Assessment of knowledge regarding environmental risk factors that are influencing the risk of Autism among Antenatal Mothers

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Article History:
Received on: 01 Aug 2020
Revised on: 03 Sep 2020
Accepted on: 04 Sep 2020

Keywords:
Autism, Environmental risk factors, Antenatal mothers

ABSTRACT

Autism Spectrum Disorder (ASD) alludes to a scope of conditions portrayed by some level of debilitated social conduct, communication and language and a tight scope of interests and exercises that are both special to the individual and completed repetitively. ASDs starts in youth and will, in general, persevere into pre-adulthood and adulthood. As a rule, the conditions are apparent during the initial five years of life. People with ASD regularly present other co-happening conditions including epilepsy, depression, anxiety and attention deficit hyperactivity disorder (ADHD). The study aims to assess the knowledge of environmental risk factors that influence the risk of autism among antenatal mothers. A descriptive survey design was adopted with 100 samples using a convenient sampling technique. The significant findings of samples are 26% had inadequate knowledge, 64% had moderate knowledge, and 10% had adequate knowledge. The demographic variable of maternal age, education and place of residents are statistically significantly associated with the level of knowledge at p<0.001 level. The study findings revealed that antenatal mothers had moderately adequate knowledge regarding awareness on environmental risk factors that are influencing the risk of autism. So the antenatal mothers should be aware of environmental risk factors of autism. Early identification and treatment of these risk factors during gestation may play a role in reducing ASD risk factors.

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ISSN: 0975-7538
DOI: https://doi.org/10.26452/ijrps.v11iSPL4.3734

© International Journal of Research in Pharmaceutical Sciences

INTRODUCTION

According to World Health Organization Autism Spectrum Disorder (ASD) alludes to a scope of conditions portrayed by some level of debilitated social conduct, communication and language and a tight scope of interests and exercises that are both special to the individual and completed repetitively (Chun et al., 2019).

ASDs starts in youth and will, in general, persevere into pre-adulthood and adulthood. As a rule, the conditions are apparent during the initial five years of life. People with ASD regularly present other co-happening conditions including epilepsy, depression, anxiety and attention deficit hyperactivity disorder (ADHD). The degree of scholarly working in an individual with ASD is extremely variable, reaching out from significant debilitation to predominant levels (Ng et al., 2003).

Autism is mainly a neurodevelopmental condition that ordinarily shows subjective socio-open impedance and confined generalized interests and exercises. Even though a huge extent of young-
sters with autism show unusual advancement during the preceding year of life, 15–62% of them show a relapse somewhere in the range of 18 and 24 old enough after a time of clearly normal development (Zerbo et al., 2015).

Roughly 70% of people with autism present a variable level of scholarly handicap, and expressive/responsive language can be missing or very insufficient (Wang et al., 2017). Other issues, not elite of chemical imbalance, are consideration short-fall and upset practices as etero-autolasy. 30% of kids show epileptic seizures by late youth or immaturity and 10% of cases are related with a few hereditary issues, for example, tuberous sclerosis, Angelman condition, phenylketonuria, and fragile X syndrome (Kalkbrenner et al., 2014).

The etiopathogenesis of autism isn’t yet comprehended; the commonness is without a doubt rising, and it isn’t clear if this expansion is connected to the indicative improvement or a more unusual weakness of the populace to the disease (Yang et al., 2017).

Many twins and family considers bring up the significance of acquired inclination to the confusion, although epidemiologic exploration recommends the substantial commitment of prenatal and early postnatal environmental factors (Magnusson et al., 2016). Truth be told, hereditary factors alone record for close to 20–30% everything being equal, while other 70–80% is the aftereffect of a mind-boggling association between ecological hazard factors and acquired or all over again hereditary susceptibility (Croen et al., 2007).

Numerous pregnancies and obstetric complications have been related in a few examinations to more danger of autism (Gardner et al., 2015). Children with autism are more at risk for developing many due to expressive communication difficulties. Late meta-investigations underline the job of cutting edge maternal and paternal age, gestational diseases, low birth weight, fetal hypoxia, preterm birth, and labour complications in the pathogenesis of autism. There is as yet a discussion in universal writing about some perinatal hazard factors, for instance, it isn’t clear if there is a relationship among mental imbalance and neonatal hyperbilirubinemia (Minolin et al., 2019).

Recent investigations have concentrated on the defensive or harmful job of synthetic substances on the cerebrum of the fetus. Moms of commonly developed kids have a more noteworthy admission of pre-birth nutrients and, specifically, folic corrosive contrasted and moms of kids with autism. A right on time in uteroexposure to traffic-related contamina-

tion and particulate issue or other neurotoxic components across the board in nature as phthalates are suspected of meddling with the neurodevelopment and favouring the beginning of formative issues, for example, autism (Julvez et al., 2009).

The purpose of the study was 1. To assess the knowledge of environmental risk factors that influence the risk of autism among antenatal mothers. 2. To assess demographic variables of antenatal mothers. 3. To find out the association between demographic variables of the antenatal mother regarding environmental risk factors of autism. 4. Providing necessary information concerning the nature of autism, needed for improving the quality of life strategies.

MATERIALS AND METHODS

An evaluative approach with descriptive research design was used to conduct the study. The study was conducted in Antenatal OPD and ward, Saveetha Medical College and Hospital, Thandalam. 100 sampling were selected by using a convenient sampling technique. The Inclusion Criteria for the sampling are an antenatal mother who is willing to participate, who knows English and Tamil, who are present at the time of data collection. The purpose of the study was explained to the samples and written informed consent was obtained from them. Data collection was done by a structured questionnaire which consists of about environmental risk factors that are influencing the risk of autism. It consists of 25 close-ended questions to assess the knowledge of antenatal mothers regarding autism environmental risk factors. The gathered information was broke down by utilizing illustrative and inferential insights. The Ethics Committee of the Institution has endorsed the undertaking.

RESULTS AND DISCUSSION

Section I: Description of Sample Characteristics

The study findings show that regarding age out of 100 samples 35(35%) were under the age group of 31-35 years, 40(40%) had a primary school, 38(38%) were housewives, 68(68%) were Hindus, 100(100%) were married, 81(81%) had a non-consanguineous marriage, 64(64%) reside in a nuclear family, 86(86%) were non-vegetarians and 81(81%) reside in the rural area.

Section II

Table 1 shows that out of 100 samples, 26(26%) had inadequate knowledge, 64(64%) had moderate knowledge, and 10(10%) have adequate knowledge (Figure 1).
Table 1: Frequency and percentage distribution of knowledge on environmental risk factors that are influencing the risk of Autism among Antenatal Mothers

<table>
<thead>
<tr>
<th>Level of Knowledge</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate knowledge</td>
<td>26</td>
<td>26%</td>
</tr>
<tr>
<td>Moderate knowledge</td>
<td>64</td>
<td>64%</td>
</tr>
<tr>
<td>Adequate knowledge</td>
<td>10</td>
<td>10%</td>
</tr>
</tbody>
</table>

Table 2: Distribution of mean and standard deviation of level of knowledge among antenatal mothers regarding environmental risk factors that influencing the risk of autism knowledge score

<table>
<thead>
<tr>
<th>Knowledge on Antenatal Mother’s</th>
<th>Inadequate</th>
<th>Moderate</th>
<th>Adequate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>12.913</td>
<td>19.2955</td>
<td>23</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>1.8358</td>
<td>1.3907</td>
<td>0.6667</td>
</tr>
</tbody>
</table>

Section III

Table 2 shows the mean and standard deviation of the level of knowledge of antenatal mothers regarding environmental risk factors that are influencing the risk of autism.

In knowledge score the mean score for inadequate (12.913), moderate (19.2955) and adequate (23) and standard deviation score for inadequate (1.8358), moderate (1.3907) and adequate (0.6667).

Section IV

Association between levels of knowledge in the demographic variable of antenatal mothers regarding environmental risk factors that are influencing the risk of autism in knowledge scores with the demographical variables.

The study shows the demographic variable of maternal age, education and place of residents are statistically significantly associated with the level of knowledge at p<0.001 level. The other demographic variables are not statistically significant with knowledge score.

CONCLUSION

The study findings revealed that antenatal mothers had moderately adequate knowledge regarding awareness on environmental risk factors that are influencing the risk of autism. So the antenatal mothers should be aware of environmental risk factors of autism. Early identification and treatment of these risk factors during gestation may play a role in reducing ASD risk factors.

ACKNOWLEDGEMENT

The author is thankful to Prof. Dr.S. Kalabarathi, Principal of Saveetha College of Nursing, SIMATS. The authors also wish cordial thanks to Mrs.Mary Mnolin, HOD of the department, Saveetha College of
Nursing, SIMATS, for their encouragement, valuable suggestions, support and advice given throughout the study.

Conflict of Interest
The authors declare no conflicts of interest for this study.

Financial Support
The authors declare that they have no funding support for this study.

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