*Original Research Article*

# Parental Awareness of the Psychosocial Needs of Children with Neurodevelopmental Disabilities in India: A Cross-Sectional Study

**Anuj Srivastava[1], Sara Begum[1]**

1 Department of Teacher Training and Non-formal Education (IASE), Faculty of Education, Jamia Millia Islamia, New Delhi, India.
* Correspondence: anujsrivastava27@gmail.com

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## ABSTRACT

**Background:** Parents of children with neurodevelopmental disabilities play a critical role in identifying and responding to their child's psychosocial needs. However, the relationship between parental awareness and demographic characteristics such as gender, education level, socioeconomic status, age and domicile needs to be understood but remains an unexplored area. Evidence from South Asian populations remains scarce.

**Aim:** The study aimed to explore parental awareness of the psychosocial needs of children with neurodevelopmental disabilities aged 6 – 12 years and to determine the associations with gender, educational qualification, socioeconomic status, age and domicile.

**Method:** A cross-sectional descriptive study was conducted with 30 parents comprising 18 mothers and 12 fathers whose children had a diagnosis of Autism Spectrum Disorder, Intellectual Disability or Specific Learning Disability in Delhi - National Capital Region, India. Participants were selected through purposive sampling from clinical and community-based intervention settings. Data was collected through structured face-to-face interviews. A *'Psychosocial Needs Checklist'* developed by the researcher, which consisted of 30 items across emotional, behavioural, social, cognitive and adaptive domains, was administered. Content validity was established through expert review by 24 rehabilitation professionals and the tool demonstrated excellent internal consistency reliability (Cronbach's alpha = 0.919). Data were analyzed using non-parametric tests Kruskal – Wallis H test, Mann – Whitney U test and Spearman's rank correlation.

**Results:** Parental awareness showed significant variation across the diagnostic groups in a decreasing order such as being the highest among parents of children with Autism Spectrum Disorder, followed by those of children with Specific Learning Disability and those of children with Intellectual Disability. Mothers demonstrated significantly greater levels of awareness of psychosocial needs than fathers. Awareness levels increased consistently with higher levels of education, with graduates and parents holding professional degrees showing significantly greater awareness. Socio-economic status was significantly associated with awareness as parents from high socio-economic status families demonstrated significantly greater awareness compared to middle and low socio-economic status groups. Parental awareness varied by age group as parents aged 31 – 40 years showed higher awareness, though the oldest group, which consisted of those aged 41 – 50 years, recorded the lowest scores. Urban and semi-urban parents were significantly more aware than rural parents, indicating a pronounced geographic gap.

**Conclusion:** Parental awareness of psychosocial needs significantly varies across all demographic variables. These disparities signal the importance of targeted psychosocial awareness programmes and parent-training interventions, particularly for fathers, rural families and those from low-socio-economic status groups.

**Keywords:** Awareness, Psychosocial Needs, Psychosocial Intervention, Parents, Children with Neurodevelopmental Disabilities (NDDs).

## INTRODUCTION

Neurodevelopmental disabilities (NDDs) represent developmental conditions involving cognitive, communicative and socio-behavioural challenges (American Psychiatric Association, 2022; Schwartzman et al., 2024). Lack of awareness among parents contributes significantly to delayed identification, less effectiveness of interventions, and increased levels of parental stress (Chansa-Kabali et al., 2025; Chow et al., 2024). These consequences may further contribute to emotional exhaustion, psychological distress and a decrease in coping ability among parents (Usman et al., 2025). These challenges become more severe in low-resource settings where limited rehabilitation services and prevailing social stigma delay timely identification and intervention for children with neurodevelopmental disabilities (Chansa-Kabali et al., 2025).

Delayed recognition of early developmental concerns, often because of low parental awareness, remains a key barrier to optimal outcomes for children with NDDs (Kanniappan et al., 2024). In many instances, the difference between initial parental concern and formal diagnosis exceeds 1.5 years, especially for autism conditions (Bhavnani et al., 2021). Such delays in diagnosis decrease the effectiveness of early interventions (Collins et al., 2017) and indicate the gaps towards the necessity for studies that examines parental awareness among different demographic variation.

There is a need to understand parental awareness in South Asian contexts, as cultural beliefs, socio-economic disparities and lack of service infrastructure shape the way in which caregivers interpret developmental milestones (Estrin et al., 2023; Mohanty et al., 2025). With estimates of one in eight children in India possibly facing developmental challenges due to NDDs (Mohanty et al., 2025), the identification of demographic predictors like gender, education, socio-economic status, age and domicile background can help target awareness-building interventions accordingly. Parent-mediated instructions increased awareness, supported accelerated early detection, linked with services and improved psychosocial well-being for children and caregivers (Koly et al., 2021).

The present study, therefore, investigates parents' awareness of psychosocial needs in children with NDDs and explores how key demographic variables influence this awareness.

### Significance of the study

Denial and delayed acceptance of a child's development needs, in many cases due to stigma and fear, are important contributors to late initiation of intervention and adverse outcomes (Mazumdar, 2024). Empirical evidence brings to notice that parents with multiple intellectually disabled children usually deny the developing issues, causing a hindrance to proper analysis and therapy participation (Ho & Keiley, 2003). Denial of developing issues in children also poses a delay in receiving early development-related services, causing a wasted development period for children due to delayed interventions, as stated in the PEDALS Blog, authored by Laura Tipton, also backed by Goldberg (n.d.) in the Special Education Advisor Blog. Denial also affects family dynamics, where a father's rejection heightens maternal caregiving burden and stress (Purba & Simanjuntak, 2021),

whereas mothers often report increased psychological strain and reduced social participation, which can have adverse effects on child and family functioning (Aydın & Yamaç, 2014).

### Research Objective

To examine parental awareness of the psychosocial needs of children with neurodevelopmental disabilities and to determine whether awareness differs according to the child's diagnosis and parental demographic characteristics.

### Research Question

How does parental awareness of the psychosocial needs of children with neurodevelopmental disabilities vary across diagnostic groups and demographic characteristics (gender, educational qualification, socioeconomic status, age and domicile) among parents in India?

### Hypotheses

The study hypothesis is that there would be no statistically significant differences in parental awareness regarding psychosocial needs across diagnostic categories ($H_o1$) and demographic variables including gender ($H_o2$), educational qualification ($H_o3$), socioeconomic status ($H_o4$), age ($H_o5$) and domicile background ($H_o6$) among parents of children with neurodevelopmental disabilities.

## LITERATURE REVIEW

### Psychosocial Needs of Children with NDDs

Children with NDDs often have increased psychosocial difficulties, which include emotional dysregulation, behavioural outbursts, difficulties in social reciprocity, anxiety and developmentally inappropriate coping mechanisms (Schwartzman et al., 2024). Soliman et al. (2020) found that most children between the age 6 – 12 years encountered psychosocial challenges. Such concerns significantly impact daily functioning, school engagement and family functioning. Berens et al. (2019) explored early–life psychosocial hazards which can impact developmental outcomes among children. Parents are the first point of observation and support in a child's emotional and behavioural pattern; studies proved that parental age, income, gender and parenting played key roles in these patterns (Arim et al. 2015). Another study conducted in India showed that per capita income, education of mother, nutrition status of child, number of rooms, environmental hygiene, availability of a high school in easy access, availability of a caretaker when mother is busy, child attending nursery school or not, households with access to a newspaper, child having toys or toy substitutes, TV, books, and storytelling by mother were found to be significantly associated with psychosocial development of preschool children (Kumar et al., 1997); thus, their awareness is quite essential in psychosocial intervention.

### Parental Awareness Association with Early Identification and Support

Parental awareness significantly impacts early detection of psychosocial and developmental difficulties. Children with NDDs have significant psychosocial needs and the awareness level of parents is a key factor in early identification, referrals and access to support (Ahinkorah et al., 2024; Aldharman et al., 2023). As revealed by the studies, caregivers who correctly interpret the first signs of emotional distress or behavioural deviances seek professional help sooner, which is associated with better developmental outcomes (Chow et al., 2024; Collins et al., 2017). By sharp contrast, delayed identification, frequently longer than one year in disorders like ASD, is strongly associated with poorer long-term functioning (Bhavnani et al., 2021).

### Gaps in Existing Literature

While a number of studies have investigated parental awareness about neurodevelopmental disabilities, few have focused specifically on parents' awareness of psychosocial needs such as emotional regulation, behavioural challenges and social functioning. Those that do exist typically focus on diagnostic delays or disability awareness rather than psychosocial awareness of parents. Second, few analyses have considered how multiple demographic factors (gender, educational qualifications, socioeconomic status, age and domicile) interact to influence parental awareness (Cheng & Lai, 2023). Research is also currently limited regarding school-aged children aged 6 – 12 years; most research has been conducted into early childhood. Lastly, there is a dearth of evidence from South Asian contexts, where cultural beliefs, structural barriers and limited-service access distinctly shape parental awareness. These gaps thus underscore the need for focused empirical investigation into the ways that demographic variables shape parental awareness of psychosocial needs in children with NDDs.

## METHODS

### Research Design

A cross-sectional descriptive design was implemented to evaluate the awareness of parents regarding psychosocial needs and demographic influences.

### Participants

The sample included 30 parents of 6–12-year-old children diagnosed either with Autism Spectrum Disorder (ASD), Intellectual Disability (ID) or Specific Learning Disability (SLD) residing in the Delhi National Capital Region (NCR), India. The sample size (n = 30) was determined based on feasibility and accessibility within the study setting. Parents were purposively sampled from clinical and community early-intervention settings. Participation was voluntary, and written and oral informed consent was obtained from all the participants; no participant left the study in between. Ethical clearance was obtained from the institutional review board (The Department of Teacher Training & Non-Formal Education, Institutes of Advanced Studies in Education (IASEs), Jamia Millia Islamia, New Delhi, India). The study was accorded Ethical Committee Approval vide Ethics Committee (Ref. – IASE/EC/11-2025/01) dated 24th November 2025. The study adhered to the Declaration of Helsinki, as stated in the 'Ethics approval and consent to participate' section of the Declarations.

### Research Tool

### Psychosocial Needs Checklist (PNS)

The Psychosocial Needs Checklist (PNS) is a 30-item instrument developed by the researcher and it is content-validated by a panel of 24 rehabilitation professionals. The instrument assesses parental awareness across six domains:

1. Sense of Competence and Achievement
2. Social Interaction and Peer Relationships
3. Encouragement and Motivation
4. Emotional Understanding and Coping
5. Self-Esteem and Identity Formation
6. Role of Family and Environment

Responses were recorded on a three-point Likert scale with reverse coding in between. Reverse coded questions are 1, 3, 6, 7, 8, 11, 12, 13, 19, 20, 21, 22, 23, 26 & 28, which are randomly selected (to minimize acquiescence 'yes-saying' response bias and reduce predictable response patterns), computing 50% of the tool (15 questions out of 30 questions). The scoring scheme used for each response is presented in Table 1.

Table 1: Scoring sheet of the Psychosocial Needs Checklist (PNS)

| Response | Score | |
|---|---|---|
| | Positively coded items | Reverse-coded items |
| Always | **3** | **1** |
| Sometimes | **2** | **2** |
| Never | **1** | **3** |

Table 1 shows responses were recorded on a 1 – 3 scale where the minimum score was 1 – Never (in positive coding) and 1 – (in reverse coding), whereas the maximum score was 3 – Always (in positive coding) and 3 – (in reverse coding). Higher scores indicate greater awareness.

### Reliability and Validity of the Tool Used

Content validity was established through expert review by 24 professionals from the fields of special education, psychology and rehabilitation, yielding satisfactory content validity. The tool demonstrated excellent internal consistency reliability with a Cronbach's alpha coefficient of 0.919. Split-half reliability using the Spearman-Brown formula was found to be 0.941, indicating acceptable reliability and consistency of the scale for research purposes.

### Procedure

Participants provided informed consent. Data were collected individually in structured face-to-face interviews to ensure comprehension. Demographic information was recorded. Data were collected during the period of May to August, 2025.

### Data Analysis

The data were analyzed using IBM SPSS Statistics, Version 21. Non-parametric statistical tests were used: the Kruskal–Wallis H test and the Mann–Whitney U test to test differences among groups along the type of disability, gender, educational qualifications, socioeconomic status and parental age groups, as well as domicile background. Before any inferential analysis was conducted, assumptions for the chosen statistical approaches were examined. The normality assumption was examined using the Shapiro-Wilk test; results showed the non-normality of the awareness index distribution in several comparison groups. Given the small sample size (N = 30), differences in subgroup size and non-normality of distributions, it was decided that a non-parametric statistical approach would be the most appropriate one. In case of comparison of two independent groups, the Mann-Whitney U test was chosen, while the Kruskal-Wallis H test was chosen for comparison of three or more independent groups. The effect size for Mann-Whitney U tests was denoted by *r* and for Kruskal-Wallis H test by epsilon squared ($\varepsilon^2$). No missing data were observed in the collected responses, and all questionnaires were included in the final analysis.

### Inclusion and Exclusion Criteria

The study included biological mothers or fathers of children aged 6 - 12 years diagnosed with Autism Spectrum Disorder, Intellectual Disability or Specific Learning Disability residing in Delhi NCR, India. Parents who were temporarily or permanently residing within the region during the period of data collection were considered eligible for participation.

Parents of children diagnosed with other neurodevelopmental disorders such as Attention-Deficit/Hyperactivity Disorder, Communication Disorders or Motor Disorders

were excluded from the study. Parents who had adopted children with autism spectrum disorder, intellectual disability or specific learning disability and parents residing outside Delhi NCR during the data collection period were also excluded.

## RESULTS

### Demographic Characteristics of the Participants

The demographic characteristics of the parents of children diagnosed with neurodevelopmental disabilities are presented in Table 2.

Table 2: Demographic Details of the samples

| Characteristics | | N | % |
|---|---|---|---|
| Diagnosis of the Child | Autism Spectrum Disorder | 8 | 29% |
| | Intellectual Disability | 5 | 16.67% |
| | Specific Learning Disability | 17 | 56.67% |
| Relationship with the Child | Mother | 18 | 60% |
| | Father | 12 | 40% |
| Educational Qualification of the Parents | No Formal Education | 2 | 6.67% |
| | Primary | 2 | 6.67% |
| | Secondary | 2 | 6.67% |
| | High School | 3 | 10% |
| | Intermediate / Diploma | 4 | 13.34% |
| | Graduate | 10 | 33.34% |
| | Professional Degree and above | 7 | 23.34% |
| Socioeconomic Status | Lower | 5 | 17% |
| | Middle | 17 | 56% |
| | Upper | 8 | 27% |
| Age range of the Parents | 20 – 30 years | 12 | 40% |
| | 31 – 40 years | 12 | 40% |
| | 41 – 50 years | 6 | 20% |
| Residential Area | Rural | 5 | 16.67% |
| | Semi Urban | 5 | 16.67% |
| | Urban | 20 | 67% |

Table 2 shows the sample consisted of 30 parents of children with neurodevelopmental disabilities from three diagnostic categories, with a majority of the children being diagnosed with Specific Learning Disability (56.67%), followed by Autism Spectrum Disorder (29%), and Intellectual Disability (16.67%). Regarding the parental relationship to the child, mothers were the majority of respondents at 60 percent, and fathers composed 40 percent of the sample. The qualification of parents ranged widely. A few had no formal education, primary education and secondary education representing 6.67% each, while about 10% had studied up to high school and 13.34% had an intermediate / diploma qualification. Quite a good number were graduates, with 33.34%, while 23.34% had professional degrees or higher. Socioeconomically, most of the children belonged to the middle-income group, comprising 56%, followed by 27% from the upper group, while 17% came from the lower socioeconomic category. Parents were spread fairly evenly across two age brackets of 20–30 years and 31–40 years at 40%, while the rest were 41 – 50 years old. Regarding residential background, the majority of the parents belonged to an urban background (67%), followed by semi-urban and rural backgrounds with 16.67% each.

### Differences in Parental Awareness across Diagnostic and Demographic Variables

Parental awareness was compared across the child's diagnostic category and selected demographic characteristics. The results are presented in Table 3.

Table 3: Differences in Parental Awareness across Diagnostic and Demographic Variables

| Variable | Categories | N | Mean Rank | Test Used | Test Value | p-value |
|---|---|---|---|---|---|---|
| Diagnosis | Autism Spectrum Disorder | 8 | 26.50 | Kruskal – Wallis H test | 23.131 | .001** |
| | Intellectual Disability | 5 | 3.00 | | | |
| | Specific Learning Disability | 17 | 14.00 | | | |
| Gender | Father | 12 | 7.46 | Mann – Whitney U test | 11.500 (U), Z = -4.091 | .001** |
| | Mother | 18 | 20.86 | | | |
| Educational Qualification | No formal education | 2 | 2.50 | Kruskal – Wallis H test | 20.271 | .002* |
| | Primary | 2 | 2.50 | | | |
| | Secondary | 2 | 8.75 | | | |
| | High School | 3 | 9.33 | | | |
| | Intermediate / Diploma | 4 | 11.13 | | | |
| | Graduate | 10 | 21.80 | | | |
| | Professional Degree and above | 7 | 21.00 | | | |
| Socio Economic Status (SES) | Lower | 5 | 3.00 | Kruskal – Wallis H test | 23.131 | .001** |
| | Middle | 17 | 14.00 | | | |
| | Upper | 8 | 26.50 | | | |
| Parent's Age Group | 20 – 30 years | 12 | 15.21 | Kruskal – Wallis H test | 12.727 | .002* |
| | 31 – 40 years | 12 | 20.92 | | | |
| | 41 – 50 years | 6 | 5.25 | | | |
| Domicile | Rural | 5 | 3.00 | Mann – Whitney U test | 12.314 | .002* |
| | Semi Urban | 5 | 16.50 | | | |
| | Urban | 20 | 18.38 | | | |

*Note: * Highly Significant at p < .01; **Very Highly Significant at p < .001.*

The Kruskal–Wallis H test (Table 3) for diagnosis revealed that scores in the parental Awareness Index statistically show a very high significantly difference across the three diagnostic groups, $X^2 = 23.13$, $p < .001$. Hence, $H_0 1$ is rejected. This suggests that parental awareness differs significantly depending on the child's diagnosis.

The mean rank distribution showed a clear hierarchical pattern in parental awareness across diagnostic categories. Parents of children with Autism Spectrum Disorder demonstrated the highest level of awareness with a mean rank of 26.50, followed by parents of children with Specific Learning Disability with a mean rank of 14.00, indicating moderate awareness. In contrast, parents of children with Intellectual Disability demonstrated the lowest level of awareness, with a mean rank of 3.00.

The Mann-Whitney U test (Table 3) for gender revealed that differences in psychosocial awareness scores between mothers and fathers were very high and statistically significant, $U = 11.50$, $Z = -4.091$, $p < .001$. Hence, $H_0 2$ is rejected. Mothers reflected significantly higher levels of awareness, with a mean rank of 20.86, compared with fathers, who had a mean rank of 7.46. This implies that gender is associated with shaping the awareness of parents on psychosocial needs.

The Kruskal–Wallis H test for education level (Table 3) highlighted that the difference in awareness among different education levels is statistically highly significant. Therefore, $H_0 3$ is rejected. The data show that parents with professional degrees, graduates, etc., had significantly higher awareness than those with no formal or primary education. Parents with higher educational qualifications demonstrated higher awareness

scores. This pattern may reflect differences in educational exposure and access to information.

Both the Spearman and Kruskal–Wallis H test for socioeconomic status (Table 3) revealed that Socio Economic Status (SES) is a highly significant associated with the awareness at $p < 0.001$. A strong positive correlation was recorded at $\varrho = 0.950$ (Correlation is significant at the 0.01 level, 2-tailed) showing that awareness by parents of their child's psychosocial needs increases with an increase in family socioeconomic status from Lower to Upper class. Thus, $H_0 4$ is rejected.

The Kruskal–Wallis H test for age group (Table 3) was highly significant, indicating that there was a difference by age group; older parents (41 – 50 years) were less aware than younger parents. Therefore, $H_0 5$ is rejected.

The Mann–Whitney U test for domicile (Table 3) presented a high significant difference. The statistical comparison reflected sharp division along the lines of geographic location ($p < 0.001$). Parents from urban areas scored significantly higher in awareness compared to those from rural areas, indicating a serious gap in terms of resource availability and dissemination of information within a rural setting. Thus, $H_0 6$ is rejected.

## DISCUSSION

The current research explored the awareness of parents on the psychosocial needs of children with neurodevelopmental disabilities and the difference in awareness based on the diagnostic and demographic categories. According to the findings, high levels of discrepancies exist in levels of awareness, which are both structural and socio-contextual, such as rehabilitation resources, awareness programmes, and diagnostic facilities, particularly between urban and rural settings and educational attainment, socioeconomic status, and residential background of the parents.

In terms of types of diagnoses, parents of children with Autism Spectrum Disorder had the highest parental awareness, followed by Specific Learning Disability and the lowest parental awareness with Intellectual Disability. The substantially higher ranks for Autism Spectrum Disorder may reflect greater access to specialized services, more extended guidance from professionals or active involvement in psychoeducational processes for the children falling within this diagnosis (Fuentes et al., 2021), as this disability is reported to have a regression in language or social skills, most typically between 18 and 24 months of age (Barbaresi, 2016; Bradley et al, 2016), American Academy of Paediatrics recommends formally screening as early as at 18 and 24 months of age in their primary care visits (Hyman et al, 2019; Lord et al, 2006), recognizable as early as 3 years of age (The Rights of Persons with Disabilities Act, 2016). One potential explanation relates to the increased visibility of autism prior to age 3, coupled with earlier diagnosis and access to specialized services. Together, these factors facilitate greater parental involvement and increased exposure to professional guidance (Landa, 2008; Zwaigenbaum et al., 2015). Intellectual disability, which might be linked to social stigma and acceptance of the diagnosis, in contrast, may be a reason behind relatively low parental awareness (Boot, et al. 2020).

The differences based on gender indicated that mothers were much more aware than fathers. This observation is in line with the existing literature that indicates that mothers usually play a more intense role in caregiving and therefore have wider exposure to specialist consultations, school-based interactions and therapeutic settings to develop their awareness. The relatively low level of awareness in fathers may reflect lesser involvement in day-to-day care, lesser direct contact with professionals or sociocultural norms positioning mothers as primary caregivers within most Indian families (Aydın & Yamaç, 2014; Purba & Simanjuntak, 2021). The level of education was found significantly associated with the awareness whereby increased levels of education were linked to increased levels of awareness (Aydın & Yamaç, 2014). Informed parents tend to seek, interpret and apply

information on child development and psychosocial requirements such as online and professional materials (National Academies of Sciences, Engineering and Medicine, 2016; Shi et al., 2024). Likewise, socioeconomic status (SES) affects awareness, which may reflect differences in resource availability, such as access to special services, private therapy, digital literacy and exposure to professional advice (Kushwaha & Ahmad, 2024; Shi et al., 2024; Sosinsky & Kim, 2013). Parents in higher SES are more likely to seek out regular developmental assessments and attend parent training seminars, which may contribute to higher awareness (National Academies of Sciences, Engineering and Medicine, 2016).

The age difference showed that the parents of the 31 - 40 years age group had a relatively high level of awareness and older parents showed lower awareness. Such differences may reflect longer exposure to diagnostic and therapeutic processes and accumulated learning through digital mode over time. Future studies are recommended towards this point. Reasons like social stigma hamper the acceptance of the child and their needs (UNICEF & Institute of Social Studies and Analysis, 2016).

Furthermore, in terms of domicile-based differences, urban and semi-urban parents were found to be significantly more aware than rural parents, likely due to better access to diagnostic centers, trained specialists, and awareness programs in urban areas (Blumenthal & Kagen, 2002; Chen et al. 2019; Meena, 2025). Whereas rural families have limited access to diagnostic services, fewer special educators, fewer awareness campaigns and weak digital infrastructure (Kumar et al., 2012; Lakshmi, 2025; Rose et al., 2021). Accessibility to multidisciplinary centers, inclusive schools and regular awareness initiatives by NGOs and government departments are advantages enjoyed by urban parents, and this may contribute to the observed differences (Kumar et al., 2012).

Overall, the results of this research highlight that parental awareness appears to be associated with multiple diagnostic factors, on one hand, and demographic factors, on the other hand. This signifies the necessity of psychosocial interventions, especially among underserved populations, including fathers, rural communities and lower socioeconomic and educational status.

## Limitations of the Study

Notwithstanding its contributions to the field, this study is subject to certain limitations. To begin with, the sample size was limited (n = 30) and it can be argued that such a sample is not representative of the population. Second, purposive sampling limits the representativeness of the sample and can create selection bias. Third, the cross-sectional design will not permit a causal inference or study of the changes in awareness over time. Lastly, the research was also limited to the Delhi - National Capital Region (NCR), India, and it might be impossible to generalize it to other geographical, religious and cultural settings.

## Future Recommendations

Future studies should use a larger sample and stratified across diagnostic and demographic groups to improve the representativeness and generalizability of the findings. Longitudinal investigations may help in understanding changes with increasing child age, service exposure and intervention participation. The Psychosocial Needs Checklist should be further standardized and validated across diverse linguistic and cultural contexts for wider applicability. There is also a need to develop targeted parental training/modules, particularly for fathers, rural families and socioeconomically disadvantaged groups. There is an urgent need to integrate various digital awareness programs to bridge the gaps related to socio-economic status and location. However, the current study has not addressed various contextual variables that might affect the parent's awareness and can act as confounders, such as the availability of specialized intervention services, the duration since diagnosis, participation of parents in daily rehabilitation processes,

parental mental health, caregiving burden and access to multidisciplinary services. This study has not been able to measure these variables because of the differences seen among the groups. Future studies should incorporate these variables to better understand the mechanisms underlying parental awareness. Community-based awareness initiatives involving schools, healthcare professionals, and non-governmental organizations may further strengthen early identification and psychosocial support for children with neurodevelopmental disabilities.

## CONCLUSION

The findings from the study indicate that parental awareness regarding psychosocial needs of children with neurodevelopmental disabilities was found to be significantly different with respect to diagnostic and demographic variables. Parents of children with Autism Spectrum Disorder showed increased awareness compared to parents of the children with Specific Learning Disability and Intellectual Disability. Mothers and highly educated parents and parents from higher socioeconomic backgrounds and urban families were significantly more aware. The results indicate that inequalities in social and educational status were associated with differences in parental awareness, which calls for the need for targeted psychosocial awareness programmes and family-centred interventions, especially for fathers, the rural population and socioeconomically disadvantaged families in order to enhance psychosocial outcomes and access to early support services for children with neurodevelopmental disabilities.

## DECLARATION

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**Ethical Approval and Accordance:** The study adhered to all ethical standards for research involving human participants. Ethical clearance was obtained from the institutional review board (The Department of Teacher Training & Non-Formal Education, Institutes of Advanced Studies in Education (IASEs), Jamia Millia Islamia, New Delhi, India). The study was accorded Ethical Committee Approval vide Ethics Committee (Ref. – IASE/EC/11-2025/01) dated 24th November 2025. The study adhered to the Declaration of Helsinki to this effect in the 'Ethics approval and consent to participate' section of the Declarations.

**Clinical Trial Number:** Not Applicable.

**Consent to Participate:** All participants were informed about the purpose, procedures, potential risks and benefits of the study. Participation was entirely voluntary; oral and written informed consent was obtained from all participants before their inclusion in the research.

**Generative AI Usage:** The authors have not used any AI tools in the preparation of this article. It has been found 0% AI use in Copyleaks Software.

**Data Availability Statement:** The data that support the findings of this study are not publicly available due to ethical constraints and the sensitive nature of the data, which include confidential psychosocial information of parents and children with neurodevelopmental disabilities. Public access to these data could violate participant privacy and the terms of

informed consent. Although the primary data is provided, but any form of secondary use, redistribution or public sharing of the data is prohibited.

**Consent to Publish:** Participants were informed that the findings of the study may be published in academic outlets. Written consent for publication of confidentiality and anonymized data was obtained from all participants.

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