

Work Ability of Employees with Disabilities in Malaysia

Sobhan Lavasani¹, NorWahiza Abdul Wahat^{2*}, Adriana Ortega²

1. Faculty of Educational Studies, Universiti Putra Malaysia (UPM), Malaysia

2. Institute for Social Science Studies (IPSAS), Universiti Putra Malaysia (UPM), Malaysia

ABSTRACT

Purpose: *Based on a sample of employees with disability, this study aimed to: (1) evaluate the construct validity of work ability index (WAI), core self-evaluation scale (CSES) and job in general index (JIG), in order to make a valid and reliable assessment of their work ability, job satisfaction and core self-evaluation; (2) assess their levels of work ability, job satisfaction, and core self-evaluation; (3) investigate the associations of work ability with job satisfaction and core self-evaluation among them; and, (4) determine which demographic characteristics significantly affect the work ability of employees with disability.*

Methods: *The sample consisted of 275 employees with disability. Data was collected using a self-administered survey. The analysis focussed on: (1) CFA- for evidence of the construct validity of the employed scales; (2) Descriptive analysis - for evaluating the variables of the study; (3) Pearson correlation analysis – for understanding the simple correlation between variables of the study; and, (4) One-way ANOVA- for identifying the demographic factors that influence the work ability of employees with disability.*

Results: *The findings indicated that 29.5% of the participants had poor levels of work ability, while 35.3% reported moderate levels of work ability. Also, 49.1% of the participants reported moderate levels of core self-evaluation, and 70.5% exhibited high job satisfaction. In this study, work ability was found to be associated with core self-evaluation and job satisfaction. Significant differences in work ability levels were found in terms of age, level of education and employment status of the respondents.*

Conclusion: *Work ability among employees with disabilities did not seem to be influenced merely by individual health status. Attitudinal and dispositional factors appeared to have a significant impact on their levels of work ability. The potential positive impact of education and employment status on employees' levels of work ability are highlighted in this study.*

* **Corresponding Author:** Nor Wahiza Abdul Wahat, Institute for Social Science Studies (IPSAS), Universiti Putra Malaysia (UPM), Malaysia. Email: norwahiza@gmail.com

Keywords: Employees with disability, work ability, core self-evaluation, job satisfaction, education, employment status

INTRODUCTION

In the South East Asia region, the well-being and quality of working life (QWL) of employees with disability continues to be a marginalised human resource issue. However, there is a growing awareness and interest in understanding the needs and expectations of employees with disability in Malaysia. This paper presents the preliminary findings of the first study on work ability of employees with disability.

The actual proportion of people with disability in Malaysia is not known. The most recent statistics available from the Department of Social Welfare Malaysia (DSW), regarding the categorical number of registered persons with disabilities, indicates that 1.16% of the total population lives with disability, that is, about 314,247 people (Abdullah & Arnidawai, 2013). In addition to these incomplete records, there is also no standard definition in Malaysia for the term 'people with disabilities'. However, in an effort to provide better services for them, Malaysian people with disabilities are categorised on the basis of the impairment that they reported when they registered with the DSW. The current distribution of disabilities recorded by DSW in 2013 is described in Table 1.

Table 1: Categories and Distribution of Disabilities

Type of Disability	Description (Types of Persons with Disabilities)*	Number of Persons with Disabilities registered**	%
Hearing Disability	Individuals who are unable to hear clearly without hearing aids or unable to hear even with hearing aids.	55517	11.95
Visual Disability	Individuals who are visually impaired or have low vision in either one eye or both eyes even with visual aids such as spectacles or contact lenses.	42909	9.22
Physical Disability	Individuals who are suffering from inability of the body to function normally, either caused by bodily defect or injury.	153918	33.10

Learning Disorder	People with Down syndrome, inert, intellectual disabilities, autism, Attention Deficit Hyperactive Disorder (ADHD), specific learning disabilities (dyslexia, dyscalculia, dysgraphia) and global development delay fall under this category.	170809	36.74
Speech Disorder	Individuals who are able to hear but have speech problem.	2725	0.59
Mental Disorder	An individual who has a severe/chronic mental disorder and has undergone treatment or was given diagnosis by psychiatrist for at least 2 years.	16998	3.66
Various Disabilities	Individuals who have more than one type of disability and are not suitable to be classified under any of the six existing categories. A person with, for example, vision and hearing disabilities will be registered under this category	22091	4.75
Total		464967	

*Adapted from <http://www.spa.gov.my/PortalEng/PersonsWithDisabilities>

** Abdullah & Arnidawai, 2013

According to Ta and Leng (2013), in Malaysia, approximately 8% of the working population live with disabilities, and they are mainly employed in the private sector. In 2008, the Malaysian Government decided that the civil services must allocate 1% of the available jobs to people with disabilities. With this 1% quota policy, it was expected that approximately 14,000 job opportunities in the government sector would have been opened for people with disabilities in Malaysia (Abdullah & Arnidawai, 2013). However, 5 years later, this 1% quota has not been met. The statistics available from the Department of Social Welfare Malaysia reveals that in the government sector only 581 people with disabilities have been employed since 2008 (Ta & Leng, 2013). This failure in integrating people with disabilities into the Malaysian workforce has resulted in an estimated loss in the Gross Domestic Product (GDP) that ranges between USD \$1.68 and US \$ 2.38 million (Khor, 2002).

Active participation of people with disability in the workforce is beneficial to both individuals and society. Equal employment opportunities for people with disability would improve their quality of life and enable them to integrate into society, thereby contributing to feelings of self-worth and self-assurance.

Furthermore, being able to work and support themselves and their families would empower them with a sense of self-sustenance. Enforcing inclusion policies for people with disability would translate into better performance and creativity among employees at work.

The available research indicates that people with disability who are given fair job opportunities are able to perform well and contribute meaningfully towards the organisations' productivity (Haq, 2003; Sharma et al, 2006; Barnes, 2007). However, the data also shows that the proportion of people with disability who have access to job opportunities is lower in comparison to people without disability (Kruse & Schur, 2003; Stapleton & Burkhauser, 2003; Yelln & Trupin, 2003; Schur et al, 2009). Similarly, in Malaysia, the proportion of people with disabilities in the workforce is significantly lower than that of people without disability (Ta & Leng, 2013).

Furthermore, research reveals that people with disability face many difficulties that limit their work performance and impact their quality of working life. For example, employees with disability face discrimination in terms of job security, autonomy, promotion opportunities, payment and decision making (Blanck, 2001; Baldwin & Johnson, 2006; Schur et al, 2009; Khoo et al, 2013; Ta & Leng, 2013). They are also more likely to be hired for unrewarding and undemanding jobs, and are more often employed as part-time or temporary workers (Yelln & Trupin, 2003; Schur et al, 2009; Khoo et al, 2013).

Research, however, suggests that the obstacles and resistance they face are based on negative assumptions, beliefs and stereotypes that society holds about their functional ability, making them targets of discrimination at work and in their communities (Khoo et al, 2013). Accordingly, employees with disability have limited access to education and, when they are employed, they receive little or no training to meet the demands of their jobs. Moreover, people with disabilities often lack the acceptance or support of their co-workers (Colella et al, 2004; Schur et al, 2009). Not surprisingly, employees with disability exhibit more work-related fatigue than their colleagues without disability (Donders et al, 2007; Varekamp & Van Dijk, 2010).

Despite the fact that excluding people with disability from the workforce could result in economic loss for developing nations like Malaysia, employers hold on to their stereotypes and make no attempt to educate themselves about how best to manage employees with disability. Employers are also worried about the

potential negative impact of pre-existing health risks of people with disability on their work performance and productivity, and the possible 'waste' of their organisation's resources on training and health services for employees with disability (Ta et al, 2011a). Thus, lack of understanding and interest on the part of potential employers seems to be the biggest obstacle that prevents people with disability from joining the workforce in Malaysia (Sharma et al, 2006; Ta et al, 2011a; Othman, 2013; Ta & Leng, 2013).

Work Ability

According to Ilmarinen (2009), Work Ability refers to the balance between work and personal resources. Personal resources include an individual's health, functional abilities, competence, value, and attitude; and work demands consist of content and context of work, working environment, the organisation of work, etc. (Ilmarinen, 2009). The concept of Work Ability was developed by the Finnish Institute of Occupational Health (FIOH) in the early 1980s, as a generic evaluation of the productive capacities of employees as a function of their current health status and their psychological resources (Ilmarinen & Rantanen, 1999; Pohjonen, 2001). Therefore, most research on work ability has been conducted within the western cultural and work context to identify best predictors of work ability among ageing employees and those who have returned to work after serious illness or work-related injuries (Karpansalo et al, 2004; Berg et al, 2008; Kenny et al, 2008).

Work ability has been typically measured by the Work Ability Index (WAI), developed by the Finnish Institute of Occupational Health (Ilmarinen et al, 1991; Tuomi et al, 1998). The WAI was developed to evaluate how well workers perform in their current job, taking into account the specific psychosocial and physical work-related factors, mental and physical capabilities and health (Tuomi et al, 1991; Ilmarinen et al, 1997). The Work Ability Index (WAI) consists of seven items that measure the: (1) subjective estimation of current work ability compared with lifetime best, (2) subjective work ability in relation to the physical and mental demands of work, (3) number of diagnosed diseases, (4) subjective estimation of work impairment due to diseases, (5) sickness absenteeism during the past year, (6) own prognosis of work ability after 2 years, and (7) psychological resources (e.g. job satisfaction, individual motivation and values).

The assessment of work ability can also contribute towards developing policies that would enable the empowerment of employees with disability in Malaysia. To the authors' knowledge, there is a lack of research focussed on the evaluation

of work ability among people with disability, and the possible association with individual subjective factors such as job satisfaction and core self-evaluations (CSE). However, assessing the work ability of people with disability could provide relevant information to address employers' concerns regarding their employees with disability, as well as the employees' misconceptions in terms of their abilities and competencies to face work demands, quality of their work performance, and potential health risks.

Research data suggests that employees' work ability is associated with a number of factors such as individual dispositional characteristics, psychosocial aspects of the work environment, occupational and social related characteristics (Gould et al, 2008; Hasselhorn, 2008; Nordenfelt, 2008; Tengland, 2011; Airila et al, 2014). For example, having a positive attitude towards the job could ensure the maintenance of work ability among employees (Gould et al, 2008). In addition, a positive self-view and healthy self-esteem can impact positively on employees' work ability (Airila et al, 2014).

Job Satisfaction

Job satisfaction or employee satisfaction has been defined in many different ways. It was initially defined by Locke (1976) as *"a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences"*. Similarly, the most recent definition provided by Weiss (2002) describes job satisfaction as the positive appraisal that employees make of their job or particular job situation. Thus, job satisfaction in organisational research and practice is defined simply as the employees' reflections on whether or not they like their jobs, or certain facets of their jobs (e.g., nature of work, supervision, co-workers). This definition is in line with the ones provided by both Locke (1976) and Weiss (2002). Employees' job satisfaction has been associated with different organisational factors such as organisational commitment, intention to quit, work ability and employees' well-being (DeConinck & Stilwell, 2004; Ilmarinen et al, 2005; Gould et al, 2008; Rutherford et al, 2009; Keller & Semmer, 2013). Although a few studies have explored job satisfaction among employees with disability, the impact of disability on job satisfaction has not been investigated. According to the findings of the few studies on job satisfaction among people with disabilities, these employees exhibited low job satisfaction (McAfee & McNaughton, 1997a, 1997b; Burke, 1999; Uppal, 2005). In addition, poor job satisfaction among employees with disabilities was found to be associated with the working conditions and workplace characteristics (Uppal,

2005). Balsler and Harris (2008) also reported that poor working conditions and low job satisfaction were significantly associated with employees with disabilities; and suggested that if accommodation at the workplace was poor or unsuited to the needs of employees with disabilities, it impacted significantly on their job satisfaction. However, in contrast to this finding, Hansen and Nielsen (2008), Pagán and Malo (2009), and Hashim and Wok (2014) indicated in their studies that employees with disability reported high levels of job satisfaction. Pagán and Malo (2009) also suggested that disability could increase job satisfaction among employees with disability because they usually have low expectations about securing a job and consequently feel happier at work when they do get jobs.

Core Self-Evaluations (CSE)

Core self-evaluation is the fundamental appraisal which individuals make about their self-worth and capabilities (Judge et al, 1997). Judge and his colleagues (1997) developed the theory of core self-evaluation to explain how individual personality traits have a significant impact on job satisfaction. They stated that individuals' core self-evaluation can directly and indirectly influence employees' outcomes. Moreover, it was suggested that core self-evaluation is conceptualised to be reflected by core, broad and evaluative personality traits including self-esteem, generalised self-efficacy, locus of control and emotional stability as a higher order construct (Judge et al, 2000).

The theory of core self-evaluation was not only used to explain the relationship between employees' core self-evaluation and job satisfaction, but was also frequently employed to interpret the relationship between employees' core self-evaluation and job performance (Erez & Judge, 2001; Judge & Bono, 2001; Song & Chathoth, 2013), employees' income and objective career success (Judge & Hurst, 2008; Judge et al, 2009), subjective career success (Wahat, 2011), career commitment (Zhang et al, 2014), subjective well-being (Montasem et al, 2013), job engagement (Rich et al, 2010), organisational commitment (Joo et al, 2012) and entrepreneurial orientation (Simsek et al, 2010). Hence, the possibility of an association between employees' core self-evaluation and work ability seems to be rational.

Given the lack of research data on work ability, job satisfaction and core self-evaluation among employees with disabilities in Malaysia, this paper seeks to: (1) evaluate the construct validity of work ability index (WAI), core self-evaluation scale (CSES) and job in general index (JIG), to make a valid and reliable assessment

of work ability, core self-evaluation and job satisfaction in a sample of employees with disabilities; (2) measure the level of work ability, job satisfaction, and core self-evaluation of employees with disabilities; (3) assess the associations of work ability with job satisfaction and core self-evaluation among employees with disabilities; and, (4) determine which demographic characteristics significantly affect the work ability of people with disability.

METHOD

The study was cross-sectional in design, and data was collected using a survey which contained demographic questions, work ability index, and measurements of job satisfaction and core self-evaluation.

Sample Size

The sample consisted of 275 registered employees with disabilities. The participants were people living with physical, vision and hearing disabilities. At the time of the data collection, they were employed in either public or private sectors across Malaysia.

Sampling Procedure

The questionnaire was translated to Malay language by a local expert who was familiar with both the area of study and Malaysian culture. The original version and translated version of instruments were reviewed by a panel of experts, in order to establish the content validity of the translated version. A two-stage sampling design was employed to select the study participants. In the first stage, proportional stratified sampling method was used to group the sample into the three categories of disability, based on the statistics of disability-type distribution given by the Department of Social Welfare Malaysia. At the second stage, simple random sampling technique was used to collect the required sample for each group from among 27 active NGOs, working with and for people with disability in Malaysia. The NGOs provided their lists of all people with disability in the above-mentioned categories who were employed by either the public or private sectors. Based on these lists, the required sample size for each category was chosen through random number generator. After finding the NGO to which each of the selected respondents belonged, the researcher was sent to the respondents through their respective NGOs.

Tools

Work Ability was measured by the Work Ability Index (WAI) (Tuomi et al, 1998). The index is comprised of 7 subscales which include: (1) subjective estimation of current work ability compared with lifetime best; (2) subjective work ability in relation to the physical and mental demands of work; (3) number of diagnosed diseases; (4) subjective estimation of work impairment due to diseases; (5) sickness absenteeism during the past year; (6) own prognosis of work ability after 2 years; and, (7) psychological resources. The scoring for each subscale was calculated separately and then aggregated as one score. Scores ranging between 7 and 27 indicate poor work ability; 28-36 moderate work ability; 37-43 good work ability; and, 44-49 excellent work ability.

Job Satisfaction of employees was measured using the abridged Job In General (aJIG) (Ironson et al, 1989). For the purpose of this study, the aJIG consists of adjectives and short phrases that describe aspects of a job or job situation (e.g., Makes me content, Excellent, Enjoyable, Poor). Participants indicated whether these adjectives or phrases described aspects of their current job or job situation by simply ticking the answer categories: (1) "yes" , (2) "no" , and (3) "?". The option "yes" indicated that the adjective described their work situation well, the option "no" was chosen if the adjective did not describe their work situation, and they could choose the "?" option if they were undecided about their work situation. The aJIG were scored by determining numeric values on the "yes", "no" and "cannot decide" responses. The responses to each adjective were then transferred into a 3-point Likert-type rating scale for statistical analysis.

Core self-evaluation was measured by the Core Self-Evaluation Scale (CSES) (Judge et al, 2002). The scale consisted of 12 items, of which 6 were positively-worded and 6 were reversed items, to measure self-esteem, self-worth, self-efficacy, locus of control and emotional stability. Sample items included - "When I try, I generally succeed", and "Sometimes I fail, I feel worthless". Items were measured on a 5-point Likert scale, ranging from "1 (strongly disagree)" to "5 (strongly agree)". The higher the scores, the more positive were the employees' core self-evaluation.

Data Analysis

Data analysis was carried out using IBM SPSS Statistics 21 and IBM SPSS Amos 21.

Confirmatory factor analysis (CFA) was used to assess the construct validity of the Malay version of the scales used to measure work ability, job satisfaction and core self-evaluation.

The descriptive statistics, Pearson correlation analysis and one-way Analysis of Variance (ANOVA) followed by Tukey's post-test were used to evaluate the levels of work ability, core self-evaluation and overall job satisfaction among employees with disability, to assess simple correlations between core self-evaluation and job satisfaction of the study respondents and their work ability, and to examine differences in work ability scores and determine whether work ability varied across the demographic characteristics of respondents.

RESULTS

The study sample consisted of 275 employees with disability. 62.5% of them had a physical disability, 19.7% had a hearing disability and 17.8% were visually impaired. Tables 2 and 3 summarise the general profile of the people with disability who participated in the study.

Table 2: Demographic Profile (N=275)

	N	%
Gender		
Female	92	33.5
Male	183	66.5
Age Groups		
15 -25 years old	70	25.5
26 -40 years old	106	38.5
41 -55 years old	68	24.7
56+ years old	31	11.3
Ethnicity		
Malay	199	72.4
Chinese	18	6.5
Indian	25	9.1
Others	33	12.0

	N	%
Educational Level		
Primary school	80	29.1
Secondary school	149	54.2
Post-secondary school	46	16.7
Religion		
Islam	227	82.5
Christianity	25	9.1
Buddhism	9	3.3
Hinduism	14	5.1

Table 3: Employment Information

	N	%
Employment Status		
Full-time	130	47.3
Temporary	108	39.3
Part-time	37	13.5
Unemployed	N/A	N/A
Workplace Location		
Urban	132	51.2
Sub-urban	50	19.4

	N	%
Tenure		
Less than 1 year	68	25.8
1-5 years	66	25.1
6-10 years	48	18.3
More than 11 years	81	30.8

Table 2 shows that 66% of the respondents were male. The mean age of the total sample was 36.58 years (SD=13.3). The participants were grouped according to age. 38.5% of them were in the category of 26 – 40 years, and 11.3% were in the category of 56 years and above. The majority of the participants (72.4%) were Malay, 9.1% were Indian, 6.5% were Chinese and 12% were of other ethnicities.

Table 3 shows that 47.3% of the respondents had full-time employment and more than half of them (51.2%) worked in urban areas. Also, 30.8% of the participants reported that they had been engaged in their current work for more than 11 years, while 18.3% had held their jobs for 6 - 10 years.

In order to ensure reliability and validity of the measures, convergent validity of the constructs used in the study were checked by examining the factor loading scores of items, the Average Variance Extracted (AVE) of each construct and computing Cronbach's Alpha. From the information given in Table 4, the factor loadings of all construct items, ranging from .73 to .92, indicated that each item loaded significantly on its hypothesised factor. The construct reliability (CR) for all constructs was well above .7, indicating satisfactory internal consistency of the scales used in the current study. The AVE for all constructs was also higher than .5. These findings confirm the convergent validity of constructs and the measurement items which were used in the survey instruments. In other words, among Malaysian employees with disabilities, the operationalisation of these 3 measurements reflects their theoretical meaning.

Table 4: Summary of Measurement Scales

Constructs and Items	Factor Loadings	AVE	Cronbach's α (CR)
Core Self-Evaluation		.747	.970
Item 1	.85		
Item 2	.86		
Item 3	.87		
Item 4	.87		
Item 5	.88		
Item 6	.87		
Item 7	.87		
Item 8	.86		
Item 10	.86		
Item 11	.85		
Item 12	.86		
Job Satisfaction in General		.678	.927
Item 1	.84		
Item 4	.81		
Item 5	.85		
Item 6	.79		
Item 7	.80		
Item 8	.85		
Work Ability		.654	.929
Subscale 1	.92		
Subscale 2	.86		
Subscale 3	.76		
Subscale 4	.87		
Subscale 5	.74		
Subscale 6	.75		
Subscale 7	.73		

Table 5 summarises the frequency analyses. The results indicate that 70.5% of the employees with disability who participated in the study exhibited high job satisfaction, 49.1% reported moderate levels of core self-evaluation, and 35.3% reported moderate levels of work ability. The overall mean score of WAI was 32.08 (SD=8.56) which corresponded to the moderate level of work ability. The results also show that the overall mean scores on core self-evaluation and job satisfaction

were 3.45 (SD=.75) and 2.45 (SD=.54) respectively, indicating moderate level of core self-evaluation and high level of job satisfaction among employees with disability.

Table 5: Descriptive for Levels of Core Self-Evaluation, Job Satisfaction and Work Ability (N=275)

Levels	N	%	Mean	Std. D
Core Self-Evaluation			3.45	0.75
Low	20	7.3		
Moderate	135	49.1		
High	120	43.6		
Job Satisfaction			2.45	0.54
Low	28	10.2		
Moderate	53	19.3		
High	194	70.5		
Work Ability			32.08	8.56
Poor	81	29.5		
Moderate	97	35.3		
Good	79	28.7		
Excellent	18	6.5		

The correlation analysis described in Table 6 indicates that work ability is associated with both core self-evaluation and job satisfaction. The results show that work ability has a high positive association with core self-evaluation ($r=.765$; $p<0.05$) and job satisfaction ($r=.743$; $p<0.05$).

Table 6: Correlation Matrix

	1	2	3
Total Work Ability	1	.765**	.743**
Core Self-Evaluation	.765**	1	.751**
Job Satisfaction	.743**	.751**	1

** . Correlation is significant at the 0.01 level (2-tailed).

The results from the Analysis of Variance, described in Table 7, indicate that there were significant differences in work ability scores in terms of participants' education levels [$F(2)=41.872$, $p \leq 0.001$], employment status [$F(2)= 36.965$, $p \leq 0.001$], and age group [$F(3)= 20.233$, $p \leq 0.001$].

Table 7: Mean Difference in Work Ability by Age Group, Education, and Employment Status

	Mean	SD	F	P value
Age Group				
15 -25 years old	31.22	7.5	20.233	
26 -40 years old	33.78	7.87		0.000
41 -55 years old	34.69	8		
56+ years old	22.48	7.61		
Educational Level				
Primary school	28.92	8.36	41.872	0.000
Secondary school	30.99	7.77		
Post-secondary school	41.11	4.47		
Employment Status				
Fulltime	35.94	7.79	36.965	0.000
Temporary	27.94	8.29		
Part-time	32.14	4.14		

The post-hoc analysis shows that participants in the age group of 56 years and above scored significantly lower than the other 3 age groups ($p < 0.05$), those with post-secondary education reported higher work ability levels than those with either primary or secondary education ($p < 0.05$), and participants in full-time employment exhibited higher work ability levels than those in either part-time or temporary employment ($p < 0.05$).

DISCUSSION

In this study, the convergent validity of the Malay versions of WAI, aJIG and CSES were examined among a sample of employees with disability. The results of the single CFA confirmed the convergent validity and reliability of the scales, indicating that the constructs of work ability, job satisfaction and core self-evaluation were explained satisfactorily by items of the scale used for the population of people with disability in Malaysia.

The findings indicate that people with disability understand and have experienced their disability as a limiting factor in their work ability. The level of perceived work ability was found to be strongly associated with the self-rated health. It is possible that the health status of people with disabilities impacts the evaluation of their own work ability. This is in line with the findings of Gould and colleagues (2008), that employees who perceive their health to be unsatisfactory, also tend to perceive their work ability to be lower than that of persons who felt they were in good health. This aspect is interesting with respect to the respondents who, despite the obvious disadvantages of their disability, have not evaluated their work ability as 'poor' on the given categories. It could be inferred that their assessment of work ability is not merely influenced by their health status, but perhaps by other elements such as attitudinal and dispositional factors.

The descriptive analysis of core self-evaluation based on the mean summated score revealed that the total mean score of respondents' core self-evaluation was 3.447, which is slightly more than the mid-point of 3 in the respective Likert scale. This finding indicated that the respondents' overall perception of their core self-evaluation was at the moderate level. A possible explanation for this could be that people with disability, in the general context of Malaysian society and more particularly at their workplaces, face a lot of difficulties and much discrimination (Khoo et al, 2013). Additionally, this group of employees consider their disabilities to be the main cause for the problems they encounter regarding social and career discrimination, as compared to individuals without disability. As a result, they may have a negative self-image which could lead to negative self-evaluation. This finding is consistent with the results of earlier studies on disability in Malaysia, which found feelings of low self-worth among employees with disability. The finding is also in line with the idea of Sanders (2006), that negative attitudes towards their own disabilities may cause people with disability to make negative self-evaluations.

The results of this study indicated that employees with disabilities reported high job satisfaction. This may be explained by the notion that disadvantaged groups (like persons with disabilities) in the labour market have low expectations of finding any type of job, and would therefore probably experience a sense of joy and happiness when they gain any sort of employment, irrespective of the nature of the job or its overall terms (Pagán & Malo 2009). It is to be noted that people with disability place a high value on loyalty to a job, since they are well aware that if they lose the current opportunity, they probably will not get another; hence,

they express overall satisfaction with the job they have. This is supported by previous studies that reported a very low employment rate among people with disability in Malaysia (Ta et al, 2011; Ta & Leng, 2013).

This finding is consistent with previous studies which reported high job satisfaction among employees with disability (Hansen & Nielsen, 2008; Hashim & Wok, 2014). However, other researchers have reported low job satisfaction among employees with disabilities (Burke, 1999; Uppal, 2005). These authors have speculated that health problems can decrease employees' job satisfaction. In other words, there is a strong association between health status and job satisfaction (Drydakis, 2012).

The current study found a significant association between the work ability of employees with disability and their core self-evaluation, as well as their job satisfaction. There are several possible explanations for these results. In line with the theory of core self-evaluation, people with disability who have high core self-evaluation seem to evaluate themselves positively despite their disability and possess a high degree of self-efficacy. They perceive themselves as capable of coping with stressful situations at work, and therefore are more likely to cope with difficulties as well as overcome disability-related obstacles in the working environment. It is expected that employees with disability who express a high level of core self-evaluation will have more confidence in their ability to work and engage in job-associated activities as compared to those who lack this positive self-view.

It could be argued that people with disability who exhibit high levels of core self-evaluation also have high emotional stability. In turn, they are less likely to suffer from insecurity, helplessness and anxiety when faced with workplace-related difficulties. Accordingly, these employees with disability demonstrate higher capability to handle the problematic issues and obstacles caused by their disability at work, and this eventually results in building more confidence regarding their future career engagements and work ability.

This finding is in keeping with the theory of core self-evaluation (Judge et al, 1997) which suggests that employees' core self-evaluation may have a direct effect on their work outcomes through a process in which individual positive self-view spills over to impact other outcomes. The findings of the current study are also consistent with those of Airila et al (2012), which suggested that employees' positive self-evaluation like high self-esteem was strongly associated with their work ability.

The findings of the current study correspond to those of Gould and colleagues (2008) which suggested a significant relationship between employees' job satisfaction and their work ability. Among employees with disability, it is possible that those who are satisfied with their jobs are more likely to be confident about their ability to do work than those who feel negative towards their jobs. This may be explained by the fact that employees with disability who have high levels of job satisfaction have greater motivation to work, and often believe that they will be able to continue working for a few more years. They believe that the supportive and caring environment at their workplace could foster their work ability by helping them to tolerate disability-related problems, whereas negative feelings towards work dramatically reduces their confidence with regard to their future work ability.

The results of the one-way ANOVA showed that significant difference in work ability scores were found in terms of education level, employment status and age group. These findings match earlier studies in which higher education as well as having full-time employment were found to be positively related to employees' work ability (Gould et al, 2008).

Education can produce professional skills that may enable them to overcome the problems associated with limited functional capacity that threatens their work ability. Having a high level of education may have a positive effect on improving communication skills among employees with disability in the workplace (Stephens et al, 2008). They are likely to receive more social and occupational support from their co-workers and supervisors due to better communication that, in turn, can improve their work ability (Gould et al, 2008). The findings could also be justifiable in the sense that education may play an important role as a social determinant of health and well-being of employees with disability, both of which are strongly related to their work ability (Zimmer & House, 2003; Dupre, 2008; Link et al, 2008). To sum up, education can enable and motivate employees with disability to avoid stress (arising from disability) at the workplace, as well as give them control over their work, and make them feel more positive towards their health status, experience more well-being and consequently perceive their work ability to be higher.

With regard to employment status, the findings also concurred with the notion that engaging in full-time work as compared to underemployment, such as part-time employment and temporary work, provides more opportunity for employees with disability to develop and apply all of their skills, knowledge and

abilities to their work. Full-time employment is more likely to maximise their well-being at work, which is strongly related to their mental and physical health status and in consequence enhances their functional capacity (Konrad et al, 2013). As a result, as suggested by Gould and colleagues (2008), improved functional capacity can lead to increased work ability. The mentioned outcomes also are in line with the notion stated by Takala (2004) (as cited by Gould et al, 2008) that part-time employees as well as temporary employees perceive their health and work ability to be poorer than that of full-time employees.

Previous research has reported negative associations between employees' work ability and age (Monteiro et al, 2006; Martinez& Latorre, 2006; Gould et al, 2008; Tengland, 2012; Weigl et al, 2013) ; however, no evidence of the negative effect of age on work ability of employees with disability was detected in this study.

CONCLUSION

In summary, the results of confirmatory factor analysis (CFA) indicated that work ability index(WAI), core self-evaluation scale (CSES) and job in general index (JIG) fit the data well, in the context of Malaysian employees with disability. The findings of this study showed that the overall mean score of WAI for the population of 275 employees with disability was 32.8, indicating that in general the respondents of the study evaluated their work ability as moderate. It is noteworthy that despite the serious functional limitations caused by their disability, they have not evaluated their work ability as being of a poor level. It could be inferred that employees with disability are not merely influenced by their health status when it comes to assessing their work ability, and other elements such as attitudinal or dispositional factors could have more influence on them. The descriptive outcomes of the current study also revealed that study participants generally assessed their core self-evaluation as being of moderate level, while they also expressed high levels of job satisfaction. The results of correlation analysis indicated that core self-evaluation and job satisfaction of employees with disability positively and strongly correlated with their work ability. One-way analysis of variance (ANOVA) revealed that employed people with disability differed significantly in their perceived work ability with regard to age, education levels and employment status.

The research insights obtained from assessing work ability and job satisfaction among employees with disability can contribute towards better design of work space, allocation of job tasks and a positive working environment; all of

which would have a positive spillover effect on productivity, organisational performance, and individual and organisational health. The evidence from this study provides insights into the significant role of education and employment status in improving and maintaining the work ability of employees with disability. The present study also provides additional evidence with respect to the strong correlation between core self-evaluation as well as job satisfaction of employed people with disability and their work ability. Future studies on the work ability of employees with disability can go forward from this point by introducing and highlighting the role of positive self-evaluation and job satisfaction in their work ability.

The current study documents the need for developing a specific training package in Malaysia to improve the dispositional traits of employees with disabilities. In addition, the results of this study support the need for workplace intervention programmes for people with disability to improve their attitude towards work, and consequently their work ability.

The results obtained in this study cannot be generalised, because employees with learning and developmental disabilities (LDDs) and mental and psychological disabilities were not included in the sample, on the assumption that they would be unable to answer the complex survey questions adequately. Future studies should include all types of registered disabilities in Malaysia. It is recommended that one-on-one interview techniques be employed to simplify the items for respondents according to their level of intellectual disability, particularly when administering questionnaires to employees with mental and learning disability.

ACKNOWLEDGEMENT

This work is supported by Malaysia's Ministry of Education via the provision of Fundamental Research Grant Scheme (Project code: 06-01-12-1152FR).

REFERENCES

- Abdullah W, Arnidawati W (2013). Supported employment: persons with learning difficulties in Malaysia (Doctoral dissertation, University of Warwick).
- Airila A, Hakanen JJ, Punakallio A, Lusa S, Luukkonen R (2012). Is work engagement related to work ability beyond working conditions and lifestyle factors? *International Archives of Occupational and Environmental Health*; 85(8): 915–925. <http://dx.doi.org/10.1007/s00420-012-0732-1> PMID:22270385

- Airila A, Hakanen JJ, Schaufeli WB, Luukkonen R, Punakallio A, Lusa S (2014). Are job and personal resources associated with work ability 10 years later? The mediating role of work engagement. *Work & Stress*; 28(1): 87–105. <http://dx.doi.org/10.1080/02678373.2013.872208>
- Baldwin ML, Johnson WG (2006). A critical review of studies of discrimination against workers with disabilities. *Handbook on the Economics of Discrimination*: 119–160.
- Balser DB, Harris MM (2008). Factors affecting employee satisfaction with disability accommodation: A field study. *Employee Responsibilities and Rights Journal*; 20(1): 13–28. <http://dx.doi.org/10.1007/s10672-007-9062-y>
- Barnes C (2007). Disability activism and the struggle for change: disability, policy and politics in the UK. *Education, Citizenship and Social Justice*; 2(3): 203–221. <http://dx.doi.org/10.1177/1746197907081259>
- Berg T, Elders L, de Zwart B, Burdorf A (2008). The effects of work-related and individual factors on the Work Ability Index. A systematic review. *Occup Environ Med*; 66: 211–220. <http://dx.doi.org/10.1136/oem.2008.039883> PMID:19017690
- Blanck P (2001). Civil War pensions and disability. *Ohio State Law Journal*; 62: 109–249.
- Burke RJ (1999). Disability and women's work experiences: an exploratory study. *International Journal of Sociology and Social Policy*; 19(12): 21–33. <http://dx.doi.org/10.1108/01443339910788613>
- Colella A, Paetzold R, Belliveau MA (2004). Factors affecting co-workers' procedural justice inferences of the workplace accommodations of employees with disabilities. *Personnel Psychology*; 57(1): 1–23. <http://dx.doi.org/10.1111/j.1744-6570.2004.tb02482.x>
- DeConinck JB, Stilwell CD (2004). Incorporating organisational justice, role states, pay satisfaction and supervisor satisfaction in a model of turnover intentions. *Journal of Business Research*; 57(3): 225–231. [http://dx.doi.org/10.1016/S0148-2963\(02\)00289-8](http://dx.doi.org/10.1016/S0148-2963(02)00289-8)
- Donders N, Roskes K, Van der Gulden JWJ (2007). Fatigue, emotional exhaustion and perceived health complaints associated with work-related characteristics in employees with and without chronic diseases. *International Archives of Occupational and Environmental Health*; 80(7): 577–587. <http://dx.doi.org/10.1007/s00420-006-0168-6> PMID:17219181
- Drydakis N (2012). Health-impaired employees' job satisfaction: new evidence from Athens, Greece. *Applied Economics Letters*; 19(8): 789–793. <http://dx.doi.org/10.1080/13504851.2011.605346>
- Dupre ME (2008). Educational differences in health risks and illness over the life course: A test of cumulative disadvantage theory. *Social Science Research*; 37(4): 1253–1266. <http://dx.doi.org/10.1016/j.ssresearch.2008.05.007> PMID:19227701
- Erez A, Judge TA (2001). Relationship of core self-evaluations to goal setting, motivation, and performance. *Journal of Applied Psychology*; 86(6): 1270–1279. <http://dx.doi.org/10.1037/0021-9010.86.6.1270> PMID:11768067
- Gould R, Ilmarinen J, Järvisalo J & Koshinen S. (ed.) (2008). *Dimensions of work ability*. Helsinki, Finland: Finnish Centre for Pensions, Waasa Graphics Oy.

Hansen N, Nielsen HO (2008). Workers with disabilities express high job satisfaction. *European Workers Conditions Observatory*; 5: 132–135.

Haq FS (2003). Career and employment opportunities for women with disabilities in Malaysia. *Asia Pacific Disability Rehabilitation Journal*; 14(1): 71–78.

Hashim J, Wok S (2014). Predictors to employees with disabilities' organisational behaviour and involvement in employment. *Equality, Diversity and Inclusion: An International Journal*; 33(2): 193–209. Available at: <http://www.emeraldinsight.com/doi/abs/10.1108/EDI-03-2012-0018> [Accessed on 11 November 2014].

Hasselhorn HM (2008). Work ability-concept and assessment. Germany: University of Wuppertal. Available at: http://www.arbeitsfaehigkeit.uni-wuppertal.de/picture/upload/file/Concept_and_Assessment.pdf [Accessed on 18 November 2012].

Ilmarinen J, Tuomi K, Eskelinen L, Nygård C H, Huuhtanen P, Klockars M (1991). Summary and recommendations of a project involving cross-sectional and follow-up studies on the aging worker in Finnish municipal occupations (1981-1985). *Scandinavian Journal of Work, Environment & Health*; 17(1): 135-141. PMID:1792527

Ilmarinen J, Tuomi K, Klockars M (1997). Changes in the work ability of active employees over an 11-year period. *Scandinavian Journal of Work, Environment & Health*; 28(3): 179–188.

Ilmarinen J, Rantanen J (1999). Promotion of work ability during ageing. *American Journal of Industrial Medicine*; 36(S1): 21–23. [http://dx.doi.org/10.1002/\(SICI\)1097-0274\(199909\)36:1+<21::AID-AJIM8>3.0.CO;2-S](http://dx.doi.org/10.1002/(SICI)1097-0274(199909)36:1+<21::AID-AJIM8>3.0.CO;2-S)

Ilmarinen J, Tuomi K, Seitsamo J (2005). New dimensions of work ability. In *International Congress series*. Elsevier: 3–7. <http://dx.doi.org/10.1016/j.ics.2005.02.060>

Ilmarinen J (2009). Work ability - a comprehensive concept for occupational health research and prevention. *Scandinavian Journal of Work, Environment & Health*; 35(1): 1-5. <http://dx.doi.org/10.5271/sjweh.1304> PMID:19277432

Ironson G H, Smith PC, Brannick MT, Gibson WM, Paul KB (1989). Construction of a Job in General scale: A comparison of global, composite, and specific measures. *Journal of Applied Psychology*; 74(2):193–200. <http://dx.doi.org/10.1037/0021-9010.74.2.193>

Joo BK, Yoon HJ, Jeung CW (2012). The effects of core self-evaluations and transformational leadership on organisational commitment. *Leadership & Organisation Development Journal*; 33(6): 564–582. Available at: <http://search.proquest.com/docview/1113194528?accountid=27932> LA - English. <http://dx.doi.org/10.1108/01437731211253028>

Judge TA, Lock EA, Durham CC (1997). The dispositional causes of job satisfaction: A core-evaluations approach. *Research in Organisational Behaviour*; 19: 151–188.

Judge TA, Bono JE, Lock EA (2000). Personality and job satisfaction: the mediating role of job characteristics. *Journal of Applied Psychology*; 85(2): 237–249. <http://dx.doi.org/10.1037/0021-9010.85.2.237> PMID:10783540

Judge TA, Bono JE (2001). Relationship of core self-evaluations traits — self-esteem, generalised self-efficacy, locus of control, and emotional stability — with job satisfaction and

job performance: A meta-analysis. *Journal of applied Psychology*; 86(1): 80–92. <http://dx.doi.org/10.1037/0021-9010.86.1.80> PMID:11302235

Judge T A, Erez A, Bono JE, Thoresen CJ (2002). Are measures of self-esteem, neuroticism, locus of control, and generalised self-efficacy indicators of a common core construct? *Journal of Personality and Social Psychology*; 83(3): 693–710. <http://dx.doi.org/10.1037/0022-3514.83.3.693> PMID:12219863

Judge TA, Hurst C (2008). How the rich (and happy) get richer (and happier): Relationship of core self-evaluations to trajectories in attaining work success. *Journal of Applied Psychology*; 93(4): 849–863. <http://dx.doi.org/10.1037/0021-9010.93.4.849> PMID:18642988

Judge TA, Hurst C, Simon LS (2009). Does it pay to be smart, attractive, or confident (or all three)? Relationships among general mental ability, physical attractiveness, core self-evaluations, and income. *Journal of Applied Psychology*; 94(3):742–755. <http://dx.doi.org/10.1037/a0015497> PMID:19450010

Karpansalo M, Manninen P, Kauhanen J, Lakka TA, Salonen JT (2004). Perceived health as a predictor of early retirement. *Scandinavian Journal of Work, Environment & Health*; 30: 287–292. <http://dx.doi.org/10.5271/sjweh.796> PMID:15458011

Keller AC, Semmer NK (2013). Changes in situational and dispositional factors as predictors of job satisfaction. *Journal of Vocational Behaviour*; 83(1): 88–98. Available at: <http://linkinghub.elsevier.com/retrieve/pii/S0001879113000948> [Accessed on 6 May 2013]. <http://dx.doi.org/10.1016/j.jvb.2013.03.004>

Kenny GP, Yardley JE, Martineau L, Jay O (2008). Physical work capacity in older adults: implications for the ageing worker. *American Journal of Industrial Medicine*; 51(8): 610–625. <http://dx.doi.org/10.1002/ajim.20600> PMID:18543279

Khoo SL, Tiun LT, Lee LW (2013). Unseen Challenges, Unheard Voices, Unspoken Desires: Experiences Of Employment By Malaysians With Physical Disabilities. *Kajian Malaysia*; 31(1): 37–55.

Khor HT (2002). Employment of Persons with Disabilities. *Social-Economic & Environmental Research Institute*; 4(3): 4–7.

Konrad AM, Moore ME, Ng ES, Doherty AJ, Breward K (2013). Temporary Work, Underemployment and Workplace Accommodations: Relationship to Well-being for Workers with Disabilities. *British Journal of Management*; 24(3): 367–382. Available at: <http://doi.wiley.com/10.1111/j.1467-8551.2011.00809.x> [Accessed on 3 October 2014]. <http://dx.doi.org/10.1111/j.1467-8551.2011.00809.x>

Kruse D, Schur L (2003). Employment of people with disabilities following the ADA. *Industrial Relations: a Journal of Economy and Society*; 42(1): 31–66. <http://dx.doi.org/10.1111/1468-232x.00275>

Link BG, Phelan JC, Miech R, Westin EL (2008). The resources that matter: fundamental social causes of health disparities and the challenge of intelligence. *Journal of Health and Social Behaviour*; 49(1): 72–91. <http://dx.doi.org/10.1177/002214650804900106> PMID:18418986

- Locke EA (1976). The Nature and Causes of Job Satisfaction. In *Handbook of I/O Psychology*, ed. MD Dunnette: 1297–349. Chicago: Rand-McNally. 1st ed. p.1300.
- Martinez MC, Latorre M (2006). Health and work ability among office workers. *Revista de Saúde Pública*; 40(5): 851–858. <http://dx.doi.org/10.1590/S0034-89102006000600015> PMID:17301907
- McAfee JK, McNaughton D (1997a). Transitional Outcomes: Job Satisfaction of Workers with Disabilities Part Two: Satisfaction with Promotions, Pay, Co-Workers, Supervision, and Work Conditions. *Journal of Vocational Rehabilitation*; 8(3): 243–251. [http://dx.doi.org/10.1016/S1052-2263\(97\)00007-X](http://dx.doi.org/10.1016/S1052-2263(97)00007-X)
- McAfee JK, McNaughton D (1997b). Transitional outcomes—job satisfaction of workers with disabilities. Part One: general job satisfaction. *Journal of Vocational Rehabilitation*; 8(2): 135–142. [http://dx.doi.org/10.1016/S1052-2263\(96\)00247-4](http://dx.doi.org/10.1016/S1052-2263(96)00247-4)
- Montasem A, Brown SL, Harris R (2013). Do core self-evaluations and trait emotional intelligence predict subjective well-being in dental students? *Journal of Applied Social Psychology*; 43(5): 1097–1103. <http://dx.doi.org/10.1111/jasp.12074>
- Monteiro MS, Ilmarinen J, Filho HRC (2006). Work ability of workers in different age groups in a public health institution in Brazil. *International Journal of Occupational Safety and Ergonomics*; 12(4): 417–427. PMID:17156617
- Nordenfelt L(2008). *The concept of work ability*. Bruxelles; New York: P.I.E. Peter Lang.
- Othman R (2013). *Workforce Diversity in Malaysia: Current and Future Demand of Persons with Disabilities*. In *Cultural and Social Diversity and the Transition from Education to Work*. Springer: 87–110.
- Pagán R, Malo MÁ (2009). Job satisfaction and disability: lower expectations about jobs or a matter of health? *Spanish Economic Review*; 11(1): 51–74. <http://dx.doi.org/10.1007/s10108-008-9043-9>
- Pohjonen T (2001). Perceived work ability of home care workers in relation to individual and work-related factors in different age groups. *Occupational Medicine*;51(3): 209–217. <http://dx.doi.org/10.1093/occmed/51.3.209>
- Rich BL, Lepine JA, Crawford ER (2010). Job engagement: Antecedents and effects on job performance. *Academy of Management Journal*; 53(3): 617–635. <http://dx.doi.org/10.5465/AMJ.2010.51468988>
- Rutherford B, Boles J, Hamwi GA, Madupalli R, Rutherford L (2009). The role of the seven dimensions of job satisfaction in salesperson's attitudes and behaviours. *Journal of Business Research*; 62(11): 1146–1151. <http://dx.doi.org/10.1016/j.jbusres.2008.10.019>
- Sanders KY (2006). Overprotection and lowered expectations of persons with disabilities: The unforeseen consequences. *Work: A Journal of Prevention, Assessment and Rehabilitation*; 27(2): 181–188. PMID:16971765
- Schur L, Kruse D, Blasi J, Blanck P (2009). Is disability disabling in all workplaces? Workplace disparities and corporate culture. *Industrial Relations: A Journal of Economy and Society*; 48(3): 381–410. <http://dx.doi.org/10.1111/j.1468-232X.2009.00565.x>

- Sharma RN, Singh S, Kutty ATT (2006). Employment leads to independent living and self-advocacy: A comparative study of employed and unemployed persons with cognitive disabilities. *Asia Pacific Disability Rehabilitation Journal*; 17(1): 50–60.
- Simsek Z, Heavey C, Veiga JFF (2010). The impact of CEO core self-evaluation on the firm's entrepreneurial orientation. *Strategic Management Journal*; 31(1); 110–119. <http://dx.doi.org/10.1002/smj.800>
- Song Z, Chathoth PK (2013). Core self-evaluations and job performance: The mediating role of employees' assimilation-specific adjustment factors. *International Journal of Hospitality Management*; 33: 240–249. <http://dx.doi.org/10.1016/j.ijhm.2012.08.009>
- Stapleton DC, Burkhauser RV (2003). The decline in employment of people with disabilities: A policy puzzle. WE Upjohn Institute for Employment Research, Kalamazoo, Michigan.
- Stephens JC, Hernandez ME, Román M, Graham AC, Scholz RW (2008). Higher education as a change agent for sustainability in different cultures and contexts. *International Journal of Sustainability in Higher Education*; 9(3): 317–338. <http://dx.doi.org/10.1108/14676370810885916>
- Ta TL, Wah LL, Leng KS (2011). Employability of People with Disabilities in the Northern States of Peninsular Malaysia: Employers' Perspective. *Disability, CBR & Inclusive Development*; 22(2): 79–94. <http://dx.doi.org/10.5463/dcid.v22i2.28>
- Ta TL, Leng KS (2013). Challenges Faced by Malaysians with Disabilities in the World of Employment. *Disability, CBR & Inclusive Development*; 24(1): 6–21. <http://dx.doi.org/10.5463/dcid.v24i1.142>
- Tengland PA (2011). The concept of work ability. *Journal of occupational rehabilitation*; 21(2): 275–85. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/21052807> [Accessed November 26, 2012]. <http://dx.doi.org/10.1007/s10926-010-9269-x> PMID:21052807
- Tengland PA (2012). A qualitative approach to assessing work ability. *Work: A Journal of Prevention, Assessment and Rehabilitation*; 44(4): 393–404. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/22927582>.
- Tuomi K, Ilmarinen J, Jahkola A, Katajarinne L, Tulkki A, Oja G (1998). Work Ability Index. Helsinki: Finnish Institute of Occupational Health. *Occupational Health Care*: 19.
- Tuomi K, Toikkanen J, Eskelinen L, Backman AL, Ilmarinen J, Järvinen E, Klockars M (1991). Mortality, disability and changes in occupation among ageing municipal employees. *Scandinavian journal of work, environment & health*; 17(1): 58–66. PMID:1792530
- Uppal S (2005). Disability, workplace characteristics and job satisfaction. *International Journal of Manpower*; 26(4): 336–349. <http://dx.doi.org/10.1108/01437720510609537>
- Varekamp I, Van Dijk FJH (2010). Workplace problems and solutions for employees with chronic diseases. *Occupational Medicine*; 60(4): 287–293. <http://dx.doi.org/10.1093/occmed/kqq078> PMID:20511269
- Wahat NWA (2011). Towards Developing a Theoretical Framework on Career Success of People with Disabilities. *Asian Social Science*; 7(3): 62–70. Available at: <http://ccsenet.org/journal/index.php/ass/article/view/9728> [Accessed on 12 October 2012].

- Weigl M, Muelle A, Hornung S, Zacher H, Angerer P (2013). The moderating effects of job control and selection, optimisation, and compensation strategies on the age–work ability relationship. *Journal of Organisational Behaviour*; 34(5): 607–628. <http://dx.doi.org/10.1002/job.1810>
- Weiss HM (2002). Deconstructing job satisfaction: Separating evaluations, beliefs and affective experiences. *Human Resource Management Review*; 12(2): 173–194. [http://dx.doi.org/10.1016/S1053-4822\(02\)00045-1](http://dx.doi.org/10.1016/S1053-4822(02)00045-1)
- Yelln EH, Trupin L (2003). Disability and the characteristics of employment. *Monthly Labour Review*; 126(5): 20-31.
- Zhang J, Wu Q, Miao D, Yan X, Peng J (2014). The impact of core self-evaluations on job satisfaction: The mediator role of career commitment. *Social Indicators Research*; 116(3): 809–822. <http://dx.doi.org/10.1007/s11205-013-0328-5>
- Zimmer Z, House JS (2003). Education, income, and functional limitation transitions among American adults: contrasting onset and progression. *International Journal of Epidemiology*; 32(6): 1089–1097. <http://dx.doi.org/10.1093/ije/dyg254> PMID:14681281