

KNOWLEDGE AND ATTITUDE TOWARDS AUTISM AMONG THE GENERAL PUBLIC IN MALAYSIA

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ARTICLE INFO	ABSTRACT
Received:	<i>Autism Spectrum Disorder (ASD) is a range of neurodevelopmental disorders predominantly characterized by impaired social functioning and communication disturbances. Symptoms of autistic children may include repetitive movements, intense focus on one item, severe tantrum or self-abusive like behavior. In Malaysia, autism is still not clear and the public seems to lack good information or experience with people with ASD. Therefore, this study was investigated to describe the level of knowledge and attitude on ASD among public in Malaysia. A cross sectional study was conducted and Google link questionnaires containing demographic data, level of knowledge and attitude was distributed online via social media. Of 385 respondents, only 296 that meet the inclusion and exclusion criteria. Collected data were analyzed using Microsoft Excel 2013 and IBM Statistical Package for the Social Sciences (SPSS) version 20. The findings suggested that public in Malaysia have a moderate level of knowledge (72%) and low level of positive attitude (57%) towards ASD. Even there are many Malaysian people have heard about autism but still many of them do not really understand the nature of children with autism. Some of them even cannot recognize the physical appearance of autistic children. We can conclude that lack of knowledge can lead to the negative attitudes towards autistic individuals and families. Further awareness strategy and giving the right information of the autism via social media and educational campaign can decrease the discrimination and stigmatization on ASD among public</i>
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INTRODUCTION

Approximately 47,000 of Malaysian between the six months to the late 20s are being diagnosed with autism spectrum disorder (ASD) each year [1, 2]. However, the World Health Organisation (WHO) estimates that 1 in 160 children has ASD and its prevalence appears to be increasing globally [3]. Individual suffering from ASD have problems with communication, social interaction as well as prone to engage with repetitive behaviors [4]. It is very difficult to diagnose autism before the age of eighteen months as the behavioral symptoms have not clearly emerged. The severity of the symptoms varies widely among affected individuals. Other possible symptoms include speech delayed, not playing interactively with other children, lack of empathy, and social withdrawal. Children with ASD may also act out like screaming or crying, to express their needs, restricted in school or day care placement including increased risk of becoming victims [5]. This lifelong developmental disability will be a challenge not only to the affected autism individual also to the parents and caregiver. A very limited studies on the awareness and lacking knowledge and exposure on the autism among public could be the reason why they have negative attitude towards it. Therefore, further studies on the understanding of the general public such as students, parents, and caregivers, on the knowledge and attitude of ASD is crucial since autism is no longer be considered as a rare disease in Malaysia.

RESEARCH METHOD

2.1 Study Design

A cross-sectional survey was conducted between November 2021- January 2022 using an online survey tool to investigate the level of knowledge and attitude on autism among public in Malaysia.

2.2 Sample population and selection criteria

The sample population was randomly selected throughout Malaysia by using the following inclusion criteria: i) age between 15 to 54 years old; ii) able to understand English.

2.3 Sample size and sampling technique

To estimate the sample size, an online software Raosoft Sample Size Calculator was used (Raosoft.Inc, 2019). With total of 32 million population, the margin of error of 5% with 95% confidence was used (Worldometers.info, 2019). Questionnaire was distributed online, and all participants' personal information and their responses were treated confidentially.

2.4 Study instrument

The validated questionnaire was adapted and utilized from previous studies developed by a few researchers [4, 6, 7, 8, 9, 10, 11, 12]. The questionnaire consists of three sections: the first Section A is comprised of 6 questions on sociodemographic data of the participants. The second Section B is consists of 10 questions in yes/no to explore

participant's general knowledge on autism. The last Section C comprised of 10 questions that explored participants' level of attitude that concerning on social stigma of the public towards autistic person (Appendix 1).

2.5 Statistical data analysis

Data collected were analyzed by using IBM Statistical Package for the Social Sciences (SPSS version 25). The percentage, mean, standard deviation and frequency distribution was calculated. Pearson chi-square (χ^2) test was applied to assess the association between demographic characteristics, knowledge and attitude. Those questions having two possible answers. A correct answer was given 1 score, whereas a 0 score was given for a wrong answer. The original Bloom's cut-off points, 80.0%–100.0%, 60.0%–79.0%, and $\leq 59.0\%$, were adapted and modified from the previous study [13]. Those respondents who obtained KAP score above 80 were considered as high level, while the scores between 60 -79 were considered as medium level. The score below 59 was considered as low level [13].

RESULT AND DISCUSSION

3.1 Sociodemographic characteristics of respondents

A total of 296 out of 385 eligible respondents completed the survey, giving a response rate of 76.9%. Table 1 represents the socio-demographic data of the participants among local Malaysians. Approximately 222 respondents (75.0%) were female while 74 respondents (25.0%) were male. Then there are 64 (21.6%) of them aged between 15-19 years old, 189 (63.9%) of them are in 20-24 years old, 9 (3%) of them are in 25-29 years old, 4 (1.4%) of them are in 30-34 years old, 7 (2.4%) of them are in 35-39 years old, 3 (1%) of them are in 40-44 years old, 2 (0.7%) of them are in 45-49 years old and 18 (6.1%) of them are 50-54 years old. Next, among the respondents 160 (54.1%) are from urban area, 90 (30.4%) are from suburban area and 46 (15.5%) are from rural area. Majority of the respondents were unmarried (88.5%), where 32 (10.8%) of them are married while another 2 (0.7%) are divorced. For educational level, about 287 (97.0%) the respondents are from tertiary level, 7 (2.4%) of them are from secondary level which is on secondary school and another 2 (0.7%) are on primary level. In addition, there are 160 (54.1%) of the respondents live in urban area where 90 (30.4%) live in suburban area and 46 (15.5%) live in rural area. Lastly, 143 (48.3%) of the respondents have experienced surrounded with autistics people while another 153 (51.7%) did not.

3.2 The mean knowledge and attitude regarding autism

This study evaluated the level of knowledge and attitude on autism among public ($n=296$) in Malaysia. Based on the KAP's cut-off points, the mean knowledge percentage (71.17%) calculated revealing the moderate level of knowledge whilst the mean percentage of attitude (56.72%) indicated that respondents had a low level of attitude towards autism with the average p-value of knowledge ($p>0.05$), as shown in Figure 1.

3.3 Knowledge regarding autism characteristics among gender

Gender plays a role in autism as it is predominantly diagnosed in male four times more frequently than females [14]. In this study, the gender was considered to influence the level of knowledge and attitude towards the characteristic and identification of ASD. Concerning on determination whether general public are able to recognize autistic individual through their characteristic. Table 2 represents the association of male and female with knowledge on autism characteristics ($p>0.05$). Most of the female ($n=133$, 45%) and male ($n=73$, 24%) respondents knew that autistic children do not show interest in playing. Approximately 127 females (43%) and 66 males (22%) disagreed that all autistic people have intellectual disability. The percentage of females ($n=183$, 62%) are higher compared to males ($n=86$, 29%) who knew that increase sensitivity towards stimuli was one of the characteristics of autism. Almost half of the respondents are female ($n=143$, 48%) while male respondents ($n=81$, 27%) agree that most autistic does not show interest in playing like other children. Almost one-third of the males ($n=89$, 30%) and 168 female respondents (57%) chose to play in repetitive and fixed ways as one of the autism characteristics. It is commonly demonstrated that autistic children always prone to have fixed ways of play with a very limited or only a few toys or play in a repetitive way. For example, the child might like spinning the wheels on a car and watching the wheels rotate or might complete a puzzle in the same order every time.

The present findings seem to be consistent with the previous findings that showed females scored higher in total knowledge of autism than male [6]. It can be predicted that both male and female only have general knowledge on the characteristics of autism such as their physical appearances.

Other than that, males and females of 15-24 years old have little to no interaction with autistic people or exposure about them in school, workplace or home contributing to their lack of knowledge about social interaction of autistic people. This drawback emphasizes that more thoroughly campaign and awareness stressing better in knowledge towards autism on all aspects should be conducted.

3.4 Knowledge regarding autism transmission among various educational level

Figure 2 shows the association of respondents from various education level with knowledge towards autism transmission. Educational level was not statistically significant associated with knowledge on transmission of autism (Pearson $\chi^2 = 2.616$, $p > 0.05$). However, the majority of public with tertiary education (84%) knew that autism is non-transmissible while the other 35 (11%) chose otherwise. The percentages of respondents with secondary and primary education who knew about autism were lower compared to those with higher education level which are 2% and 1% respectively. In addition, it can also be seen that the knowledge level is directly proportional to the educational background based on the percentage. In other words, the higher the educational level, the higher the knowledge on autism. This study corroborates the earlier findings about a study on autism knowledge among teachers in China which found that higher educational level is associated with more early exposure to neurodevelopmental disorders such as ASD [7]. A possible explanation for this might be due to lower level of education is associated with lack of exposure for information and facts about autism as they did not go through higher education channel.

3.5 Attitude regarding stigmatization on autism among various residential area

Figure 3 highlights the association of public from various residential areas all over Malaysia regardless of their social economic status with social stigma on autism. Residential area was not significantly associated with stigmatized attitude towards autism (Pearson $\chi^2 = 2.421$, $p > 0.05$). The high level of stigmatization on autism can be seen from each area, rural (11%) and suburban (22%) with a large percentage of respondents came from urban (40%) areas. Only a more than quarter of the respondents (27%) from all area had a good perception on autism. The present findings seem to be consistent with other several research that the majority of autism caregivers suffered from stigma even in high-income countries where the society should be more educated and unprejudiced about sensitive medical issues [10, 15]. The previous studies also highlighted that caregivers in low- and middle-income countries have high levels of stigma which concurrent with this study where suburban (22%) and rural areas (11%) are the majority who stigmatized autism [16]. It may due to the lack of health education and awareness about developmental disorder like autism in educational institute such as schools or universities especially in the poverty area where people tend to only focus in fulfilling their life necessities.

3.6 Attitude regarding autism stigmatization among public experienced with autistic people

In order to further demonstrate the low level of attitude on autism, Figure 4 shows no significant association between experience with autistic people and social stigma (Pearson $\chi^2 = 0.024$, $p > 0.05$). It can be seen that even though the respondents (35%) have some form of knowledge, either through exposure or reading about autism, they concur that autism is associated with bad perception and stigma within the society. However, these findings do not support by the previous study by Kuzminski et.al [6] that experience with autistic people is one of the crucial factors and effective method in improving the attitudes towards people with autism condition. The amount of people who were not stigmatized over autism whether they have already experienced with autistic people or not was the same (13%), while about 39% of people with zero-experience stigmatized autism. The high level of stigmatization among Malaysians may due to lack of first-hand experience with autistic patients, lack of understanding together with bad portrayed of autism by media may lead to misconceptions of autism.

In a nutshell, moderate knowledge and low positive of people attitudes and behaviors concerning individuals with ASD among Malaysians are not common as it often occurred all around the world, even among the educated community in urban areas as well as high-income countries.

CONCLUSION

To conclude, the Malaysian public had a moderate level of knowledge and low level of positive attitude regarding autism. The deficit of knowledge is not only displayed by people with low educational level but also with people with a higher educational background. This lack of awareness about autism may play a role in creating social

stigma about this disorder. Even there are many Malaysian people have heard about autism but still many of them do not really understand the nature of children with autism. Some of them even cannot recognize the physical appearance of autistic children. True, the parents, family or caregivers of autistic children are strongly advised to monitor their autistic children when shopping or go to public places but sometimes these autistic children will do something that cannot be controlled by parents. Due to this scenario, it is therefore essential to raise awareness among Malaysian people about autism and the characteristic of the autistic children. People other than parents, family or caregivers of autistic individual should aware that autistic children tend to create behavioural problems. This study is a preliminary study to seek the awareness among Malaysian people towards children with autism. The findings of this study are expected to raise awareness among all Malaysian people including not only the parents, families or caregivers but also to society as a whole about the importance of understanding the characteristics of autistic children. The increasing number of children with ASDs creates more challenges not only to the individuals and families but also society as a whole. Therefore, it is necessary to increase awareness and build a better understanding about autism to all parties so that the responsibility for children with autism not only taken by parents or caregivers but all parties will play a role to help reduce the stress suffered by families with autistic children. At the same time overcome all the stigmas from people who may not understand autism.

There is limitations in doing this research that need to be acknowledged. One of the limitations could be due to limited articles and journal relating to the public awareness, knowledge and attitude towards children with autism specifically in Malaysia. Since this is only a preliminary study among Malaysian public, therefore the sample size may not represent the whole population of Malaysia. Finally, the majority of the study participants (75%) were females, which could have affected the generalizability of our findings. It is also suggested that further studies need to be conducted to investigate the determinants that influence attitudes and analyze the relationship between each determinants and the attitude of Malaysian people towards children with autism [17,18,19]. Therefore, we believe that public should be given a major awareness and exposure regarding autism such as through educational campaign on the knowledge such as characteristics, etiology and sign of ASD. Further distribution of information through social media platforms (facebook, twitter, instagram, local TV, radio) are also recommended. This will help to enhance the public's knowledge about ASD also to prevent any further misconceptions and misunderstanding conferring to autism disorder.

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