



Review Article

Nursing professional's understanding and screening practices in the identification of children with autism spectrum disorder: A scoping review

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ABSTRACT

Introduction: Early identification and intervention of childhood autism spectrum disorder (ASD) is recognised to have a valuable impact on a child's life. Nurses who are adequately prepared with the necessary screening practices to do early identification of the children with risk for ASD and knowledge surrounding ASD may enhance the screening practices in the child care delivery system.

Objectives: This study was to discuss nurses' knowledge and understanding about childhood ASD and its screening practices among nurses.

Methodology: The scoping review approach was adopted for the present study utilised by reviewing electronic databases from inception to 2021.

Results: The authors have searched 160 related studies from above-said database and found only 10 full-text studies based on the objective and research question. Based on the review, researchers understood that the Nursing Professionals have scant to moderate knowledge and understanding on childhood ASD and its 'Screening Practices.' Effective training programmes and continuing nursing education would hasten the early identification and intervention process in this arena.

Keywords: Autism Spectrum Disorder, Nurse, Knowledge, Screening Practice

INTRODUCTION

American child psychologist Leo Kanner first described autism disorder in 1943. 'Autism spectrum disorder (ASD) is a neurodevelopmental disorder of the brain that is characterised by impairments in social interaction, communication, and repetitive patterns of behaviour.^[1] These behaviours can range from mild to severe.^[2] According to a study conducted in 2012," ASD is estimated to worldwide prevalence of 6.2/1000.^[3] According to the statistical reports given by the Centers for Disease Control and Prevention^[4] and other authors,^[5] ASD has increased to one out of every 68 children.^[6] It is predicted that India will have more than 2 million children with autism under the age of 10 years,^[7] at present, around 3 million people affected in the Indian subcontinent. It indicates high prevalence found in India recently (one in 65 children 2–9 years of age).^[8] The World Health Organization^[9] has recommended monitoring of child development as part of routine childcare in health care delivery systems.

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BACKGROUND OF THE STUDY

The awareness of medical pathophysiology, clinical features, and management in autism might lead to primary care autism prevention strategies.^[10] The healthcare professionals need to know about some of the important clinical clues for possible autism while performing general examination of the children, such as: delay or absence of spoken language, not responsive to other people's facial expressions/feelings, lack of pretend play, unable to share pleasure, impairment in non-verbal communication, not pointing at an object or person, lack of gaze monitoring, social play, unusual or repetitive hand and finger mannerisms, unusual reactions, or lack of reaction to sensory stimuli. If any of the above-said clinical clues are found in a toddlers, further assessment may be needed to evaluate the possibility of autism.^[11] Early diagnosis is important that leads to a better outcome in autism. It has been proved that the level of healthcare professional's understanding and knowledge of autism influences the average age of diagnosis and provision of further information to caregivers.^[12,13]

Screening for Neuro-Developmental Disorder would help in early identification and better intervention, further, it leads to a reduction in disability and improves better outcome. 'Early developmental screening and surveillance for conditions such as ASD are not done regularly in India. The Indian Academy of Pediatrics and American Academy of Pediatrics (AAP)' recommended the need for a screening programme to be carried out. The periodic examinations at the 15th, 18th, and 24th months are particularly useful in providing information about possible autism since characteristics of autism often begin to emerge during the 2nd year of life.^[14,15]

Facilitating early diagnosis and standardised early screening, on-going developmental surveillance is essential.^[14] It is recommended that all children should undergo for a physical examination and screening process.^[16] Along with medical professionals,^[6] nurses have a duty to provide high-quality care to children with and without problems.^[4] It is identified that medical^[17,18] and nursing professionals are having inadequate knowledge about ASD screening practices.^[19]

Nurses are the primary and secondary healthcare providers^[20] and members of multidisciplinary teams and who gives care to the children in hospitals and community.^[21] Inadequate knowledge and understanding about childhood autism and screening practices toward identifying children at risk for and with ASD, among these health care professionals might be a major barrier to do early identification and interventions.^[22] Thus, improving nurse's understanding, knowledge and skill regarding screening and early identification of the children at risk for and with the ASD are essential.

Moreover, several factors that influence understanding and knowledge about childhood autism among nurses need to

be explored.^[19] There is a dearth found in nursing research related to the current topic. Hence, the present researchers found it to be essential to do further review in this area.

Research question

Does the nurses have sufficient knowledge and understanding on childhood ASD and its Screening Practice?

Objective

This study was to discuss nurses' knowledge and understanding about childhood ASD and its screening practices among nurses.

Methodology

The Scoping review approach was adopted for the present study. The inclusion criteria were original studies published in the peer-reviewed journal focused on nurses' knowledge and understanding about childhood ASD and Nurses' Screening Practice which was published in English, till April 2021. PubMed, MEDLINE, Google Scholar, Psych INFO, Pro-Quest, EBSCO, JAMA and Cochrane Database of Systematic Reviews, along with grey literature and conference proceedings were searched using the keywords such as 'Nurses' knowledge,' understanding Screening Practice' and 'childhood ASD.'

RESULTS

The electronic-based studies were examined and assembled according to the research question and objective. The authors searched 160 related studies from above-said database and found only 10 full-text studies based on the objective and research question. Out of 10 full-text studies, three were experimental design study, three cross-sectionals descriptive study, two mixed method approach, one qualitative study and one comparative study. All 10 studies were discussed about nurses' knowledge on ASD. Out of 10 studies, only three studies were discussed about screening practices along with nurses' knowledge and understanding, other seven studies were discussed only about nurses' knowledge about ASD alone. The results have been depicted in [Table 1]. Based on the review, researchers understood that the Nursing Professionals have scant to moderate level of knowledge and understanding on childhood ASD and its 'Screening Practices'.^[19,22-30]

DISCUSSION

It is very difficult to detect autism in young children. Most of the children are not diagnosed until the age of 4 years or even later, especially in low socioeconomic status children.

Table 1: Summary and interpretation of the review of literatures.

Author's name/ year	Research design/place	Study population/ sample size	Purpose of the study	Result/Conclusion
Strunk/2009 ^[23]	Mixed method explorative/state of Virginia	School health nurses/ n=231	To explore the school Nurses Knowledge on autism	A need for school nurses to enhance their knowledge of ASD, to familiarise themselves with the policy and healthcare networks that they collaborate with and to communicate effectively with students, parents, educators and community members in dealing with ASD
Igwe <i>et al.</i> 2011 ^[24]	Comparative study/ Nigeria	Paediatrics and Psychiatric nurses/n=80	To compare the knowledge about ASD among two groups	Psychiatric nurses had more knowledge than Paediatric nurses
Ghulman <i>et al.</i> /2017 ^[22]	Descriptive cross-sectional survey/Riyadh	Paediatric nurses/n=125	To assess the base line knowledge regarding ASD	They found nurses had insufficiency in understanding ASD/need for continuing education is essential
Barry <i>et al.</i> /2009 ^[25]	Experimental design with pre- and post-intervention/University of Vermont	Primary care providers including nurses/n=40	To support the adoption of best practices around developmental and autism screening in the primary care setting	Result showed, quality improvement found toward Screening practices
King <i>et al.</i> /2010 ^[26]	Experimental design with pre-and post-intervention/ USA	(Physician, staff and another healthcare providers)/n=17	to implement guideline adherent developmental screening	Post-intervention screening varied among practices
Sena <i>et al.</i> /2015 ^[27]	Qualitative approach and exploratory research design/Brazil	Nurses/n=15	To assess knowledge and practice on family health strategy for ASD	Inadequate knowledge and practice due to lack of training
Queisser/2016 ^[28]	Experimental study/Ohio	Nurses/n=60	To assess effectiveness of evidence-based intervention package. (educational compound toolkit on ASD and screening practices)	The post-test revealed that there was an increased knowledge in nurses towards ASD
Gardner <i>et al.</i> /2016 ^[19]	Descriptive survey/New Jersey	Nurse educators/n=295	To assess the Knowledge and perception	Nurse educators had inadequate knowledge about ASD to educate nursing students
Winslow/2017 ^[29]	Mixed method research/ St. Cloud State	Nursing students/n=36	Assessed the effectiveness of training programme on ASD and screening practices	The post-test revealed that there was an increased knowledge in nurses toward ASD and its screening practices
Govindan and Ramu/2020 ^[30]	Cross-sectional survey/ India	Community psychiatric nurses/n=50	To assess the nurses' knowledge on ASD	The study result revealed that nurses had insufficiency in understanding ASD and they need more information

ASD: Autism spectrum disorder

Clear evidence exists that early detection and subsequent early intervention can lead to significantly better prognosis, including improved language, social relationships, adaptive functioning as well as fewer maladaptive behaviours and facilitate early diagnosis and standardised early screening.^[31] The AAP recently recommended universal screening for ASDs at the 18–24 months well-child paediatric visit.^[15] Giarelli

et al. found in their study and said that a limited amount of ASD material has been presented within the nursing curriculum.^[32,33] Further few researchers have explained in their study about importance of Nurses' knowledge regarding ASD to initiate referrals to specialists by having nurses who are adequately prepared with the necessary tools to screening and early identification of the children with risk for ASD

and knowledge surrounding with ASD, may enhance the screening practices in child care delivery system.^[33] One of the research findings revealed even nursing educators having the inadequate knowledge to educate the nursing students. These findings indicate need of the nursing curriculum incorporated with ASD components.^[19] Scarce knowledge and understanding regarding childhood ASD alone is not the only barrier in screening children with and at risk for 'Childhood Autism:' among nurses. Indeed, there are some other obstacles including ambiguity in roles, wide-ranging working settings, lack of time to conduct screening and evaluations and more work load were also discussed by some of the researchers.^[25] Most of the studies revealed that nursing professionals having lack of awareness about referral and early intervention services to reduce the developmental disabilities in children. The above-mentioned barriers must be studied in detail as they may be region and context specific and specifically addressed especially if one really wants to improve the developmental outcomes of children in the community. Few authors found the effectiveness of educational intervention on nursing professional's knowledge.^[25,26,28] Based on these evidence-based research, we understand that continuing nursing education might also improve the nurses' knowledge.

This review article might have number of limitations. This review was not a systematic review; authors took an effort but might have missed out some articles. Further, each study has the different research approach, designs, methodology and materials, but two of the studies were used the same survey questionnaire.^[22,24]

Implications

Health care professionals including nurses working with children in the community and clinical settings can utilise the study findings to screen children as early as possible during children's visit to the health care settings for various purposes such as immunisation and other health care needs. Nursing administrators can conduct a training programme to all level of nursing professionals. Nurse educators can incorporate curriculum changes toward the importance of ASD screening for risk and early identification in the regular academic programme for nursing students. Authorities of Government and private health care delivery systems can implement the strategies to conduct programme toward screening practices.

CONCLUSION

Based on this review, it is evident that the nurses are having inadequate understanding on childhood ASD with respect to identification, screening practices. Further, most of the studies found that nurses would like to receive additional

information about ASD and its screening practices. It is important that authorities who are the policy makers with respect to nursing education take note of these findings.

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Declaration of patient consent

Patient's consent not required as there are no patients in this study.

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Conflicts of interest

There are no conflicts of interest.

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