The Role of Transformational Leader to Safety Performance in Malaysia's Automotive Industry

Shah Rollah Abdul Wahab [1+], Ishak Mad Shah [1] and Durrishah Idrus [2]

[1] Faculty of Management and Human Resource Development, Universiti Teknologi Malaysia, Malaysia
[2] KPJ International University College of Nursing and Health Sciences, Malaysia

Abstract. This paper aims to investigate the role of transformational leadership to safety performance in Malaysia's automotive industry. This study is carried out as a non-experimental type research which employs questionnaire as the method of collecting data. The measurement tool undertaken in the data collection includes Multifactor Leadership Questionnaire and Safety Performance Scale. A total of 696 employees from automotive manufacturing and assembly plants are selected as the respondents of this study. The selection of respondents is made using systematic sampling design. Data of the study are then analyzed using canonical correlation analysis. The finding of the study demonstrates that transformational leadership plays a significant influence to an organization's safety performance (canonical correlation coefficient= 0.501, p <0.001).

Keywords: Transformational Leadership, Safety Performance

1. Introduction

Today, technology pressure and intense global competition not only bring tremendous changes in organizational safety but also threaten it (Shah Rollah, 2010). In many countries, workplace accidents have received big attention as early as 100 years before due to the fact that it is enormously costly (Pitt, 2007). The data from International Labor Organization (ILO) shows that every minute twenty-one person are involved in workplace accidents and over 270 million of those accidents lead to the employees' being absent for at least the next three days (Hamalainen, 2008). There is an idiom that claims the smaller accidents happen in a workplace the safer the workplace is (Shapiro, 2008). However the claim holds very little truth. The idiom failed to emphasize that minor injuries may also threaten employees' safety and bring cost to the organizations (Ayers and Kleiner, 2000).

Stromgren and Andersson (2010) claim that making good business could be proven through the increase of productivity and profit in an accident-free working environment. Therefore, management is the one who is responsible in promoting employees' safety awareness regardless of differences of the employees' post and geographical distances or locations (Makin and Winder, 2008). However, inconsistent understanding of safety responsibility between management and employees has contributed to unsafe working environment (Durrishah *et al*., 2009). Sole dependence on hardware approach such as redesigning machines is insufficient to reduce workplace accidents especially when accidents happen due to human errors (Wu *et al.*, 2008). Good safety management coupled with competent staffs is able to reduce the frequency of accidents at workplace.

However, many organization fail to appreciate the vital role of safety management because it is always seen as a costly method in resolving the safety issue (Gilling and Kleiner, 1993). Hasle *et al.* (2009) discovers that the smaller an organization is the lesser emphasize is given by the management towards the employees' safety. In Malaysia, manufacturing industry contibutes to the highest number of workplace accidents. Linking to that fact the Malaysia heavy industry that is a subsector of manufacturing industry had reported an increasing number of workplace accidents from 2007 to 2009 (Department of Occupational Safety and Health Malaysia, 2010). In 2007, there were thirteen accidents that happened daily and that amounted to an estimation of one accident for every two hours in the organization (Social Security

[+] Corresponding author. Tel.: +6075535136; fax: +6075566911.
E-mail address: shah@fppsm.utm.my

Organization, 2009). This incident had worsen in 2009 when 16 cases happened daily with at least one case reported each hour (Social Security Organization, 2009).

Recent development in the area of safety management has heightened the need of effective leadership in many of today's organizations (Wu *et al.*, 2009). Leadership has become a competitive advantage in promoting responsive culture towards change which includes changes in workplace safety (Parry and Proctor-Thomson, 2003; Abu Daud and Zaharah, 2009). In the late 1970s, transactional and transformational leadership have received a considerable attention in organizational development (Leithwood *et al.,* 1992). However, the transformational leadership is assumed as being more significant to organizational setting which includes safety compared to transactional leadership (Humphreys, 2010). Jones (2006) confirms that the leaders with transformational characters usually have employees that enjoy better safety performance. The employees are willing to take risk as the leaders' support has changed their focus into completing their task rather than wasting their focus on safety fear (Liu *et al*., 2010).

To sum up this section, even though safety management is practiced in today's organizations, weak considerations on leadership factor may limit its efficiency to manage safety performance. The staggering number of workplace accidents in heavy industry highlights that its safety level is volatile. The inconclusive findings on transformational leadership to safety performance have therefore driven the researcher to investigate the safety issue phenomena in Malaysia setting.

2. Linkage of Transformational Leadership and Safety Performance

A large and growing body of leadership literature has shown that transformational leadership are divided into four dimensions that are idealized influence, inspirational motivation, intellectual simulation and individualized consideration (Bass, 1985; Krause, 2007). Idealized influence is referring to a leader who is admired, respected, trusted and charismatic by his employees (Pillai and Williams, 2004). The second dimension is inspirational motivation which stress on communicating an attractive vision with confidence, cultivating team spirit and raising enthusiasm (Bass *et al*., 2003). Intellectual stimulation is commonly related to a leader who actively encourages his employees to reframe problems into new perspectives and perform their job through new approaches (Kark *et al.*, 2003). The last dimension is individualized consideration whereby leaders pay special attention to each and every one of their employees needs for their achievement and growth by providing support and coaching to make each individual feels appreciated and valuable to the organization (Gillespi and Mann, 2004).

A number of studies show that there is a significant relationship between leaders' role and organizational performance. However, only little attention has been given to examine the effect of leadership particularly the relationship of transformational leadership to safety performance. On the surface, leaders must be familiar with safety programs because they have to show their commitment to safety in the organizations (Zakaria and Abdullah, 2003). Dodge (1998) believes that leaders' advice and actions are very powerful in influencing safety behaviors among employees at work. It is widely known that a pleasant working climate will stimulate employees' potentials to perform their job safely. However, several drawbacks occur when developing the pleasant climate which includes different needs among employees. Therefore, the leaders must be sensitive to the difference in social politic background of employees in his intention to inculcate good safety practices (Cheng *et al*., 2010). Employees' participation to nurture good safety practices is vital to avoid them from resisting the agreed practices.

Good safety leaders possess high safety commitment, excellence in leadership and rational persuasion attitudes to safety (Clarke and Ward, 2006). At the same time, transformational leaders are believed to be able to communicate high safety standards and motivate their employees to accept safety goals (Kelloway *et al.*, 2000). Since the transformational leader is believed to have great influence to safety, Krause (2007) has outlined several important characteristics to become an effective safety leader. He explains that the leaders must be articulate and convey safety vision in interesting ways throughout the organizations besides, being credible and accountable in delegating safety task to their employees. Krause (2007) highlights that all leaders should be a great communicator and always able to employ psychological approach to manage safety among employees. Therefore, good leadership practices coupled with proper resource management in the organizations are necessary to improve safety performance in an organisation (Zeng *et al.*, 2008). In addition,

Zohar and Tenne-Gazil (2008) suggest that the role of transformational leaders is lucid and vital when the level of safety unstable.

As the summary, transformational leadership dimensions are able to bring success to safety efforts in the working environment. Emphasizing on individual uniqueness and investing on employees' talent may automatically promote effective safety programmes. Furthermore, employees' perception on available safety efforts is also necessary to attain the organization safety goal which is known as safety climate.

3. Methodology

This study adopts a correlational research design in order to respond its objective. The respondents of study are 696 production employees from Malaysia's automotive manufacturing and assembly plants. The questionnaire from Bass's Multiple Leadership Questionnaire (1985) and Wu *et al.*'s Safety Performance Scale (2008) with the value of Alpha Conbrach in pilot study is 0.966 and 0.987 are used as an instrument to collect data of the study. Respondents answer the questionnaire using a five Likert scale ranging from "extremely disagree" to "extremely agree". The data were analyzed by using canonical correlation analysis to identify the correlation between transformational leadership and safety performance.

4. Findings and Discussion

As discussed in the review of literature, there are very little empirical data that explain the association of transformational leadership and safety performance. However, the literature assumes that the transformational leader plays an important role to attain the organizational safety goals. In this paper, canonical correlation analysis (CCA) is adopted to measure the relationship between transformational leadership and safety performance. As shown in Figure 1, there is only one significant canonical correlations with ρ= 0.501 (*Wilks' Lambda*= 0.732, *d.f*= 16, *p*= 0.000). Since the observed significant value (*p*= 0.000) is smaller than the significant level 0.001, it demonstrates that there is relationship between transformational leadership and safety performance.

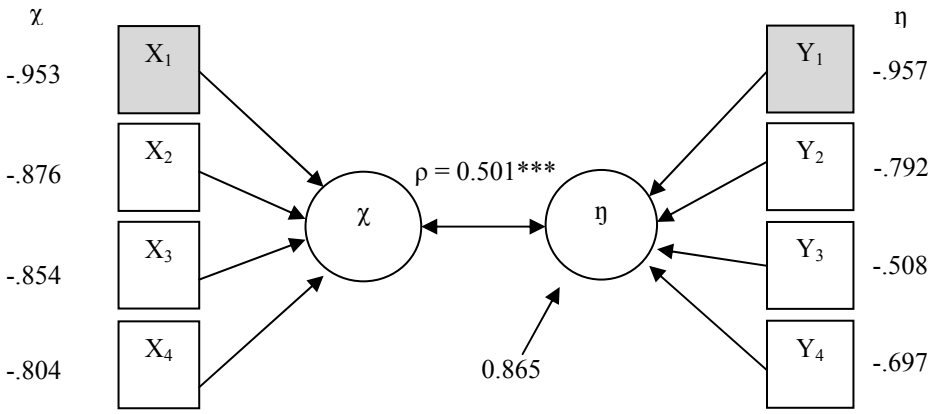

Fig. 1: Path Diagram between Transformational Leadership and Safety Performance

In terms of the factor structure of transformational leadership, the canonical factor χ accounts for 76.3 percent of the variance in transformational leadership, whereas 19.2 percent is the redundancy between transformational leadership and safety performance. On the other hand, in the factor structure of safety performance, the canonical factor ŋ explains 57.2 % of the variance in safety performance, while 14.4% is the redundancy of safety performance and transformational leadership. It is apparent that transformational leadership is positively associated to safety performance (ρ= 0.501; p< 0.001). Figure 1 also illustrates that idealized influence dimension (-0.953) correlates safety management dimension (-.957) mostly through the canonical factor χ. Due to the fact that the canonical correlation coefficient is 0.501, 25.1 percent of the variance in the canonical variable ŋ is determined by the canonical variable χ. The alienation affects 74.9 percent of the variance and the coefficient of alienation is 0.865.

The findings describe that the influence of transformational leaders is significant in promoting a safer workplace. The significant relationship has therefore assisted our understanding of the importance of transformational leadership to the intention of attaining safety goals in the workplace. It is possible to explain the current findings that the traits entrenched in transformational leadership have increased employees' safety awareness at work. As derived from this research, a charismatic transformational leader is the key person to manage safety in the organizations. It can be concluded that the leader of this style is committed in drawing attention to safety at working environment. The leader constantly encourages employees to give opinions with the aim of improving the safety situation in an organization. Furthermore, this finding enhances our understanding that the leaders' willingness in trusting their employees' potential is merely associated with zero-accident achievement at the workplace. The findings are in agreement with Pillai and William (2004) who discover that the transformational leadership is associated with the employees' self efficacy and their perceptions on performance. In the context of Pillai and William's study, self-efficacy refers to the employees' perception of their ability to attain safety goals in the organizations.

However, the current study finds out that there are respondents who are doubtful about the transformational leaders' ability to motivate them to safely perform their jobs. It is surprising that evidently a quarter of the respondents have no trust on the organizations in managing the accidents cases in the workplace. This situation is becoming more serious when the leaders are not able to comply with the safety standards and procedures in the organization. Therefore, it is suggested that leaders must be flexible in motivating the employees to carry out their job safely. In this context, the word flexibility refers directly to the role of transformational leaders whereby they allow spaces for their subordinates to understand the organizations' safety environment. This is due to the differences among individuals in an organization for instance social-economic background which influenced an individual's learning capability. Leaders could apply flexibility through various means such as the technique they use to give safety instructions to the employers by taking into consideration the level of their individual differences and intellectual capacity in an organization.

As a conclusion, this paper concluded that safety performance does not rely to the technical solution; it is all about people-related issues. It must be assisted by the people management strategy that involves transformational leadership. The transformational leadership must be tailored for overall employees' personal interest for the sake of promoting the better safety performance and a safer workplace.

5. Acknowledgements

The work was sponsored by Ministry of Higher Education Malaysia and Universiti Teknologi Malaysia.

6. References

[1] A.W. Shah Rollah. The Impact of Moderated Mediation to the Relationship of Transformational Leadership on Safety Performance in Malaysia Heavy Industry Companies. *PhD Thesis.* 2010.

[2] M. Pitt. Keeping the Workplace Safe. *Human Resource Management International Digest.* 2007, **15**(6): 43-44.

[3] P. Hamalainen. The Effect of Globalization on Occupational Accidents. *Safety Science.* 2008, doi:10.1016/j.ssci.2008.01.011.

[4] M. J. Shapiro. *Cinematic geopolitics*. Routledge, 2008.

[5] Ayers P. A. and Kleiner B. H. New Development Concerning Managing Human Factors for Safety. *Management Research News.* 2000, **23** (7/8): 18-23.

[6] M. Stromgren and R. Andersson. The Usage of Safety Management Tools in Swedish Municipalities. *Safety Science.* 2010, **48**: 288-295.

[7] A. M. Makin and C. Winder. A New Conceptual Framework to Improve the Application of Occupational Health and Safety Management Systems. *Safety Science.* 2008, **46**: 935-948.

[8] I. Durrishah, A. W. Shah Rollah, M. S. Ishak and J. C. Rees. How Far is Transformational Leadership Relevant to Safety Performance? *Malaysian Labour Review*. 2009, **3** (1): 74-97.

[9] T.-C. Wu, C.-H Chen. and C.-C. Li. A Correlation Among Safety Leadership, Safety Climate and Safety

Performance. *Journal of Loss Prevention in the Process Industries.* 2008, **21**: 307-318.

[10] S. C. Gillings and B. H. Kleiner. New Developments in Health and Safety Programmes. *Work Study.* 1993, **42** (5): 9-12.

[11] P. Hasle, P. Kines and L. P. Andersen. Small Enterprise Owners' Accident Causation Attribution and Prevention. *Safety Science.* 2009, **47**: 9-19.

[12] Department of Occupational Safety and Health Malaysia *Occupational Accidents by Sector for the Category of Permanent Disabilities until October 2009.* Retrieved on January 17, 2010 from http://www.dosh.gov.my/doshV2/phocadownload/stats/English/ve_huk_sect_2009.pdf, 2010.

[13] Social Security Organization. Social Security Organization Annual Report Year 2009. Retrieved on 31 January, 2010 at http://www.perkeso.gov.my/en/ yearly-report.html, 2009.

[14] T.-C. Wu. Safety Leadership in the Teaching Laboratories of Electrical and Electronic Engineering Departments at Taiwanese Universities. *Journal of Safety Research.* 2009, **39**: 599-607.

[15] K. W. Parry and S. B. Proctor-Thomson. Leadership, Culture and Performance: The Case of the New Zealand Public Sector. *Journal of Change Management.* 2003, **3** (4): 376-399.

[16] S. Abu Daud and H. Zaharah Hassan. Effective Leadership: Malaysian Cases and Practices. *Proceedings of the 10th International Conference on Human Resource Development Research and Practices.* 10-12 June. 2009, Newcastle Business School, Northumbria University

[17] K. A. Leithwood, P. T. Begley and J. B. Cousins. *Developing expert leadership for future schools*. Falmer, 1992

[18] J. H. Humphreys. Transformational and Transactional Leader Behavior: The Relationship with Support for E-Commerce and Emerging Technology. *Journal of Management Research.* 2001, **1** (3): 150-159.

[19] K. Jones. Transformational Leadership for Transformational Safety. *Occupational Health.* 2006, 75(6): 82-85.

[20] W. Liu, R. Zhu and Y. Yang. I Warn You Because I Like You: Voice Behavior, Employee Identifications and Transformational Leadership. *The Leadership Quarterly.* 2001, **21:** 189-202.

[21] B. M. Bass. *Leadership and Performance beyond Expectations*. The Free Press, 1985

[22] T. R. Krause. The Effective Safety Leader: Leadership Style and Best Practices. *Occupational Hazard.* 2007, **69** (12): 19.

[23] B. M. Bass, B. J. Avolio, D. I. Jung and Y. Berson. Predicting Unit Performance by Assessing Transformational and Transactional Leadership. *Journal of Applied Psychology.* 2003, **88** (2): 207-218.

[24] R. Kark, B. Shamir and G. Chen. The Two Faces of Transformational Leadership: Empowerment and Dependency. *Journal of Applied Psychology.* 2003, **38** (2): 246-255.

[25] N. A. Gillespie and L. Mann. Transformational Leadership and Shared Values: The Building Blocks of Trust. *Journal of Managerial Psychology.* 2004, **19** (6): 588-607.

[26] R. B. Dodge. Unintentional Learning and the Occupational Health and Safety Experience. *Education and Training.*1998, **40** (3): 109-114.

[27] C-W. Cheng, C-C. Lin and S-S. Leu. Use of Association Rules to Explore Cause-Effect Relationships in Occupational Accidents in the Taiwan Construction Industry. *Safety Science.* 2010, **48**: 436-444.

[28] S. Clarke and K. Ward. The Role of Leader Influence Tactics and Safety Climate in Engaging Employees' Safety Participation. *Risk Analysis.*2006, **26** (5): 1175-1185.

[29] E. K. Kelloway, J. Barling and J. Helleur. Enhancing Transformational Leadership: The Roles of Training and Feedback. *Leadership and Organization Development Journal.* 2001, **21** (3): 145-149.

[30] S. X. Zeng, V. W. Y. Tam and C. M. Tam. Towards Occupational Health and Safety Systems in the Construction Industry of China. *Safety Science.* 2008, **46**: 1155-1168.

[31] D. Zohar. Safety Climate and Beyond: A Multi-level Multi-Climate Framework. *Safety Science.* 2008, **46**: 376-387.