

Relationship Between Transformational Leadership and Safety Citizenship Behaviour in Manufacturing Industry

Mohamad Radhi Amonodin, Nur Syafiqah A.Rahim & Shah Rollah Abdul Wahab

School of Human Resource Development & Psychology, Faculty of Social Sciences & Humanities, Universiti Teknologi Malaysia, 81310 UTM Skudai, Johor

Corresponding Author's Email: nursyafiqaharahim@utm.my

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Abstract

Employee in the manufacturing sector in Malaysia suffers high rates of industrial accident, as reflected in eight times more fatal accidents and 50 % of injuries more likely to occur. The manufacturing industry is among the significant contributors towards Malaysia's growth domestic product (GDP) and ensuring high levels of safety in the industry remains a significant issue. This study explored the relationship between transformational leadership and safety climate towards safety citizenship behaviour in the manufacturing sector. A comprehensive review of the safety literature enabled the invention of the variables that supported a conceptual transformational leadership framework. A conceptual framework was adopted based on the integration of Social Exchange Theory. The framework will be tested empirically using data collected from manufacturing companies in Malaysia. This conceptual framework is one of the alternatives to effectively evaluate safety performance in the manufacturing sector, particularly in the Malaysian context.

Keywords: Transformational Leadership, Safety Citizenship Behaviour, Manufacturing

Introduction

Occupational accidents and injuries continue to pose significant challenges globally. It is estimated that over 374 million occupational injuries occur worldwide each year, comprising approximately 2.78 million deaths (ILO, 2020). Occupational injuries and accidents are now among the most significant workplace issues. A healthy safety culture and climate within the business is one of the critical requirements for effective occupational safety and health at the workplace.

According to SOCSO Annual Report 2018, manufacturing is Malaysia's largest and most consistent contributor to workplace accidents. For instance, in the year 2014, 15,323 cases; the year 2015, 15,513 cases; the year 2016, 15,768 cases; the year 2017, 16,589 cases and year 2018, 16,621 cases (**Table 1**) (SOCSO, 2018). The manufacturing sector is regarded as the primary contributor to industrial accidents as it contributes more than a quarter of the total number of workplace accidents in Malaysia from 2014 (30.2%), 2015 (30.2%), 2016 (29.8%), 2017 (29.8%) and 2018 (28.9%) (Social Security Organisation (SOCSO), 2018) (**Table 1**). The numbers from DOSH Malaysia provide more evidence that manufacturing has a higher accident rate than other industrial sectors. This department provided statistics on the number of workplace accidents resolved. Manufacturing has also been listed as one of the industries with the highest rate of workplace fatalities from the years 2020 (2.09), 2019 (4.70), 2018 (5.16), 2017 (7.57), 2016 (5.90), and 2015 (5.34), as shown in **Figure 1**. (DOSH, 2020). Except for 2020, when manufacturing activity will likely slow down owing to the Covid-19 epidemic, which will impact the industry's productivity, the fatality rates for manufacturing are projected to remain stable over the years.

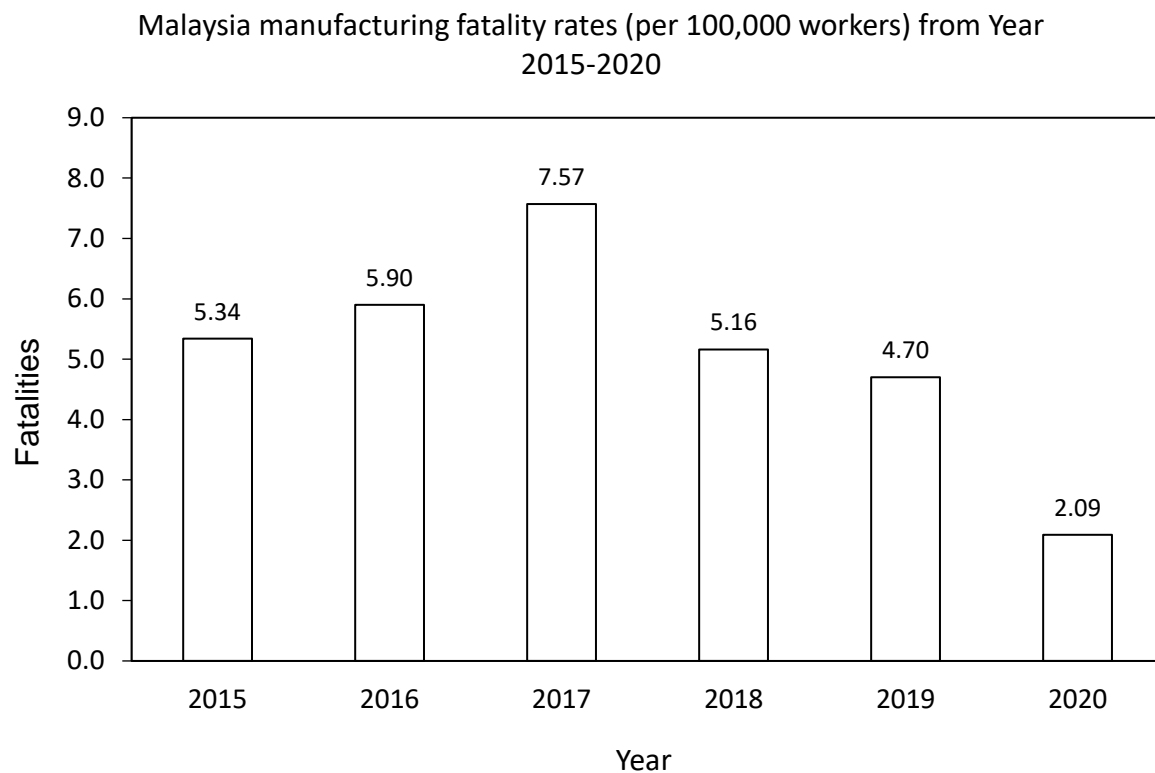


Figure 1: Malaysia manufacturing fatality rates (per 100,000 workers) from the year 2015-2020

Table 1

Number of incidents and percentage of manufacturing incidents from total workplace incidents (%) from the year 2014-2018

Year	2014	2015	2016	2017	2018
Number of workplace incidents in Malaysia	15,323	15,513	15,768	16,589	16,621
Percentage of manufacturing incidents from total workplace incidents (%)	30.2	30.2	29.8	29.8	28.9

Problem Statement

Despite significant improvements in workplace safety performance brought about by improvements in the application of safety management along with the use of technology and engineering solutions, numerous workplace injuries, including fatalities, continue to be reported annually across Malaysia's various industries. This is because not all events can be resolved by engineering and technology. Some reasons need to be addressed by concentrating on the more subtle aspects of human behaviour that cause accidents.

Leadership is a proven organisational characteristic most important for enhancing workplace safety behaviours (Wu et al., 2017). It should be emphasised that leadership style problems have been linked to failures in safety systems and the results of such failures (Hald et al., 2021). However, there is dispute over how leadership impacts safety behaviours, especially among workers in industries with strict regulations, like manufacturing (Martínez-Córcoles & Stephanou, 2017), even though many studies have shown that transformational leadership plays a significant role in fostering a safe work environment and reducing occupational-related accidents (Mullen et al., 2017). Additionally, there aren't that many attempts to empirically explore how transformational leadership affects safety performance (Sun et al., 2017) and safety behaviour (Dartey-Baah et al., 2021).

Therefore, the issue is assessing employees' safety citizenship behaviour using transformational leadership which may successfully gauge safety in an organisation, particularly in a high-risk industry like manufacturing. Considering the above issues, the present study will then extend the knowledge by focusing on antecedents of transformational leadership and safety climate to safety citizenship behaviour. Therefore, this study aims to explore the effect of transformational leadership on safety citizenship behaviour.

Literature Review

Conceptual framework of transformational leadership and safety citizenship behaviour

A preliminary literature review undertaken to review safety management at the workplace, which has been interpreted into the conceptual framework, consists of two variables: transformational leadership and safety citizenship behaviour.

Transformational Leadership

As shown in the proposed conceptual framework (**Figure 2**), researchers have chosen transformational leadership as the dependent variable in this study. Transformational leadership Bass (1985) is one of the most popular leadership theories of the organisational sciences in various industries; manufacturing (Boatca et al., 2022; Oah et al., 2018; Rahlin et al (2020), aviation Bastola (2020), healthcare Seljemo et al (2020); Ugwu et al (2020), and oil and gas (Ojuola et al., 2020; Shi & Zainal, 2021; Xue et al., 2020). Over the past 40 years, attention has shifted from traditional, transactional leadership models to more modern

transformational leadership (Siangchokyoo et al., 2020). By definition, a transformational leader plays a part in enlarging and elevating followers' motivation, understanding, maturity, and sense of self-worth (Bass, 1999).

The primary characteristics of a transformational leader are idealized influence (leader identifies and articulates a vision), inspirational motivation (leader demonstrates high-performance expectations for followers), intellectual stimulation (leader challenges followers' assumptions about their work) and individualised consideration (leader recognises individual needs of followers) (Bass, 1985).

It's interesting to note that over the past 30 years, researchers have emphasised safety behaviour more as a contributing element or result of safety management practises in an organisation (Rusyda & Abdul Aziz, 2021). There is consensus as to how safety behaviours are influenced by leadership, especially among employees in highly regulated work settings in developed countries such as South Korea (Oah et al., 2018). Consequently, while it is established that different leadership styles influence safety behaviours differently (Umme et al., 2015), very little theoretical development and research has been done that explores explicitly the fundamental mechanisms of how leadership styles affect safety behaviours, especially in Malaysian chemical or petrochemical manufacturing settings (Mirza & Isha, 2017).

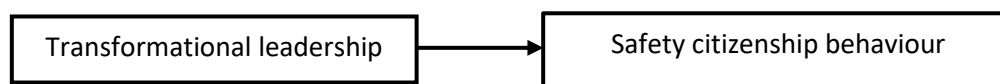


Figure 2: The conceptual framework

Hypothesis

There is a significant relationship between transformational leadership and safety citizenship behaviour.

Safety Citizenship Behaviour

Safety initiatives and participation, for example, have previously been presented as constructs akin to safety citizenship behaviour, and they have been positively correlated with a decreased frequency of accidents (Neal et al., 2000). Organisational citizenship behaviour study is where the concept of safety citizenship behaviour first emerged. It can be characterised as those safety-related risk management actions taken by individuals who go above and beyond the requirements of the organisation and its safety procedures (Wishart et al., 2019). In other words, safety citizenship behaviour refers to individual actions and responsibilities that employees within an organisation do in order to carry out their daily tasks above and beyond the minimum standards set by organisations and laws. Therefore, just as organisational safety behaviour, safety citizenship behaviours can be described as discretionary behaviours that, taken together, support the efficient operation of the organisation but are not openly or immediately acknowledged by the formal incentive system.

The idea of citizenship behaviour is founded on the reciprocity principle, which states that employees often act in ways that are beneficial to the organisation in exchange for a good connection with their supervisor (i.e., a relationship based on trust, support, and fairness). Employees are likely to select safe behaviours since it is commonly known that safety is a valued behaviour in a high-risk business (Hofmann et al., 2003). For every part of the

organisation, the top management develops rules and procedures, which, when followed, become practices. The management's internally consistent pattern of executed policies determines the safety climate. Due to this, it is believed that the safety climate is a social construct rather than the outcome of the observation of specific safety procedures in a passive manner (Biron et al., 2018).

The idea of safety citizenship behaviour was characterised as a voluntary, individual action taken by workers in the construction industry to assure the safety performance of other team members, as well as the project's and organisation's safety performance (Hofmann et al., 2003). They discovered that emphasising employee support for one another and the idea of safety citizenship behaviour was crucial for enhancing working groups' safety performance and could increase organisational effectiveness. The definition of safety citizenship behaviour has been expanded to include voluntary assistance to other project participants and project organisations in order to improve safety and working conditions (Didla et al., 2009). Additionally, acts to ensure the safety of others, efforts to prevent accidents from happening, and proactive efforts to improve organisational safety procedures and general workplace safety conditions were all included in the specialised organisational citizenship behaviour known as "safety citizenship" (Conchie & Donald, 2008).

Transformational leadership and safety citizenship behaviour relationship

There is a wide range of research on safety leadership, particularly in the manufacturing sector, but there is relatively little research on leadership styles for safety citizenship behaviours. However, the limited research that has been carried out on safety leadership in the manufacturing industry has demonstrated that transformational leadership and its related dimensions can affect employee safety behaviours (Addo & Dartey-Baah, 2020; Baertschi et al., 2018; Flin & Yule, 2004). For instance, a known dimension of transformational leadership style, stimulation and individual consideration, favours employees' safety behaviours (Flin & Yule, 2004). Another study found that empowering transformational leadership produces better levels of safety compliance and safety participation behaviours (Martínez-Córcoles et al., 2012).

Senior managers have direct control over organisational culture, employee expectations, and safety behaviour (O'Dea & Flin, 2001). Additionally, leaders' safety citizenship behaviour encourages subordinates' organisational safety citizenship behaviour, which is confirmed to be an imitation of that of their superiors (Guay et al., 2019). Therefore, leader-member exchange positively impacts safety citizenship behaviour (Rashidah et al., 2017; Shiou-Yu et al., 2021). More specifically, leader-member interactions influence safety citizenship behaviours in accordance with the respect and encouragement of immediate superiors (Shen et al., 2017).

The aforementioned findings imply that transformational leadership and its associated dimensions can assist in the explanation of safety citizenship behaviours in Malaysia's industrial sector. The evidence that transformational leadership can positively relate to employee safety behaviours has been proven in Ghana's power transmission subsector organisation (Addo & Dartey-Baah, 2020). The study has found that managers who exhibit a transformational leadership style can influence employees to oblige and demonstrate safety behaviours beyond the regular safety expectation of top management. If the management can establish a vision and strategic direction, empower employees, give resources, and consistently stress and reinforce the importance of safety to employees beyond their regular responsibilities, more positive influence may be attained (Martínez-Córcoles et al., 2012).

Theoretical Argument

A theory can explain and support the relationship between transformational leadership and safety citizenship behaviour. The suggested theory is the Social Exchange Theory (Blau, 1964; Gouldner, 1960). The central tenet of Social Exchange Theory is that social exchanges should be supported by a norm of reciprocity such that the exchange partners' discretionary advantages are eventually returned in a discretionary manner (Blau, 1964; Eisenberger et al., 1986; Laurent et al., 2018). The Social Exchange Theory is applied to understand leadership and safety citizenship behaviours. If there is a quality social exchange between employees and their managers, Social Exchange Theory has been used to explain that employees have a sense of obligation to respond and reciprocate in a way that is consistent and above and above what is expected of them (Hofmann & Morgeson, 1999; Kelloway et al., 2017; Mearns & Reader, 2008). Again, the leader-member exchange viewpoint, which examines exchange interactions between leaders and their subordinates, has been used primarily to examine safety citizenship behaviours (Jiang et al., 2017).

On the other hand, the leader-member exchange view sheds light on how we perceive how leadership affects safety citizenship behaviours. Its underlying premise is transformational, according to which leaders motivate employees (Addo & Dartey-Baah, 2020; Jungbauer et al., 2018). Leadership has always been a social phenomenon, and it depends on social interactions and procedures to persuade workers or followers to adhere to safety ideals and practises (Lai et al., 2020; Mearns & Reader, 2008). Workers' opinions of their managers can influence how they view safety in their workplaces, which in turn can influence how they behave in safety-related situations. By following safety policies and procedures, actively taking part in safety-related activities, and positively influencing their risk-taking behaviours, employees simply give back to their organisations. Positive leader behaviours should eventually be reflected in positive follower behaviours.

The Social Exchange Theory is appropriate for describing the connection between organisational sociopsychological characteristics and how these factors improve workers' performance (Fløvik et al., 2019). Furthermore, the Social Exchange Theory has been primarily used to underpin the relationship between leaders and their subordinates (Liden et al., 1993; Settoon et al., 1996), specifically in the safety research area (Hackett et al., 2018; Hofmann & Morgeson, 1999; Meng et al., 2021; Rahlin et al., 2020). Furthermore, it is only more recently that scholars have begun to link transformational leadership and safety citizenship behaviour to the Social Exchange Theory (Arief et al., 2020; Shi, 2021). Thus, the use of this theory in the current investigation is supported. It is expected that when a leader and their subordinate have an antagonistic relationship, the workplace will be compromised by the employees' poor behaviour. In order to understand how leadership influence safety citizenship behaviours, this stance is expected to be empirically explored.

Conclusion

The framework suggests that transformational leadership may influence safety citizenship behaviour, which leads to the development of the conceptual framework. Incorporating the notion of transformational leadership will be likely led to increasing predictive ability of safety citizenship behaviour models. This conceptual framework is one of the alternatives to empirically evaluate safety citizenship behaviour in manufacturing industry, particularly contributes to the literature in the Malaysian context.

Limitation of Study

In this study, only some limitations were encountered. This study approach was designed to provide appropriate safety citizenship behaviour measures by covering a broader array of the manufacturing sector. This present research has argued two variables: transformational leadership and safety citizenship behaviour. The conceptual model of this study has proven the proposed relationships between variables signifying the Social Exchange Theory. However, practical contributions derived from the empirical evidence found in this research should uphold the theory augmentation.

Future Research

Researchers discuss that this article generated aspects further, as researchers could provide explanations of the underlying Social Exchange Theory. This article aids as a discussion icebreaker of the effect of transformational leadership on safety citizenship behaviour in the manufacturing sector, especially in Malaysia. In this study, researchers also acknowledge that further replicated studies may consider building on what has been investigated in this research and applying the methodology and findings developed to another relevant construct. The safety citizenship behaviour evaluation in the manufacturing sector should consider multi-projection strategies comprised of elements such as the enforcement of law, education or training related to safety in the workplace and employee safety engagement. Finally, sampling design should be carried out on other high-risk industries in a boarder range of country geographies. Thus, the results of safety citizenship behaviour in specific industries can be added to the literature body.

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