequency .And for qualitative data we use Braun and Clarke's thematic analysis using NVivo 14 through the following 6steps: (1) becoming familiar with the data, (2) generating codes, (3) generating themes, (4) reviewing themes, (5) defining and naming themes, and (6) locating exemplars.

Ethical Consideration

Ethical approval was obtained from PMC Ethical Review Committee and subjects/participants data will be secure and accessed by only to research principal investigator. Verbal consent from the parents were taken and special permission was taken from the Autism center administration with the help of Facilitation letters provides by Peshawar medical college.

Result

This mixed-method study aimed to explore the behavioral challenges faced by children with Autism Spectrum Disorder (ASD) in various autism centers in Peshawar and to understand the parental perspectives on autism management.

A total of 250 parents participated in the quantitative phase of the study, with a

male predominance (90%) among the children diagnosed with ASD. The average age of the children was 3.5 years. About 70 % were born in 2019(covid 19) and were belongs to solar family with 30% good ,40 moderate while the rest where poor socioeconimcs status. [Table 1]

| Demographic Characteristic	Value
Total Number of Participants	250
Gender Distribution	
Male	90% (225 children)
Female	10% (25 children)
Average Age of Children	3.5 years
Year of Birth	
Born in 2019 (COVID-19 era)	70% (175 children)
Family Structure	
Nuclear (Solar) Family	70% (175 children)
Socioeconomic Status	
Good	30% (75 families)
Moderate	40% (100 families)
Poor	30% (75 families)

[Table 1]

The Child Behavior Checklist (CBCL) was utilized to assess behavioral challenges among children, revealing a broad distribution of issues. Attention problems emerged as the most prevalent concern, with 24.3% of the children struggling to maintain focus. Aggressive behavior followed, affecting 20.3% of the children, often manifesting in tendencies toward self-harm or harm to others. Additionally, withdrawal behavior was observed in 16.2% of the children, characterized by a preference for isolation and limited social interaction.

Somatic complaints, in which children reported physical discomfort without identifiable medical causes, were present in 15.2% of cases, reflecting internalized distress. Depressive symptoms were noted in 9.7% of the children, with indicators such as persistent sadness and lack of interest in usual activities. Sleep difficulties, affecting 6.7% of the children, were also reported, often resulting in disrupted daily

functioning.[Table 2 and fig 2]

Behavioral Issue	Percentage (%)
Attention Problems	24.3
Aggression	20.3
Withdrawal Behavior	16.2
Somatic Complaints	15.2
Depression	9.7
Sleep Problems	6.7
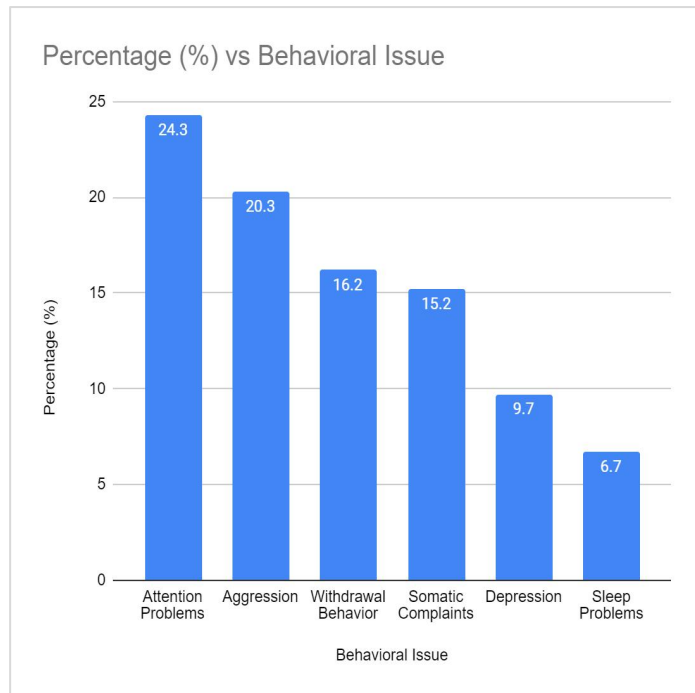
[Table 2 ,Fig 2]

These behavioral issues were categorized into internalizing behaviors (withdrawal and somatic complaints) and externalizing behaviors (attention problems and aggression). The most prevalent externalizing behavior was attention problems, followed by aggression, while withdrawal was the dominant internalizing behavior.

Qualitative Findings

[Fig.4]

In-depth interviews with 20 parents provided further insights into their perceptions regarding the management of ASD. Thematic analysis of the interviews identified 44 codes, categorized into 15 subcategories, which were synthesized into four major themes: [Fig 4]

Parental Challenges in Autism Management

Financial constraints were a primary concern for most parents, with therapies being perceived as costly. Additionally, many parents felt that there was a lack of awareness about autism, both among families and healthcare providers.

Goals and Effectiveness of Early Intervention

The main goal for most parents was to improve their child's communication, particularly transitioning from non-verbal to verbal communication. majority parents observed positive changes through early intervention strategies, with improvements in speech and eye contact.

Key Components of Successful Autism Management

Parents highlighted the importance of early intervention, active parental engagement, and creating a stimulating and interactive home environment as essential for managing ASD.

Parental Satisfaction and Suggestions

A significant portion of parents (70%) expressed satisfaction with the autism management resources available, and they encouraged others to seek timely intervention and pay close attention to their child's needs.

Discussion

The results of this study align with previous research on Autism Spectrum Disorder (ASD), particularly regarding the prevalence of behavioral challenges such as aggression, attention problems, withdrawal behavior, and somatic complaints. The most common behavioral issues identified in this study, attention problems (24.3%) and aggression (20.3%), reflect similar patterns found in studies conducted by Kanne and Mazurek [7], which highlighted aggression as a prevalent issue among children with ASD. Aggression, reported in 20.3% of the participants, often manifested as self-harm or harm toward family members, which is consistent with earlier research indicating that aggression can lead to safety concerns and create significant stress for caregivers [7].

Similarly, attention problems were a significant concern, with 24.3% of parents noting that their children had difficulties maintaining focus, responding to

verbal cues, or engaging in sustained eye contact. Noterdaeme et al. [8] reported comparable issues, where attention deficits were a dominant concern among children with ASD, often impacting their learning and communication. These findings emphasize the need for early intervention strategies focusing on improving attention spans and reducing aggressive behaviors, both of which have been shown to yield positive outcomes when addressed early [7].

Withdrawal Behavior and Somatic Complaints

This study also highlighted withdrawal behavior (16.2%) and somatic complaints (15.2%) as significant issues among children with ASD. These findings are supported by Schwichtenberg et al. [9], who observed similar behavioral patterns, noting that social withdrawal often coexists with emotional and somatic complaints in ASD children, especially those with concurrent sleep issues. Somatic complaints, such as unexplained physical discomfort, were reported in 15.2% of the children in this study, which mirrors the findings of Fulceri et al. [10], who noted a high prevalence of such complaints, especially in ASD children experiencing gastrointestinal symptoms.

The connection between gastrointestinal symptoms, withdrawal, and somatic complaints has been explored in previous research. Ferguson et al. [11] found that ASD children with gastrointestinal issues often exhibited greater withdrawal behaviors and were more likely to report somatic complaints, such as headaches or stomachaches, without clear medical causes. These internalized behaviors are thought to arise as coping mechanisms for underlying anxiety or stress, which frequently goes undiagnosed in children with ASD due to communication difficulties.

Additionally, Skokauskas and Gallagher [12] emphasized the significant mental health challenges faced by ASD children, including increased levels of withdrawal and somatic complaints. They argue that these behaviors, if left untreated, can lead to more severe mental health issues in adolescence. This aligns with the current study's findings, where 16.2% of the children exhibited withdrawal behaviors, isolating themselves from social interactions and preferring solitary activities. These behaviors can be early warning signs of more complex mental health conditions such as anxiety or depression [12].

Parental Perspectives on Autism Management

A major challenge identified in this study was the lack of awareness about autism, both among the general public and healthcare providers. Parents expressed frustration over the financial burden posed by therapies, particularly in a region with limited

resources. Despite these challenges, many parents saw early intervention as the key to improving their child's behavior and communication. The improvements noted by parents—especially in terms of speech and eye contact—support the view that early, targeted interventions can lead to significant progress in ASD management.

Study Limitations and Future Directions

One limitation of this study was the relatively small sample size for the qualitative phase (20 interviews), which may not fully capture the diversity of parental experiences. Additionally, the study focused on children under the age of 5, potentially limiting its generalizability to older children with ASD. Future studies could expand the scope to include older children and explore the long-term impacts of early interventions.

Conclusion

This study underscores the importance of early identification and intervention in managing the behavioral challenges associated with autism. The findings suggest that attention problems and aggression are the most prevalent issues faced by children with ASD in Peshawar. Despite the challenges, including financial constraints and limited awareness, parents report positive outcomes from early intervention programs. Future efforts should focus on increasing awareness of ASD, expanding access to resources, and addressing the financial issues.

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