

## Higher Institution Students' Level of Awareness, Knowledge and Attitudes towards People with Down Syndrome

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### ABSTRACT

*People with Down Syndrome (PWDS) are disabled people who a part of the biggest minorities of the society. The main problems faced by them are exclusion from community, discrimination and prejudice. To live with dignity is deemed as a basic right for everyone. Awareness, knowledge and attitudes (AKA) among the general population regarding PWDS vary widely between different countries. In the developed world, public attitude towards PWDS has greatly improved over the years resulting in more favourable social environment. Nevertheless, cultural beliefs and lack of information about PWDS still exist in developing countries. A higher level of education correlates positively with AKA concerning. University students represent a better-educated group of society and it is important that they possess the correct AKA towards disable people. The aim of this study was to determine the current level of AKA among students at a private university in Malaysia. Quantitative Exploratory Research Approach with cross-sectional survey design was the methodology used in this study. The study was conducted within the main campus of the Stanford International College, Penang, Malaysia. It detected that nearly 50 percent of the students were still uncertain on their attitude toward people with PWDS. The results should trigger alertness that much need to be done for our young generation to possess high emotional intelligent. However, the evidence is restricted due to research limitations, including poor measurement, self-selection bias and time constraint.*

**Keywords:** down syndrome, Students, AKA, disability.

### INTRODUCTION

In the developing countries, the World Health Organisation (WHO) indicated that the number of PWDS is between 5 to 10 per cent of the population (Ta L.T, Wah LL et al., 2011). In Malaysia, highlighted that the registered number of disability cases raised steadily over the last five years (Lee Ng L, Abdullah Y et al., 2011). At the national level in Malaysia, more than 600 new cases of PWDS in children are reported annually (Abdullah, M. N. L. Y., & Mey, et al., 2011). Cases of PWDS accounts for almost 40% of the cases of moderate to severe learning disabilities and is a lifelong condition (Yeo Kee, Lina Handayani, & Lu Xi, 2014). This research aims to determine the level of awareness, knowledge, and attitudes (AKA) towards PWDS amongst students. The lack of awareness towards PWDS can contribute to a negative attitude of society, especially among future generations. Community-based studies have reported that better-educated individuals should offer more favourable opinions and suppose to display positive attitude toward disabled people. University students represent a better-educated section of society and are the future workforce of the country. They are a group of individuals who have the potential to become role models for the society. Thus, it is important that they have the correct knowledge and appropriate attitude towards disabled people.

The research on AKA towards PWDS in multi-ethnic Malaysia is still unsupportive (Yeo Kee, Lina Handayani, & Lu Xi, 2014). Even though the research has shown that a person with disabilities possesses and display talent, enthusiasm, and determination to succeed in any activity despite all the challenges faced, and if they are given the opportunity, they can be valuable contributors to work productivity (Ta L.T, Wah LL et al., 2011). There is a possibility that they can exceed the non-disabled workers in productivity (Findler, Y. K, et al., & Yeo Kee, Lina Handayani, and Lu Xi, 2014). This study will help the researchers to identify the right suggestions according to the needs of AKA among students in higher learning institution to become future leaders who should not only be intellectually intelligent, but also emotionally intelligent.

## LITERATURE REVIEW

In 2014, it was recorded that there were 29,403 Malaysian people with Down Syndrome (PWDS), and the life expectancy for PWDS has increased dramatically in recent decades - from 25 in 1983 to 60 in 2014 (Jiar, Y. K, et al., 2014). Medical findings shown that despite having a longer life expectancy, at least half of all children and adults with Down syndrome face major mental health concerns during their lifespan and limitations in social skills and learning abilities. The advocacy of and champions for disability issues and the rights of PWDS in Malaysia are still not strong enough to push for their well beings (Ta L.T, Wah LL et al., 2011).

Students born in the 1980s and 1990s, also known as Millennials, are the generation that come after generation X. They are also known as Echo Boomers, Internet Generation or Nexters (Armour S., 2009). Those aged from 15 to 34 shows the biggest quota of the residents, which counted to 10.8 million or 38.2% of the population (Armour S., 2009). Malaysia is a young country and our population progress is in a fine fettle upright triangle and today, students, on the negative side, have been described as lazy, self- admiring, and prone to change jobs easily (Liao, Chun Cheng, et al., 2015). Further the article highlighted that students are easily influenced by technology, the students are more civically and politically disengaged, dedicated more towards materialistic values, and not interested to help the society (Liao, Chun Cheng, et al., 2015). However, he also revealed on the positive side in which, the students have high self-expectations as they work faster than others, also always seek challenges and consider their social groups as vast resources to gain knowledge. PWDS unsurprisingly will get less attention amongst the students since this group of people are different from normal. Their movement and mental disabilities are slower than others.

However, PWDS are also a part of the community and thus, this group of society should be treated positively. Positive attitudes towards PWDS may lead them to have a better life in society. The major challenge of PWDS to have a good quality life like others is when the community makes it hard for PWDS to be included. The level of the social support system may help PWDS people to improve their conceptual skills that are language, reading and writing (Jiar, Y. K, et al., 2014). Attitudes play an important role in achieving success and defending their social right among PWDS people. From the knowledge gained, it can create more awareness towards people with Down syndrome. The negative attitude towards people with PWDS happens from the lack knowledge among students and community (Jiar, Y. K, et al., 2014). A survey on communities in US, Europe and Middle East reveal negative attitudes on communities toward PWDS still persist (G. Al-Kindi, S. et al., (2012). In Malaysia, students AKA towards people with PWDS is still lacking (Jiar, Y. K, et al., 2014).

### Awareness

Early awareness about PWDS amongst students is imperative to ensure that this generation will open their eyes towards disabled people. The level of awareness amongst students can be increased through education (Norizan, A. & K. Shamsuddin, 2010). The level of education that students have may lead to the way they will treat people with Down Syndrome (Palad, Yves Y. et al.,

2016). A high level of education can prevent negative perception in the students about PWDS (Pitetti, Ken et al., 2014). Education about awareness towards people with Down Syndrome should be exposed to the people at the early stage of their education. The attitude towards people with Down comes from the students' awareness and knowledge (Pitetti, Ken et al., 2014). He further emphasized that it is important for the generation to have enough of knowledge and information towards people with Down syndrome. A lack of knowledge or understanding towards people with PWDS, students feel uncomfortable when communicating with people with PWDS (Palad et al., 2016). Research shown that self-awareness among students towards PWDS will appear at significantly verbal mental ages (Pitetti, Ken et al., 2014). He further mentioned that the awareness and levels of awareness can be significantly related to verbal mental age. Awareness and associated reactions might happen due to social factors and events example likes parent activities, life events and experiences and also from socio demographic (Pitetti, Ken et al., 2014).

### **Knowledge**

It is important for students to have knowledge about people with Down Syndrome in order to avoid negative perceptions towards these group of people. Without knowledge, they will not be able to understand about the behaviour, thought and mind of people with Down Syndrome. Thus, this will lead to negative perception towards them. In actuality, normal people should be able to interact well with people with PWDS if they have enough knowledge about Down syndrome (Antonak & Livneh, 2000; Pace et al., 2010, Ryan, Travis A., & Katrina Scior, 2014). Education about PWDS could also help to reduce students-level barriers such as integration of PWDS into everyday contexts like school and the workplace (Antonak & Livneh, 2000; Pace et al., 2010, Rajabi, Maryam, et al., 2012). It is important for students to have knowledge about physical, especially facial, and cognitive manifestations of PWDS, and the causes of Down syndrome (Antonak & Livneh, 2000; Pace et al., 2010). Understanding in details about all PWDS related matters such as their characteristics is very important. The negative attitudes towards people with PWDS definitely will influence the success of special education for PWDS (Monroe, Day, & Grieser, 2000). Education about DS could also help to reduce student-level barriers, such as the integration of PWDS into everyday contexts like school and the workplace (Seccombe, Judy A, 2007).

### **Attitude**

Attitudes are the basis of how students behave (Daruwalla, Pheroza, and Simon Darcy, 2005). PWDS need to be treated nicely by normal people because negative attitudes towards PWDS will affect their emotions and confidence. It is believed that self-efficacy is considered as a future-oriented belief concerning the level of competence an individual might display in a certain situation and which could affect thoughts and emotions (Uysal, Aynur, Bağdat Albayrak, et al., 2014). Students especially need to show a positive attitude towards PWDS. Some researchers have evaluated the attitudes of students about PWDS from the perception of the general public. One study in United Kingdom said that most students agreed that PWDS are treated differently (Daruwalla et al., 2005). Besides that he added, the students think that PWDS also could not properly get an education and be employed. Enough information about PWDS might lead to positive attitude and educate students to mind their attitude towards PWDS. In addition, research on public understanding and attitude toward PWDS in Malaysia and between its races is lacking (Jiar, Y. K, et al., 2014). An assessment of the level of understanding and attitudes among the general community would help to press the point and identify the efforts for increasing awareness and eradicating misinformation about PWDS in a more targeted and effective manner. This is crucial in helping to advance the development of a healthy social system and in creating a better prospect for PWDS in a setting where prejudice or discrimination toward them arises unconditional.

## MATERIALS AND METHODS

This study is a quantitative research using convenience sampling techniques. Cross-sectional Survey design was used to conduct this study. It is an exploratory study. The obtained data were coded, analysed and tabulated with the help of SPSS Version 22. Descriptive and inferential statistical techniques were used to analyse the data. Population size used for this study, approximately 236 sample, are students from Stanford International College. The sample size is determined by using table of sample size for a given population size (Sekaran, 2009).

**Table 1: Sample Size for a given population**

<b>N</b>	<b>S</b>
200	132
210	136
220	140
230	144
<b>236</b>	<b>148</b>

### Objectives

- Assess the socio-demographic data of subjects
- Determine the level of AKA among the students in Stanford International College

### Data Collection

Section A: consists of socio-demographic data; It included demographic characteristics such as age, gender, marital status, educational level and occupation. Section B: Awareness, Section C: Knowledge and Section D: Attitude. The measurement used is interval scale. The interval scale allows researcher to perform certain arithmetical operations on the data collected from the respondents. To measure the level of awareness, knowledge and attitude towards people with PWDS among students in Stanford International College the researcher used these: statement strongly disagree, disagree, neutral, strongly agree and agree.

### Data Analysis

The data was analysed by using statistical software tool, Statistical Package Social Science Program (SPSS) version 22.0. The primary data collected from the respondents was analysed by using this software.

### Reliability Analysis

**Table 2: Summary of Reliability Results**

<b>Item</b>	<b>Alpha Value</b>	<b>Internal Consistency</b>
<b>Social Demographic Characteristics</b>	0.492	Poor
<b>Awareness</b>	0.786	Good
<b>Knowledge</b>	0.800	Good
<b>Attitude</b>	0.669	Moderate

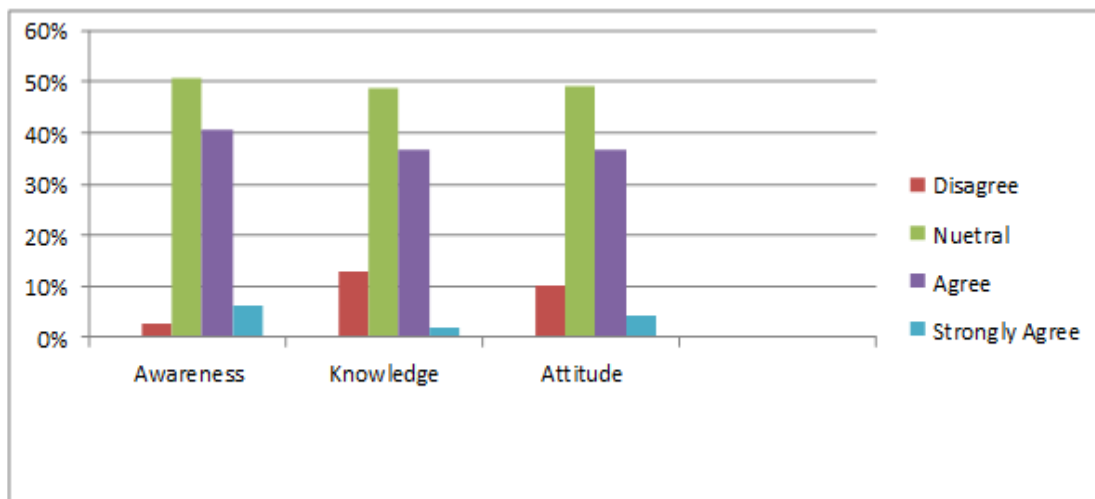
Cronbach's Alpha value for the dependent variables, which were social demographic characteristics, was 0.492. The result was <0.6 which indicated a poor relationship. From the table

above, the Cronbach's Alpha for awareness that consisted of 4 items was 0.786. It shows a good strength of association, which was reliable for the asked questions. Thus, the independent variable used was acceptable. Then, the reliability test for the knowledge variable was 0.800, which consisted of 5 items. This also shows a good strength of association, which means it was usable to ask questions in the questionnaire. This means that the variable used in the questionnaire was acceptable. Lastly, the reliability test for the attitude variable, which consisted of 5 items, was 0.669. It shows a moderate strength of association, which was reliable for the asked questions.

### Descriptive Analysis

The study used the SPSS as a medium to transform the raw data into a form which would provide information.

**Table 3: Graph Shows Frequency of Descriptive Analysis.**



In table 3, it shows that most of the respondents disagreed with the statement regarding awareness towards PWDS because the percentage was the highest at 50.7%. This shows that the students had a low level of awareness towards PWDS. The percentage of the neutral choice was 40.5%, meaning that the students were not fully aware of Down Syndrome. For knowledge towards PWDS, the highest percentage was 48.6%, which was for the neutral choices. The highest frequency and percentage for the neutral choices meant that most of the respondents were unable to state clearly whether they had enough knowledge about PWDS or not. The highest percentage for attitude was 49.3%, which was neutral, meaning that most of the respondents were unable to decide clearly whether they had a positive or negative attitude towards PWDS. The 'Agree' answer with 36.5%, shows that the respondents could clearly identify their attitude towards PWDS.

The graph shows that from the three main variables, which were awareness, knowledge, and attitude, most of the respondents gave N answers towards the questions in the questionnaire. For the three main variables with the highest percentage being neutral, it meant that most of the respondents were not sufficiently aware of PWDS. The lowest percentage was for strongly disagree, which meant that most of the respondents had less information about PWDS. The graph shows that from the three main variables that are awareness, knowledge and attitude most respondents gave neutral answers towards the question in the questionnaire. For the three main variables with the highest percentage is neutral, which means that most respondents are not aware enough about PWDS. The lowest

percentage is strongly disagree option means that most of respondents have little information regarding PWDS.

## Inferential

The researchers used T-test to compare the means from two different variables of data. Different participants have performed in each group, they are known as independent variable (Veera Pandiyan et.al., 2016). In this study, researchers used independent sample t-test to compare the genders (male and female) because the two groups are independent from one another.

**Table 4: Table of AKA differences based on gender**

Variables	Male n = 64		Female n=84		95% CI		P values
	Mean	Sd	Mean	Sd	Upper	lower	
<b>Awareness</b>	3.84	0.52	3.08	0.59	0.57	0.94	0.707
<b>Knowledge</b>	3.63	0.51	2.93	0.59	0.51	0.87	0.329
<b>Attitude</b>	3.58	4.84	3.09	0.66	0.30	0.67	0.040

Based on the table above, both gender male and female shows the highest score for awareness as stated: mean = 3.84, Standard Deviation = 0.52 and for female mean = 3.08, and standard deviation = 0.59. This shows there was no significant difference between male and female. For the knowledge variable, males did not show significant better knowledge towards PWDS with mean = 3.63 and standard deviation = 0.51 whereas females have better knowledge than male. For attitude male have better attitude towards people with PWDS with mean = 3.58.

**Table 5: Table of AKA based on age**

Variables	20 and below		21-25		26-30		31-35		P values
	Mean	Sd	Mean	Sd	Mean	Sd	Mean	Sd	
<b>Awareness</b>	3.56	0.63	3.30	0.71	3.21	0.65	3.33	0.38	0.479
<b>Knowledge</b>	3.30	0.56	3.20	0.75	3.23	0.54	2.53	0.31	0.253
<b>Attitude</b>	3.33	0.62	3.29	0.68	3.32	0.55	2.93	0.23	0.202

Based on table above shows that, students from the age 20 and below have better awareness with mean=3.56 and sd 0.63 compares to students who age from 21 and above. Again with mean=3.30 and sd 0.56 students whose age from 20 and below have high knowledge compares to students who age 21 and above, it is same for the attitude.

**Table 6: Table of AKA based on religion**

Variables	Muslim		Christian		Buddhist		Hinduism		P values
	Mean	Sd	Mean	Sd	Mean	Sd	Mean	Sd	
<b>Awareness</b>	3.42	0.67	3.51	0.82	3.58	0.72	3.13	0.45	0.240
<b>Knowledge</b>	3.28	0.65	3.24	0.71	3.20	0.72	2.84	0.48	0.432
<b>Attitude</b>	3.28	0.59	3.56	0.77	3.53	0.64	3.00	0.66	0.989

Based on the table above, religion-based comparison shows that Hinduism has the less AKA level compare to Muslim, Christian and Buddhist.

## DISCUSSION ON FINDINGS AND CONCLUSION

The purpose of this research is to explore the level of AKA towards people with PWDS among students in higher learning institution. Based on this research, it is shown that the level of AKA towards people with PWDS is still lacking because the results on the three variables are moderate. This is because from the three variables, it indicates the result of uncertain decision. This means that students do not have enough of AKA components towards PWDS. It also reveals that the students are unaware on how to treat PWDS.

The second objective in this research is to assess the AKA level based on socio demographic characteristics. The finding showed that, male have better AKA level compares to female which contradicts with the finding from Ryan, T. A., & Scior, K, which indicated that male mostly will shows negative attitude.

He further emphasized that socio-demographic factors such as age, education and contact with disability people may have significant impact on attitude towards PWDS. Students aged of 21 and below have better attitude than the students of 21 and above. Finally, the comparison based on religion shows that Hinduism has less AKA level compared to Muslim, Christian and Buddhist.

As the conclusion of this research, it show that more need to be done to increase the level of AKA amongst student in higher learning institution. A higher level of AKA especially among the young is critical to facilitate the development of intervention program to protect the community by fighting stigma and ensuring a strong supporting environment for PWDS. A lack of AKA components amongst students towards PWDS may lead to negative perceptions towards the PWDS. High levels of AKA towards PWDS amongst students can contribute to better wellbeing for PWDS. The following are the recommendations to develop public awareness strategies:

- Effective educational program to address social misconceptions and improve understanding on PWDS. Education about DS could also help to reduce student-level barriers, such as the integration of PWDS into everyday contexts like school and the workplace (Seccombe, Judy A, 2007).
- Development of other means of publicity to reach the students especially through social Medias. Actually, normal people are able to going well with people with PWDS if they have enough knowledge about Down syndrome (Antonak & Livneh, 2000; Pace et al., 2010).
- Further studies could include people PWDS and the agencies that serve them in developing studies or intervention aimed to increase awareness.

The questions on why the level of AKA is different based on demographic characteristic should be explored in details. In addition, research on public understanding of and attitudes toward PWDS that is representative of the different parts of Malaysia and among its races is lacking (Jiar, Y. K, et al., 2014). The cross-sectional study revealed that AKA about PWDS is inadequate among the students in higher learning institution.

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