



Addressing Knowledge Gaps in Autism Spectrum Disorder to Prepare Teachers for Inclusive Education

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ABSTRACT

The current study focused on general educators attitude towards inclusion and support, knowledge and understanding of Autism Spectrum Disorder (ASD) and their misconception and beliefs about the condition. The result highlighted that although a few myths and partial misunderstanding still exists, teachers showed a moderate to high level of awareness of ASD and generally positive attitude towards inclusive education.

Teachers showed an excellent conceptual comprehension of ASD as a neurodevelopmental condition marked by social and verbal challenges in the knowledge and understanding domain. The majority of the respondents admitted that ASD is a spectrum disorder and disagreed with the view that each person experiences it in the same way. However, there was noticeable misunderstanding especially between ASD and associated conditions like ADHD, as seen by middling scores on hyperactivity, intellectual functioning and lifelong support needs. These results demonstrated that although fundamental knowledge is solid, specific professional training is necessary for a deeper clinical and functional understanding.

In the context of knowledge and comprehension educators showed a solid conceptual understanding of ASD is a neurodevelopmental disorder characterized by social and interaction challenges. The majority of respondents agreed that ASD is a spectrum disorder and opposed with the notion that it shows up uniformly in all people. Moderate scores on lifelong support needs, intellectual functioning and hyperactivity however suggested some misunderstanding especially when it come to ASD and related disorders like ADHD. While the foundational knowledge is strong, these findings demonstrated that particular professional training exists for a deeper clinical and functional understanding.

Addressing attitudes toward support and inclusion, educators expressed positive views. A majority of respondents believed that children with ASD could learn well in regular classroom, gain from child centred approaches and improve social skills through planned interventions. Negative academic prejudices were regularly disregarded which was encouraged.

All things looked at, findings highlights the significance of methodical, research-based professional development in building up the remaining knowledge gaps, breaking myths and strengthening inclusive methods for instructions. Improving teachers preparation will encourage the more successful, understanding and long-lasting integration of children with ASD in mainstream education settings.

INTRODUCTION

Autism Spectrum Disorder is a neurodevelopmental disability mark out differences in communication and socialisation. In a school set-up teacher play a lead role in teaching learning process. Teacher assured that teaching learning process is beneficial for everyone. For a smooth and accessible teaching learning process teacher attitude plays an important role. An attitude of a teacher effects each and every factor in the classroom. In an Inclusive set-up teacher role determine whether children with or without disability are receiving a meaningful access to learning. Teachers positive attitude is essential to enhance inclusive education but on other hand negative attitude crates hurdles between inclusion. With rising global prevalence , teachers increasingly encounter students with autism spectrum disorder in the mainstream classroom.

This research paper presents a research article on the attitudes of general educators towards autism spectrum disorder.

REVIEW OF THE LITERATURE

Irene Gomez Mari, Pilar Sanz Cervera and Raul Tarrage Minguez (2022) “Teachers attitude towards Autism Spectrum Disorder” A Systematic Review. It was a review paper which focused to review teachers attitudes are favourable or not. They conducted a systematic review in WoS, Scopus and Psyc INFO database containing 16 studies. Result indicated inconclusive levels in teachers attitude. There was mixed opinion of the teachers some have moderate attitudes some have negative and some have neutral.

“Teachers attitude towards the inclusion of students with autism spectrum disorder”: Impact of students difficulties by Mickael Jury, Anne Laure Perrin, Caroline Desombre and Odile Rohmer in 2021. They conducted this research on one thousand sixty four teachers. An online questionnaire was shared to teachers to express their attitude towards the inclusion of students with ASD. Result indicates a positive attitude of the teachers towards the inclusion of students with ASD.

“Knowledge and attitudes of special education teachers towards the inclusion of students with Autism Spectrum Disorder” by Hui Min Low, Lay Wah Lee and Aznan Che Ahmad in 2019. This study was conducted at Penang, Malaysia with 87 special education teachers to identify their attitudes towards inclusive education for children with ASD. Result stated that societal attitudes as a strong predictor of the special education teachers perceptions towards inclusive education for students with ASD.

“Pre service teachers attitude towards inclusive education for students with Autism Spectrum Disorder in Malaysia” by Hui Min Low, Lay Wah Lee and Azen Che Ahmad in 2017. This study were investigated to identify pre service teachers attitudinal patterns and predictors. This study involved pre service 151 special education teachers and pre service 181 special education, sciences , English teachers in teachers training programmes. The result showcased that the pre service special education teachers are less in favour of the total inclusion of students with ASD in the mainstream. The result also revealed that combined effects of societal attitude and categorical teacher training model in shaping the pre service teachers attitudes towards inclusive education for the students with ASD in Malaysia.

“Assessment of knowledge, attitude and myths towards Autism Spectrum Disorder among teachers working in schools for children with special needs in south Gujara”: A cross sectional study by Kukreja, Gargi, Shatadal, Pooja, Mehta and Ritambhara in 20225. For this study teachers were approached through Need Assessment Program and other directly with consents.33 teachers were part of the study and in it 91% was female. The average work experience of the teachers was 9.57 years. The result showcased that almost teachers have inadequate knowledge. A lag towards integrated education despite an overall favourable attitudes highlights the need for exploring underlying reasons.

OBJECTIVES OF THE STUDY

- 1) To examine general educators knowledge and understanding about children’s with autism spectrum disorder.
- 2) To examine general educators attitudes for inclusion of children with autism spectrum disorder
- 3) To examine general educators misconceptions and myths about children with autism spectrum disorder.

METHODOLOGY

RESEARCH DESIGN

A mixed method design was adopted combining qualitative survey.

PARTICIPANTS

The study involved 50 general educators working in general schools in the Sonipat district through simple random method. Teachers working at foundational stage and middle stage were included in the selection. Teachers were selected through simple random method.

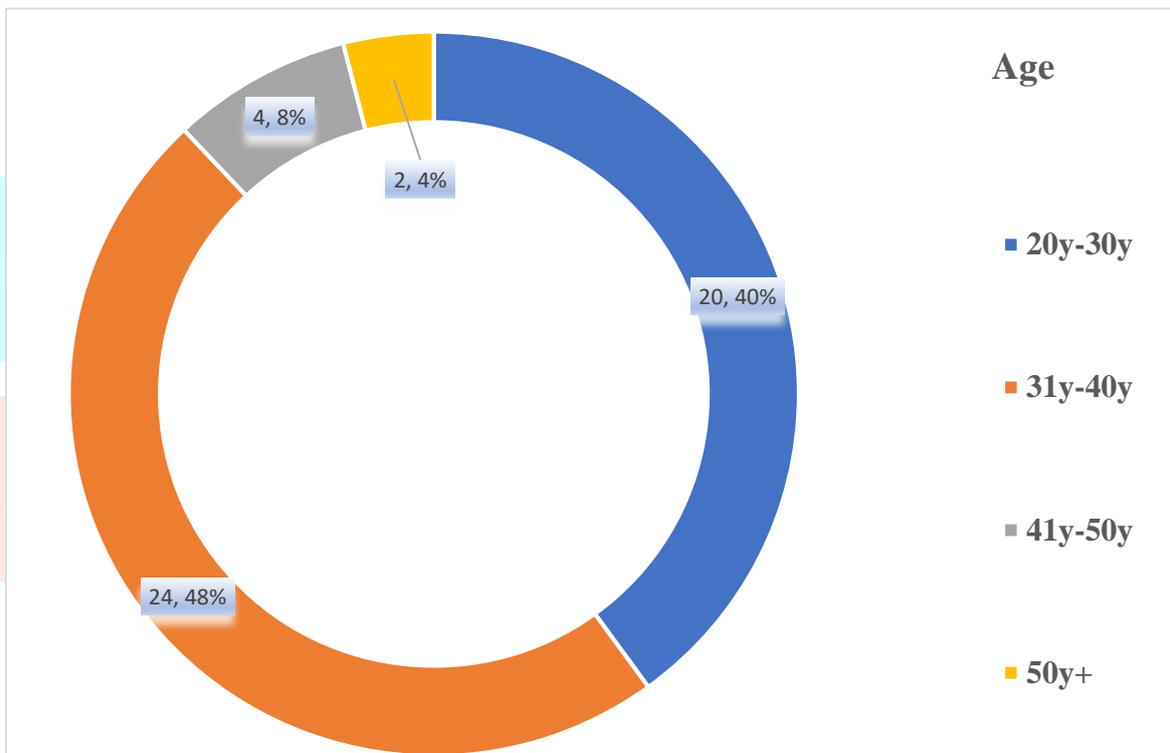
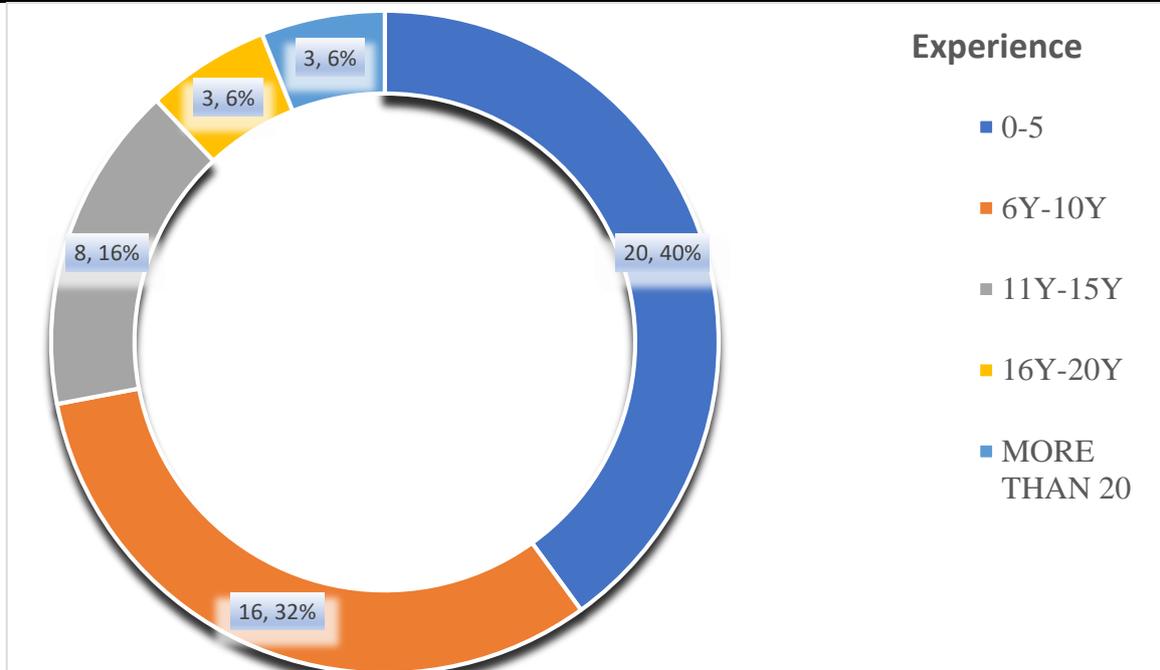
TOOL

A self-constructed tool was used. The tool contained 25 statements distributed across three domains. The first domain covered Knowledge and Understanding with 9 statements. The second domain focused on attitude toward inclusion and support with 7 statements. The third domain addressed Misconceptions and myths with 9 statements.

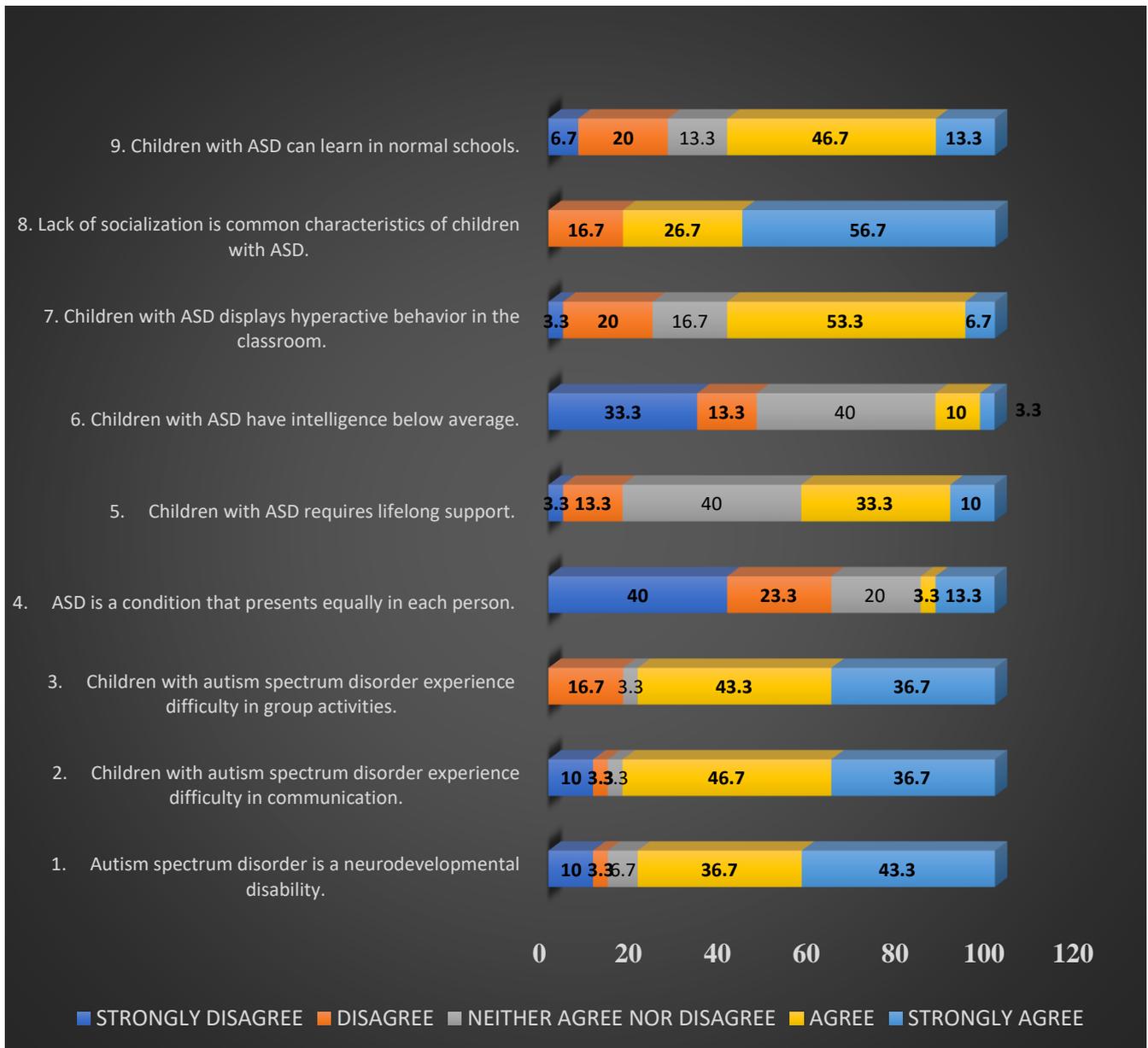
A Likert scale (5 points) was applied to measure each topic, with 5 representing "strongly agree," 4 representing "agree," 3 representing "neither agree nor disagree," 2 representing "disagree," and 1 representing "strongly disagree." Experts in both general education and special education established the scale's face and content validity. Internal consistency and great reliability characterize the scale.

DISCUSSION

The average age of majority general educators was 36.6 years. All teachers were experience with average experience of 8.1 years. About 50% teachers were from government schools and 50% were from private schools. All of them were teaching at middle stage.



DOMAIN 1 KNOWLEDGE AND UNDERSTANDING



RESULT

Overall moderate to high level of knowledge regarding ASD was showed by educators. In general, the respondent’s knowledge concerning ASD ranged from moderate to high. An excellent conceptual awareness along with high mean score (M>4.0) were showed an acceptable level of agreement found for fundamental conceptual issues.

High level scores reflects the items related to social interaction difficulties and suggests clear acceptance of social problems associated with ASD.

On other hand showing a great deal of disagreement with the assertion “ ASD presents equally in each person “ received a low mean score (M<3.0) highlights an excellent understanding of the varied character of ASD. The moderate mean scores (M=3.0-3.5) for statements on intellectual functioning and lifetime assistance needs were indicated to respondent prediction and partial misconception.

High mean score was addressed by the items related to the hyperactivity behaviour in the classroom which indicate a propensity to link hyperactivity. The cause for that may be misunderstanding between ASD and other associated conditions like ADHD.

The fairly high mean score and good attitude towards inclusive education seen on the highly positive responses to the assumption that children with ASD may learn in regular classroom.

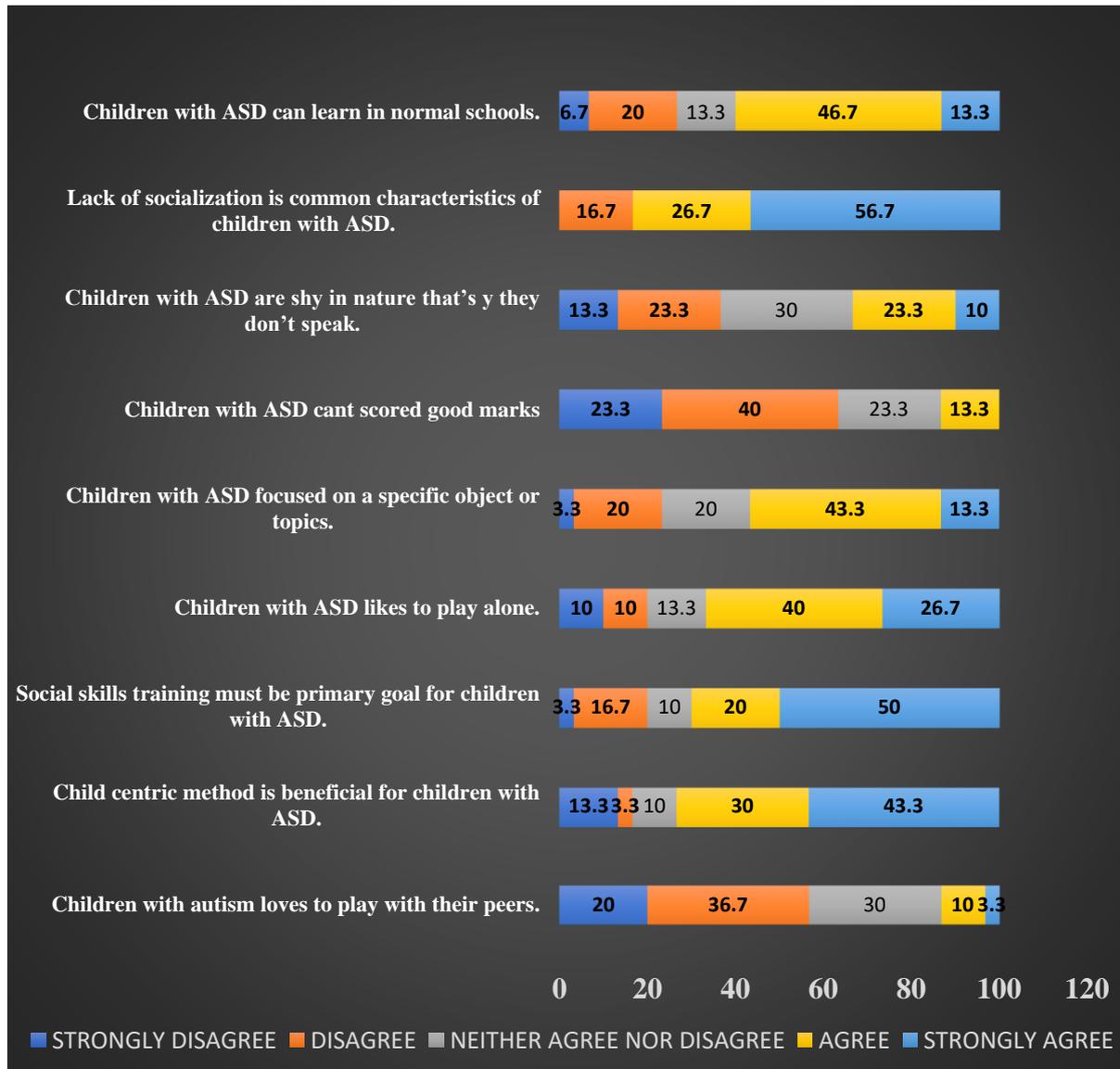
COMPARISON WITH OTHER STUDIES

Findings pointed a moderate to high level of knowledge and understanding for Autism Spectrum Disorder which is in line with prior studies indicating rising awareness (Avramidis & Norwich, 2002; Sharma et al., 2008). Strong understanding of the fundamental traits of ASD is shown by the high agreement on Autism Spectrum Disorder as a neurodevelopmental disorder as well as communication and social impairment, which is consistent with research by Kalyva (2011) and Park Chitiyo (2011).

Based to research by Jordan (2005) and Happe et al. (2006), disagreement with the claim that ASD manifests similarly in every person implies an awareness of its spectrum character. As noted by Gokdere (2012) and Al-Sharbati et al. (2015), who noted uncertainly and stereotypical attitudes among teachers, moderate mean scores on items pertaining to intellectual aptitude, lifelong assistance and hyperactive behaviour imply partial misconceptions.

Forlin et al. (2013) and Srivastava et al. (2015), who observed increased acceptability of inclusive education despite limitations in specific knowledge, are consistent with the favourable perception of mainstream schooling for children with ASD. Overall, the findings support previous research that emphasized the necessity of targeted professional training to dispel myths and bolster successful inclusive practices.

DOMAIN 2:- ATTITUDES TOWARDS INCLUSION AND SUPPORT



RESULT

Result related to the teachers attitudes towards inclusion and support for children with ASD showed positive and fluent standpoint with some disagreeing opinions on cognitive ability and behaviour in society.

With 36.7% strongly agreeing and 20% agreeing, a large number of respondents expressed agreement that children with autism spectrum disorder enjoy playing with classmates highlight their ability for socialisation when an appropriate opportunities given to them. Regarding methods of instruction, 30% of the respondents agreed that child-centric approaches are beneficial for children with ASD.

In relation to intervention priorities, 20% agreed and 50% strongly agreed on social skills trainings must be the main the primary goal for children with ASD. This reflects an awareness of the importance of social growth in inclusive settings. On the other side, views on the suggestion that children’s with ASD prefer to play by themselves were more mixed; while 40% disagreed, a sizable percentage agreed or stayed neutral, suggesting that different people have different perspectives on the social preference of children with ASD.

Afterwards, viewpoint on communication were equal. A large number of respondents disagreed showing the need for additional sensitization regarding communication differences. Some respondents agreed that children with ASD are shy and do not talk.

COMPARISON WITH OTHER STUDIES

In the current study majority of participants agreed that children with ASD like playing with their classmates, indicates a positive view of their social interest. This result is similar to those of Odom et al. (2011) and Koster et al. (2009), who found that in inclusive environment children with ASD showed stronger peer interaction. The current study shows more positive responses which indicates increased awareness among teachers.

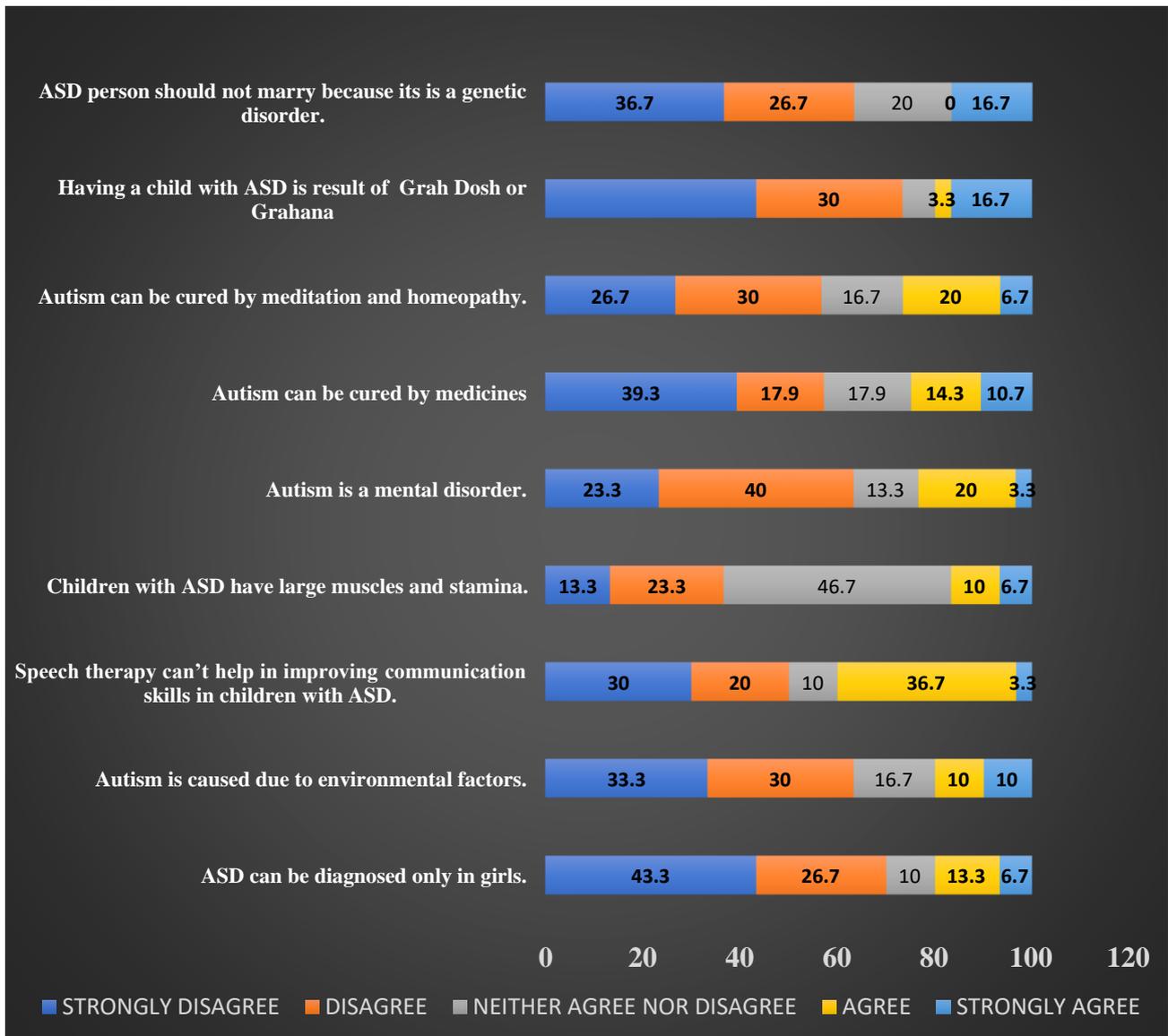
There is a broad acceptance that child centric approaches are highly helpful for childrens with ASD, which is supported by the findings of Avramidis and Norwich (2002) and Florian & Black- Hawkins (2011), who stressed that learner centered and differentiated instructions facilitate inclusion. When compared to these studies, the new study shows an equally strong-and frequently much stronger endorsement of inclusive educational strategies.

According to the current study, children with ASD should prioritize social skills training. This outcome is in line with the findings of Bellini et al. (2007) and Rao et al. (2008), who highlighted the importance of social skills intervention in educational programs for kids with ASD. Respondents in the current study showed a stronger emphasis on social competences, in contrast to some previous research that claimed teachers prioritized academic aims above social development.

The current study revealed that the majority of respondents disagreed with the claim that children with ASD cannot achieve good grades, in contrast to previous studies that highlighted strong negative academic stereotypes (e.g., Chakrabarti & Fombonne, 2005). This is consistent with more recent research by Fleury et al. (2014), which revealed improved academic expectations when proper help is offered, and implies a more optimistic and knowledgeable attitude compared to previous studies.

In terms of communication, the current study found a range of reactions to the claim that kids with ASD are quiet because they are timid. Paul et al. (2009) and Jones et al. (2017) revealed similar errors, where teachers frequently mistook communication issues for shyness. Although some misunderstanding still exists, the current data indicate a partial gain in knowledge when compared to these investigations.

DOMAIN 3:- MISCONCEPTIONS AND MYTHS



RESULT

The results related to misconceptions and myths about Autism Spectrum Disorder reveal the presence of several inaccurate beliefs among respondents, although varying levels of awareness were also evident.

A substantial proportion of respondents disagreed with the statement that ASD can be diagnosed only in girls, with 43.3% strongly disagreeing and 26.7% disagreeing, indicating adequate awareness that ASD affects both boys and girls. Similarly, misconceptions related to superstitious beliefs, such as having a child with ASD being the result of Grah Dosh or Grahana, were largely rejected, as 43.3% strongly disagreed and 30% disagreed, reflecting a decline in culturally rooted myths.

Regarding causation, responses to the statement that autism is caused due to environmental factors were mixed. While a significant proportion disagreed (33.3% strongly disagree, 30% disagree), a notable percentage still agreed or remained neutral, suggesting partial understanding of the multifactorial (genetic and neurodevelopmental) nature of ASD.

Awareness about interventions showed encouraging trends. A majority rejected the myth that speech therapy cannot help improve communication skills in children with ASD, with 36.7% disagreeing and additional respondents strongly disagreeing, highlighting recognition of the effectiveness of therapeutic interventions. However, misconceptions related to physical characteristics, such as children with ASD having large muscles and stamina, were neither strongly rejected nor accepted by many respondents, as nearly half (46.7%) remained neutral, indicating limited clarity.

The belief that autism is a mental disorder was largely rejected, with 40% disagreeing and 23.3% strongly disagreeing, demonstrating growing awareness that ASD is a neurodevelopmental condition rather than a mental illness. Despite this, misconceptions regarding cure persisted; a considerable proportion of respondents believed that autism can be cured by medicines or by meditation and homeopathy, reflecting lingering misunderstandings about the nature of ASD as a lifelong condition requiring support rather than a cure.

Finally, attitudes toward social life revealed concern, as some respondents agreed with the statement that persons with ASD should not marry because it is a genetic disorder, although a notable proportion disagreed, indicating conflicting beliefs regarding adulthood, independence, and genetic transmission.

Overall, the findings suggest moderate awareness alongside persistent misconceptions, particularly regarding causes, cure, and adult life of individuals with ASD.

COMPARISON OF PRESENT FINDINGS WITH OTHER RESEARCHERS

The rejection of gender-based myths in the present study aligns with findings by Fombonne (2009) and Loomes et al. (2017), who emphasized that ASD occurs across genders, though with differing prevalence rates. Compared to earlier studies, the present findings indicate improved teacher awareness regarding gender distribution in ASD.

Mixed beliefs about environmental causes of autism are consistent with studies by Huws and Jones (2010) and Griffith et al. (2012), which reported confusion among educators regarding the etiology of ASD. While earlier research documented stronger endorsement of environmental myths, the present study shows a gradual shift toward scientific understanding, though misconceptions remain.

The strong disagreement with the statement that speech therapy is ineffective supports the findings of Paul et al. (2009) and ASHA (2016), who highlighted widespread recognition of speech and language therapy as a cornerstone intervention for ASD. Compared to some earlier Indian studies reporting limited awareness of therapeutic benefits, the present findings reflect improved professional knowledge.

The finding that many respondents were uncertain about physical characteristics (muscle strength and stamina) parallels results from Sharma and Rangarajan (2013), who noted ambiguity and lack of accurate information about physical development in children with ASD. This suggests that non-core features of ASD continue to be poorly understood.

The rejection of the myth that autism is a mental disorder aligns with DSM-5 (APA, 2013)-based awareness reported in recent studies by Boutot (2017). Compared to older studies that reported high levels of confusion between mental illness and developmental disorders, the present study indicates increasing conceptual clarity. However, continued belief in cures through medication, alternative therapies, or spiritual practices is consistent with findings by Daley (2004) and Divan et al. (2012), especially in developing-country contexts. While the present results show reduced endorsement compared to earlier studies, the persistence of such beliefs highlights ongoing cultural and informational gaps.

Finally, misconceptions regarding marriage and genetic transmission reflect similar concerns reported by Neely-Barnes et al. (2011), where societal stigma influenced perceptions of adult life for individuals with ASD. Compared to these studies, the present findings suggest slightly more progressive attitudes, though stigma-related beliefs have not been fully eliminated.

In comparison with existing literature, the present study demonstrates improved awareness and reduced superstition, yet confirms that misconceptions related to causation, cure, and adulthood of individuals with ASD continue to persist, underscoring the need for sustained awareness programs and evidence-based teacher training.

CONCLUSION

The present study investigated general educators in three areas:- knowledge and comprehension, attitudes towards inclusion and support and misconception and myths about Autism Spectrum Disorder. Although some misconception and partial misunderstanding still persist. The result highlighted that teachers have a moderate to high level of awareness and a generally positive attitude towards inclusive education.

Teachers in domain 1 Knowledge and Understanding exhibited a solid conceptual understanding of ASD as a neurodevelopmental disorder marked by communication and social barriers. ASD spectrum nature has been recognised by a larger majority on its main symptoms and its rejection of the belief that it expresses as uniformly in numerous individuals. Moderates scores on hyperactivity, continuous assistance needs and cognitive abilities however indicates towards certain confusion, particularly between ASD and related disorders like ADHD. These results shows that although the underlying knowledge is solid, focused training is needed to develop the deeper clinical and functional understanding.

Teachers attitudes towards inclusion appeared overwhelmingly favourable in Domain 2 (Attitudes towards Inclusion and support). The vast majority of respondents agreed that planned interventions might help children with ASD develop social skills, learn in regular schools and benefit from child-cantered methods. Negative academic views were frequently ignored, so it was encouraging. Yet, disagreements about communication styles and social preferences point of the need for more education about the varied characteristics of children with ASD. Overall the result highlighted that inclusive approaches are becoming widely accepted and that children with ASD have social and developmental potential.

The study demonstrated reducing acceptance of gender based and culturally ingrained belief in Domain 3 (Misconception and beliefs), indicating better knowledge than previous investigations. The idea that ASD is a mental disease and superstitious belief were mainly rejected by respondents. Misconception about causes, treatment, alternative therapies and adulthood including marriage- remain visible. The need for evidence-based professional instructions is highlighted by the observation of neutral responses on particular subjects suggest clarification gaps rather than major in communications.

In conclusion, systematic professional development is required to address remaining gaps, clarify myths and boots inclusive classroom practices even while general educators demonstrated positive levels of knowledge and supportive attitudes towards kids with ASD,. As well as strengthening instructions will result in the more successful, compassionate and long- lasting inclusion of kids with ASD in regular classroom environments.

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