FACTORS INFLUENCING JOB SATISFACTION AMONG CONSTRUCTION SITE ARTISANS IN NORTHERN MALAYSIA

Ahmed Mohammed Kamaruddeen, Adibah Hani Hamdan, Wahida Wahi

ABSTRACT

The satisfaction of construction site workers is very important in ensuring the success of any construction project because of its impact on their commitment and site productivity. This paper aims to determine the factors influencing job satisfaction and the overall job satisfaction among the construction site Artisans across selected construction sites in Kedah, Malaysia. Using simple random sampling technique, a survey was conducted by distributing copies of questionnaire to 30 experienced construction site artisans in order to obtain the required data. SPSS was used to analyze data. Workplace environment and facilities, personal factor and supervision showed significant relationship with job satisfaction. It was also found that the satisfaction level among the artisans was high. The study concludes that job satisfaction of artisans is an important issue that should be given much attention in construction sites.

Keywords: Construction Artisan, Construction Sites, Job Satisfaction, Kedah State, Malaysia.

INTRODUCTION

Construction artisans play a vital role in ensuring the successful completion of a project. To ensure the smooth running of any project, the satisfaction of the workforce should be given considerable attention. Job satisfaction among the workforce is very important because it has influence on the level of commitment and productivity (Kazaz *et al.*, 2008; Lum, *et al.*, 1998). Generally, low satisfaction among construction workers can influence the workers' level of productivity in the construction site. While there are extant researches on job satisfaction across countries including Malaysia (Mastura *et al.* 2006; Kazaz *et al.* 2008; Aziri 2011; Lim & Ling 2012; Danso 2012; Anari 2012; Marzuki *et al.* 2012), little attention has been directed towards researches that examine job satisfaction of artisans at the construction sites. In narrowing the gap identified in related literature, this paper aims to identify the factors that could influence job satisfaction and the level of job satisfaction of among the construction site artisans across selected construction sites in Kedah, Malaysia.

JOB SATISFACTION

The Concept of Job Satisfaction

There are several views and opinions regarding the concept of job satisfaction. According to Saari and Judge (2004), the most used research definition of job satisfaction is by Locke (1976) who defines it as "...a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences". The satisfied state of mind makes employees to be more innovative and to

play a greater role in decision-making within organizations (Kivimaki and Kalimo, 1994). Furthermore, a recent case study by Randeree and Chaudhry (2007) concluded that job satisfaction affects productivity of employees in a culturally diversified environment. Describing job satisfaction from a facet approach (Dabke, Salem, Genaidy & Daraiseh, 2008) emphasizes the attitudes of employees towards various aspects of a job, such as satisfaction of rewards, opportunity, among others. Employees who experience job satisfaction are more likely to be productive and stay on the job (McNeese-Smith, 1997).

In the context of construction project managers, job satisfaction can be defined as a function of the match between the rewards offered by the work environment and the individual's preferences for those rewards. (Love &Edwards, 2005). Moreover, research undertaken by Hurrell and McLaney (1988) revealed that job demand and job control did not exhibit an interactive effect on job satisfaction, and that job control increased job satisfaction regardless of the perceived levels of job demands. Job satisfaction is an affective (emotional) reaction to one's job, resulting from the incumbent's comparison of actual outcomes with those that are desired (expected, deserved, and so on.)" (Weiss, 2002). Likewise, Danso (2012), states that, job satisfaction is important in everyday life to both employers and their workers. He also mentions that the knowledge of job satisfaction of the construction workers helps to understand their motivations and, thus, the ways to improve their performance (Danso, 2012).

Importance of Job Satisfaction

Job satisfaction is important from the perspective of maintaining and retaining the appropriate employees within the organization. Job satisfaction is about fitting the right person to the right job in the right culture and keeping them satisfied. This is due to the fact that many experts believe that job satisfaction trends can affect artisan market behaviour and influence work productivity, work effort, employee absenteeism and staff turnover. Job satisfaction has much importance.

In the view of Diaz-Serrano and Cabral (2005), it is considered a strong predictor of overall individual well-being. According to Gazioglu and Tansel (2002), job satisfaction is a good predictor of intentions or decisions of employees to leave a job. Workers' decisions about whether to work or not, what kind of job to accept or stay in, and how hard to work are all likely to depend in part upon the workers' subjective evaluation of their work, especially on their job satisfaction (Clark, 2001).

In the view of Spector (1997), organizations have significant effects on the people who work for them and some of those effects are reflected in how people feel about their work. This makes job satisfaction an issue of substantial importance for both employers and employees. Many studies suggest that employers are more likely to experience higher productivity which will lead to profit from staff turnover if their employees experience a high level of job satisfaction (Aziri, 2011; Anari, 2012; Danso, 2012). According to Taylor *et al.* (2003), employees should also 'be happy in their work, given the amount of time they have to devote to it throughout their working lives'. Job satisfaction has been found to be the most important tool for employee retention and it also refers to how employees perceive their jobs (Mc Shane & Glinow, 2005).

Factors Influencing of Job Satisfaction

Literature suggests that the following numerous factors influence employees' job satisfaction: salaries, fringe benefits, achievement, autonomy, recognition, communication, working conditions, job importance, co-workers, degree of professionalism, organizational climate, interpersonal relationships, working for reputable agency, supervisory support, positive affectivity, job security, workplace flexibility, working within a team environment and genetic factors (Randeree and Chaudhary, 2012). Scholars (Ilies and Judge, 2003; McNeese-Smith, 1999) have identified that low satisfaction is being associated with working with unskilled or inappropriately trained staff regarding the following laborious tasks: documentation; repetition of duties; tensions within role expectations; role ambiguity; role conflict; job/patient care; feeling overloaded; the increasing need to be available for overtime; relations with co-workers; personal factors and organizational factors. There are varying perceptions of these causative factors of job satisfaction. For the purpose of this study, the areas to be considered are the workplace environment and provided facilities in workplace, workers' personal factors, human relations and supervision of workers. According to Lum, et al. (1998), job satisfaction has a number of facets such as satisfaction with work, pay, supervision, quality of work life, participation, organizational commitment and organizational climate. Factors relevant to job strain do not only reside in the job environment (Love and Edwards, 2005), other factors discussed by the previous study in the literature review can account for more reason in the job satisfaction.

Workplace Environment and Facilities

An increasing important issue affecting job satisfaction and efficiency is the nature of the work environment and workplace facilities (Mullins, 2005). Handy (1997) argues that when a workplace is inspired, the result is that workers are inspired and their attentions are drawn to the quality of the atmosphere, style of buildings and offices for work performance. The opposite can also be true in that a survey by Myerson and Ross (2003) revealed that people were willing to relinquish one week's annual leave for better offices while some were willing to forgo £ 1,000 in salary or private medical care for a significantly upgraded workspace. Some workers were contemplating changing companies for an improved environment. Work environment and workplace facilities are therefore very essential in dealing with job satisfaction. A study by Bowen *et al.* (2008), regarding the job satisfaction of South African Quantity Surveyors, established that a secure working environment (safety needs) was deemed important by majority of respondents although they claimed they were working in an environment that was continuously not safe.

Workers Personal Factors

Job satisfaction is viewed as the extent of a worker's positive or negative feelings about his or her job (Odom *et al.*, 1990). Similarly, Heller *et al.* (2002) said that one's disposition contributes to job satisfaction in that individuals are disposed to be satisfied or not satisfied with their jobs. A study by Zembylas and Papanastsiou (2004) supports the supposition that one's disposition is related to job satisfaction. Nevertheless, the study is beyond the relationship between job satisfaction and personality. For example, this research shows that emotional stability is related to

several facets of job satisfaction, namely promotion, contingent rewards and nature of work. Buss (1992) found neuroticism to be related to job satisfaction and to individual's intention to leave an organization. Thus, emotionally stable individuals are less likely to leave the organization and have higher job satisfaction that would be desirable in a hospitable employee.

Human Relations and Job Satisfaction

In explaining the humanitarian perspective to job satisfaction, Spector (1997) sees job satisfaction as identifying how people deserve to be treated fairly and with respect. According to him, the facets of job satisfaction like equitable rewards, supportive working conditions and fellow employees are related to being treated fairly and with respect. Spector again explains the utilitarian perspective to job satisfaction by asserting that job satisfaction can lead to behaviours that can have either positive or negative effect on organizational functioning. Perhaps, it is as a result of this effect that Wolferson (1998) observed that workplace boredom and frustration are as a result of an employee's lack of involvement with the company's goals and a feeling that their ideas are not wanted or listened to. Subsequently, there is going to be decrease in staff turnover for the employer as employees would walk out of door for more interesting jobs. Bowen *et al.*, (2008) however found various facets of human relations such as being part of a team and participating in decision making, undertaking challenging and creative work, as well as receiving recognition for achievements over and above normal responsibilities to have influence on job satisfaction.

Supervision and Job Satisfaction

According to Scarpello and Vandenberg (1987), supervision involves technical knowledge, human relations skills and co-ordination of work activities. Effective supervision is therefore necessary for job satisfaction and high level of performance. That is why Bassett (1994) believes that a kindly and thoughtful leader generates high worker satisfaction. Hence supervisors who adopt considerate approach of leadership towards workers turn to have the more highly satisfied work groups. In the study of job satisfaction among quantity surveyors, Bowen *et al.* (2008) found this to be true as they stated that a low degree of supervision and being encouraged to take initiatives among quantity surveyors contributed to job satisfaction.

According to Bacharach *et al.* (1989), supervision of workers' activities seems critical in the examination of their dissatisfactions. They explain that supervision takes two aspects, positive and negative. According to them, when applying the positive supervision, supervisors show appreciation for workers activities and solicit inputs from them. On the other hand, supervisors applying negative supervision maintain a critical orientation towards workers and their work by criticizing their work, refusing to help, or being generally unavailable. They continue that these types of supervisory behaviour lead to dissatisfaction. Crow and Hartman (1999) therefore suggest that instead of trying to improve employee satisfaction, it is high time to consider leadership approaches and management programmes that reduce employee's dissatisfaction. Schnake (1987) on his part argues that the climate of the work group is likely to be influenced by the supervisor's chosen strategies for motivation.

RESEARCH METHODOLOGY

This research is quantitative in nature and utilizes cross sectional research design to collect data. The research was carried out across selected construction sites in Kedah State, Malaysia. The surveys covered five construction sites monitored by the Construction Industrial Development Board (CIDB) Malaysia. A total of 40 copies of questionnaire were sent out and 30 copies were completed and returned. In this research, the questionnaire was adopted from the Minnesota Satisfaction Questionnaire (MSQ) designed to measure employee's satisfaction. The questionnaire was divided into three sections. Section A contains the question or information about the basic demographic and work related characteristics, section B consists of the causative factors of satisfaction of the respondents and section C consists of Artisans' level of job satisfaction at construction sites. Based on the objectives of this paper, Statistical Package for Social Science (SPSS) Version 20 was used to analyze the data.

RESEARCH FINDINGS

Table 1: Particulars of the Respondents

Gender	Frequency	Percentage
Male	22	73.3
Female	8	26.7
Age		
Less than 20	2	6.7
21-30	7	23.3
31-40	16	53.3
41-50	1	3.3
Above 50 years	4	13.3
Marital Status		
Single	11	36.7
Married	19	63.3
Ethnic		
Malay	1	3.3
Others	29	96.7
Experience in Construction Industry		
Below 6 years	10	33.3
6-10 years	8	26.7
11-15 years	10	33.3
More than 15 years	2	6.7
Experience in Construction Company		
Below 6 years	11	36.7
6-10 years	10	33.3
11-15 years	5	16.7
More than 15 years	4	13.3
Type of skilled artisans		
Concreter	3	10.0
Mason	7	23.3
Steel bender	5	16.7
Carpenter	12	40.0
Scaffolder	3	10.0

Table 1 shows the demographic profile of the respondents. The frequencies and percentage revealed that there were more male (22) respondents (73.3%) than female (8) respondents (26.7%). The total number of the respondents were thirty (N=30) indicating 100.0%. The frequencies and percentage of respondents' age range had the highest percentage (53.3%) was from 31 to 40 years old, indicating 16 artisans; ,followed by 23.3% from the age group of 21 to 30 years old, indicating 7 artisans; and then the age group of more than 50 years old was 13.3%, indicating 4 artisans. Others were aged less than 20 years old indicating 2 artisans (6.7%) and the lowest percentage was from age group from 41 to 50 years indicating 1 artisan (3.3%). The frequencies and percentage of the marital status of the respondents indicated that there were two groups. The highest percentage was from the married group 63.3%, indicating 19 artisans and then followed by the single group 36.7%, indicating 11 labors. The frequencies and percentage of the race of the respondents were of two types. The foreign workers had the highest percentage (96.7%), indicating 29 artisans while the Malaysian had 3.3%, indicating 1 artisan.

The frequencies and percentage on respondents' years of experience in construction industry that the highest percentage (33.3%) was from the group below 6 years and the group from 11 to 15 years, both indicating 10 artisans each. Next percentage (26.7%) was from the group with 6 to 10 years' experience, indicating 8 artisans, and the lowest percentage (6.7) was from the group with more than 15 years, indicating 2 artisans.

The percentage and frequencies on experience in construction company revealed that the highest percentage (36.7%) was from the group below 6 years, indicating 11 artisans; next percentage (33.3%) was from the group between 6 and 10 years, indicating 10 artisans; followed by the group (16.7%) between 11 and 15 years, indicating 5 artisans; and the lowest percentage (13.3) was from the group with more than 15 years, indicating 4 artisans. The percentage and frequencies on the type of respondents' skilled artisan revealed that the highest percentage (40.0%) included carpenters, indicating 12 artisans; followed by 23.3 percentage which included masons, indicating 7 artisans; the next percentage (16.7) included steel benders, indicating 5 artisans; and lowest percentage (10%) included both concreters and scaffolders, indicating 3 artisans each.

Factors Influencing Job Satisfaction and Overall Job Satisfaction

In this research, respondents were asked their perceptions of factors influencing job satisfaction and overall job satisfaction. Factors influencing satisfaction and overall job satisfaction are measured by four variables: workplace environment and facilities, workers personal factor, human relation and supervision. The perception of the artisans were measured using five point scale, ranging from 5-Strongly Agree, 4-Agree, 3-Moderately Agree, 2-Disagree to 1-Strongly Disagree. To measure the respondents' satisfaction level, the following 5 likert scales were adopted: 5-Highly Satisfied, 4- Satisfied, 3- Moderately Satisfied, 2- Unsatisfied, 1- Highly Unsatisfied.

Descriptive Analysis of the Variables

Descriptive analysis was used to determine the level of perceptions towards each variables and dimensions. To determine the perceived level of these factors, the mean were computed and the middle point were used to indicate the different levels, such as low, moderate and high as mentioned by Healey (2005). Mean score was divided into three levels. The low importance

range for the level of satisfaction was from 1.00 to 2.25. The moderate importance range for the level of satisfaction was from 2.26 to 3.75 and the high importance range for the level of satisfaction was from 3.76 to 5.00.

Variable/ Dimension	Mean	Std. Deviation	Level
Job Satisfaction	3.96	0.59	High
			Importance
Workplace environment	3.52	0.44	Moderate
and facilities			Importance
Worker Personal factor	4.24	0.50	High
			Importance
Human relation	4.22	0.41	High
			Importance
Supervision	3.44	0.44	Moderate
			Importance

Table 2: Descriptive Analysis of Factors Influencing Job Satisfaction

Table 2 presents the descriptive statistics of the factors influencing job satisfaction and overall job satisfaction. Based on figure 2, the level of overall job satisfaction among the respondents were high (mean=3.96, std. deviation= 0.59). In order to reconfirm the analysis, further analysis to examine the level of factors influencing job satisfaction for each dimension was analyzed. It showed that there was high significance for two factors, which is personal factor and human relation. Workers personal factor showed the highest mean score (mean = 4.24, standard deviation = 0.50) and followed by human relation (mean=4.22, standard deviation=0.41). The other two factors, workplace environment and facilities, and supervision indicated moderate level of perceived importance. Workplace environment and facilities obtain the mean values of 3.52 and value for standard deviation was 0.44. However, the supervision obtains mean value of 3.44 and the standard deviation of 0.44.

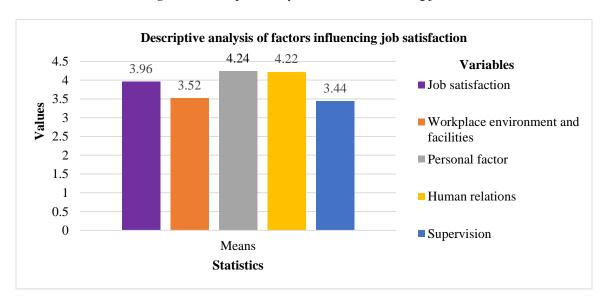


Figure 1: Descriptive analysis of factors influencing job satisfaction

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Table 3: Relationship between Factors Influencing Job Satisfaction and Job Satisfaction

	В	T	Sig.
Workplace	546	-3.139	.004
environment and			
facilities			
Personal factor	.493	3.000	.006
Human relation	.246	1.193	.244
Supervision	.822	4.637	.000
R^2	0.683		
F	13.476		
Sig.	0.000		

Table 3 presents the regression analysis which examines how strong the factors influencing job satisfaction have influence on the overall job satisfaction. The factors had influence on overall job satisfaction as much as 68.3 percent ($R^2 = 0.683$, F = 13.476, p < 0.01). Three predicted factors which had positive significance with the overall job satisfaction are workplace environment and facilities (B = -0.546, t = -3.139, p < 0.01), personal factor (B = 0.493, t = 3.000, p < 0.01), and supervision (B = 0.822, t = 4.637, p < 0.01). The highest coefficient (B) value indicates that the variables have the highest effect on the overall job satisfaction. Hence, this result shows that supervision appraisal has the highest effect on organizational commitment, followed by workplace environment and facilities, and then personal factor. It is therefore clear that human relation has no significant effect on overall job satisfaction.

DISCUSSION

The high mean score (3.96) of the overall job satisfaction in this study implies that the workers surveyed are satisfied with their job. The moderate to high mean scores for the dimensions of job satisfaction (personal factors = 4.42; human relation = 4.22; work environment = 3.52 and supervisor's appraisal = 3.44) examined in this study is a reflection of how the construction workers are satisfied with their job. This finding is similar to previous related studies (e.g. Hinzelman and Smallwood, 2004). Chileshe and Haupt, (2010) also found a similar high mean score (3.60) for the overall job satisfaction of construction workers in South Africa. The similarities between this study and the previous studies could be attributed to the similarities in the nature of activities being carried out across construction sites. Construction sites requires active participation and it is associated with recognition of individual contribution to the completion of a construction project (Holt et al., 2000). It is interesting to note that the R2 value that indicates the level of influence of dimensions of job satisfaction on the overall job satisfaction is 68.3%. This value is means that the dimensions of job satisfaction (workplace environment, personal factors and supervisors' appraisal can account for 68.3% variance in the overall job satisfaction (Pallant, 2005).

CONCLUSION

This paper has identified the factors influencing the job satisfaction of experienced workforce across selected construction sites in the northern region of Malaysia. It has also discovered that the job satisfaction of the experienced workers across the surveyed construction sites generally is high. Workers personal factors, human relation and supervision are the factors that satisfied artisans the most while working in the construction sites. As a result of this, the working conditions may have been experienced in good, smooth and seamless conditions. However, since there is no correlation between job satisfaction with workplace environment and facilities, researcher should endeavour to find out other factors which can be described as or can represent the job satisfaction in order to reveal the indicators that contribute to the quality of the artisans' working condition in construction sites. Overall, the study concludes that job satisfaction of artisans is an important issue that should be given much attention in construction sites in order to ensure the successful completion of a project so as to positively influence the economy of a country. A major limitation to this paper is that data was collected from five construction sites only. Future research should adopt qualitative approach to examine the factors influencing the job satisfaction among the construction site workers.

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REFRENCES

- Anari, N. N. (2012). Teachers: emotional intelligence, job satisfaction, and organizational commitment. Journal of Workplace Learning Vol. 24 No. 4, pp. 256-269.
- Aziri, B. (2011). Job satisfaction: a literature review, Management Research and Practice Vol. 3 issue 4 (2011), pp. 77-86.
- Bacharach, S. B. & Bamberger, P. (1990). Exit and turn over militancy intentions in elementary and secondary school. Educational Administration Quarterly, 26(4), pp. 316-344.
- Basset, G. (1994). The case against job satisfaction. Business Horizons, 37(3), 61-8.
- Bowen, P., Cattell, K., Distiller, G. and Edwards, P. J. (2008). Job satisfaction of South African quantity surveyors: an empirical study. Construction Management and Economics, 26, pp. 765-780.
- Buss, D. M. (1992). Manipulation in close relationships: five personality factors in interactional context. Journal of Personality, 60, pp. 477-499.
- Clark, A. E. (2001). What really matters in a job? Hedonic measurement using quit data. Labour Economics, 8, pp. 223–242.
- Chileshe, N., and Haupt, T. C. (2010). The effect of age on the job satisfaction of construction workers. Journal of Engineering, Design and Technology, Vol. 8 Issue: 1, pp.107-118.
- Crow, S. M. & Hatman, S. J. (1999). Can't get no satisfaction. Leadership and Organisational Development Journal, 16(4), 34.

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- Dabke, S., Salem, O., Genaidy, A. & Daraiseh, N. (2008). Job satisfaction of women in construction trades. Journal of Construction Engineering and Management, 134(3), pp. 205-216.
- Danso, H. (2012). Construction workers' satisfaction with work provision requirement dimension in Ghana's construction industry. International Journal of Engineering and Technology, 2(9), pp. 1613 – 1619.
- Diaz-Serrano, L. & Cabral, V. J. A. (2005). Low pay, higher pay and job satisfaction within the European Union: Empirical evidence from fourteen countries. IZA Discussion Papers No. 1558, Institute for the Study of Labour (IZA).
- Gazioglu, S. & Tansel, A. (2002). Job satisfaction in Britain: Individual and job-related factors. Economic Research Centre Working Papers in Economics 03/03, Ankara.
- Handy, C. (1997). Boring workplace, Boring Worker, Management Today.
- Hartman, L. (1999). A psychological analysis of leadership effectiveness. Strategy & Leadership, 27(6), pp. 30-32.
- Heller, D., Judge, T. A. & Watson, D. (2002). The confounding role of personality and trait affectivity in the relationship between job and life satisfaction. Journal of Organizational Behaviour, 23, pp. 815-835.
- Healey, M. (2005). Linking research and teaching: Exploring disciplinary spaces and the role of inquiry based learning. In R. Barnett (Ed.), Reshaping the university: New relationships between research, scholarship and teaching (pp. 67–78). London: McGraw Hill/Open University Press.
- Holt, G. D., Love, P. E. D. and Nesan, L.W. (2000). Employee empowerment in construction: an implementation model for process improvement, Team Performance Management: An International Journal, Vol. 6 Nos 3/4, pp. 47-51.
- Hinzelman, J. and Smallwood, J. (2004). Declining productivity and lack of motivation amongsite managers: medium sized contractors' perceptions, in Root, D., Massyn, M. and Shakantu, W. (Eds), Proceedings of 2nd Postgraduate Conference Construction Industry Development, Cape Town, 10-12 October, pp. 36-46.
- Hurrell, J. & McLaney, M. (1988). Control, job demands, and job satisfaction. In S.L. Sauter, J.J. Hurrell, & C.L. Cooper (Eds.), Job Control and Worker Health. John Wiley & Sons, New York, NY, pp. 97-103.
- Humphrey Danso (2012). Construction Workers' Satisfaction with Work Provision Requirement Dimensions in Ghana's Construction Industry, International Journal of Engineering and Technology Volume 2 No. 9, September, 2012.
- Ilies, R. & Judge, T.A. (2003). On the heritability of job satisfaction: the mediating role of personality. Journal of Applied Psychology. 88 (4), 750-9.
- Kazaz, A., Manisali, E., and Ulubeyli, S. (2008). Effect of basic motivational factors on construction workforce productivity in Turkey, Journal of Civil Engineering and Management, 14(2): 95–10.
- Kivimaki, M. & Kalimo, R. (1994). Contributors to satisfaction with management in hospital. Journal of Nursing Management, 2(5), 225-34.
- Lange, J. E. & Mills, D. Q. (1979). An introduction to the construction sector of the Economy. In Lange, J.E. and Mills, D.Q (eds). The Construction Industry: Balance Wheel of the Economy. pp 1-10, Lexington Books, Lexington, MA.

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Vol. 16. No.3 (1-12), ISSN: 1823-884x

- Laurie J. Mullins (2005). Management and organizational behaviour, Seventh edition, Prentice Hall.
- Lim, J. W. L., and Florence Y. Y. Ling (2012). Human resource practices of contractors that lead to job satisfaction of professional staff. Engineering, Construction and Architectural Management, Vol. 19 No. 1, 2012 pp. 101-118.
- Locke, E. A. (1969). What is job satisfaction?. Organizational Behavior and Human Performance, (4), 309-36.
- Love, P. E. D. & Edwards, D. J. (2005). Influence of job demands, job control and social support on psychological wellbeing. Engineering, Construction and Architectural Management. 12(1), pp. 88-101.
- Lum, L., Kervin, J., Clark, K., Reid, F. & Sirola, W. (1998). Explaining nursing turnover intent: job satisfaction, pay satisfaction, or organizational commitment. Journal of Organizational Behavior, 19, pp. 305-320.
- Jaafar, M., Ramayah, T., & Zainal, Z. (2006). Work satisfaction and work performance: How Project Managers in Malaysia Perceive it? Academy of World Business, marketing & management Development Conference Proceedings, Volume 2 No.113, pp.1305-1313.
- Marzuki, P. F., Permadi, H., & Sunaryo, I. (2012). Factors Affecting Job Satisfaction of Workers in Indonesian Construction Companies. Journal of Civil Engineering and Management, 18:3, pp. 299-309.
- McShane, S. L. & Von Glinow, M. A. (2005). Organizational Behavior (3th Ed.). India: Tata McGraw-Hill Inc.
- McNeese-Smith, D. K. (1997). The influence of manager behavior on nurses' job satisfaction, productivity and commitment. JONA, 27(9), pp. 47-55.
- McNeese-Smith, D. K. (1999). A content analysis of staff nurse descriptions of job satisfaction and dissatisfaction. Journal of Advanced Nursing. 29(6), 1332-42.
- Mullins L. J (2005). Management and Organizational Behavior. Prentice Hall. UK 7th Ed. 88(431): pp. 1052-1058.
- Myerson, J. & Ross, P. (2003). Twenty First Century Office: Architecture and Design for the New Millennium. Rizzoli, New York.
- Odom, R. Y., Boxx, W. R. & Dunn, M. G. (1990). Organizational cultures, commitment, satisfaction, and cohesion. Public Productivity and Management Review. 14(2), 157-69.
- Pallant, J. (2005). SPSS Survival manual: a step by step guide to data analysis using SPSS for Windows (Version 12) (2 Ed). Australia: Allen & Unwin.
- Randeree, K. & Chaudhry, A. G. (2007). Leadership in project managed environments: employee perceptions of leadership styles within infrastructure development in Dubai. International Review of Business Research Papers, (3) 4, 220-32.
- Saari, L. M. and Judge, T. A. (2004). Employee attitudes and job satisfaction. Human Resource Management, 43, pp. 395-407.
- Scappello, V. & Vandenberg, R. G. (1987). The satisfaction with my supervisor scale: It's utility for research and practical applications. Journal of Management. 13(3), pp. 447-466.
- Schnake, M. E. (1987). Principles of supervision. Iowa: Wm.C. Publishers. Spector, P. (1997). Job satisfaction: Application, assessment, causes and consequences. Thousand Oaks C.A: Sage Publications, Inc. C.A.
- Spector, P. E. (1997). Job Satisfaction: Application, assessment, causes, and consequences. Thousand Oaks, CA: Sage Publications, Inc.

Taylor, J., Bradley, S., & Nguyen, A. N. (2003). Relative pay and job satisfaction: some new evidence. (Economics Working Paper Series). Lancaster University: The Department of Economics.

Wells, Jill. (2006). Subcontracting in the Construction Industries of Developing Countries: An Assessment from Two Perspectives. Journal of Construction in Developing Countries, 11(1).

Weiss, H. M. (2002). Deconstructing job satisfaction: separating evaluations, beliefs and affective experiences. Human Resource Management Review. 12(2), 173-94.

Wolferson, S. V. Brian. (1998). Train, retain and motivate staff. Management Today. pp 5.

Zymbylas M. and Papanatasiou, E. (2004). Job satisfaction among school teachers in Cyprus. Journal of Educational Administration 42(3) pp. 357-374.

ABOUT THE AUTHORS

AHMED MOHAMMED KAMARUDDEEN

Quantity Surveying Programme, University College of Technology Sarawak, Malaysia kamaruddeen@ucts.edu.my

ADIBAH HANI HAMDAN

Department of Technology and Operation Management, Universiti Utara Malaysia, Malaysia dybahamdan@gmail.com

WAHIDA WAHI

Quantity Surveying Programme, University College of Technology Sarawak, Malaysia wahidawahi@ucts.edu.my