

# A Study to Assess the Knowledge Regarding Autism among Primigravida Mothers at Selected Rural Area (Lucknow)

Dr. Nitin Soni

Professor Cum Vice-Principal, College of Nursing, Baba Educational Society, Lucknow, Uttar Pradesh, India

## ABSTRACT

Autism Spectrum Disorder (ASD), commonly referred to as autism, is a complex neuro developmental disorder characterized by difficulties in social communication and interaction, along with restrictive, repetitive behaviors and interests. Some children with autism may be highly intelligent, while others may have intellectual disabilities or severe communication difficulties. A descriptive cross-sectional research design was used for this study. This design was chosen because it allows for the assessment of the level of knowledge regarding autism among primigravida mothers at a specific point in time. The sample size for this study was 30 primigravida mothers. The sampling technique was purposive sampling, which ensured that the selected mothers met the specific inclusion criteria. This technique was chosen because it allows for the deliberate selection of individuals who meet specific criteria, in this case, primigravida mothers in rural areas. The sampling method ensured that the study targeted mothers who had no prior pregnancies and were accessing maternal healthcare. The majority of the participants (53.3%) had poor knowledge of autism, with scores ranging from 0 to 5 out of 15. 40% of the participants demonstrated moderate knowledge, scoring between 6 and 10. Only 6.7% of the mothers had good knowledge of autism, with scores between 11 and 15. This data indicates that overall awareness and knowledge about autism among primigravida mothers in rural areas are limited. Based on the results of the statistical analysis, conclusions were drawn regarding the level of knowledge among primigravida mothers about autism and the influence of demographic factors on their knowledge.

## INTRODUCTION

Autism Spectrum Disorder (ASD), commonly referred to as autism, is a complex neurodevelopmental disorder characterized by difficulties in social communication and interaction, along with restrictive, repetitive behaviors and interests. First described in the early 1940s, autism has gained significant global attention due to its rising prevalence and profound impact on children and their families. Autism, which often manifests within the first few years of life, varies widely in severity and presentation. Some children with autism may be highly intelligent, while others may have intellectual disabilities or severe communication difficulties.

The global prevalence of autism has risen dramatically over the last two decades, with recent estimates from the Centers for Disease Control and Prevention (CDC) in the United States indicating that

approximately 1 in 36 children are diagnosed with autism (CDC, 2023). Similarly, data from Europe and other developed countries show a comparable prevalence of 1 in 54 children (World Health Organization, 2020). The rise in diagnosis rates can be attributed to a combination of improved awareness, better diagnostic tools, and possibly environmental and genetic factors.

In India, the scenario is equally concerning, though comprehensive nationwide data is still scarce. According to a report from the Indian Council of Medical Research (ICMR), autism affects approximately 1 in 100 children in the country (ICMR, 2021). The lack of early detection in rural areas exacerbates the issue, as children with autism often go undiagnosed or are misdiagnosed, delaying intervention and decreasing the likelihood of positive

**How to cite this paper:** Dr. Nitin Soni "A Study to Assess the Knowledge Regarding Autism among Primigravida Mothers at Selected Rural Area (Lucknow)" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-10 | Issue-3, June 2026, pp.491-500, URL: [www.ijtsrd.com/papers/ijtsrd133273.pdf](http://www.ijtsrd.com/papers/ijtsrd133273.pdf)



IJTSRD133273

Copyright © 2026 by author (s) and International Journal of Trend in Scientific Research and Development Journal. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0) (<http://creativecommons.org/licenses/by/4.0>)



**KEYWORDS:** Knowledge, Autism, Primigravida Mothers.

outcomes. Limited access to pediatric specialists and specialized services in rural areas such as Lucknow further aggravates this situation.

The growing global awareness about autism has led to increased focus on early diagnosis and intervention, which have proven to be highly effective in improving outcomes for children with autism. Studies have shown that early intervention programs can enhance communication skills, reduce behavioral challenges, and improve the overall quality of life for both the child and their family. However, the success of early intervention largely depends on the level of awareness among parents, especially mothers, who are often the primary caregivers.

Primigravida mothers, or those pregnant for the first time, represent a unique and critical demographic in terms of child health education. This is often the time when women are most receptive to health-related information, as they prepare for motherhood and are concerned about their child's well-being. A study by Walker et al. (2019) emphasized that first-time mothers are particularly eager to learn about potential developmental disorders, including autism, during their pregnancy and early child-rearing years.

Research indicates that the level of maternal knowledge regarding autism can have a profound impact on the early identification of symptoms and subsequent interventions (Mandell et al., 2005). In many cases, mothers are the first to notice developmental delays or atypical behavior in their children, which can lead to an early diagnosis if they are adequately informed about the signs and symptoms of autism. Conversely, a lack of knowledge can delay diagnosis and treatment, potentially limiting the child's developmental progress.

Rural areas in India face unique challenges when it comes to healthcare access, particularly for conditions like autism that require specialized knowledge and resources. Healthcare infrastructure in rural regions is often underdeveloped, with fewer hospitals, clinics, and medical professionals available compared to urban centers. According to the National Health Profile (NHP) 2019, rural India has a doctor-to-patient ratio of 1:10,926, far exceeding the World Health Organization's recommended ratio of 1:1,000. This disparity is further exacerbated by the lack of awareness and education about developmental disorders among the general population.

In rural areas such as Lucknow, cultural factors and misconceptions about autism often lead to stigma and reluctance in seeking medical help. Many families attribute developmental delays to superstitions or

external factors rather than recognizing them as symptoms of autism. This cultural barrier, coupled with the lack of access to pediatric specialists, results in delayed diagnosis and intervention. A study conducted by Daley et al. (2002) found that in rural Indian settings, children with autism are often diagnosed several years later than their urban counterparts, sometimes as late as 5 or 6 years of age, when early intervention would

Early detection and intervention are critical components in managing autism. Research has consistently shown that children who receive early intervention services, such as speech therapy, occupational therapy, and behavioral interventions, demonstrate significant improvements in communication, social skills, and adaptive behaviors (Rogers & Dawson, 2010). These interventions are most effective when initiated in the first three years of life, a period often referred to as the "critical window" for brain development. During this time, the brain is most malleable, and early intervention can help to mitigate the severity of autism symptoms and improve long-term outcomes.

In the context of rural India, where access to specialized services is limited, the role of maternal knowledge becomes even more critical. Primigravida mothers who are aware of the early signs of autism are more likely to seek medical advice promptly, increasing the chances of early intervention. Educating mothers during pregnancy or immediately postpartum about the signs and symptoms of autism can lead to earlier detection and better outcomes for children in these settings.

The knowledge and awareness of autism among primigravida mothers can be influenced by a range of demographic factors, including age, education level, socioeconomic status, and occupation. Several studies have explored the relationship between these variables and maternal knowledge of developmental disorders.

1. Age: Older mothers may have more life experience and knowledge about child development, potentially leading to greater awareness of autism. However, younger mothers, particularly those in their early twenties, may have had more recent exposure to healthcare education through antenatal care programs. Age may also correlate with access to information, as younger mothers may be more likely to use digital resources to learn about autism.
2. Education Level: Numerous studies have demonstrated a strong correlation between maternal education and knowledge of child

development (Gupta & Singhal, 2015). Mothers with higher levels of education are more likely to be aware of autism and to seek early diagnosis and intervention for their children. In rural areas, where educational attainment may be lower, this presents a significant barrier to autism awareness.

3. **Socioeconomic Status:** Socioeconomic status is another important factor influencing maternal knowledge about autism. Families from higher socioeconomic backgrounds are more likely to have access to healthcare services, including specialized pediatric care, and to receive information about developmental disorders. Conversely, low-income families may face financial barriers that limit their access to healthcare and educational resources.
4. **Occupation:** The occupation of the mother may also influence her knowledge of autism. Mothers who work in healthcare, education, or related fields may have more exposure to information about autism and other developmental disorders. In rural areas, however, many women are involved in agriculture or domestic work, which may limit their access to such information.

By understanding the impact of these demographic variables, this study seeks to identify which groups of primigravida mothers may be most in need of targeted educational interventions about autism.

This study is particularly relevant in the context of rural Lucknow, where access to healthcare and health education is limited. The study aims to assess the knowledge of autism among primigravida mothers, who represent a key demographic for health interventions. Given the high prevalence of autism globally and the documented benefits of early intervention, increasing awareness among mothers in rural areas is a public health priority. The study also seeks to identify the demographic variables that may influence autism awareness, providing insights that could inform the development of targeted educational programs.

The findings from this study could have significant implications for public health policy in India. By identifying gaps in knowledge and understanding among primigravida mothers, the study can guide the development of interventions aimed at increasing autism awareness in rural areas. These interventions could be integrated into existing maternal and child health programs, such as antenatal care visits and postnatal support services. In the long term, increasing autism awareness among mothers in rural areas could lead to earlier detection and intervention, improving outcomes for children with autism and their families.

## NEED OF THE STUDY

Autism Spectrum Disorder (ASD) is a complex neurodevelopmental condition that typically emerges in early childhood. Despite the increasing prevalence of autism globally, there is a significant gap in knowledge and awareness among populations in rural areas, particularly in India. According to recent studies, rural regions often lack access to appropriate healthcare services, diagnostic tools, and educational resources for autism, resulting in delayed diagnosis and intervention. Early intervention has been shown to improve long-term outcomes for children with autism, but for these interventions to be effective, early diagnosis is critical.

Primigravida mothers, who are pregnant for the first time, are in a unique position to detect early signs of developmental issues in their children. Given that these mothers are more likely to engage with healthcare services during their first pregnancy, increasing their knowledge of autism can enhance early detection and intervention. However, in rural settings like Lucknow, access to information on autism is limited, and there is a lack of focused research assessing the knowledge of autism among first-time mothers.

This study is essential because it will help identify the level of awareness regarding autism among primigravida mothers in rural areas and establish the need for targeted health education programs. The findings will contribute to public health efforts aimed at improving early detection and intervention for autism in rural settings.

## OBJECTIVES OF THE STUDY

1. To assess the level of knowledge regarding autism among primigravida mothers in a selected rural area of Lucknow.
2. To examine the association between the knowledge scores of primigravida mothers regarding autism and selected demographic variables such as age, education level, occupation, and socioeconomic status.

## HYPOTHESIS

- **H1:** There will be a significant association between the knowledge scores regarding autism and the selected demographic variables of primigravida mothers in the rural area of Lucknow.

## OPERATIONAL DEFINITION

### 1. Assessment:

In this study, "assessment" refers to the structured, systematic, and continuous process of collecting and analyzing data from primigravida mothers to determine their knowledge of autism.

## 2. Knowledge:

"Knowledge" in this study refers to the information and awareness that primigravida mothers have about autism, including its symptoms, causes, and implications for a child's development.

## 3. Autism:

Autism, also known as Autism Spectrum Disorder (ASD), is a neurodevelopmental disorder that affects communication, social interaction, and behavior. It typically appears in early childhood and varies widely in its presentation and severity.

## 4. Primigravida Mother:

A primigravida mother is defined as a woman who is pregnant for the first time. This study focuses on primigravida mothers in rural Lucknow.

## 5. Demographic Variables:

In this study, demographic variables refer to characteristics such as age, education level, occupation, and socioeconomic status, which may influence the knowledge of primigravida mothers regarding autism.

## ASSUMPTIONS

1. Primigravida mothers in the selected rural area of Lucknow may have some degree of knowledge about autism, though this knowledge may be limited or incomplete.
2. Primigravida mothers may express interest in learning more about autism and other developmental disorders, especially during their first pregnancy.
3. The healthcare services available in the rural area may not provide sufficient information about autism to primigravida mothers.

## DELIMITATION

1. The study is limited to primigravida mothers residing in selected rural areas of Lucknow.
2. The study is restricted to primigravida mothers aged between 20 and 35 years.
3. The sample size is limited to 30 primigravida mothers.
4. The study focuses solely on assessing knowledge of autism and does not assess attitudes, practices, or behaviors of mothers regarding autism diagnosis or intervention.

## RESEARCH METHODOLOGY

### RESEARCH DESIGN

A **descriptive cross-sectional research design** was used for this study. This design was chosen because it allows for the assessment of the level of knowledge regarding autism among primigravida mothers at a specific point in time. It enables the collection of data

on knowledge levels and the examination of associations between knowledge and demographic variables. This type of design is particularly useful for understanding the existing knowledge base and identifying gaps.

## SETTING

The study was conducted in selected rural areas of **Lucknow**, Uttar Pradesh, India. These areas were chosen based on their rural nature and accessibility to the researcher. The health facilities in these areas include primary healthcare centers (PHCs) and community health centers (CHCs), which serve as the main points of maternal healthcare. The rural setting ensures that the study focuses on populations where healthcare services and knowledge about developmental disorders like autism may be more limited.

## POPULATION

The population for this study consists of **primigravida mothers** (i.e., women pregnant for the first time) residing in the selected rural areas of Lucknow. These mothers are accessing antenatal care services at local health centers. The target population for the study includes women between the ages of 20 and 35 years, which represents the typical age range of primigravida mothers in this setting.

## SAMPLING TECHNIQUES

A **non-probability purposive sampling technique** was used to select the participants for the study. This technique was chosen because it allows for the deliberate selection of individuals who meet specific criteria, in this case, primigravida mothers in rural areas. The sampling method ensured that the study targeted mothers who had no prior pregnancies and were accessing maternal healthcare services in the selected areas.

## SAMPLE

The sample consisted of **primigravida mothers** attending antenatal care visits in rural healthcare centers. These mothers were recruited from various primary healthcare centers in the selected rural areas. Only mothers who fit the inclusion criteria (i.e., primigravida, residing in rural areas, and aged between 20 and 35 years) were included in the study.

## SAMPLE SIZE AND SAMPLE TECHNIQUE

The sample size for this study was **30 primigravida mothers**. This sample size was selected to provide a manageable and representative sample for this rural setting, allowing for meaningful analysis within the constraints of time and resources.

The sampling technique was **purposive sampling**, which ensured that the selected mothers met the specific inclusion criteria. This method was used

because it allows for focused data collection from individuals who are most relevant to the study's objectives.

## VARIABLES UNDER STUDY

### ➤ **Independent Variables:**

- Demographic variables such as age, education level, occupation, socioeconomic status, and area of residence (rural).

### ➤ **Dependent Variable:**

- Knowledge of autism among primigravida mothers, as measured by their responses to a structured questionnaire.

## TOOLS FOR DATA COLLECTION

Data was collected using a **structured questionnaire** specifically designed for the study. The questionnaire was divided into two sections:

- 1. Demographic Information:** This section included questions about age, education, occupation, socioeconomic status, and residence.
- 2. Knowledge Assessment on Autism:** This section consisted of multiple-choice and true/false questions aimed at evaluating the participants' knowledge of autism, including its symptoms, causes, and the importance of early intervention.

The questionnaire was developed in both **Hindi** (the local language) and **English** to ensure

## PROCEDURE FOR DATA COLLECTION

### 1. **Ethical Clearance:**

Prior to data collection, ethical clearance was obtained from the institutional review board (IRB). Permission to conduct the study was also obtained from local health authorities in the selected rural areas.

### 2. **Informed Consent:**

Each participant was provided with detailed information about the study's purpose and procedures. Written informed consent was obtained from all participants before their inclusion in the study. The participants were assured of the confidentiality of their responses and were informed that they could withdraw from the study at any time.

### 3. **Data Collection Process:**

Data collection was carried out over a two-week period at the selected healthcare centers. The researcher, along with trained assistants, administered the questionnaire to the participants during their routine antenatal visits. The mothers were provided

with the questionnaire and asked to complete it while seated in a quiet, private area. For mothers who were illiterate or had difficulty reading, the questions were read out loud, and their answers were recorded.

### 4. **Duration:**

The average time taken to complete the questionnaire was approximately 20 to 25 minutes per participant.

## PLAN FOR DATA ANALYSIS

The collected data was entered into **SPSS (Statistical Package for the Social Sciences)** software for analysis. The data analysis was conducted as follows:

### 1. **Descriptive Statistics:**

Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize the demographic characteristics of the participants and their knowledge scores.

### 2. **Inferential Statistics:**

To test the association between knowledge scores and demographic variables, the following statistical tests were used:

➤ **Chi-square test:** This test was used to examine the association between knowledge scores and categorical demographic variables such as education level, occupation, and socioeconomic status.

### ➤ **T-test or ANOVA (Analysis of Variance):**

These tests were used to compare mean knowledge scores across different demographic groups.

### 3. **Statistical Significance:**

A p-value of less than 0.05 was considered statistically significant for all analyses.

### 4. **Interpretation of Results:**

Based on the results of the statistical analysis, conclusions were drawn regarding the level of knowledge among primigravida mothers about autism and the influence of demographic factors on their knowledge.

## DATA ANALYSIS AND INTERPRETATION

This chapter presents the analysis and interpretation of the data collected from 30 primigravida mothers in selected rural areas of Lucknow. The data analysis includes descriptive statistics and inferential statistics, which help to assess the knowledge level regarding autism and its association with selected demographic variables.

## Descriptive Statistics

**Table 1: Demographic Characteristics of Primigravida Mothers (N = 30)**

Demographic Variables	Frequency (n)	Percentage (%)
Age (in years)		
20-25	14	46.7
26-30	10	33.3
31-35	6	20.0
Education Level		
No formal education	8	26.7
Primary education	9	30.0
Secondary education	10	33.3
Higher education	3	10.0
Occupation		
Housewife	22	73.3
Working (farm/labor)	8	26.7
Socioeconomic Status		
Low income	17	56.7
Middle income	11	36.7
High income	2	6.7

### Interpretation:

- **Age Distribution:** The majority of the participants (46.7%) were between the ages of 20-25, while 33.3% were between 26-30, and only 20% were in the 31-35 age group.
- **Education Level:** A significant proportion of the mothers had either no formal education (26.7%) or only primary education (30%). About 33.3% had secondary education, while only 10% had higher education.
- **Occupation:** Most participants (73.3%) were housewives, while 26.7% were engaged in farm labor or other forms of work.
- **Socioeconomic Status:** More than half (56.7%) of the participants belonged to low-income households, while 36.7% came from middle-income households, and only 6.7% were from high-income families.

### Knowledge of Autism Among Primigravida Mothers

The participants' knowledge regarding autism was assessed using a structured questionnaire. Table 2 presents the knowledge scores of the participants.

**Table 2: Distribution of Knowledge Scores Regarding Autism**

Knowledge Level	Frequency (n)	Percentage (%)
Poor Knowledge (0-5)	16	53.3
Moderate Knowledge (6-10)	12	40.0
Good Knowledge (11-15)	2	6.7

### Interpretation:

- The majority of the participants (53.3%) had poor knowledge of autism, with scores ranging from 0 to 5 out of 15.
- 40% of the participants demonstrated moderate knowledge, scoring between 6 and 10.
- Only 6.7% of the mothers had good knowledge of autism, with scores between 11 and 15.

This data indicates that overall awareness and knowledge about autism among primigravida mothers in rural areas are limited.

### Association Between Knowledge of Autism and Demographic Variables

To explore the relationship between the knowledge scores and selected demographic variables, a Chi-square test was conducted. Table 3 shows the association between knowledge of autism and education level.

**Table 3: Association Between Education Level and Knowledge of Autism**

Education Level	Poor Knowledge (0-5)	Moderate Knowledge (6-10)	Good Knowledge (11-15)	Total (n)	p-value
No formal education	6	2	0	8	0.04*
Primary education	6	3	0	9	
Secondary education	3	6	1	10	
Higher education	1	1	1	3	

\*p-value < 0.05 indicates significant association

Interpretation:

- The Chi-square test revealed a significant association between education level and knowledge of autism (p = 0.04).
- Mothers with no formal education or primary education predominantly exhibited poor knowledge of autism.
- Those with secondary or higher education showed a higher proportion of moderate to good knowledge, indicating that education significantly influences knowledge levels about autism.

**Association Between Knowledge and Socioeconomic Status**

**Table 4: Association Between Socioeconomic Status and Knowledge of Autism**

Socioeconomic Status	Poor Knowledge (0-5)	Moderate Knowledge (6-10)	Good Knowledge (11-15)	Total (n)	p-value
Low income	12	5	0	17	0.08
Middle income	4	6	1	11	
High income	0	1	1	2	

Interpretation:

- Although the results indicate that mothers from low-income backgrounds had poorer knowledge about autism, the association between socioeconomic status and knowledge was not statistically significant (p = 0.08).
- Mothers from middle and high-income families exhibited better knowledge of autism, suggesting that higher socioeconomic status may positively influence autism awareness, though the relationship was not statistically significant in this sample.

## SUMMARY

This chapter provides a comprehensive summary of the study conducted to assess the knowledge regarding autism among primigravida mothers in selected rural areas of Lucknow. The study aimed to determine the level of awareness about autism and to explore the association between the mothers' knowledge of autism and their demographic variables, such as education, socioeconomic status, age, and occupation. This chapter presents an overview of the research objectives, methods, key findings, conclusions, and recommendations for future research and public health interventions. The study utilized a **descriptive cross-sectional design** to evaluate the knowledge of autism among primigravida mothers. A sample of 30 primigravida mothers aged 20-35 years from selected rural areas of Lucknow was recruited using a purposive sampling technique. Data were collected through a structured questionnaire, which included questions on demographic details and a knowledge assessment regarding autism.

The collected data were analyzed using **descriptive statistics** (such as frequencies, percentages, means, and standard deviations) to summarize the participants' demographic characteristics and knowledge scores. **Inferential statistics**, such as the Chi-square test, were used to determine the association between the mothers' knowledge of autism and their demographic variables. The results were processed using **SPSS software**.

## Key Findings

### 1. Demographic Characteristics:

- The majority of participants (46.7%) were aged between 20-25 years, with 33.3% in the 26-30 age group and 20% in the 31-35 age group.
- Most mothers (73.3%) were housewives, and a large proportion of them had either no formal education (26.7%) or only primary education (30%). Only 10% of the participants had higher education.
- More than half (56.7%) of the mothers came from low-income households, with 36.7% from middle-income and 6.7% from high-income families.

## 2. Knowledge of Autism:

- The study revealed that the majority (53.3%) of the primigravida mothers had poor knowledge of autism, scoring between 0-5 out of 15. Only 6.7% demonstrated good knowledge (11-15), and 40% had moderate knowledge (6-10).
- Overall, these findings indicate that the awareness and understanding of autism among rural primigravida mothers were limited.

## 3. Association Between Knowledge and Education Level:

- There was a significant association between education level and knowledge of autism, with mothers who had secondary or higher education showing better knowledge scores. The Chi-square test indicated a significant relationship ( $p = 0.04$ ), highlighting that higher education positively influenced knowledge about autism.

## 4. Association Between Knowledge and Socioeconomic Status:

- Although mothers from middle- and high-income households exhibited better knowledge scores, the association between socioeconomic status and knowledge was not statistically significant ( $p = 0.08$ ). However, there was a general trend showing that mothers with higher income had more knowledge of autism.

## CONCLUSION

In conclusion, this study highlights the significant knowledge gaps that exist among primigravida mothers in rural Lucknow regarding autism. The findings indicate that education level is a major predictor of autism knowledge, with mothers who have higher levels of education demonstrating better understanding of the disorder. While socioeconomic status and other demographic factors may also influence knowledge, more research is needed to explore these relationships in greater detail.

The study underscores the need for targeted health education interventions that focus on raising awareness about autism in rural areas. Integrating autism education into existing maternal healthcare services, training healthcare providers in autism diagnosis, and conducting public health campaigns could all play a key role in improving early detection and intervention for autism in rural settings.

By addressing these knowledge gaps and promoting early diagnosis, public health initiatives can help ensure that children with autism receive the support and intervention services they need to reach their full potential.

## IMPLICATIONS FOR PUBLIC HEALTH

The findings from this study have important public health implications, particularly in the context of improving autism awareness and early detection in rural areas. To address the knowledge gaps identified in the study, several interventions could be implemented:

- **Health Education Programs:** Integrating autism education into existing maternal healthcare services, particularly during antenatal care visits, could significantly improve awareness among primigravida mothers.
- **Community Outreach:** Public health campaigns and community-based outreach programs can help raise awareness about autism in rural areas, especially in populations with limited access to formal education.
- **Training for Healthcare Providers:** Providing training for rural healthcare providers on recognizing the early signs of autism can facilitate early diagnosis and intervention, which are critical for improving developmental outcomes in children with autism.

## RECOMMENDATIONS

Based on the findings of the study, the following recommendations are made:

- 1. Develop and Implement Autism Awareness Campaigns:** Public health authorities should develop culturally appropriate awareness campaigns to improve knowledge about autism in rural areas.
- 2. Educational Interventions During Antenatal Care:** Autism education should be integrated into antenatal care programs, providing mothers with information about early signs, symptoms, and the importance of early diagnosis and intervention.
- 3. Train Healthcare Providers:** Rural healthcare providers should receive training on autism to help them identify developmental delays and provide timely referrals to specialists.
- 4. Expand Research in Rural Areas:** Further research should be conducted with larger sample sizes to explore the broader context of autism awareness in rural India and to identify additional factors that may influence knowledge, such as access to media and healthcare services.

## LIMITATIONS:

The small sample size (30 participants) limits the generalizability of the findings to the broader population of rural mothers in Lucknow or other regions.

The study relied on self-reported data, which may be subject to response bias, as some mothers may have overestimated or underestimated their knowledge of autism.

## REFERENCES

- [1] Centers for Disease Control and Prevention (CDC). (2023). Autism Spectrum Disorder (ASD) Data & Statistics.
- [2] Daley, T. C., & Sigman, M. D. (2002). Diagnostic conceptualization of autism among Indian psychiatrists, psychologists, and pediatricians. *Journal of Autism and Developmental Disorders*, 32(1), 13-23.
- [3] Gupta, A., & Singhal, N. (2015). Perception of autism spectrum disorder among parents and healthcare professionals in India. *Journal of Autism and Developmental Disorders*, 45(5), 1543-1554.
- [4] Indian Council of Medical Research (ICMR). (2021). National prevalence of autism spectrum disorders in India.
- [5] Centers for Disease Control and Prevention (CDC). (2023). Autism Spectrum Disorder (ASD) Data & Statistics. Retrieved from <https://www.cdc.gov/ncbddd/autism/data.html>
- [6] Wiggins, L. D., Durkin, M., Esler, A., Newschaffer, C., Rice, C., & Baio, J. (2019). Maternal Education and Autism Awareness in the U.S.: A Population-Based Study. *American Journal of Public Health*, 109(8), 1088-1094.
- [7] Mandell, D. S., Novak, M. M., & Zubritsky, C. D. (2005). Factors Associated with Age of Diagnosis among Children with Autism Spectrum Disorders. *Pediatrics*, 116(6), 1480-1486.
- [8] Walker, A. K., McLeod, J. D., & Perrin, E. C. (2019). First-Time Mothers' Knowledge of Autism Spectrum Disorders. *Journal of Child and Family Studies*, 28(4), 1091-1103.
- [9] Rogers, S. J., & Dawson, G. (2010). *Early Start Denver Model for Young Children with Autism: Promoting Language, Learning, and Engagement*. The Guilford Press.
- [10] Zwaigenbaum, L., Bauman, M. L., Choueiri, R., Kasari, C., Carter, A., Granpeesheh, D., & Wagner, S. (2015). Early Identification and Interventions for Autism Spectrum Disorder: A Review. *Pediatrics*, 136(1), 60-81.
- [11] Boyd, B. A., Odom, S. L., Humphreys, B. P., & Sam, A. M. (2011). Infants and Toddlers with Autism Spectrum Disorder: Early Identification and Early Intervention. *Journal of Early Intervention*, 33(1), 75-98.
- [12] Ozonoff, S., Iosif, A. M., Baguio, F., Cook, I. C., Hill, M. M., & Hutman, T. (2008). A Prospective Study of the Emergence of Early Behavioral Signs of Autism. *Journal of the American Academy of Child & Adolescent Psychiatry*, 47(3), 251-261.
- [13] Daley, T. C., & Sigman, M. D. (2002). Diagnostic Conceptualization of Autism among Indian Psychiatrists, Psychologists, and Pediatricians. *Journal of Autism and Developmental Disorders*, 32(1), 13-23.
- [14] Gupta, A., & Singhal, N. (2015). Perception of Autism Spectrum Disorder among Parents and Healthcare Professionals in India. *Journal of Autism and Developmental Disorders*, 45(5), 1543-1554.
- [15] Sharma, S., Mehta, K., & Mishra, R. (2018). Autism Spectrum Disorders: A Comparative Study between Urban and Rural Indian Populations. *Indian Journal of Pediatrics*, 85(4), 285-290.
- [16] Kumar, R., & Aggarwal, A. (2020). Barriers to Autism Awareness in Rural India: A Qualitative Study. *Rural and Remote Health*, 20(2), 6051.
- [17] Ravindran, N., & Myers, B. J. (2012). Cultural Influences on Perceptions of Health in Children with Autism in South India. *Journal of Developmental and Behavioral Pediatrics*, 33(2), 95-102.
- [18] Desai, V., Patel, N., & Patel, H. (2021). Community-Based Autism Awareness Programs in Rural Gujarat: Increasing Awareness and Knowledge. *Journal of Community Health*, 46(3), 482-490.
- [19] Patel, P., Shah, A., & Joshi, V. (2017). Autism Awareness in Rural Maharashtra: A Survey of Mothers. *Indian Journal of Psychiatry*, 59(6), 72-78.
- [20] Verma, R., & Bhargava, P. (2019). Training Rural Healthcare Workers in Autism Diagnosis: An Indian Perspective. *International Journal of Autism Research*, 22(4), 302-310.
- [21] Thakur, S., Saini, R., & Bhandari, A. (2020). The Stigma of Autism in Rural India: Exploring the Attitudes of Mothers. *Indian Journal of Public Health*, 64(2), 150-155.

- [22] Green, S. E., & Dolan, P. M. (2012). Health Literacy and Maternal Knowledge in Primigravida Mothers. *Journal of Maternal Health*, 33(5), 451-461.
- [23] Ahmed, N., & Rashid, R. (2017). Autism Awareness and Knowledge Gaps among First-Time Mothers in Pakistan. *Pakistan Journal of Pediatrics*, 64(2), 175-182.
- [24] Yogman, M., Garfield, C. F., & the Committee on Psychosocial Aspects of Child and Family Health. (2015). Fathers' Roles in the Care and Development of Their Children: The Role of Maternal Awareness. *Pediatrics*, 136(1), 180-183.
- [25] Robinson, R. J., Singh, N., & Thomas, J. (2013). The Role of Health Education for First-Time Mothers in the Early Detection of Developmental Disorders. *Child Health Journal*, 17(3), 248-255.
- [26] Singh, P., & Mehta, S. (2018). Autism Awareness in Primigravida Mothers in Rural Punjab. *Journal of Rural Health*, 34(5), 381-387.
- [27] Lai, M. C., & Koyama, T. (2020). Autism Awareness in Rural Chinese Primigravida Mothers: A Descriptive Study. *Journal of Asian Pediatrics*, 8(4), 284-290.
- [28] Chatterjee, A., & Sinha, R. (2021). Autism Knowledge and Health-Seeking Behavior of Mothers in Bangladesh. *International Journal of Autism Studies*, 16(2), 78-85.
- [29] Nanda, P., & Gupta, A. (2016). The Role of Prenatal Education Programs in Improving Autism Awareness in Rural India. *Indian Journal of Community Medicine*, 41(3), 211-216.
- [30] Kasari, C., Gulsrud, A., Paparella, T., Helleman, G., & Berry, K. (2010). Early Intervention for Children with Autism: Randomized Controlled Trial of Interventions. *Journal of Consulting and Clinical Psychology*, 78(3), 331-340.
- [31] Esler, A. N., & Ruble, L. A. (2015). Parental Involvement in Autism Treatment: A Meta-Analysis of Early Interventions. *Journal of Autism and Developmental Disorders*, 45(2), 307-320.
- [32] Schreibman, L., & Stahmer, A. C. (2014). Early Autism Treatment Programs: Behavioral and Developmental Interventions. *Autism Research and Treatment*, 2014(1), 235-240.
- [33] Fountain, C., King, M. D., & Bearman, P. S. (2011). Age of Diagnosis for Autism Spectrum Disorder: The Role of Maternal Knowledge and Timing of Autism Diagnosis. *Journal of Autism and Developmental Disorders*, 41(12), 1591-1598.
- [34] Wang, C., Zhang, Y., & Chen, J. (2019). The Impact of Public Health Campaigns on Autism Awareness in Rural China. *BMC Public Health*, 19(2), 403.