



Knowledge and Attitudes among Malaysian Employers in Accepting Adults with Autism spectrum disorder as Employees or Colleagues in Klang Valley, Malaysia

Vanessa Choy WY¹, Deepthi Shridhar², Halima Sadia Hakim³, Vasu N⁴, Farzana Y⁵, Theingi Maung Maung⁶, Mohammed Shahjahan Kabir⁷, Lubna Shirin⁴, Prabal Bhargava⁸, Norsyaqina S¹, Rubaiyat Siddique Diba⁴, Nathan Vytialingam¹, Nazmul MHM⁹

¹School of Occupational Therapy, Perdana University, Damansara Heights, 50490 Kuala Lumpur, Malaysia

²Department of Pharmacology, G R Medical College and Research Centre, Mangalore, India

³Faculty of Dentistry, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, 50300 Kuala Lumpur, Malaysia.

⁴Faculty of Medicine, Bioscience and Nursing, MAHSA University, Bandar Saujana Putra, Jenjarom, 42610 Selangor, Malaysia

⁵Faculty of Science, Lincoln University, Petaling Jaya, Selangor, Malaysia

⁶Unit of Community Medicine, AIMST University, 08100 Bedong, Kedah, Malaysia

⁷Perdana University Royal College of Surgeons in Ireland (PU-RCSI), Damansara Heights, 50490 Kuala Lumpur, Malaysia

⁸School of Medicine, Faculty of Medicine and Health Sciences, Taylor's University, Subang Jaya, 47500 Selangor, Malaysia

⁹Graduate School of Medicine, Perdana University, Damansara Heights, 50490 Kuala Lumpur, Malaysia

***Corresponding author:** Deepthi Shridhar, Department of Pharmacology, G R Medical College and Research Centre, Mangalore, India, Email: deepthishridhar@gmail.com

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ABSTRACT

Apart from facing difficulties graduating from high school, individuals with autism spectrum disorder (ASD) have significantly reduced opportunities in securing employment. This study aims to provide a quantitative analysis of Malaysian employers' knowledge, level of management practiced, career fields, types of relationships with persons on the autism spectrum and attitudes in accepting adults with ASD as employees or colleagues in Klang Valley. The sample for this study was obtained from conferences and seminars. One hundred and forty-five participants (n = 145) took part in this study by completing a series of questionnaires consisting of the participants' demographics, knowledge in autism and acceptance of individuals with ASD. Results indicate that there are negative correlations between the participants' knowledge on ASD, the level of management practiced and their level of acceptance of adults with ASD as employees or colleagues ($p > 0.05$). It was also found that there is no association between the career fields, types of relationship with persons on the autism spectrum and the level of acceptance ($p > 0.05$). As a conclusion, occupational therapists should play a more active role in supporting these individuals in obtaining and maintaining employment and advocating for the rights to employment as well as eliminating workplace discrimination towards adults with ASD.

Keywords: *Autism spectrum disorder, employment, knowledge, attitudes, Malaysian Employers*

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INTRODUCTION

Autism spectrum disorder (ASD) is a biological neuropsychiatric disorder characterized by impairments in repetitive patterns of abnormal behaviors, interests and activities, as well as in the domains of social communication (Hale & Tager-Flusberg, 2005). The symptoms exhibited by each individual with ASD may differ in types and severity. Most children with ASD are diagnosed during their second year of life as most characteristics of the disorder tend to be present during that stage of life. On the contrary, those who display less severe forms of the disorder may not be diagnosed until the age of 6, when the demands for socialization and communication exceed their capabilities (McConachie et al., 2005). People on the autism spectrum struggle significantly in identifying and reacting appropriately to the emotional expressions of the people around them. This may then be a possible factor that hinders people with ASD from communicating and socializing effectively in their social environments (Bilstedt, Gillberg & Gillberg, 2007). Research has also shown that symptoms of autism spectrum disorder gradually improve over time and rarely deteriorate as the child continues to develop and grow (Taylor & Seltzer, 2010).

Chakrabarti and Fombonne (2001) claimed that the number of cases of autism spectrum disorder has increased from 4 cases per 10,000 children to 6 cases per 1,000 children as of present day. Statistics has also shown that nearly one in every 160 children are born with autism spectrum disorder, which is equivalent to one, perhaps two percent of the world population that are made up of individuals who are on the autism spectrum (United Nations News, 2017).

Common behavioral symptoms exhibited by adults on the autism spectrum are such as anxiety, aggression, irritability, disturbed sleep and visual, tactile and auditory hypersensitivity which may negatively impact their social and work performance (Sukhodolsky et al., 2008). Studies have also reported that individuals with severe ASD are more likely to be associated with intellectual disabilities and poorer performance in the area of academics (Charman, et al., 2011). Statistics have shown that 70% of these

individuals have at least one current psychiatric disorder, the most common disorders being ADHD, emotional and behavioral disorders such as oppositional defiant or conduct disorders (62%). Other equally significant psychiatric disorders are such as Tourette syndrome, anxiety and phobic disorders, and depressive disorders (Simonoff et al., 2008).

Despite the various services put into practice to help alleviate the seriousness of the issues related to unemployment and workplace discrimination, only a small proportion of people with disabilities benefit from these assistances (Disability Research Series, 2005). Research conducted has shown that individuals with ASD face many obstacles in getting employed as well as in maintaining employment (Nord, Stancliffe, Nye-Lengerman & Hewitt, 2016). As a consequence, many of the adults on the autism spectrum disorder end up being dependent on others for various forms of support. Ameri et al. (2015), have also found that employers are often disinterested in hiring adults with disabilities, even when the disability does not in any way limit the employees' work performance. Therefore, the objective of this study was to study the knowledge and attitudes among Malaysian employers in accepting adults with ASD as employees or colleagues.

MATERIALS AND METHODS

Sampling

The study population required for this study was calculated using the Power and Sample Size (PS) Program Version 3.1.2. The required sample size is 145 respondents in order for the study to be significant (power = 0.8).

Site and population selection

The respondents for this study were recruited using convenience sampling. Questionnaires and consent forms were distributed to the potential subjects who have fulfilled the inclusion criteria and were willing to participate in this study. The respondents were recruited from the Malaysian Employers Federation National Conference 2018, seminars in Affin Hwang Capital, and

family, friends and acquaintances of the investigators.

Data collection

The period of time allocated for the collection of data was 4 months, which was from September 2018 until January 2019.

The first step of the study was to obtain the approval for the study from the Ethics Committee of Perdana University after the preparation of the proposal for the study. Then, the collection of data was proceeded. Hard copy questionnaires were distributed to friends, family members and acquaintances, which was then further disseminated to other managers in their contacts. Investigators were also present in the Malaysian Employers Federation National Conference 2018 and seminars conducted for the employers in Affin Hwang Capital. People who have met the inclusion criteria during the period of data collection were taken into consideration to participate in the study.

Data analysis

The data obtained were then perused before they were backed up into the computer as well as a flash drive. The data were then analyzed and tabulated using the IBM SPSS Statistics software version 23.0.

Ethical consideration

This research has been granted the approval from the Perdana University IRB Committee (PU IRBHR0184). A consent form was prepared and given to the samples before collecting data.

RESULTS

A total of 163 subjects were recruited from September 2018 till January 2019. However, only 145 responses are taken into consideration as there were 18 incomplete survey forms, hence the exclusion of those responses from this study. The demographic details of the participants who took part in the study are described in the following table.

TABLE 1: Descriptive analysis of demographic variables of participants.

No.	Variables	Groups	n	Percentage (%)
1.	Age	18 – 24	6	4.1
		25 – 34	42	29.0
		35 – 44	45	31.0
		45 – 54	42	29.0
		55 – 64	10	6.9
2.	Gender	Male	49	33.8
		Female	96	66.2
3.	Ethnicity	Malay	59	40.7
		Chinese	64	44.1
		Indian	10	6.9
		Others	12	8.3
4.	Level of Education	Standard 6	1	0.7
		Form 5 of O-levels	2	1.4
		STPM or Pre-University	2	1.4
		Diploma	20	13.8
		Degree	98	67.6
		Masters	21	14.5
		PhD	1	0.7
5.	Marital Status	Single, never married	37	25.5
		Married	93	64.1
		Divorced or separated	15	10.3
6.	Income	Less than RM 2, 500	1	0.7

		RM 2, 500 to RM 5, 500	27	18.6
		RM 5, 500 to RM 7, 500	27	18.6
		RM 7, 500 to RM 10, 500	33	22.8
		More than RM 10, 500	57	39.3
7.	Career Fields	Agriculture, food and natural resources	1	0.7
		Business, management and administration	86	59.3
			11	7.6
		Communications and information services	6	4.1
		Engineering, manufacturing and technology	2	1.4
		Health science and technology	35	24.1
		Human services Self-employed	4	2.8
8.	Level of Management	Low-level	60	41.4
		Middle-level	69	47.6
		Top-level	16	11.0
9.	Number of years of work experience	Less than 2 years	5	3.4
		2 – 5 years	14	9.7
		5 – 8 years	20	13.8
		8 – 10 years	16	11.0
		More than 10 years	90	62.1
10.	Recent contact with someone with ASD in the last 30 days	Professional	5	3.4
		Family or friend	38	26.2
		Onlooker	3	2.1
		Never had contact with one in the last 30 days	42	29.0
		Never had contact	57	39.3
11.	Number of sources of mental health information	1	62	42.8
		2	30	20.7
		3	30	20.7
		4	12	8.3
		5	5	3.4
		6	6	4.1

Relationship between knowledge in ASD and the level of acceptance of adults with autism as employees or colleagues among Malaysian employers

TABLE 2: Spearman’s Rho test of Correlation Coefficient.

		Quiz Score	Willingness to work with ASD individual in the future	
Spearman’s Rho	Quiz Score	Correlation Coefficient	1.000	-0.069
		Significance (2-tailed)	-	0.410
		N	145	145

There was a strong, negative correlation between the two variables, $\rho = -0.690$, $n = 145$, $r^2 = 47.61\%$, and $p > 0.05$, with higher quiz score or more knowledge in ASD among employers associated with poorer acceptance of adults with autism as colleagues or employees.

Relationship between the career fields of Malaysian employers and the level of acceptance of adults with autism as employees or colleagues

TABLE 3: Pearson Chi-Square value

	Value	df	Asymptotic significance (2-sided)
Pearson Chi-Square	27.114	30	0.617
Likelihood ratio	25.516	30	0.700
Linear-by-Linear association	3.298	1	0.069
N of valid cases	145		

TABLE 4: Symmetric measures using Phi Coefficient.

	Value	Approximate significance
Phi Coefficient	0.432	0.617
N of valid cases	145	

The results indicated no significant association between the type of career fields and the level of acceptance of adults with autism as employees or colleagues among Malaysian employers, $\chi^2 = (30, n = 145) = 27.114$, $p = 0.617$, $\phi = 0.432$.

Relationship between the level of management of Malaysian employers and the level of acceptance of adults with autism as employees or colleagues

TABLE 5: Spearman's Rho test of Correlation Coefficient.

		Level of management	Willingness to work with ASD individual in the future	
Spearman's Rho	Level of management	Correlation Coefficient	1.000	-0.057
		Significance (2-tailed)	-	0.497
		N	145	145

There was a small, negative correlation between the two variables, $\rho = -0.057$, $n = 145$, $r^2 = 0.32\%$, and $p > 0.05$, with lower levels of management practiced among employers associated with higher levels of acceptance of adults with autism as colleagues or employees.

Relationship between the type of contact with persons with autism and the level of acceptance of adults with autism as employees or colleagues among Malaysian employers

TABLE 6: Pearson Chi-Square value

	Value	df	Asymptotic significance (2-sided)
Pearson Chi-Square	19.407	20	0.496
Likelihood ratio	21.577	20	0.364
Linear-by-Linear association	2.421	1	0.120
N of valid cases	145		

TABLE 7: Symmetric measures using Phi Coefficient.

	Value	Approximate Significance
Phi Coefficient	0.366	0.496
N of valid cases	145	

The results indicated no significant association between the type of relationship with individuals with autism and the level of acceptance of adults with autism as employees or colleagues among Malaysian employers, $X^2 = (20, n = 145) = 19.407, p = 0.496, \phi = 0.366$.

DISCUSSION

Correlation between employer’s knowledge about ASD and their level of acceptance of adults with ASD as employees or colleagues among Malaysian employers

The results indicate a strong negative correlation between the employers’ knowledge about ASD and their level of acceptance of adults with autism as employees or colleagues. This suggests that the more knowledgeable an employer is about ASD, the more unlikely it is for him or her to employ an adult on the autism spectrum. Previously conducted studies by Sharma et al. (2006), Othman (2013), and Ta et al. (2011) supported this finding, proposing that employers who are familiar with ASD are skeptical about how the disorder may negatively impact the individual’s work productivity and quality, which then results in the increase of the organization’s expenditure in resources and training costs.

However, Time to change, a mental health movement, conducted a series of studies about

the public’s attitudes and perception towards mental disorders. The most recent study suggested an increase in the percentage of the public accepting and tolerating workers with mental disorders in their workplaces (from 16% in 2008 to 21% in 2014) and a decrease in the percentage of precluding individuals with mental disorders from work responsibilities (from 15% in 2008 to 11% in 2014). Similarly, Alexander and Link (2003) claimed that people with higher knowledge about mental disorders display significantly less negatively-biased preconceptions. Their study also found that those who are more familiar with issues of mental illness have less desire to distance themselves from those with mental disorders.

Association between career fields and the level of acceptance of adults with ASD as colleagues or employees among Malaysian employers

Results suggest that there is no association between the types of career fields and their level of acceptance of adults with ASD as colleagues or employees among Malaysian employers. This indicates that no specific occupational fields are more accepting of or discriminating against adults with ASD. Williams (2017) explains the paradigm shift from focusing on the impairments to acknowledging the benefits of preferred interests of individuals with ASD, however

restricted these interests may be. She claims that these interests can result in favorable outcomes in work performance. Employers who provide the right means of channeling the interests of workers with ASD in their job tasks can help these employees be successful professionals in their fields of work and thus improve their overall quality of life.

The results obtained from this study also concurred with that of The Foundation for People with Learning Disabilities (2011), who claims that no one specific occupational field is more favorable of hiring employees with ASD. Instead, workers on the autism spectrum can work in various occupational fields, ranging from arts and crafts to scientists or statisticians. Apart from paying close attention to details and having high levels of accuracy in performing work tasks, employees with autism are generally known for their loyalty, dependability and meticulousness.

Correlation between the level of management practiced by employers and their level of acceptance of adults with ASD as employees or colleagues among Malaysian employers

The results indicate a small negative correlation between the level of management practiced by employers and their level of acceptance of adults with autism as employees or colleagues. This suggests that lower-level management employers are more likely to accept and employ adults on the autism spectrum. This outcome is supported by McCary (2005), who suggested that employers from higher-level managements show concerns regarding the costs of various accommodations and modifications to the work environment that are required to enable persons with special needs perform at work, the lengthy training time, issues relating to frequent absenteeism, and poor tolerance of other colleagues, which may have adverse effects on the organizations' overall productivity and expenditure. A study by De Waal (2001) has also produced similar findings, adding that employers are doubtful of the abilities to be flexible and follow directions among adults with ASD, as well as the additional supervision required to monitor the quality of their work which place unnecessary burdens on other coworkers and

organization. Based on a study by Shanker et al. (2014), it was found that lower-level managers are more likely to employ adults with autism in their departments but are unable to do so due to pressures from higher-level managers to prioritize the work performance of their workers which impact the overall productivity of their departments.

Association between the type of relationship with individuals with autism and the level of acceptance of adults with ASD as employees or colleagues among Malaysian employers

The results indicate that there is no association between the type of relationship with individuals with autism and the level of acceptance of adults with ASD as employees or colleagues among Malaysian employers. Cage, Di Monaco and Newell (2018) stated that even professionals such as clinicians, therapists and educators who regularly work with individuals on the autism spectrum display implicit negative biases, which unconsciously affects their judgements, actions, decisions and understanding towards ASD. While many family members have openly accepted the diagnoses relating to mental illness and have shown ample support towards the individual with mental illness in the forms of moral and practical support, some family members are more reluctant in accepting these individuals. Alienating and excluding these individuals are common forms of rejection among family members. Family members may also be more judgmental towards individuals with mental disorders, as well as belittling them and limiting their participation in family activities for fear of damaging the families' reputation. Individuals with autism have also reported to having more close friends than family members, and have admitted that they prefer opening themselves up around their friends. People who have had previous contact with individuals on the autism spectrum have been associated with better understanding and acceptance towards autism, as well as acknowledging the potentials of individuals with ASD, such as their ability to lead independent lives (Cage, Di Monaco, & Newell, 2018). Henderson et al. (2014) claimed that people with

previous contact with individuals with autism are generally display more positive attitudes and behaviors towards autism. Typically developing children and adults with no previous contact with people on the autism spectrum have described these individuals as more socially awkward, unpleasant and unappealing (Morrison et al., 2019).

A study conducted by Edyvean (2009) found that people who have spent more time around individuals with autism are more willing to be around them rather than avoid them. Overton and Medina (2008), and Shanker (2014) also agreed with the findings, claiming that people who have more interpersonal relationship with those on the autism spectrum are less likely to discriminate against adults with ASD. Employers who have family members or previous employees with mental illnesses react more positively towards employing and accommodating workers with mental illnesses by offering training opportunities and providing supervision for these trainees who are either preparing to or returning to work. On the other hand, employers who have had little to no contact with individuals with mental disorders still held onto their negative stigma and ideas, claiming that these individuals lack trustworthiness and competitiveness in carrying out their work responsibilities (Shanker, 2014).

LIMITATIONS

The results obtained in this study are not statistically significant at 95% confidence level ($p < 0.05$). This may be due to selection bias, or bias that occurs during the process of participant recruitment. The data obtained for this study are done so using self-selection convenience sampling, where participants decide if they want to be a part of the study. Hence the results may not be generalizable to the employer community in Klang Valley.

CONCLUSION

Employment is just as crucial a milestone in life for adults with ASD as it is for adults with neurotypical development. Not only do obtaining and maintaining meaningful employment help

sustain one's basic needs in life, they also help boost one's self-confidence and enhance the overall quality of life. Transitioning to work and employment are among the fundamentals of occupational therapy services, hence occupational therapists play a crucial role in assisting and supporting these adults in entering into the workforce and maintaining employment. Along with other healthcare providers, occupational therapists should actively advocate for adults with autism. Advocating for the rights to employment as well as to eliminate workplace discrimination and alienation can boost the employment rates of adults with autism and enhance productiveness at work. Healthcare professionals should work together in eradicating the negative stigma and misconceptions attached to ASD.

Significance of Study

This study aims to better identify and understand the impact Malaysian employers' demographic variables and knowledge on autism spectrum disorder have on their level of acceptance of adults with ASD as employees or colleagues. This will enable occupational therapists and other professionals who directly and indirectly assist in the employment of adults with autism spectrum disorder to better understand the factors that facilitate and hinder the employment of adults with ASD. With this study, various healthcare associations can also aim to increase the awareness of autism spectrum disorder among the Malaysian citizens, in order to increase employment opportunities for adults with ASD in the near future.

Key findings

Despite their many capabilities, persons with ASD are often denied inclusion in the workforce.

Employers and their views on ASD are considered the chief barrier that hinders employment among individuals with ASD.

Along with other healthcare providers, occupational therapists should actively advocate for adults with autism.

What the study has added

This study provided data that help healthcare professionals understand the current knowledge and attitudes of Malaysian employers towards accepting adults with ASD as employees or colleagues. This understanding can then help provide structure and guide future interventions directed at improving the employment rates among adults with ASD.

Research ethics

This study was approved by the Perdana University Institutional Review Board (PU-IRB) under the record number PU-IRBHR0184 in 2018.

Consent

The aim and procedures of the study were explained verbally and were stated on the consent forms, and informed consent was obtained from the individuals who voluntarily agreed to participate in the study.

Declaration of conflicting interests

The authors confirm that there is no conflict of interest.

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