

A SURVEY OF KNOWLEDGE OF AUTISM SPECTRUM DISORDER AMONG MALAYSIA POLYTECHNIC COMMUNITIES

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ABSTRACT

Autism is a disorder of neural development, characterized by impaired social interaction, communication, and by restricted, repetitive behaviors. As autism spectrum disorder (ASD) is more commonly diagnosed, having knowledge of the disorder becomes increasingly important for educators, parents, and the general public. According to Feilina Muhammad Feisol, chairman of National Autism Society of Malaysia (Nasom) (The Star, 2017), autism should no longer be considered a rare disease, instead it should be recognised as a developmental disability that needed urgent support. Autism spectrum disorder-specific knowledge deficits contribute to current disparities in the timing and quality of autism spectrum disorder services throughout Malaysia and globally. Previous studies regarding knowledge of ASD, focused mainly on knowledge possessed by those in the educational field, has found that individuals may perceive themselves as possessing average knowledge regarding ASD but have low actual knowledge (as defined by the researchers) regarding specific aspects of the disorder (Williams et al., 2011). This study conducted A Survey of Knowledge of Autism Spectrum Disorder among polytechnic communities in Malaysia. This study demonstrated an exploratory factor analysis of knowledge of ASD. Additionally, exploratory analyses revealed several interesting between ASD knowledge, demographic characteristics, and source of ASD knowledge to evaluate actual knowledge of ASD among polytechnic communities.

Keywords: Autism, autism spectrum disorder, knowledge.

Introduction

Autism is a developmental disorder characterized by troubles with social interaction and communication, and by restricted and repetitive behavior. Autism spectrum disorders (ASD) are characterized by social-interaction difficulties, communication challenges and a tendency to engage in repetitive behaviors. Parents usually notice signs in the first two or three years of their child's life. These signs often develop gradually, though some children with autism reach their developmental milestones at a normal pace and then worsen. Autism developmental disabilities represent a serious challenge, not only to the individuals diagnosed with autism, but also to the family which is lifelong. The difficulty faced by this family is to handle the individual with autism who is often accompanied by extremely disruptive antisocial behavior. Besides having problems with language, individuals with autism are also frequently associated with tantrums, self-destructive acts and other forms of inappropriate persons' behavior (Dominick et al., 2007).

In Malaysia, National Autism Society of Malaysia (NASOM) is a non-profit charitable organization, non-governmental welfare organization that provides education, assistance, care, and protection for individuals with autism and their families. ASD is more commonly diagnosed, having knowledge of the disorder becomes increasingly important for educators, parents, and the society. Knowledge among Malaysian people has increased but still much more studies are needed to ensure public get a better understanding about autism. Dolah et al. (2011) suggested Malaysian is lack of knowledge and exposure on autism. Previous studies regarding knowledge of ASD, focused mainly on knowledge possessed by those in the educational field, has found that individuals may perceive themselves as possessing average knowledge regarding ASD but have low actual knowledge (as defined by the researchers) regarding specific aspects of the disorder (Williams et al., 2011).

1. Problem Statement

Autism can occur in any of the child and family. So far, it is still reported that there are no know medical cure, also researches are until now cannot identify the real cause (s) of autism. To date, many cases reported that the number of children with ASDs

have increased during the past decade. At present, there is no accurate data available of autism in Malaysia. In 2014 statistics, approximately 47,000 Malaysians with autism which is between the six months to the late 20s, and this number rises by three percent each year (Zakaria, 2016; Harian Metro, 2017). A smaller scale study showed that autism on children in Malaysia is between the ages 18 to 26 months showed a rate of 1.6 in 1000 children, or approximately 1 in 625 individuals (Ministry of Health, 2014). According to recent statistics, there are 300,000 individuals living with ASD in Malaysia. (The Star, 2017; Koshy, 2018).

National Autism Society of Malaysia (NASOM) stated that although knowledge has increased among Malaysian but still much further researchers are necessary to ensure people get a better understanding about autism (Shamsudin, & Rahman Abdul, 2014). It is due to there are lots of gaps in Malaysian understanding of autism because there has been a little studies regarding the knowledge relating to individuals with ASD outside of the educational and medical areas.

In Malaysia, autism is still not clear to what extent the general public is informed about this disorder. The people seems to lack good information or experience with individuals with ASD (Dolah et al., 2011) although autism term has gained much attention in the media. A lack of knowledge can lead to the negative attitudes towards autistic individuals and families. The problems such as emotions, behaviors, thoughts and other of parents (Jiar, & Xi, 2012) will contribute to the higher levels of stress and distress in the family especially mothers can be affected for anything happens to their autistic children (Shamsudin, & Rahman Abdul, 2014).

Due to the problems created by children with autism and very a few studies have been completed on the attitude of adults toward individuals particularly children with autism, hence, this study was to conduct an exploratory and descriptive survey of the population of a Malaysia polytechnic in order to better understand the extent of autism knowledge in this cross-section of a diverse polytechnic communities. The findings can then be used to carry out further study to improve the understanding of the general public about the real nature of autism to change the bad impression towards this Autism Spectrum Disorders (ASDs). It is essential for other researches focuses on people knowledge and not to the parents, family or caregivers of children with autism in decreasing discrimination and stigmatization and to create a sense of responsibility among citizens on autistic children and families.

2. Objective of the Study

There is a need to increase knowledge and understanding of children with autism to one other than the parents, family or caregivers. Even though there are many of autism studies were conducted by various researchers, but most have focused only on autistic children and families of the children with autism. This study is conducted to get the accurate knowledge among polytechnic communities towards children with autism in Malaysia. This study also will explore through literatures the relevant issues regarding the knowledge of people towards children with autism.

As stated by the Director of the Early Autism Project (EAP) Malaysia, Jochebed Isaacs, the more people who know about autism, will increase the level of acceptance of people towards children with autism, and their families will get more support from the public (The Star in Shamsudin, & Rahman Abdul, 2014). By improving more knowledge information, it is expected that the polytechnic communities will no longer have the bad impression towards the autistic individuals and families, and there is also hope that the public will feel responsible to foster relationships among human and help individuals with autism with sincerely.

3. Literature Review

Autism can affect any child and family that can range from mild to severe (See, 2012). ASD is a neurodevelopmental disorder affect by the normal functioning of the brain, and have a significant impact on learning acquisition, the development of social interaction and communication skills and restricted and repetitive behaviors (Maskey et al., 2013; Shamsudin, & Rahman Abdul, 2014). For examples, difficulties in learning, language problems, issues with motor skills, inappropriate emotional reactions and hypersensitivity to sensory issues (Shamsudin, & Rahman Abdul, 2014) that can effect on individuals autism lives' and on their families (Dominick et al., 2007). See (2012) and Maskey et al., (2013) highlighted that children with autism frequently have difficulties on behavioral problems, including aggression, becoming restless and jumpy, showing tendencies to touch and hit people, being noisy (shouting or screaming), temper tantrums, self-injury behavior, being distracted, sleeping problems and types of eating problems, such as food selectivity by type and texture, or food refusal.

Information about ASD is conveyed not only through scientific journals, but also through mass media such as television, films, blogs, advocacy websites, newspapers, and word-of-mouth (Bain et al. 2009), which can be used to aggressively educate the people about the autistic child and their characteristics (Shamsudin, & Rahman Abdul, 2014). Furthermore, many websites provided that information about ASD comprise advertisements for treatments and interventions that are not evidence-based, creating it more difficult for individuals looking for information about ASD to distinct genuine lack of knowledge versus incorrect beliefs treatment (Brain et al., 2011; Hansen, 2015), either scientifically valid treatments regarding both diagnostic methods and treatment (Bain et al., 2011; Williams et al., 2011) or from those not supported by studies (Bain et al., 2009). Additionally, in theory understanding, individuals with low or average actual knowledge should have higher levels of perceived knowledge (Hansen, 2015), thus information sources are important to give more accurate of actual knowledge about autism. For example, information on mass media like television about autism should contain the right information and also must be in appropriate ways to convey messages, with regard to attract more people to view and understand autism (Shamsudin, & Rahman Abdul, 2014).

Various studies and mass media also stressed in the rate of autism diagnoses are increased. ASD occurs in approximately 1 in 68 children and girls are less five times than boys who more probable to have ASD (Centers for Disease Control and Prevention (CDC), 2014). According to See (2012), the number of children who have ASD can be more than 60,000 children in Malaysia. Children as young as two-years-old can be diagnosed with ASD, conversely on average children are not diagnosed until after age 4 years (CDC, 2014).

However there is still much to be done to improve the general social understanding of ASDs even though the people knowledge regarding autism has increased in recent years (Martin, 2012). Yet, there is a big lack of knowledge about autism in Malaysia (Dolah et al., 2011) and something needs to be done to raise this knowledge concerning ASD among individuals outside of the education sphere (Dolah et al., 2011; William et al., 2011) because many individuals remain to be unaware about signs of threatening concerning the disorder or disregard these early signs of threatening before taking action (CDC, 2014). Hence because of lack of education in Malaysia to see those with autism from mentally ill or special-needs individuals (Shamsudin, & Rahman Abdul, 2014), the autistic children be view similar as an ordinary people. In fact, more general public do not actually identify the specific characteristics of children with autism (Shamsudin, & Rahman Abdul, 2014). Therefore, general public who could not understand often perceive these children as selfish, slow and odd (Dolah et al., 2011) and some of them think autism is similar to hyperactive children (Shamsudin, & Rahman Abdul, 2014).

Furthermore, people attitudes towards individuals with ASD improve when receiving information from formal sources but show a little improvement when information comes from informal sources (Ryan, 2013). For that reason, for these persons to succeed in all parts of society, positive people attitudes and behaviors concerning individuals with autism are important to spread out in community living instead of only knowledge or evidence from past studies (Durand-Zaleski et al., 2012; Shamsudin, & Rahman Abdul, 2014) in the educational field or medical realm. Among the factors affect the attitudes of people towards individuals with disabilities, Ryan (2013) emphasized is the perceived connection of the level of disability, gender, child's age, education difficulties and social desirability. Thus it is progressively significant for all parties involved (as caregivers, educators and the general public) to increase knowledge toward the different aspects of ASD, such as the symptoms, causes, diagnosis and treatment options as the occurrence of ASD increases (Shamsudin, & Rahman Abdul, 2014; Hansen, 2015) and at the same time reduces negative views about autism (Shamsudin, & Rahman Abdul, 2014).

4. Method

Participants

The entire communities of polytechnic in Malaysia was invited to participate in this study, via whats app, telegram, facebook and email containing a link to Google Forms. This study was carried out by distributing questionnaires to 10,238 staff of polytechnic in Malaysia. The data was collected through random sampling. Due to time constraints, of those respondents who returned the survey, 375 had complete information on the major variables reported here and were used in our analyses. While this is a sufficiently large population, we note that 375 staff were represented only about 2% of the total staff of polytechnic in Malaysia based on the Krejcie and Morgan Table.

Measure

This descriptive study used the quantitative approach in assessing the data. To ensure that the survey instrument is brief, user-friendly and acceptable to a sample in this study, the questionnaire consists of 2 parts: part A is about the demographic profile of respondents and part B contains questions to assess the polytechnic community's knowledge towards children with autism. This questionnaire is used to collect data for primary data analysis.

PART A: Demographic form. This measure was developed for the current study. It was a modification and update of a survey of autism knowledge created by Hansen (2015). Participants were administered a demographic form to gather information such as age, gender, race, whether or not they have children, etc. It also contained questions regarding the individual's experience with ASD (i.e., whether or not they have received training on ASD or have had a personal relationship with an individual with ASD). Finally, it assessed each participant's primary sources of information regarding ASD (e.g., first-hand experience, popular media).

PART B: A Survey of Knowledge of Autism Spectrum Disorder. The survey was created to identify respondent knowledge about autism. It was a modification and update of a survey of autism knowledge created by Hansen (2015). For each participant, the 35 questions on the Knowledge of ASD were presented via Google Form specified whether each statement was *True*, *False* or *Don't Know* (to measure actual knowledge). Participants were not allowed to skip items, and the only response choices were *True*, *False* or *Don't Know*. As noted earlier, several modifications based on Hansen (2015) were applied to this study, allowing the latter measure to collect the full range of actual knowledge could be evaluated of each participant based on all items.

5. Analysis and Interpretation

Part A: Demographic form

Table 1.0

Sample Statistics for Study 1

Participant characteristics

N = 375

	N (%)
Gender	
Female	330 (88%)
Male	45(12%)
Race	
Malay	367 (97.9%)
Other	8 (2.1%)
Polytechnics	
PUO	8 (2.1%)
POLISAS	128 (34.1%)
PKS	14 (3.7%)
PPD	7 (1.9%)
PKK	7 (1.9%)
PSA	103 (27.5%)
PMM	14 (3.7%)
PSAS	8 (2.1%)
PTSB	7 (1.9%)
PSIS	28(7.5%)
PMU	7(1.9%)
PBS	7(1.9%)
PMJ	7(1.9%)
PMKL	7 (1.9%)
PMJB	15(4.0%)
PTSN	8 (2.1%)
Participants with children	314 (83.7%)
Participants without children	61 (16.3%)
Children's Age	
No Children	61 (5.87%)
12 years and below	249 (66.4%)
12 years old to 18 years old	57 (15.2%)
18 years old and above	22 (5.87%)
Experience with individuals with Autism Spectrum Disorder (ASD)	
Yes	173 (46.1%)
No	163(43.5%)
Don't Know	39 (10.4%)

From Table 1.0, it shows the demographic profiles of all the 375 respondents. 330 respondents are women and another 45 are male. Most of the respondents are Malay. 314 respondents have children and another 61 with no children. Majority of the respondent have children at the age of 12 years and below. 128 respondents are from POLISAS, 103 respondents from PSA, 28 respondents from PSIS, 15 from PMJB, 14 from PMM and PKS, 8 respondents are from PUO, PSAS and PTSN. Lastly, 7 respondents are from PPD, PKK, PTSB, PMU, PBS, PMJ and PMKL. From 375 respondents, 249 have children from the age of 12 years old and below, 57 respondents have children from 12 years old to 18 years old and 22 respondent have children at the age of 18 years old and above. Overall, it shows that 46.1% of the respondents have experience with the individual with ASD and another 163 (43.5%) do not have any experience with individual that have ASD and most of the experience are closest to friend and acquaintance. Besides that, majority of the respondents which is 308(82.1%) does not undergone training for interacting with ASD individuals.

The main source of information about autism that is chosen by the respondent are came out to be friend or acquaintances (27.7%) followed by popular media (26.1%) and the lowest was training/workshops (5.9%). Popular Media as the main source of information to the public, therefore, can be used to aggressively educate the people about the autistic child and their characteristics. Information about autism on TV should contain the right information and appropriate ways to convey messages must be used to attract more people to view and understand autism. People attitudes towards individuals with ASD improved when receiving information from formal sources but show little improvement when information comes from informal sources (Ryan, 2013).

Part B: A Survey of Knowledge of Autism Spectrum Disorder

Table 2.0

Participant characteristics		N = 375
		N (%)
Recognize autism		
Yes		115(30.67%)
No		170(45.33%)
Not Sure		90(24%)
Characteristics of children		
Yes		125 (33.33%)
No	180 (47.00%)	
Not Sure		70 (18.67%)
Physical Appearance and Characteristic of autistic children		
Yes		125 (33.33%)
No		107 (28.53%)
Not Sure		143 (38.81%)
Familiarity with the word of Autism		
Yes		232 (61.87%)
No		73(19.47%)
Not Sure	70 (18.87%)	
Autism similar with hyperactive children		
Yes		125 (33.33%)
No		98 (26.13%)
Not sure	152(40.53%)	
Heard the word autism		
Yes		158(42.13%)
No		81(21.60%)
Not Sure	136(36.27%)	

Concerning to determine whether polytechnic communities are able to recognize the children with autism, it is found in Table 2.0, only 30.67% of respondents replied "yes". In the meantime, the table indicates that only 33.33% of the respondents know the characteristics of children with autism. Others are not aware of the physical characteristics of children with autism. It is interesting to note that the total responses to the not sure answer are quite high for questions to represent whether or not the people know the physical appearance and characteristics of the autistic children.

It was found in this study that, although 61.87% of the respondents reported familiarity with the word of autism (61.87%) but not all can describe the physical appearance of the autistic children. In fact, more people do not really know the specific characteristics of children with autism. While giving answers to the questions, it was found that some of them think autism is similar to hyperactive children. Meanwhile, this study also discovered that there are still people out there who never heard the word autism (21.5%). According to the previous studies (i.e. (Dolah et al., 2011; Durand-Zaleski et al., 2012; Shamsudin, & Rahman Abdul, 2014), researchers also found that majority of the respondents do not understand about autism in general and how to recognize them. It is suggested that researchers need to address the lack of knowledge among Malaysian people and this problem could be solved by using ICT or multimedia learning (Dolah et al., 2011).

6. Discussion and Conclusion

The primary purpose of the current study was to design a valid, reliable measure to evaluate actual knowledge of ASD. Comparisons between studies are difficult to interpret due to the different in sampling frames, sample sizes, criteria and categorizations used. Limitations of the study were mainly related to sampling. First, all data was collected from a population of staff of polytechnic in Malaysia, potentially limiting the generalizability of the knowledge of ASD. This study found that although there are many polytechnic communities in Malaysia familiar with the term autism however still many of them do not really know the characteristics of children with autism. The outcome of this study is to increase autism knowledge to polytechnic communities.

Although, this is only a study focusing to polytechnic communities only, however it can encourage numbers of people to know about autism and it was found that some of the respondents directly surf the internet to find about autism during completing the questionnaires, and after completing the questionnaires by motivating more people to obtain further information and have a better understanding about autism.

It is because when more people have a better understanding about autism, it is hoped that people may feel accountable to foster relationships among individuals and lengthened help with full sincerity. There may be ways of a collaborative work between all parties to ensure treatment for ASD is successful and to provide the best life possible for individuals with autism. The collaboration should include clinicians, teachers, graduate school workers, agents from outside support groups or foundations, the family and the autistic individuals themselves (Shamsudin, & Rahman Abdul, 2014).

Generally, it also provides direction for the future studies to attempt to replicate and expand on this study's findings in a more representative, diverse sample (i.e., staff and students). This would allow researchers to explore more varied exploratory

analyses, such as examining the relation on ASD knowledge, so researchers can better evaluate levels of actual knowledge of ASD in the general population. Future studies also are necessary to find what might be the accurate rates of co-existing conditions (including other developmental and psychiatric disorders, emotional problems, or problem of behaviors), and the risk and protective factors relevant for service planning and early interventions and family support, to decrease distress and impairment for children with ASD and their families (Maskey et al., 2013). Effective and appropriate treatments and support are required from the statutory and voluntary services to support effectively children with ASD and their families.

References

- Bain, S. K., Brown, K. S., & Jordan, K. R. (2009). TEACHER CANDIDATES' ACCURACY OF BELIEFS REGARDING CHILDHOOD INTERVENTIONS. *The Teacher Educator*, 44(2), 71-89.
- Centers for Disease Control and Prevention. (2014). Prevalence of Autism Spectrum Disorder Among Children Aged 8 Years—Autism and Developmental Disabilities Monitoring Network, 11 sites, United States. *Morbidity and Mortality Weekly Report*, 63, 1-21.
- Dolah, J. B., Yahaya, W. A. J. W., & Chong, T. S. (2011). A preliminary investigation: Potential of interactive multimedia learning awareness (imla) in enhancing awareness of autistic characteristics among parents and society in Malaysia. *Electronic Journal of Computer Science and Information Technology: eJCIST*, 3(1).
- Dominick, K. C., Davis, N. O., Lainhart, J., Tager-Flusberg, H., & Folstein, S. (2007). Atypical behaviors in children with autism and children with a history of language impairment. *Research in Developmental Disabilities*, 28(2), 145-162.
- Durand-Zaleski, I., Scott, J., Rouillon, F., & Leboyer, M. (2012). A first national survey of knowledge, attitudes and behaviours towards schizophrenia, bipolar disorders and autism in France. *BMC psychiatry*, 12(1), 128.
- Hansen, L. K. (2015). *Development and validation of a survey of knowledge of autism spectrum disorder*. Master's Theses. The University of Southern Mississippi. 12-11-2015. Paper 141.
- Harian Metro. (2017). Kempen Sokong Usaha Bantu Kanak-Kanak Autisme. Retrieved from <https://www.pressreader.com/malaysia/harian-metro/20170426/283287457535141>, Retrieved 26 June 2018.
- Jiar, Y. K., & Xi, L. (2012). Parenting stress and psychological distress among mothers of children with autism in Johor Bahru and Hangzhou. *Journal of Educational Psychology & Counseling*, 6, 129-153.
- Koshy, E. (2018). Autism is not impenetrable. *New Straits Times*. Malaysia. Retrieved from <https://www.nst.com.my/lifestyle/sunday-vibes/2018/04/354620/autism-not-impenetrable>, Retrieved 26 June 2018.
- Martin, D. M. (2012). *The Ever-Changing Social Perception of Autism Spectrum Disorder in the United States*. Project completed in partial fulfillment for graduation from the Honors College of East Carolina University.
- Maskey, M., Warnell, F., Parr, J. R., Le Couteur, A., & McConachie, H. (2013). Emotional and behavioural problems in children with autism spectrum disorder. *Journal of autism and developmental disorders*, 43(4), 851-859.
- Ministry of Health. Clinical Practice Guidelines: Management of Autism Spectrum Disorder in Children and Adolescents. 2014. Retrieved from http://www.moh.gov.my/penerbitan/CPG2017/CPG_Management_of_Autism.pdf, Retrieved 26 June 2018.
- Ryan, C. T. (2013). *Disability Literacy and Attitudes Towards Autism Spectrum Disorders*. Honors Scholar Thesis. University of Connecticut. 5-1-2013. Paper 327.
- See, C.M. (2012). The use of music and movement therapy to modify behaviour of children with autism. *Pertanika Journals Social Sciences & Humanities* 20(4): 1103 – 1116
- Shamsudin, S., & Rahman Abdul, S. S. (2014). A preliminary study: awareness, knowledge and attitude of people towards children with autism. *Proceeding of the Social Sciences Research ICSSR*. 9-10 June 2014, Kota Kinabalu, Malaysia.
- The Star Online. (2017). Giving support to children with autism. Retrieved from <https://www.thestar.com.my/metro/community/2017/04/29/giving-support-to-children-with-autism-it-is-an-uphill-struggle-for-those-diagnosed-with-the-disorder/>, Retrieved 30 May 2018.
- Williams, K. L., Schroeder, J. L., Carvalho, C., & Cervantes, A. (2011). School personnel knowledge of autism: A pilot survey. *The School Psychologist*, 65, 7-14
- Zakaria, Q.M (2016). Bantu kanak-kanak autisme berjaya. *Utusan Malaysia*. Malaysia. Retrieved from <http://www.autismmalaysia.com/eap-in-the-media/feature-article-utusan-malaysia-bantu-kanak-kanak-autisme-berjaya>, Retrieved 26 June 2018.