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Effectiveness of Early Intervention Approaches for Children with Autism Spectrum Disorder

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Abstract

The study investigated the effectiveness of early intervention approaches for children with autism spectrum disorder in Pakistani society. The study's population consisted of teachers working with children who have intellectual disabilities across both private and public sectors within the province of Punjab. For this study, 51 teachers from the district of Faisalabad, who work with children having autism spectrum disorders, were selected as the sample. The developed questionnaire was validated by a panel of experts using the Content Validity Index. For this purpose, five experts in special education, all holding PhDs in the field, were selected and contacted via email. After obtaining their consent, they were asked to assess the questionnaire items on a three-point scale: 1) essential; 2) relevant; and 3) unnecessary. The researchers approached school teachers to conduct the survey and collect data from teachers. The data was numerically coded and transferred to SPSS (Statistical Package for the Social Sciences). Subsequently, frequency, valid percentage, and cumulative average were swiftly performed to identify the effectiveness of early intervention approaches for children with ASD. It was inferred that most (58.8%) of the respondents favored the use cognitive behavior therapy technique as an early intervention for the ASD children, a significant portion of the respondents (49%) agreed that Developmental, Individual-Difference, Relationship-Based Model (DIR/Floortime) is a useful early intervention strategy for ASD Children, whereby a significant portion of the respondents supported the notion that early intervention strategies for children with autism spectrum disorder should be based

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in educational and school settings. The study will be very beneficial in ameliorating the effective rehabilitation measures for the ASD Children.

Key Words: Effectiveness, early interventions, children, autism spectrum disorder.

Introduction

Consideration of autism as a spectrum disorder can be traced back to the careful and detailed clinical observations by Kanner and Asperger, who described children witha broad range of atypical behaviors and intellectual abilities. In order to fully comprehend people with autism spectrum disorder (ASD), it is imperative that researchers and clinicians alike comprehend and describe the variety within this diagnosis (Lord et al., 2018). The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) adopts this approach, which highlights the shortcomings of the categorical approach to defining ASD and encourages the use of dimensional assessments to look at the core and related features of the disorder (Lord et al., 2020). The identification of subgroups based on the existence of co-occurring psychiatric, medical, and/or genetic risk disorders remains important for research and clinical practice, despite this renewed emphasis on dimensional assessment

(Ousley, 2014).

Several modifications have been made to the current diagnostic criteria in the impending DSM-5. The focus on language delay and age of onset has been dropped, and instead, ASD is now classified as a neurodevelopmental condition having symptoms that first manifest in early childhood, even though a diagnosis may come later in life. There are now only two areas of impairment in ASD instead of the original three: the behavioral domain, which includes repetitive actions and fixated interests, and the social-communication domain. Clinical specifiers provide a more detailed description of the clinical presentation of ASD in people (Lauritsen, 2013). There has not been significant research on the application of specific therapy modalities in early intervention programs, despite the fact that they have been shown to be beneficial for some autistic children in controlled settings. Through focus groups, this study investigated how providers

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self-reported using treatments in community settings. The providers stated that they employ both non- evidence-based and evidence-based strategies, frequently combining and modifying them in response to the child's needs, their own, and outside situations. Not all of the clinicians were very knowledgeable about evidence-based practice, and they were all worried about not getting enough training (Stahmer et al., 2005).

Two recent initiatives have focused on the expanding array of autism treatment options for children. The first focuses on developing best practice recommendations, which either critically assess the options available or compile regularly utilized techniques forchildren with autism. On the other hand, the New York Early Intervention (EI) program did take experimental data on treatment effectiveness into consideration when developing guidelines for children with autism ages 0 to 3 years (New York State Department of Health, EI Program, 1999). Even while they discovered substantial evidence in favor of extensive behavioral and instructional programming, they chose not to recommend any particular tactics.

Significant methodological flaws in the research they examined were noted by the majority of earlier meta-analyses (Maenner et al., 2021; Reichow et al., 2012; French et al., 2018; Maw et al., 2018). Furthermore, a deeper look at research evaluating the efficacy of early interventions shows significant variance in the duration and intensity of treatment, independent of the theoretical framework or "brand-name." While some research concentrated on more specialized domains like joint attention and imitation, others employed comprehensive interventions aimed at fundamental functional areas like language, cognitive ability, or adaptive behavior (Zwaigenbaum, 2015). Notably, infants with autism who have better levels of imitation, object play, and joint attention are likely to grow up to have stronger intellectual and communication abilities (Poon et al., 2012).

Early intervention options are provided to children diagnosed with autism within the first five years of life in several countries. Theoretical approaches, methods, locations, intensity, duration, and the credentials of the support personnel vary

greatly among these possibilities. In Western countries, a significant amount of the expenditures associated with autism are attributed to early therapies (Odom et al., 2007). But only in the last ten to twenty years have enough outcome data become accessible to analyze the relative costs of various therapies. This protocol describes a scoping review that aims to comprehend the techniques and results of previous economic evaluations in this subject. Because of bias and incomplete reporting of side effects, efficacy studies of therapies for children on the autistic spectrum have typically been rated as being of low to intermediate quality (Rodgers et al., 2020; Whitehouse et al., 2020). This uncertainty will therefore likely limit the economic evaluations in this review, and we anticipate that sensitivity analysis in the original research will take this into account as well. It is probable that comparators will incorporate a "treatment as usual" option, which may range considerably among various trials and situations.

Review of Related Literature

The term autism spectrum disorders (ASD) refers to a group of illnesses markedby differing degrees of difficulty with speech and social interaction. Atypical behaviors and activity patterns, such as trouble switching between tasks, an intense attention to detail, and odd sensory reactions, are frequently present in these situations. People with autism can have a wide range of abilities and requirements, and they may also vary over time. While some autistic individuals can live independently, others mayhave severe impairments that need for lifetime care and assistance. Opportunities for school and work might be impacted by autism, and caregiving families may face significant challenges as a result (WHO, 2023). Differences in brain function lead to the developmental impairment known as autism spectrum disorder (ASD). Individuals with ASD usually have regressed or repetitive interests and occupations, and they often difficulty with social interaction andcommunication.

Additionally, they may have peculiar ways of moving, learning, or focusing their attention. A specific set of deficits known as autism spectrum disorder (ASD) includes issues with social communication, repetitive behaviors, severely

restricted interests, and sensory behaviors that begin early in childhood. Autism affects less than 1% of people globally, with higher prevalence rates observed in developed countries. Autism is typically not associated with severe brain abnormalities, despite the fact that post-mortem investigations, MRI, and electrophysiological study have revealed significant structural and functional changes.

Although genetic discoveries tend to apply to different groups rather than being particular to autism alone, early hopes that precise behavioral measurements would linkto distinct genetic subtypes of autism have generally not materialized. Psychosocial therapies have the potential to mitigate the severity of symptoms and impact future development in children diagnosed with autism by improving certain behaviors like social engagement, language development, and joint attention. Regardless of color, gender identity, or socioeconomic background, millions of people worldwide suffer with autism spectrum disorder (ASD), a chronic illness. Different degrees of severity can be seen in its manifestations, with people experiencing difficulties with communication and social relationships as well as repetitive or limitedbehaviors.

The condition is defined by these essential characteristics, although each person's range of symptoms may vary greatly. The term "spectrum" refers to ASD because of its diversity. In order to provide more insight into the ways in which autism impacts day-to-day functioning, it is divided into three distinct categories (Author, Washington, DC, 2000). Healthcare practitioners in the United States typically utilize the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) as their standardresource when diagnosing mental disorders. The DSM-5 lists the precise requirements that an individual must fulfill in order to be diagnosed with a particular illness, including attention deficit hyperactivity disorder (ADHD), depression, anxiety, and autism spectrum disorder. The DSM, which is currently in its fifth version, has undergone changes over time. The DSM-5 separates autism spectrum disorder (ASD) into three stages. People diagnosed with autism spectrum disorder (ASD) are classified as Level 1, Level 2,

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or Level 3 depending on the intensity of their symptoms and the amount of daily assistancethey require (Arlington, 2013).

Those with level 3 autism, which is sometimes regarded as severe, are usually those who need a great deal of assistance with everyday tasks. On the other hand, Level1 autism, which is often referred to as high-functioning autism, requires less assistance. Individuals diagnosed with Level 1 ASD typically require very little support. When it comes to the level of help needed, Level 2 autism lies between Level 1 and Level 3. Level 1 autism is regarded by some as the least severe or mildest form of the condition. A person with Level 1 autism does not have a distinct set of characteristics, but they often have similar characteristics and experiences. In contrast to people with Level 3 autism, who may not use words at all while some may still use vocalizations, most people with Level 1 ASD, whether they are children or adults, are able to communicate vocally using complex language.

Social relations and communication are often difficult for people with autism spectrum disorder (ASD). Level 1 autistic individual may still have one or more friends, but they may struggle with social cues and casual talk. They may also find it difficult to make and maintain relationships. Additionally, they could have trouble adjusting to changes in activities or transitions between them. On the spectrum, level 2 autism falls somewhere in the middle with regard to the amount of help required for increased independence and day-to-day functioning. Diagnostic criteria often state that "substantial support" is needed for those with level 2 autism. Compared to those with level 1 autism, they require more support or accommodations and typically face more serious difficulties with social and communication skills.

Stimming habits, sometimes referred to as restricted or repeated behaviors maybe more obvious in people with level 2 autism. While stimming shouldn't be completely eliminated, it's crucial to understand that in some situations, some stimming habits might have a detrimental impact on one's quality of life. For instance, skin plucking while stimming can have negative effects on one's physical

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well-being, make tasks more difficult to complete, and have an influence on interpersonal relationships. Skin plucking may be a coping strategy for discomfort or anxiety and be linked to self- regulation. Consequently, it is critical that those who provide care for people with autism comprehend the rationale behind skin picking, approach the issue with empathy,and deal with the stimming activities in a way that is acceptable. It is important to control stimming behaviors in a way that promotes the person's wellbeing. People with level 3 autism are categorized as needing "very substantial support"by the DSM-5. That is to say, in order for them to live independently and effectively, they require a great deal of support and accommodations in a variety of settings, including the community, the workplace, classroom, and interpersonal connections. While some may communicate verbally, those with level 3 autism may not speak at all and may display severe behaviors such as aggressive conduct, frequent meltdowns, or self-harm. They might have trouble understanding other people, and their stimming habits might be more frequent and strong. Even as adults or teenagers, people with level3 autism frequently need more supervision than people with level 1 or level 2 autism.

The medical community uses the degrees of autism to assist describe the different requirements and skills that people with autism have. Although this categorization can be useful, it's important to understand that even though a person with level 1 autism isnot considered to have the most severe kind (level 3 autism), they may nevertheless encounter substantial difficulties. For example, a person with level 1 autism may face social challenges that lead to sadness or anxiety, or they may be the target of bullying and social isolation, all of which can have a detrimental effect on their mental health and general wellbeing.

ASD, or autism spectrum disorder, is fundamentally complicated. People who have autism have a variety of demands and need different kinds of assistance in different aspects of their lives. Notwithstanding these difficulties, it's critical to recognize and celebrate the extraordinary qualities and skills of individuals with autism.ASD is a developmental disorder brought on by variations in brain activity. While some ASD sufferers can be linked to specific reasons, including genetic

disorders, others have unidentified causes. It is thought by researchers that a variety of factors influences the common developmental pathways and lead to ASD. Regarding these reasons and how they affect people with ASD, there is still a great deal to learn (Handleman & Harris, 2000).

Individuals who have ASD may display distinct behaviors, interactions, communication styles, and learning modalities that set them apart from the majority of individuals. They frequently don't seem to differ in look from other people. ASD individuals may possess a wide range of skills. For instance, some individuals with ASD may not speak at all, while others may speak quite well. While some people can live freely with little to no assistance, others could require a lot of aid with daily duties. ASD can affect a person for the rest of their lives, though symptoms may gradually become better. Usually, it appears before the age of three. Some children may exhibit symptoms as early as the first year of life, while others may not exhibit signs until 24 months of age or later. Up to roughly 18 to 24 months of age, children with ASD may occasionally exhibit signs of new skill acquisition and developmental milestones; beyond that, they may either entirely stop learning new skills or lose previously learnt abilities. Eaves and Ho (2004) discovered that while improvements in adaptive sociability skills were linked to the initial diagnosis of ASD, the severity of autism at the outset predicted total cognitive ability results. Furthermore, baseline language abilities were connected to gains in adaptive communication skills (Szatmariet al., 2003).

Early and accurate classification between different clinical profiles is made possible by this (Gotham et al., 2008; Gotham et al., 2009). Furthermore, according to Gotham et al. (2009), the recently developed calibrated autism severity metric, which is based on ADOS raw totals, offers a means of measuring the severity of ASD that is comparatively independent of individual parameters such as age and verbal IQ. Few researches have looked into the factors of cognitive and adaptive skills results, despite the fact that earlier studies have examined cognitive outcomes in ASD. It's critical to comprehend which children gain the most from early assistance in these areas. In order to predict better

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cognitive improvements and outcomes related to adaptive skills, this research attempts to uncover baseline features of both the kid and the parent (Gotham et al., 2008). Over 1% of children are affected by autism spectrum disorders (ASD), which usually show behavioral symptoms by the time a child is three years old. Children diagnosed with ASD may have difficulty understanding social relationships, lacklanguage development or the ability to grasp what other people are saying, and show apenchant for routines and repetitive activities. For parents, navigating this early beginning of problems can be challenging. Thus, a crucial component of early intervention is helping parents develop practical techniques for managing behavior andinteracting with others.

The majority of interventions sought to support the development of communication skills in children by improving parents' observation and attentiveness during interactions with their offspring. In conclusion, the review shows that the targeted modifications in the ways that parents engaged with their children were accomplished. Furthermore, as a consequence of the therapies, gains were noted in child outcomes, including language comprehension and the intensity of autism symptoms. Other crucial outcomes, such as parent stress, adaptive abilities, and other facets of children's language, did not, however, exhibit appreciable changes. Theevidence is still not strong enough to support any particular conclusion, and researchers should use consistent techniques of measurement (Green & Alder, 2004). Studies show that children who receive early intervention programs fare betterthan their non-receiving peers in terms of conduct, sociability, and communication. According to certain research, children that receive early intervention may have an average improvement in IQ of 17 points. The term "early intervention" describes the earliest feasible initiation of therapeutic help. In the context of autism, it refers to providing early children with specific help in order to support their development and impart vital skills.

If Asperger's syndrome is not treated at an early age, it might cause compounding delays. Early intervention is about providing appropriate therapies to reduce these delays and increase the chances of meeting normal developmental milestones. A

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child with autism spectrum condition has better chances of learning new abilities and reducing symptoms the earlier they receive assistance. Children can overcome obstacles and address weaknesses with the support of early intervention. If nothing else, managing transition and change must be acknowledged as a possible source of increased stress and anxiety for individuals with autism and their families. People with autism may experience additional forms of anxiety in addition to these changes and feelings of uncertainty. For those with ASD, speech and language therapy is the most popular developmental therapy. A person's comprehension and use of speech and language can be improved with the use of speech and language therapy. In order for any child to have the greatest possible life, early intervention in the case of neurodevelopmental problems is essential. According to research, a child's life development is mostly set during the first two years of life. This is due to the fact that therapy and outside stimuli will have the greatest effect on children at this age. The study aimed at finding out the effectiveness of early intervention approaches for children with autism spectrum disorder in Pakistani society.

Objectives of the Study

The following were the objectives of the study:

1. To gain familiarity with the phenomena of autism.
2. To find out the effectiveness of early intervention approaches for children with autism spectrum disorder.

Research Questions

Following were the research questions:

1. What are the new insights of the phenomena?
2. What is the effectiveness of early intervention approaches for children with autism spectrum disorder?

Methodology

Methodology serves as a tool to direct our investigation, influencing the framework decisions made throughout the process. This study was driven by an exploration of the interventions used for the effective rehabilitation of the children

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with autism spectrum disorders. The methodology section outlined the various research methods employed, including the participants, tests, strategies, instruments, procedures, data collection, and data analysis.

Research Design

This study was a quantitative in its nature which was based on descriptive type methodology.

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Population of the Study

The study's population consisted of teachers working with children who have autism spectrum disorder across both private and public sectors within the province of Punjab.

Sample and Sampling Technique

A sample is a subset of a population that provides data representative of the entire group. For this study, 51 teachers from the district of Faisalabad, who work with children having autism spectrum disorders, were selected as the sample. Given the study's broad scope, it was not feasible to collect data from all teachers in the district, so a decision was made to focus on these 51 teachers selected through simple random technique.

Research Instrument

The survey was performed by researchers with five options: "strongly disagree," "disagree," "neutral," "agree," and "strongly agree." 17 statements were included in the early intervention approaches to assess teachers' specialized knowledge of what are approaches of early intervention for children with autism spectrum disorder.

Validity of the Questionnaire

The developed questionnaire was validated by a panel of experts using the Content Validity Index. For this purpose, five experts in special education, all holding PhDs in the field, were selected and contacted via email. After obtaining their consent, they were asked to assess the questionnaire items on a three-point scale:

1) essential

2) relevant; and

3) unnecessary. Items with a content validity ratio below 0.50 were removed (Gull, 2015).

Reliability of the Questionnaire

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The validated survey was tested in a pilot study, and its reliability was demonstrated by evaluating the internal consistency of the items using Cronbach's alpha (0.88).

Data Collection Procedure

The researchers approached school teachers to conduct the survey and collect datafrom regarding their cognizance regarding the early intervention approaches used for the ASD children.

Data Analysis

The data was numerically coded and transferred to SPSS (Statistical Package for the Social Sciences). Subsequently, frequency, valid percentage and cumulative percentage were swiftly performed to identify the effectiveness of early intervention approaches for children with ASD.

Results

Table 1: ***Demography of the Subjects***

Demography feature	Description	F	VP	CP
Gender	Male	10	19.6	19.6
	Female	41	80.4	100.0
Experience	6-10 Years	46	90.2	90.2
	11-15 Years	4	7.8	98.0
	16-20 Years	1	2.0	100.0
Age	26-35 Years	40	78.4	78.4
	36-45 Years	5	9.8	88.2
	46-55 Years	6	11.8	100.0
Qualification	Under Graduates	3	5.9	5.9
	B.A/B.Ed	2	3.9	9.8
	M.A/M.Ed	37	72.5	82.4
	M.Phil	2	3.9	86.3
	Ph.D	7	13.7	100.0
	Total	51	100.0	

Note: *F-Frequency, VP-Valid Percentage, CP-Cumulative Percentage.*

The above table displayed that majority (80.4%) of the respondents were female and 19.6% were female. A vast majority (90.2%) of the respondent had experience of 6-10 years, 7.8% of the respondents had experience of 11-15 years while 2% had experience of 16-20 years. A great number (78.4%) of the respondent had the age of 26-35 years and few (11.8%) of the respondent had

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the age of 36-45 years while some (9.8%) of the respondent were of age 46-55 years. Two third respondents (72.5%) had MA/M.Ed, fewer respondents (13.7%) Ph.D, 5.9% were undergraduate and lowest value was 3.9 % of the respondent of M.Phil qualification.

Table 2: ***An effective early intervention approach for AD Children is Applied-behavior Analysis.***

R	F	VP	CP
SDA	1	2.0	2.0
DA	2	3.9	5.9
N	3	5.9	11.8
A	15	29.4	41.2
SA	30	58.8	100.0
Total	51	100.0	

Note: *R-Response, F-Frequency, VP-Valid Percentage, CP-Cumulative Percentage*

The above table shows that 58.8% of respondents strongly agreed, 29.4% agreed, 5.9% were neutral, 3.9% disagreed, and 2% strongly disagreed with the idea that an effective early intervention approach for children with autism spectrum disorder is applied-behavior analysis.

Table 3: ***An Effective Early Intervention Approach for Children with Autism Spectrum Disorder is Developmental, Individual-Difference, Relationship-Based Model (DIR/Floortime).***

R	F	VP	CP
SDA	2	3.9	3.9
DA	1	2.0	5.9
A	23	45.1	51.0
SA	25	49.0	100.0
Total	51	100.0	

Note: *R-Response, F-Frequency, VP-Valid Percentage, CP-Cumulative Percentage*

The above table shows that 49% of the respondents were strongly agreed, 45.1%agreed, 3.9% strongly disagreed, and 2% disagreed with the statement that an effective early intervention approach for children with autism spectrum disorder is Developmental, Individual-Difference, Relationship-Based Model (DIR/Floortime).

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Table 4: ***An Effective Early Intervention Approach for Children with Autism Spectrum Disorder is Natural Language Acquisition***

R	F	VP	CP
SDA	7	13.7	13.7
DA	4	7.8	21.6
N	13	25.5	47.1
A	18	35.3	82.4
SA	9	17.6	100.0
Total	51	100.0	

Note: *R-Response, F-Frequency, VP-Valid Percentage, CP-Cumulative Percentage*

The above table shows that 35.5% of respondents were agreed, 25.5% were neutral,17.6% strongly agreed, 13.7% strongly disagreed, and 7.8% disagreed with the stance that an effective early intervention approach for children with autism spectrum disorder is Natural Language Acquisition.

Table 5: ***An Effective Early Intervention Approach for Children with Autism Spectrum Disorder isSpeech and Language Therapy***

R	F	VP	CP
SDA	1	2.0	2.0
DA	2	3.9	5.9
N	5	9.8	15.7
A	19	37.3	52.9
SA	24	47.1	100.0
Total	51	100.0	

Note: *R-Response, F-Frequency, VP-Valid Percentage, CP-Cumulative Percentage*

The above table shows that 47.1% of respondents were strongly agreed, 37.3% agreed, 9.8% were neutral, 3.9% disagreed, and 2% strongly disagreed with the idea that Speech and Language Therapy is used as an intervention for ASD children.

Table 6: ***An Effective Early Intervention Approach for Children with Autism Spectrum Disorder is Occupational Therapy***

R	F	VP	CP
SDA	6	11.8	11.8
DA	7	13.7	25.5
N	20	39.2	64.7
A	18	35.3	100.0
Total	51	100.0	

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Note: *R-Response, F-Frequency, VP-Valid Percentage, CP-Cumulative Percentage*

The above table shows that 39.2% of respondents were agreed, 35.3% strongly agreed, 13.7% were neutral, and 11.8% disagreed with the stance that occupational therapy was effective intervention for ASD children.

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Table 7: ***An Effective Early Intervention Approach for Children with Autism Spectrum disorder is Social Skills Training***

R	F	VP	CP
SDA	4	7.8	7.8
DA	1	2.0	9.8
N	6	11.8	21.6
A	19	37.3	58.8
SA	21	41.2	100.0
Total	51	100.0	

Note: *R-Response, F-Frequency, VP-Valid Percentage, CP-Cumulative Percentage*

The above table shows that 41.2% of respondents were strongly agreed, 37.3% agreed, 11.8% were neutral, 7.8% strongly disagreed, and 2% disagreed that Social Skills Training was suitable intervention for ASD children.

Table 8: ***An Effective Early Intervention Approach for Children with Autism Spectrum Disorder is Parent-Implemented Interventions***

R	F	VP	CP
SDA	1	2.0	2.0
DA	3	5.9	7.8
N	8	15.7	23.5
A	23	45.1	68.6
SA	16	31.4	100.0
Total	51	100.0	

Note: *R-Response, F-Frequency, VP-Valid Percentage, CP-Cumulative Percentage*

The above table shows that 31.4% of respondents were strongly agreed, 45.1% agreed, 15.7% were neutral, 2% strongly disagreed, and 5.9% disagreed that Parent-implemented Interventions were very effective for rehabilitation of ASD children.

Table 9: ***An Effective Early Intervention Approach for Children with Autism Spectrum Disorderis Cognitive Behavioral Therapy***

R	F	VP	CP
SDA	3	5.9	5.9
DA	13	25.5	31.4
N	22	43.1	74.5
A	13	25.5	100.0
Total	51	100.0	

Note: *R-Response, F-Frequency, VP-Valid Percentage, CP-Cumulative Percentage*

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The above table shows that 43.1% of respondents were neutral, 25.5% agreed, 25.5% were disagreed, and 5.9% strongly disagreed that Cognitive Behavioral Therapy was viable option to treat the ASD children.

Table 10: ***An Effective Early Intervention Approach for Children with Autism Spectrum Disorder is Multidisciplinary Approaches***

R	F	VP	CP
SDA	1	2.0	2.0
DA	3	5.9	7.8
N	11	21.6	29.4
A	22	43.1	72.5
SA	14	27.5	100.0
Total	51	100.0	

Note: *R-Response, F-Frequency, VP-Valid Percentage, CP-Cumulative Percentage*

The above table shows that 43.1% of the respondent were agreed, 27.5 of the respondents were strongly agree, 21.6% of the respondent were neutral, 5.9% of the respondent were disagreed and 2% of the respondent were strongly disagree that Multidisciplinary approaches were suitable for ASD children's intervention.

Table 11: ***An Effective Early Intervention Approach for Children with Autism Spectrum Disorder Is Family Centered Practices***

R	F	VP	CP
SDA	2	3.9	3.9
DA	1	2.0	5.9
N	7	13.7	19.6
A	20	39.2	58.8
SA	21	41.2	100.0
Total	51	100.0	

Note: *R-Response, F-Frequency, VP-Valid Percentage, CP-Cumulative Percentage*

The above table shows that 41.2% of the respondent were strongly agreed, 39.2% of the respondent were agree, 13.7% of the respondent were neutral, 3.9% of the respondent were strongly disagree and 2% of the respondent were disagreed that Family Centered Practices were for the intervention of ASD children.

Table 12: ***An Effective Early Intervention Approach for Children with Autism Spectrum Disorder is Physical Exercises***

R	F	VP	CP
SDA	8	15.7	15.7

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DA	6	11.8	27.5
N	20	39.2	66.7
A	17	33.3	100.0
Total	51	100.0	

Note: *R-Response, F-Frequency, VP-Valid Percentage, CP-Cumulative Percentage*

The above table shows that 39.2% of the respondents were neutral, 33.3% of the respondents were agreed, 11.8% of the respondents were disagreed, 15.7% of the respondent were strongly disagreed that Physical Exercises were very effective for the treatment of ASD Children.

Table 13: ***An Effective Early Intervention Approach for Children with Autism Spectrum Disorder is School Based Practices***

R	F	VP	CP
SDA	3	5.9	5.9
DA	1	2.0	7.8
N	9	17.6	25.5
A	20	39.2	64.7
SA	18	35.3	100.0
Total	51	100.0	

Note: *R-Response, F-Frequency, VP-Valid Percentage, CP-Cumulative Percentage*

The above table shows that 39.2% of the respondent were agreed, 35.3% of the respondents were strongly agreed, 17.6% of the respondent were neutral, 5.9% of the respondent were strongly disagree and 2% of the respondent were disagreed that School Based Practices work best to treat the ASD Children.

Table 14: ***An Effective Early Intervention Approach for Children with Autism Spectrum Disorder is Pharmaceuticals***

R	F	VP	CP
SDA	3	5.9	5.9
DA	1	2.0	7.8
N	9	17.6	25.5
A	20	39.2	64.7
SA	18	35.3	100.0
Total	51	100.0	

Note: *R-Response, F-Frequency, VP-Valid Percentage, CP-Cumulative Percentage*

The above table shows that 35.3% of the respondent were agreed, 27.5% of the respondents were strongly agreed, 15.7% of the respondent were neutral, 13.7% of therespondent were strongly disagree and 7.8% of the respondent were disagreed

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that Pharmaceuticals play an effective role as an intervention for the ASD children.

Table 15: ***An Effective Early Intervention Approach for Children with Autism Spectrum Disorderis Nutritional Interventions***

R	F	VP	CP
SDA	1	2.0	2.0
DA	2	3.9	5.9
N	5	9.8	15.7
A	25	49.0	64.7
SA	18	35.3	100.0
Total	51	100.0	

Note: *R-Response, F-Frequency, VP-Valid Percentage, CP-Cumulative Percentage*

The above table shows that 49% of the respondent were agreed, 35.3% of the respondents were strongly agreed, 9.8% of the respondent were neutral, 3.9% of the respondents were disagree and 2% of the respondent were strongly disagreed that Nutritional Interventions are more suitable for the ASD Children.

Table 16: ***An Effective Early Intervention Approach for Children with Autism Spectrum Disorderis Medical Interventions***

R	F	VP	CP
SDA	2	3.9	3.9
DA	4	7.8	11.8
N	5	9.8	21.6
A	22	43.1	64.7
SA	18	35.3	100.0
Total	51	100.0	

Note: *R-Response, F-Frequency, VP-Valid Percentage, CP-Cumulative Percentage*

The above table shows that 43.1.% of the respondent were agreed, 35.3% of the respondents were strongly agreed, 9.8% of the respondent were neutral, 7.8% of the respondent were disagree and 3.9% of the respondent were strongly disagreed that Medical Interventions are very effective to treat the ASD children.

Table 17: ***Children with Autism Spectrum Disorder Benefit Greatly from Early Interventiion Techniques that Take Place in a Natural Setting***

R	F	VP	CP
SDA	2	3.9	3.9
DA	4	7.8	11.8

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N	4	7.8	19.6
A	23	45.1	64.7
SA	18	35.3	100.0
Total	51	100.0	

Note: *R-Response, F-Frequency, VP-Valid Percentage, CP-Cumulative Percentage*

The above table shows that 45.1% of the respondent were agreed, 35.3% of the respondents were strongly agreed, 7.8% of the respondent were neutral, 7.8% of the respondent were disagree and 3.9% of the respondent were strongly disagreed that ASD children benefit greatly from early intervene techniques that take place in nature setting.

Table 18: ***Children with Autism Spectrum Disorder Benefit Greatly from Early Intervention Techniques that Take Place in a Structured Setting***

R	F	VP	CP
SDA	1	2.0	2.0
DA	3	5.9	7.8
N	13	25.5	33.3
A	22	43.1	76.5
SA	12	23.5	100.0
Total	51	100.0	

Note: *R-Response, F-Frequency, VP-Valid Percentage, CP-Cumulative Percentage*

The above table shows that 49% of the respondent were agreed, 35.3% of the respondents were strongly agreed, 9.8% of the respondents were neutral, 3.9% of the respondents were disagreed and 2% of the respondent were strongly disagreed that Structural setting is very effective for rehabilitation of ASD Children.

Discussion

The study was carried out to explore the Effectiveness of early intervention approach for children with ASD. Objectives of the study were: 1) to find out the effectiveness of early intervention approaches for children with autism spectrum disorder.2) to gain familiarity with the phenomena.3) to explore the difference in the needs of urban and rural school teachers. The study employed a descriptive research design and focused on the teaching, administrative, and professional staff of government institutions. It aimed to evaluate the effectiveness of early intervention approaches for Autism Spectrum Disorder (ASD). A sample of 51 participants, including teachers, the headmaster, professionals, and administrative

staff, was selected using a simple random sampling technique, ensuring equal chances of selection for all. Data collection was conducted through a questionnaire consisting of 17 questions. The questionnaire was designed with close-ended statements based on a five-point Likert scale. The researcher personally distributed the questionnaires to special education teachers and staff involved with children with ASD at the Autism Spectrum Center in Faisalabad. The study's aims and objectives were communicated to all participants. The procedure of filling out the questionnaire was also elaborated to them. The completed questionnaires were received back by the researcher. The return rate of the questionnaire was hundred percent. The recorded data was checked and assessed in detail. The responses of respondents were classified and presented in tabularform and analyzed in terms of percentage.

Findings

1. More than half study subjects (58.8%) strongly agreed that an effective early intervention approach for children with autism spectrum disorder is applied-behavior analysis.
2. Almost half study subjects (49%) strongly agreed that an effective early intervention approach for children with autism spectrum disorder is Developmental, Individual-Difference, Relationship-Based Model (DIR/Floortime).
3. One third (35.5%) of respondents were agreed with the stance that an effective early intervention approach for children with autism spectrum disorder is Natural Language Acquisition.
4. Almost half study subjects (47.1%) were strongly agreed that Speech and Language Therapy is used as an intervention for ASD children.
5. Less than half study subjects (39.2%) agreed with the stance that occupational therapy was effective intervention for ASD children.
6. Less than half of respondents (41.2%) agreed that Social Skills Training was suitable intervention for ASD children.

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7. About more than one third (41.2%) of respondents opined that Parent-implemented Interventions were very effective for rehabilitation of ASD children.
8. Less than half of the respondents (43.1%) viewed that Cognitive Behavioral Therapy was viable option to treat the ASD children.
9. Less than half (43.1%) of the respondent said that Multidisciplinary approaches were suitable for ASD children's intervention.
10. Almost one third (41.2%) of the respondent replied that Family Centered Practices were for the intervention of ASD children.
11. Few of the (39.2%) of the respondents told that Physical Exercises were very effective for the treatment of ASD Children.
12. A few of the respondent were agreed (35.3%) agreed that School Based Practices work best to treat the ASD Children.
13. A fewer number of respondents (35.3%) told that Pharmaceuticals play an effective role as an intervention for the ASD children.
14. Half of the respondents (49%) opined that Nutritional Interventions are more suitable for the ASD Children.
15. Less than half of study subjects (43.1%) said that Medical Interventions are very effective to treat the ASD children.
16. Almost half of the study subjects (45.1%) replied that ASD children benefit greatly from early intervene techniques that take place in nature setting.
17. Half of the respondents (49%) told that Structural setting is very effective for rehabilitation of ASD Children.

Conclusions

Many of the respondents agreed that a good early intervention strategy for children with autism spectrum disorder is to use applied behavioral analysis. A significant portion of the respondents agreed that Developmental, Individual-Difference, Relationship-Based Model (DIR/Floortime) is a useful early intervention strategy for children with autism spectrum disorders. A significant portion of the respondents supported the notion that early intervention strategies

for children with autism spectrum disorder should be based in educational and school settings.

Recommendations

Following were the recommendations of the study:

1. Physiotherapy services should be provided to the students with ASDs.
2. Sensory integration therapy should be used to treat ASD students.
3. Medical treatment should also be provided to the ASD students.
4. Emotional behavioral services should also be provided to the ASD students
5. Social skills training should be arranged to bring social stability among the ASDstudents.

Limitations and Delimitations

Due to the unavailability of standardized instrument, self-made questionnairewas used, which might effects the results of the study. Convenient sampling was not deemed appropriate, so random sampling technique was used. The examination's results were summarized because the sample size was very small, which was insufficient.

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