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Knowledge And Awareness of Autism and Autism Interventions Among the General Public in Chennai

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ABSTRACT

Autism is a developmental disorder characterized by social interaction and communication difficulties with restricted and repetitive behaviour. Early recognition as well as behavioural, educational and family therapies can reduce symptoms, promote learning and development. The aim of the present study was to analyse the knowledge and awareness of autism and autism interventions among the general public in Chennai. A descriptive cross-sectional Survey was conducted among 101 general public in Chennai through a self administered questionnaire. The responses were collected And statistically analysed. 68.3% were aware of the symptoms of autism with p value=0.118>0.05 obtained from the association between the different age groups of the people and awareness of symptoms of autism. 67.3% thought that autism is a genetic disorder with the p value=0.033<0.05 obtained from the association of different age groups of the people and awareness of autism as genetic disorder.This study concluded that the people have good knowledge and Awareness on autism and autism interventions. Diabetes mellitus, particularly type 2 diabetes, is a growing global health issue, often exacerbated by insulin resistance, metabolic disturbances, and inflammatory responses. Emodin, a natural anthraquinone derivative, has been widely recognized for its

Keywords: *Autism; Autism interventions; Knowledge; Awareness; general public.*

1. INTRODUCTION

The autism so-called autism spectrum disorder is a developmental disorder that impairs the ability to communicate or interact. It affects the nervous system. The cognitive, emotional, social and physical health is affected in the individuals. The cause of autism is believed to be the abnormality in the brain structure and function. Autism affects the regions of the brain that are controlling social interaction and communication. The autism disorder is growing worldwide. The autism spectrum disorder (ASD) is a neurodevelopmental disorder which is difficult to be diagnosed around the age of two and the symptoms occur at an early stage within 12 to 18 Months of the child. If the symptoms are detected at 18 months the rigorous treatment may help reconfigure the brain and overturn the side effects. Since there is no scientific examination to determine the condition much like a blood test, to make a diagnosis the doctors look at the developmental history and behaviour of the children. Autism is common in males and children born prematurely. It is linked to the genetic disorder,fragile X (1). The children with autism have Vitamin A deficiency like the people recognised with goitre (2). Due to high degree of genetic and phenotype heterogeneity, genetic causes of ASD remain elusive, despite High heritability estimates (3). Autism spectrum disorder (ASD) Affects at least 1 in 88 populations, yet international Public awareness of ASD has been limited for years. (4) .Early recognition is necessary to implement a multidisciplinary treatment early which in turn improves the outcome (5) . While much of the recent rise in prevalence is due to an extended diagnostic definition and improved methods of ascertainment. (6)

Obesity is a disorder in which excess body fat has accumulated to the point that it can have an detrimental impact on health leading to decreased life expectancy and increased health problems (7). Obesity and overweight (8) both are significantly greater among children with ASD. Newborns will sleep for 16-18 hours each according to medical study Day; children in pre-school and in school will sleep 11-12 hours And ten hours a day, respectively. Teenagers will average 9–10 hours Sleeping a day, and adults will sleep 7-8 hours a day (9) but the normal sleeping cycle is disturbed in adults as well as children with autism.Like all children some children with ASD snore.Snoring may not destroy sleep, but it is a common manifestation of Obstructive Sleep Apnea(OSA) (10) Experts believe children with autism who also suffer "significantly improved" from a sleep condition after doctors cut their tonsils and adenoids out.An adenoid is the lymph tissue which is found between the nose which the back of the throat at the upper airway. Adenoids are part of the immune system and thus defend the body against an infection. (11)

Infants with jaundice are diagnosed with autism in early infancy. Neonatal jaundice is a yellowing of newborn infant's skin and other tissues(12) .Asthma is a heterogeneous group of conditions that has been diagnosed in the parents of the people with autism (13) .Lung function assessments have been used slowly to assess the harshness of obstructive airway disease and also to determine the outcome of various healing procedures and to provide an better understanding of pulmonary physiology (14). So asthma can be diagnosed by the pulmonary test.The children with autism develop several musculoskeletal disorder(15) like hypotonia, joint laxity, clumsiness, apraxia, and toe walking (16).musculoskeletal disorders affect the physical, psychological and social aspects (17) hygiene of the feet (18). Acupuncture has been shown to be an effective therapy for expressive communication, social skills, behavioral problems, food sensitivity and noise sensitivity in children diagnosed with Autism Spectrum Disorder (ASD). Acupuncture has the potential to reduce, but does not claim to remove, such symptoms. Acupuncture is a form of alternative medicine and a key component of TCM. This is also ideally suited to alleviating suffering.(19)

The previous studies focus on Accessing the Knowledge perception in primary School teachers regarding Autism in private and public schools (20).Children with autism spectrum disorder in China are theoretically benefiting from comprehensive education programs, recent measures aimed at treating children with developmental disorder(6). In the previous study local international autism campaigns were largely Successful and focus on shift disseminating Accurate information, regarding intervention and service provider responsibilities (4). In the previous research to determine a higher rates of obesity in children with autism spectrum disorders (ASD) type 2 diabetes, hypertension , hyperlipidemia and non-alcoholic fatty liver disease / nonalcoholic steatohepatitis (21) .Non-alcoholic fatty liver disease (NAFLD) is an increasingly prevalent disorder that affects children and adults and contributes to severe morbidity(22) . Stem cell therapy has been used for autism which has been discussed in the previous article (23) .Stem cell therapy is repairing the damaged tissue with new stem cells (24). Now the growing trend in this area motivated us to pursue this project.Autism is the world's fastest rising developmental handicap.Some people believe that autism is due to improper parental upbringing and others think it is due to mental retardation so an enhanced public awareness is required to avoid delays in the delivery of these services.Increased awareness will also help to raise possible associated negative pressure.Awareness raising helps people accept the illness and not be scared by it.The aim of the present study is to ascertain the knowledge and awareness of autism and autism interventions among the general public in Chennai.

2. MATERIALS AND METHODS

A descriptive cross-sectional study was conducted among the general public in Chennai of age group from 18 to more than 55 years to analyse their knowledge and awareness on autism and autism interventions. Approval was obtained from the institutional Review board. The survey was conducted among the 101 public people in Chennai. Simple random sampling was done. Self-administered questionnaires of 19 close-ended questions were prepared and distributed among the general public in Chennai through the online survey website “Google forms”. The questionnaire contained questions on demographic details also.

The responses were collected, tabulated in excel sheets and analysed statistically using SPSS software. Chi square test was used to analyse and compare the age group of people and their knowledge and awareness on autism and autism interventions.

3. RESULTS

The survey included the general public of Chennai from the age group of 18 - < 55 years where 46 males and 55 females participated. When the people were asked about whether they know what autism is, 73.3% were aware.[Figure 1]. 68.3% were aware about the symptoms of autism.[Figure 2]. When they were asked whether autism is one of the growing disorders of the world 66.3% answered yes. 66.3% of the people think that individuals with autism lack interactions with the people around.[Figure3]. 61.4% of the general public in Chennai were aware about the autism Spectrum disorder(ASD). 52.2% answered that autism could be diagnosed at the age around 2 years, 37.6% answered around the age of 6 years and the remaining 9.9% answered around the age of 12 years.[Figure 4]. 67.3% thought autism is a genetic disorder.[Figure 5]. 72.3% answered that autism is common in males and children born prematurely.[Figure 6]. When they were asked whether

delayed response to names is one of the symptoms of autism 70.3% answered yes. 70.3% felt that language development is delayed in people with autism.[Figure 7] . Are you aware that people with autism have repeated behaviour 67.3% said that they were aware about it.[Figure 8]. 69.3% thought that better awareness programmes were being conducted for autism among people. 71.3% thought that autism is a brain disorder.[Figure 9]. 67.3% have been in contact with the individuals with autism.[Figure 10]. When they were asked whether they were aware about any special centres for autism 77.2% answered that they were aware. [Figure 11].64.4% thought that autism is the result of improper parental upbringing of the affected child.[Figure 12]. 66.3% thought that autism is similar to mental retardation.[Figure 13]. 72.3% answered that a child with autism can be employed in future. [Figure 14] 74.3% thought that autism is one of the curable diseases.[Figure 15].

4. DISCUSSION

Autism has been in the physician's lexicon for nearly a 100 years but its meaning during that time has changed considerably (25). Experts currently agree that autism is potentially a heterogeneous category of developmental disorders that are classified based on subjective criteria. Therefore, pediatricians must be familiar with the specific criteria for autism diagnosis and with the characteristic of the conditions to be considered in the differential (25). The changes in non etiological factors such as diagnostic criteria, public awareness and the reference as well as in etiological factors including genetic and environmental risk factors have been postulated to account for that previously observed increase in ASD prevalence (26). From the present study it was evident that 73.3% were aware of autism where 34% from the age group of 36 to 55 years responded that they were aware. (P value 0.865 > 0.05) which is statistically insignificant. In the study conducted by Muhammad Salar Anwar (1) similar findings were found where 75.2% were aware of autism. The educational level is the reason why people were more aware of autism. From the present study, 68.3% were aware of the symptoms of autism where 35% are from the age group of 36 to 55 years (P value 0.118 > 0.058) which is significantly not significant. From the present study 66.3% of the people thought autism is one of the growing disorders of the world, where 34% responded were from the age group of 36 to 55 years. (P value 0.055 > 0.05) which is statistically not significant. There were no relevant articles found. From the present study 66.3% thought people with autism lack interaction with the people around and 33% of the study population were from the age group of 36 to 55 years (P value 0.173>0.05). 61.4 % were aware about the autism spectrum disorder where 31% responded from the age group of 36 to 55 years. (P value 0.412 >0.05). The similar finding was found in the previous article by Karola dillenburg (4) where 80% were aware about the ASD. In the present study 52.5% of the people felt that autism could be diagnosed around the age of 2 years. A similar finding has been found in the article by Mohammed Mustafa Arif (20) where 46% answered between 0 to 3 years.

In the present study 67.3% thought autism is a genetic disorder where 30% responded were from the age group of 18 to 35 years. Similar findings have been recorded in the previous study where 99% agreed that autism is a genetic disorder in the study conducted by Muhammad Salar Anwar. (1) From the present study 72.3% were aware that autism is common in males and children born prematurely. 70.3% thought delayed response to name is one of the symptoms of autism where 37% responded were from the age group of 36 to 55 years. The similar finding was found in the previous article by Muhammad Salar Anwar (1) 46% of the population were aware. From the present study 70.3% felt that language development is delayed in people with autism that 34% responded from the age group of 36 to 55 years. (P value 0.045 <0.05 which is statistically significant. In the present study 67.3% were aware that people with autism have repeated behaviour where 34% responded were from the age group of 36 to 55 years. Similar findings had been recorded in the study done by Anwar et al (1) where 58.4% agree that people with autism have repetitive behaviour. In the present study 69.3% thought that better awareness programmes are being conducted for autism among people that 35% responded from the age group of 36 to 55 years. From the present study it was evident that 71.3% of the population thought autism is the brain disorder. 34% responded from the age group of 36 to 55 years. The similar finding has been recorded in the article by Mohammad Salar Anwar. (1)

The present study revealed that 67.3% of the people were in contact with the people with autism. From the present study 77.2% of the population were aware about the special centres for children with autism. The similar findings by Matar A Alsehemi (5) where 73% agree that there are special centres for children with autism.From the present study 64.4% of the population thought autism results from improper parental upbringing of the child. Previous study revealed that 66% agreed autism is due to improper parental upbringing of the child.(1) In the present study 66.3% thought autism is similar to mental retardation. 72.3% of the population thought children with autism can be employed in the future. The similar finding by Matar. A . Alsemi (5) where 71% agree with that. The present study showed that 74.3% thought autism is one of the curable diseases Previous studies had shown that (1) 90% agreed autism is a curable disease whereas study done by Yingna Liu (6) revealed only 5% agree that it is a curable disease. The present study only included 101 general public from Chennai and it was not done on a very large population with varied age groups. Our institution is passionate about high quality evidence based research and has excelled in various fields (27–33). We hope this study adds to this rich legacy.

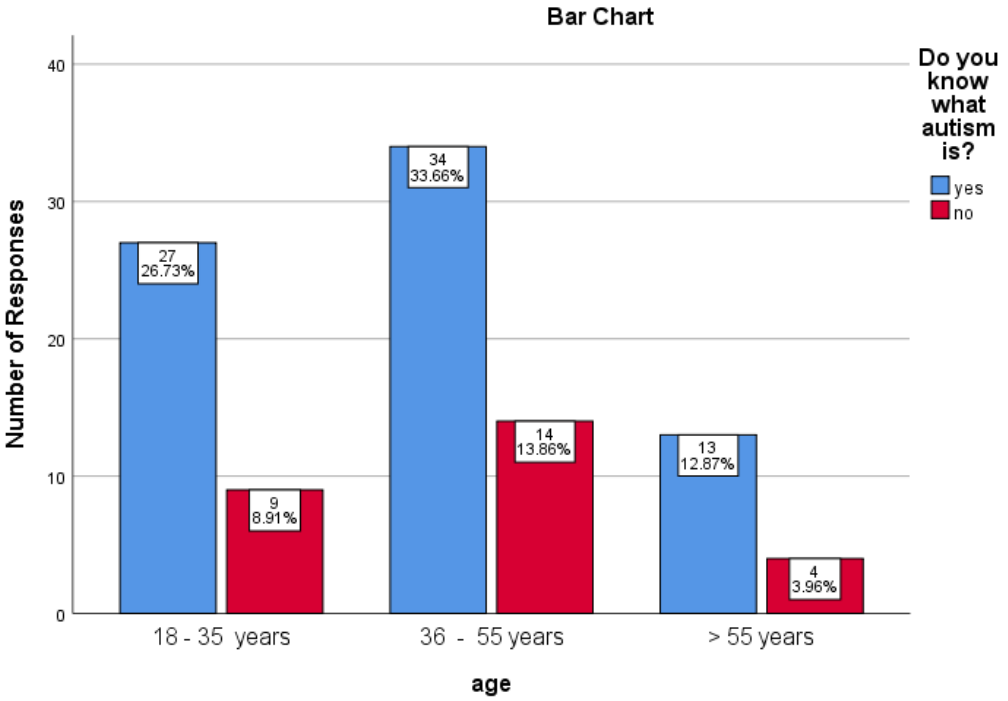

Figure 1: Bar chart represents the association between the awareness of autism and different age groups of participants. X axis represents the age group of participants and Y axis represents the number of responses, blue denotes yes and red denotes no. The study participants of 36-55 years were more aware of autism than other age groups included in the study. However it is not statistically significant.(Chi square test value=0.289, p value=0.865(>0.05) which is statistically not significant).

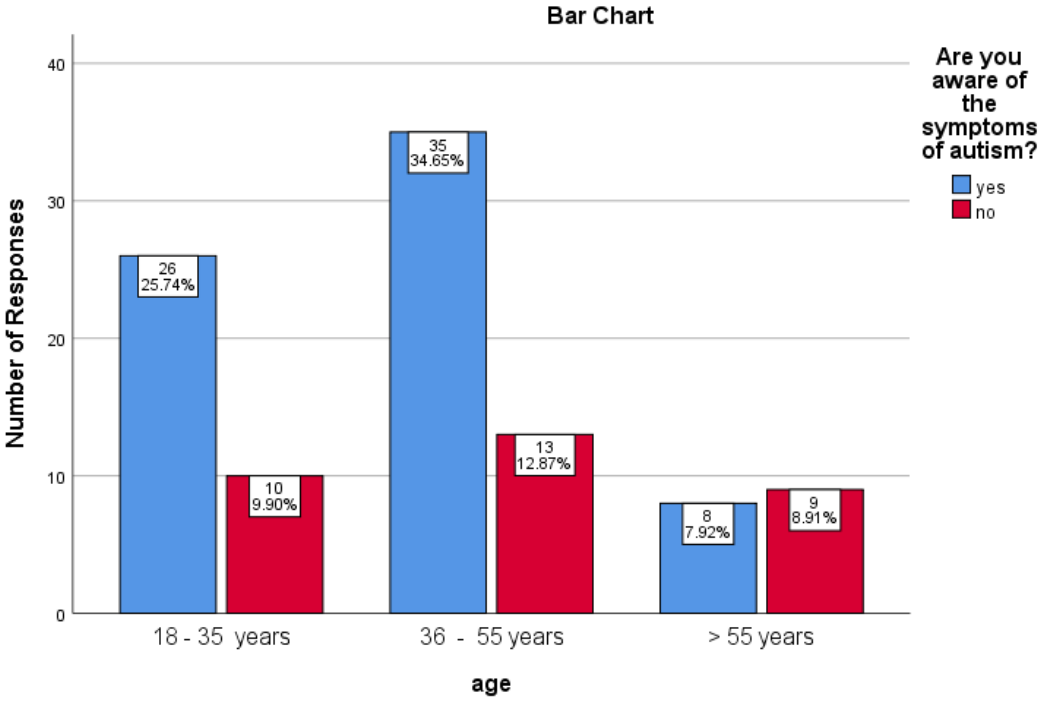

Figure 2: Bar chart represents the association between the awareness about the symptoms of autism and the different age groups of participants. X axis represents the age group of the participants and Y axis represents the number of responses, blue denotes yes and red denotes no. The study participants of 36-55 years were more aware of symptoms of autism than other age groups included in the study.(Chi square test value=4.272, p value=0.118(>0.05) which is statistically not significant)

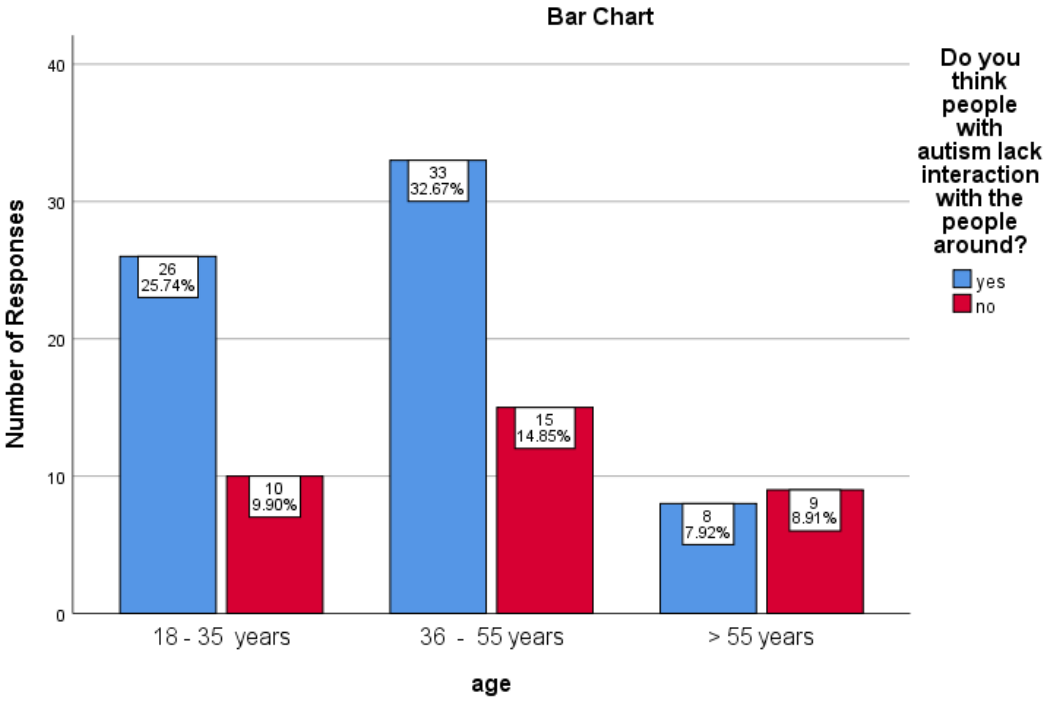

Figure 3: Bar chart represents the association of knowledge on lack of interactions of autism affected people with the people around them and the different age groups of participants. X axis represents the age group of the participants and Y axis represents the number of responses, blue denotes yes and red denotes no. The study participants of 36-55 years were more aware that people with autism lack interaction with the people around than other age groups included in the study. However it is not statistically significant.(Chi square test value=3.513, p value=0.173(>0.05) which is statistically not significant)

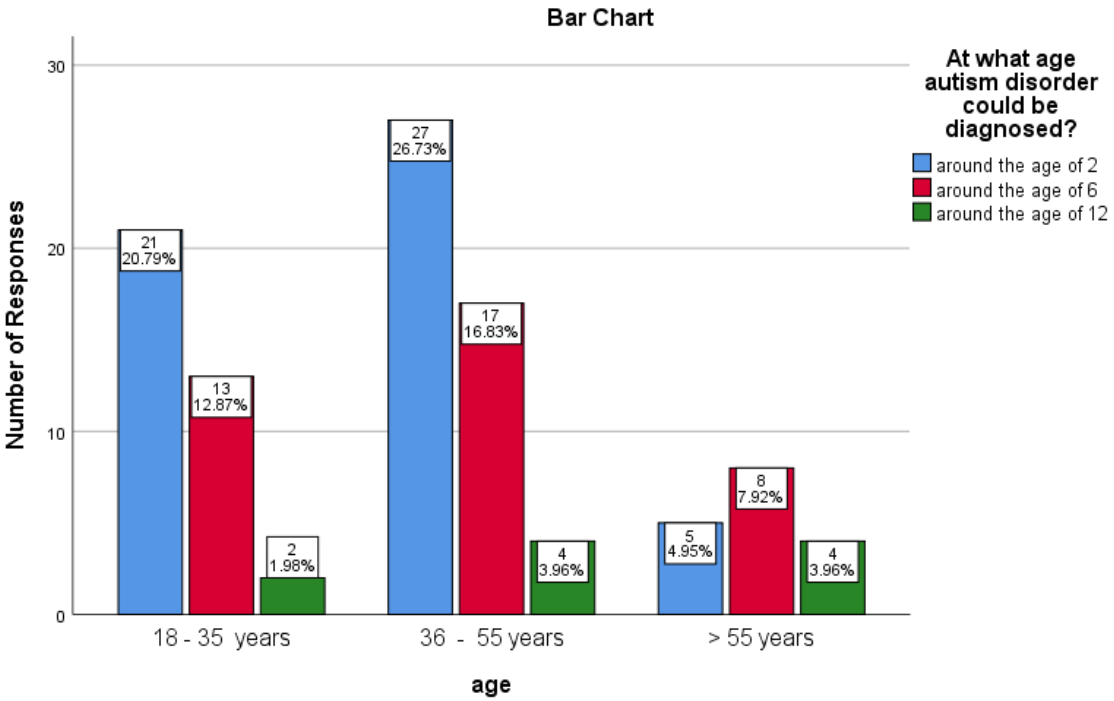

Figure 4: Bar chart represents association between the awareness of age at which autism could be diagnosed and the different age groups of participants. X axis represents the different age groups of the participants and Y axis represents the number of responses, blue denotes around the age of 2, red denotes around the age of 6 and green denotes around the age of 12. The study participants of 36-55 years were more aware that autism could be diagnosed at the age around 2 than other age groups

included in the study. However it is not statistically significant.(Chi square test value=6.570, p value=0.160(>0.05) which is statistically not significant)

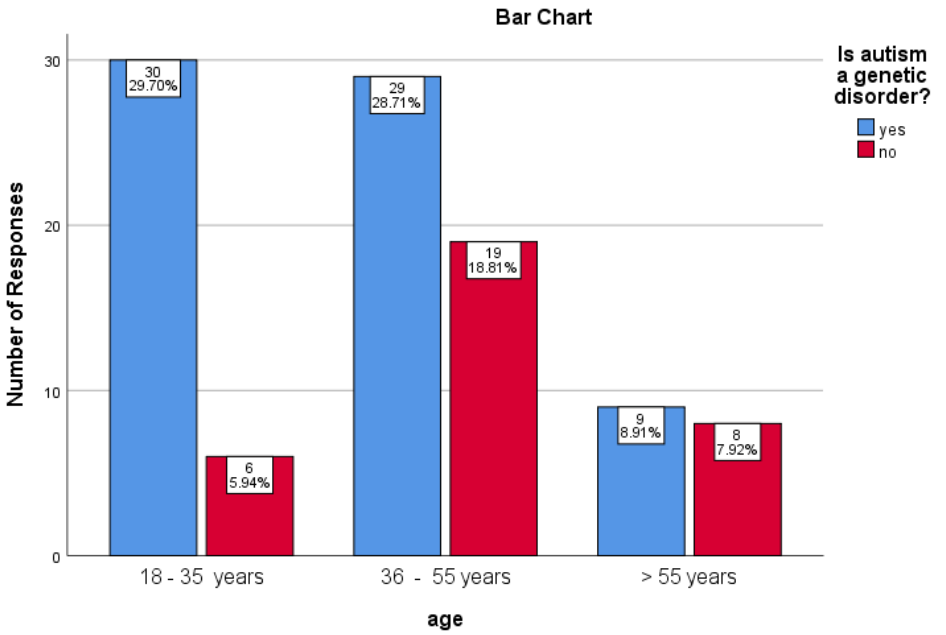

Figure 5:Bar chart represents association between the awareness of autism as a genetic disorder and the different age groups of participants. X axis represents the age group of the participants and Y axis represents the number of responses, blue denotes yes and red denotes no. The study participants of 18-35 years were more aware of autism as a genetic disorder than other age groups included in the study. However it is statistically significant.(Chi square test value=6.834, p value=0.033(<0.05) which is statistically significant)

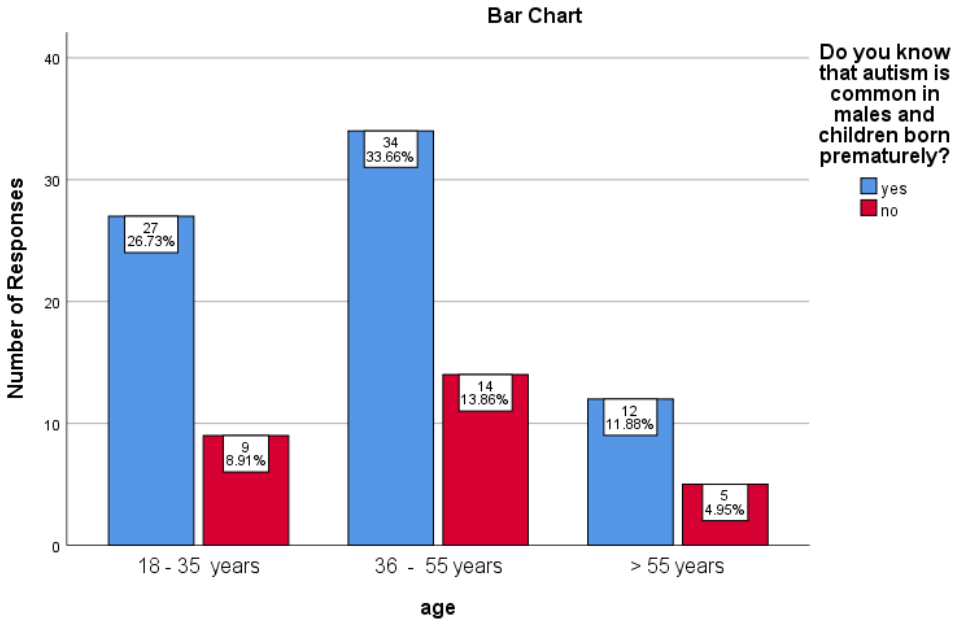

Figure 6: Bar chart represents association between the awareness of autism prevalence in males and children born prematurely and the different age groups of participants. X axis represents the different age groups of the participants and Y axis represents the number of responses, blue denotes yes and red denotes no. The study participants of 36-55 years were more aware that autism is common in males and children born prematurely than other age groups included in the study. However it is not statistically significant.(Chi square test value=0.207, p value=0.902(>0.05) which is statistically not significant)

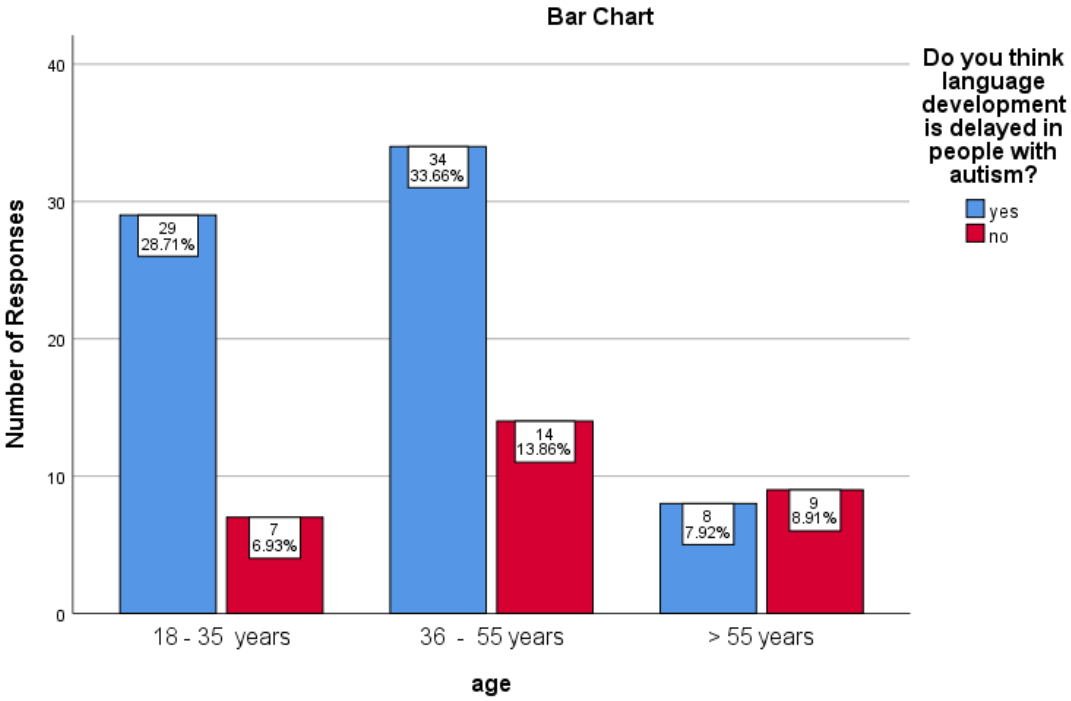

Figure 7: Bar chart represents the association between the knowledge on delay of language development in autism and the different age groups of participants. X axis represents the age group of the participants and Y axis represents the number of responses, blue denotes yes and red denotes no. The study participants of 36-55 years were more aware that language development is delayed in people with autism than other age groups included in the study. However it is statistically significant.(Chi square test value=6.218 , p value=0.045(<0.05) which is statistically significant)

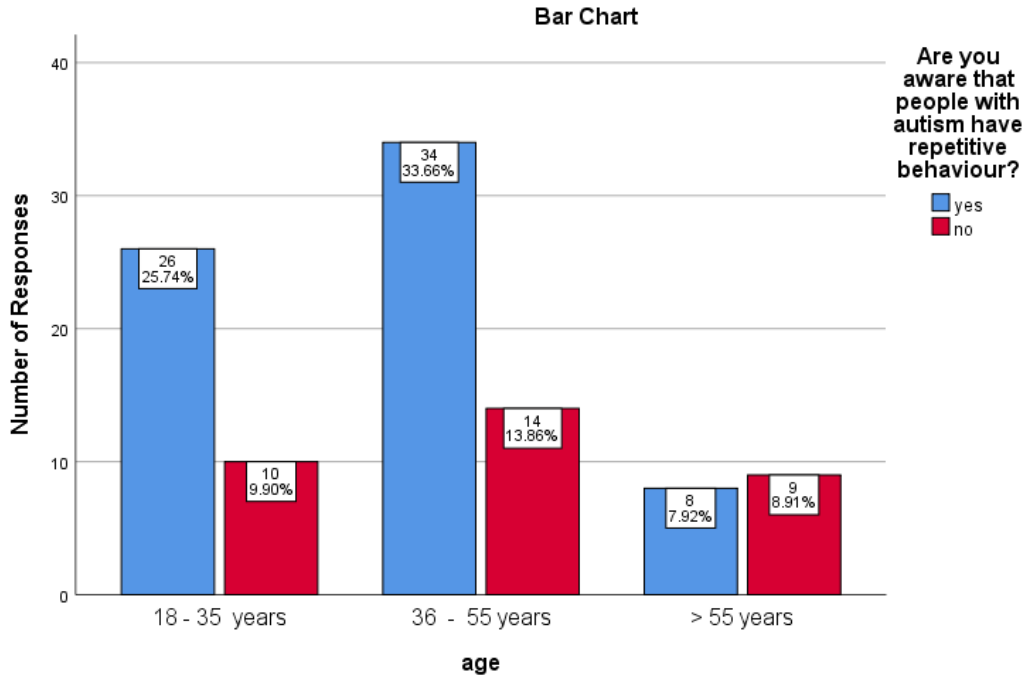

Figure 8: Bar chart represents the association between awareness of repetitive behaviour seen in autism and the different age groups of participants. X axis represents the age group of the participants and Y axis represents the number of responses, blue denotes yes and red denotes no. The study participants of 36-55 years were more aware of repetitive behaviour seen in people with autism than other age groups included in the study. However it is not statistically significant.(Chi square test value=3.835, p value=0.147(>0.05) which is statistically not significant)

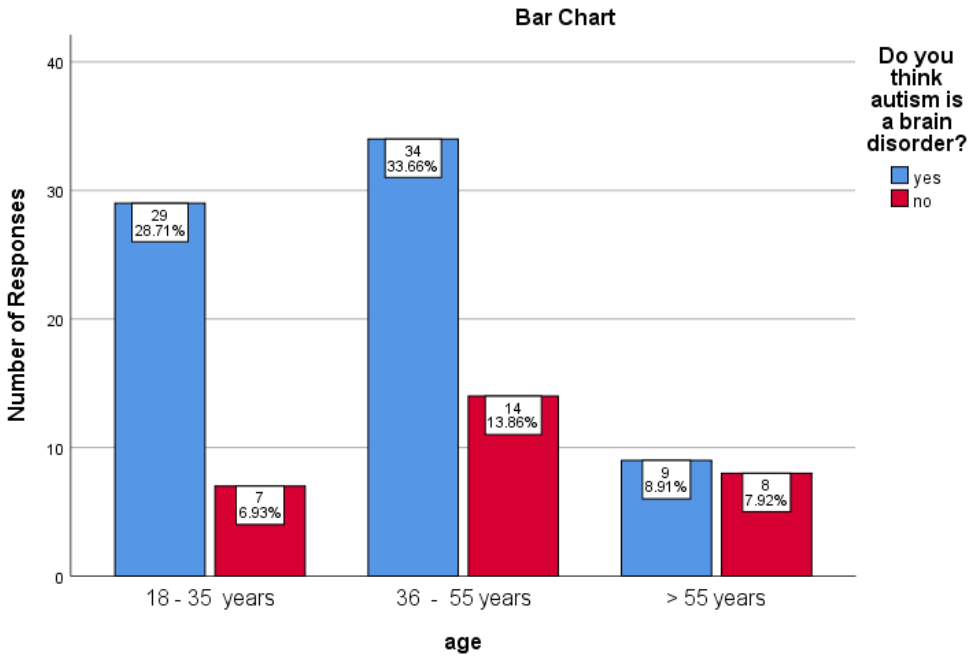

Figure 9: Bar chart represents the association between the knowledge about autism as a brain disorder and the different age groups of participants. X axis represents the age group of the participants and Y axis represents the number of responses, blue denotes yes and red denotes no. The study participants of 36-55 years were more aware of autism as a brain disorder than other age groups included in the study. However it is not statistically significant.(Chi square test value=4.311, p value=0.116(>0.05) which is statistically not significant)

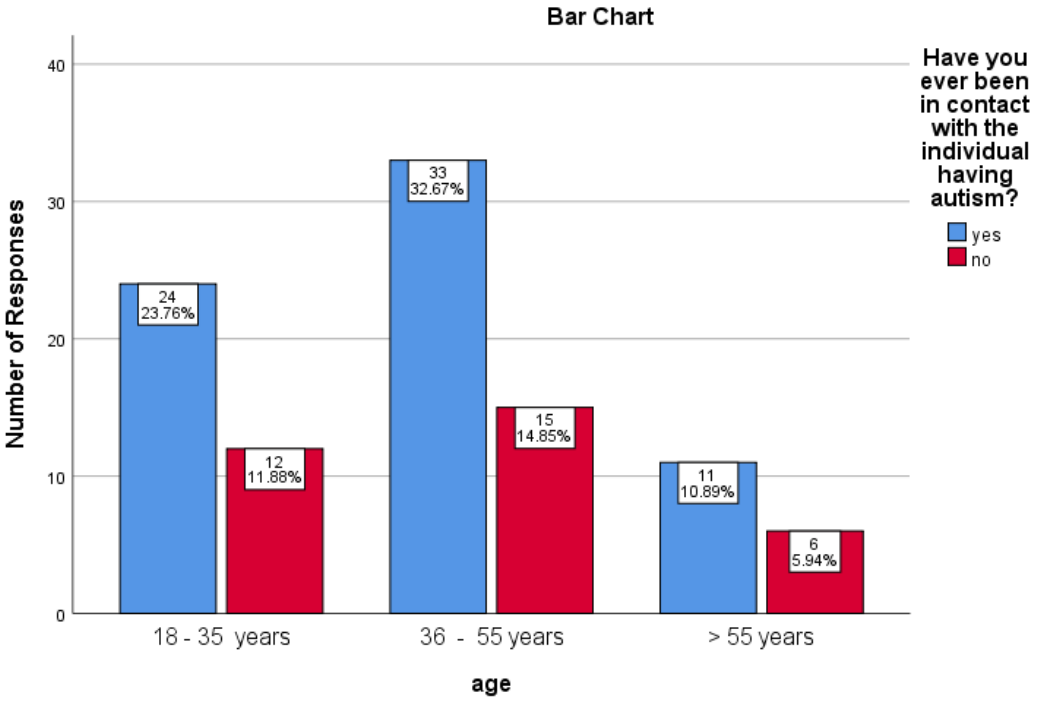

Figure 10: Bar chart represents the association between the number of people in contact with the individuals having autism and the different age groups of participants.X axis represents age groups of participants and Y axis represents the number of responses, blue denotes yes and red denotes no. The study participants of 36-55 years were more in contact with the individuals with autism than other age groups included in the study. However it is not statistically significant.(Chi square test value= 0.104, p value=0.949(>0.05) which is statistically not significant)

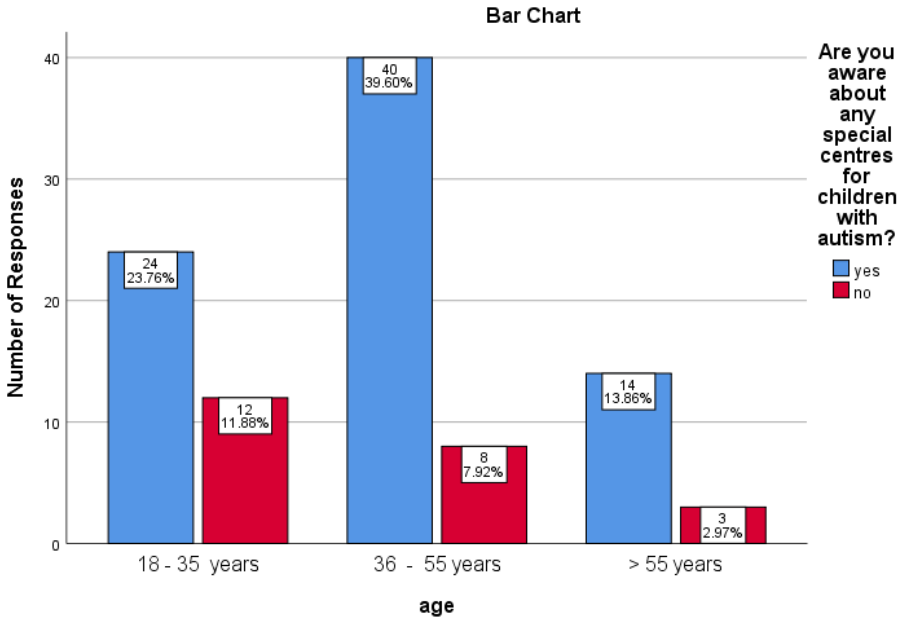

Figure 11: Bar chart represents the association between awareness of people in any special centres for children with autism and the different age groups of participants. X axis represents the different age groups of participants and Y axis represents the number of responses, blue denotes yes and red denotes no. The study participants of 36-55 years were more aware of special centres for children with autism than other age groups included in the study. However it is not statistically significant.(Chi square test value=3.555 , p value=0.169(>0.05) which is statistically not significant)

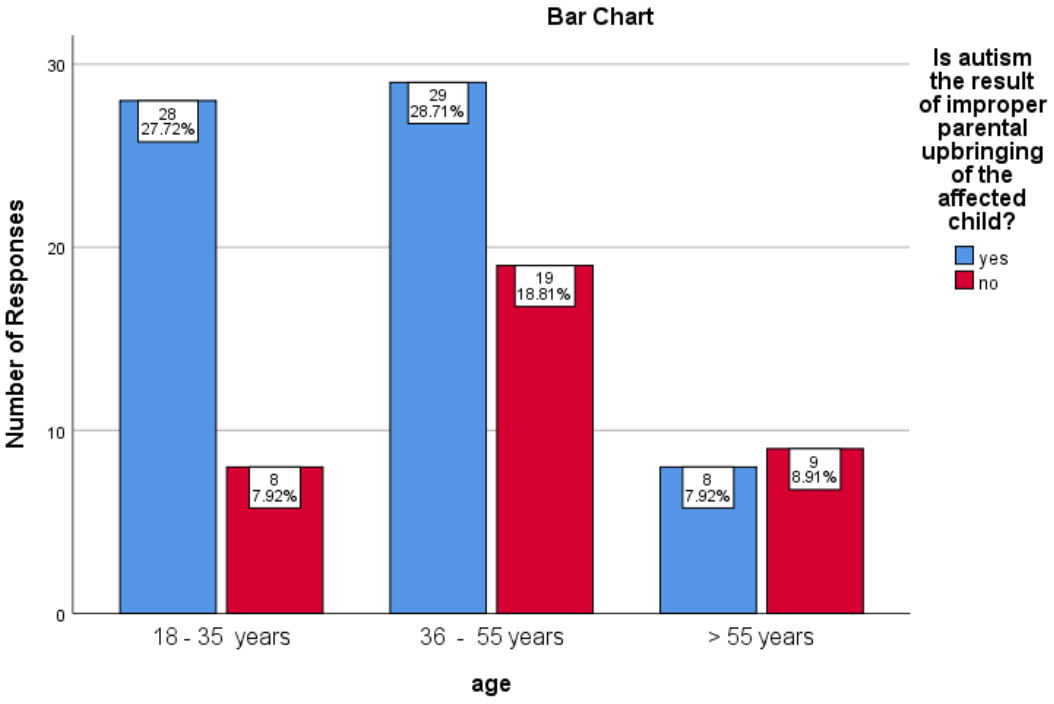

Figure 12: Bar chart represents the association between knowledge of improper parental upbringing of the affected child as a cause for autism and the different age groups of participants. X axis represents the different age groups of participants and Y axis represents the number of responses, blue denotes yes and red denotes no. The study participants of 36-55 years were more knowledgeable that autism is the result of improper parental upbringing of the child than other age groups included in the study. However it is not statistically significant.(Chi square test value= 5.369, p value=0.068(>0.05) which is statistically not significant)

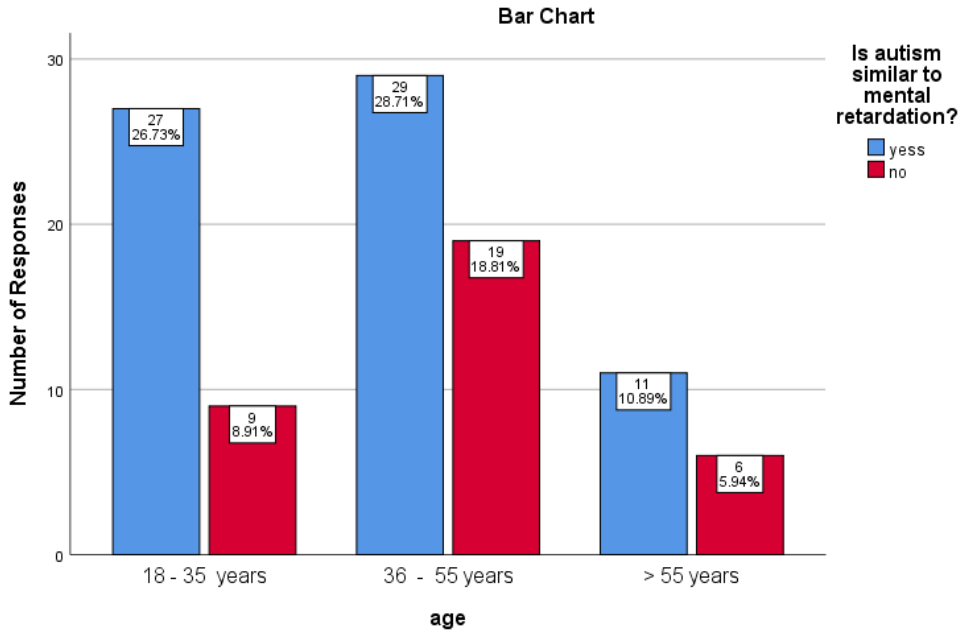

Figure 13: Bar chart represents association between the attitude of autism as similar to mental retardation and different age groups of participants. X axis represents the different age groups of participants and Y axis represents the number of responses, blue denotes yes and red denotes no. The study participants of 36-55 years were more aware that autism is similar to mental retardation than other age groups included in the study. However it is not statistically significant.(Chi square test value=1.983 , p value=0.371(>0.05) which is statistically not significant)

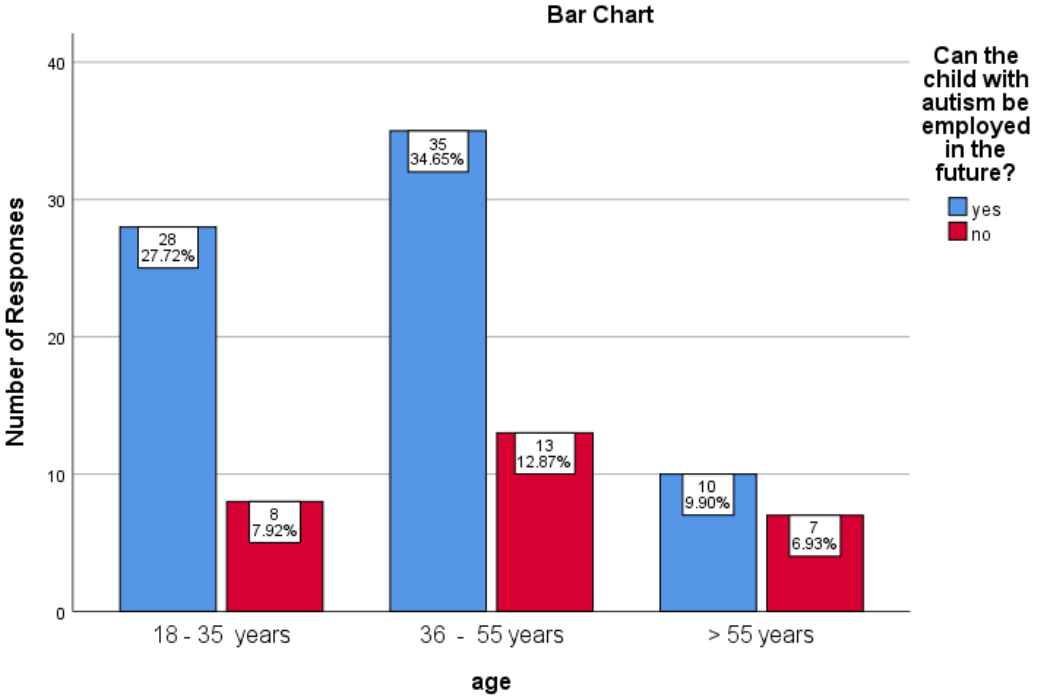

Figure 14: Bar chart represents the association between attitudes of autism affected children being employed in the future and different age groups of participants. X axis represents the age group of the participants and Y axis represents the number of responses, blue denotes yes and red denotes no.The study participants of 36-55 years responded that people with autism should be employed in future than other age groups included in the study. However it is not statistically significant.(Chi square test value=2.089, p value=0.352(>0.05) which is statistically not significant)

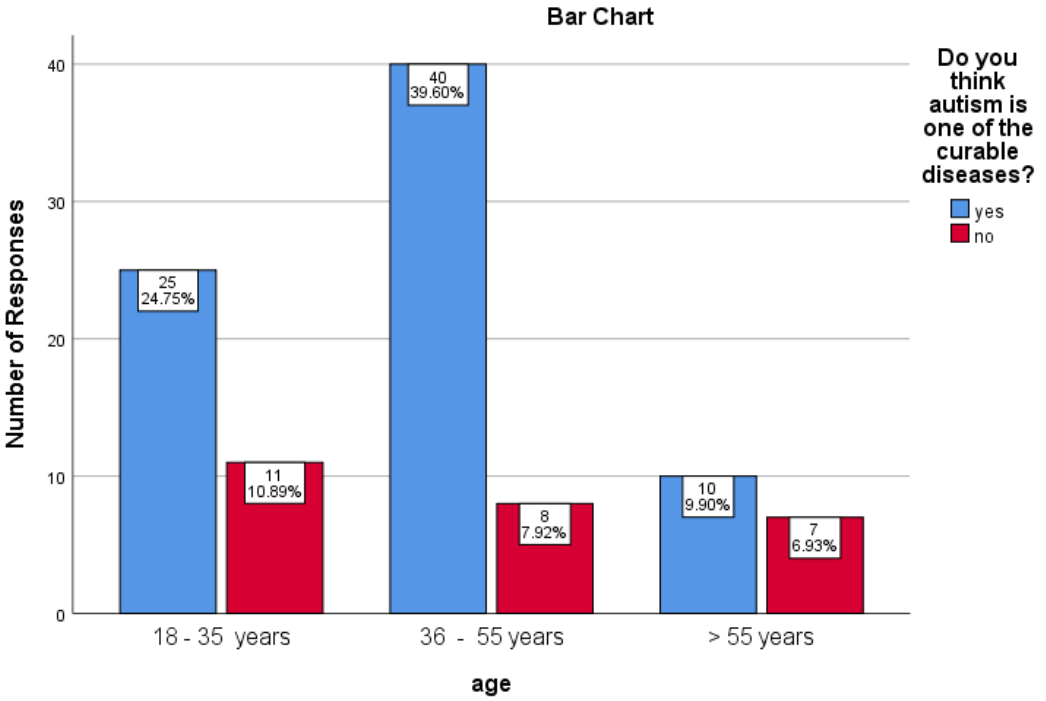

Figure 15: Bar chart represents the association between the knowledge of autism as one of the curable diseases and different age groups of participants. X axis represents the age group of the participants and Y axis represents the number of responses, blue denotes yes and red denotes no. The study participants of 36-55 years were most thought that autism is one of the curable diseases than other age groups included in the study. However it is not statistically significant.(Chi square test value=4.623, p value=0.099(>0.05) which is statistically not significant)

5. CONCLUSION

The present study concluded that the general public in Chennai have sufficient knowledge and awareness of autism and autism interventions. The people from the age group of 36 to 55 years were more aware than other age groups. In future an extensive study with large sample size and varied population would analyse the awareness and knowledge of the general public more precisely.

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