Safety Citizenship Behaviour in Malaysia Public Transportation: The Role of Safety-Specific Transformational Leadership and Safety Consciousness

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Abstract. Safety-specific transformational leadership (SSTL) is crucial in public railway transport due to the higher occupational hazards. This paper tests the direct relationship between SSTL and safety citizenship behaviour (SCB) dimensions, such as civic virtue, helping, stewardship, voice, initiating safety-related changes, and whistleblowing. The study was conducted with employees of a Light Rapid Transit (LRT) Railway Service Company, and the data were analysed using SPSS and SmartPLS 4.0.8.3. Results show significant positive relationships between SSTL and the civic virtue, stewardship, voice, and whistleblowing dimensions of SCBs. Safety consciousness significantly moderated the relationship between SSTL and both initiating safety-related changes and stewardship. The study discusses various theoretical and practical implications for public transportation.

Keywords: safety-specific transformational leadership, safety citizenship behaviour, railway, safety consciousness, SmartPLS, Malaysia

JEL Classification: I10, I12, I18

1. Introduction

The railway is one of the main modes of transportation in Malaysia, especially for those living in the city area of Kuala Lumpur. Data from the Ministry of Transport Malaysia reveals that for the first quarter (from January to April) of 2021 the number of passengers using the six main services of Light Rail Transit (LRT) Ampang Line, LRT Kelana Jaya Line, KL Monorail, Metro Rail Transit (MRT) SBK Line, KLIA Express, and KLIA Transit is nearly 20 million (Statistic of Rail Transport, 2021). The public transport usage in 2022 has increased to 24% daily in the city centre as compared to 18% in 2018 (Ravindran, 2022). The railway transport sector plays a significant role in Malaysia's national income. With more upcoming MRT projects lined up, the government is estimating a total of 531 billion Malaysian Ringgit (RM) in economic value for ten years (Yusoff et al., 2021).

Malaysian railway services operate under the Land Public Transport Agency, which has now been absorbed into the Ministry of Transport. According to the Malaysia Land and Public Transport Act (Act 715) (Land et al. Act 2010 (Act 715), 2011), a railway accident is defined as an event that results in the death of a person, serious injury to a member of the public, a train passenger, or a person operating or driving a train, in significant damage to property or goods transported on the railway, or in an incident of the kind that typically results in such loss, injury, or damage.

Accidents involving public LRT or MRT have been reported in Malaysia. In October 2006, an empty LRT coach jumped a concrete barrier while stopping at the Sentul Timur station, leaving a portion of the coach dangling about 25 meters above the ground (Lourdes and Singh, 2006). Subsequently, in March 2015, a monorail service experienced an issue that resulted in a four-car train's rubber tyre catching fire at Titiwangsa Station (Shahrudin, 2015). Furthermore, a malfunction in the signalling and communication system between Ampang Park and Dang Wangi Station left the LRT Kelana Jaya Line stranded in September 2016. The most recent public LRT accident happened on 24 May 2021, when two LRTs collided due to miscommunication, causing 213 injuries, including 166 minor and 47 serious injuries (Chin, 2021).

A study by Kyriakidis et al. (2015) reported that many public railway accidents had happened due to degraded human performance and human error. A sizable fraction of all train accidents, including those that take place in switching yards, are caused by human factors. These LRT, MRT, and monorail incidents caused line service disruptions, property (coaches) and equipment damage, financial loss for the corporation, and reputational harm (Mashi et al., 2020).

Apart from that, a review of the literature also reported that one of the significant factors that highly contribute to occupational accidents is safety citizenship behaviour (SCB). SCB applies the principle of reciprocity, which highlights the

high-quality relationship between the employees and their supervisor (Hofmann et al., 2003; Zhang et al., 2020). Having a good relationship between the supervisor and employees can further encourage safety participation and subsequently avoid any unwanted occurrences or accidents at the workplace (Zhang et al., 2020).

SSTL is crucial in the railway transport industry because of the higher occupational hazards. With strong SSTL, trust, and support from the supervisor, the SCBs can be further cultivated in the organization (Irshad et al., 2021). Another important aspect is safety consciousness, which could help enhance the link between SSTL and SCBs. Safety consciousness is the employees' positive attitude and awareness that could encourage them towards SCBs (Meng and Chan, 2020). Conscientious workforces are committed and strive for their personal goals compared to less conscientious employees. As a result, safety consciousness can encourage better SSTL and SCBs. This paper intends to investigate the influence of SSTL on SCBs while examining the moderating role of safety consciousness in the relationship above. Therefore, the objectives of this study are twofold: (1) to test the direct relationship between SSTL and SCB dimensions (i.e. civic virtue, helping, stewardship, voice, initiating safety-related changes, and whistleblowing); (2) to examine the moderating role of safety consciousness in the relationship between SSTL and SCB.

This study addresses three important contributions to the safety and leadership literature. Firstly, conventionally studied leadership philosophies, such as transformational and transactional leadership, need to be revised to understand leadership in complex and changing settings such as railways (Hughes et al., 1983). The behaviours that leaders should adopt in this complicated and dynamic environment should be specific (Zheng et al., 2022). Secondly, the study provides an understanding of various boundary situations where SSTL may promote SCB. This study verifies the positive effects of SSTL on SCB by including safety consciousness as a moderator (Meng and Chan, 2020). Finally, research shows that there are few studies on public management, including managing safety, in developing countries such as Malaysia (Zheng et al., 2022). However, with the rising demand for public railway services in Malaysia, occupational accidents and injuries among workers have had such negative effects that it has prompted calls for such studies. Therefore, this study fills in these gaps. *Figure 1* shows the research framework investigated in this study.

The remainder of the paper is organized as follows: Section 2 focuses on a review of the literature, Section 3 provides the methodology of the study, including sampling technique, measurement of variables, and data collection, Section 4 reports on the findings of the study, and, finally, Section 5 focuses on discussion, theoretical and practical implications, and conclusions.

2. Literature Review

2.1 Safety-Specific Transformational Leadership (SSTL)

Safety-specific transformational leadership (SSTL) incorporates tactics and strategies of transformational leadership, but the emphasis is on safety at work (Barling et al., 2002). The concept of transformational leadership was initially introduced by Burns (1978), while Bass (1985) elaborated further on the idea. The elements of transformational leadership do not rely on wages or rewards for performance; instead, they pinpoint motivation as the key (Bass, 1985). Rainey (2003) further stressed that transformational leaders do not exert direct control over their followers; on the other hand, they shape a positive change in their subordinates' climate perception. Having clear and engaging visions, communicating how these visions can be attained, being empowered as a sign of trusting the followers to achieve their dreams, leading by example, and motivating them to achieve higher-order needs are key in shaping an individual's climate perception (Rainey, 2003).

Since Andriessen (1978) demonstrated that the leadership and safety standards of the leader play a significant role in determining SCB, SSTL may be one of these elements that could affect SCB and efficient and appropriate PPE utilization among public railway employees. Railway leaders may help safety departments promote safety and improve rail safety behaviour outcomes by implementing SSTL concepts and tactics. As demonstrated in other occupations, these tactics may help promote good safety climate perceptions on the railway and may initiate, sustain, and improve SCB (Barling et al., 2003; Clarke, 2013; Mullen et al., 2011).

Even though SSTL emphasizes workplace safety, it also integrates elements of transformative leadership (Barling et al., 2002). The four main aspects of transformational leadership – idealized influence, inspiring motivation, intellectual stimulation, and individualized consideration – plus contingent compensation were included in the development of SSTL, which has implications for safety-specific leadership (Barling et al., 2002). SSTL is typically considered to be a justifiable unidimensional indicator that was initially validated by Barling and colleagues (Barling et al., 2002).

SSTL is linked to improved occupational safety outcomes, such as a safe work environment, safety awareness, and SCB (Barling et al., 2002; Mullen et al., 2011). Within the public railway service, there have also been positive, substantial connections shown between SSTL, safety climate, and SCB (Li et al., 2020). Given the impact on general SCB, it is anticipated that SSTL will also affect specific compliance-oriented behaviours, such as the usage of personal protective equipment (PPE). Safety motivation has received just a cursory examination as part of the theoretical framework connecting SSTL to safety behaviours, particularly

to PPE use, and more attention needs to be paid to how SSTL affects SCB outside of the context of safety climate. An individual's willingness to put forth an effort to practice safe actions is referred to as their SCB in the context of social exchange theory and reciprocity (Blau, 1964). This paradigm contends that due to the inherent reciprocity principles in social exchange interactions, the concern of the management and of the organization leaders for employees' safety stimulates the workers to engage in desired SCB (Clarke, 2013 Barling et al., 2002; Mullen et al., 2011).

Good leaders deliver safety messages to their employees to encourage them to abide by the occupational safety standards, rules, and regulations at the workplace. A study by Lu et al. (2019) further reveals that leaders or supervisors with SSTL can boost the employees' motivation and persuade them to participate actively and comply with the organization's safety standards (Lu et al., 2019; Irshad et al., 2021). A study conducted by Arief et al. (2020) reported that there was a significant direct relationship between SSTL and safety behaviour based on a survey undertaken among 40 factory employees in Indonesia. This suggests that leaders who are highly concerned with their subordinates' safety and welfare substantially increase productive safety manners and behaviour among the employees (Arief et al., 2020). As a result, the organization reported fewer injuries and occupational accidents. A similar finding has also been reported in a study by Mirza and Isha (2020), which was undertaken on 270 production workers in the oil and gas industry across Malaysia. SSTL was reported to have significantly reduced occupational accidents in the oil and gas industry (Mirza and Isha, 2020).

2.2 Safety Citizenship Behaviour (SCB)

A study by Li et al. (2020) defined SCBs as behaviour that emphasizes supporting or helping a group of employees to improve safety at work. The employees' safety performance can further be enhanced through the mutual support of other employees (Mashi et al., 2022), as well as through the effective relationship between the supervisors (Abdelmotaleb and Saha, 2018; Cesário and Magalhães, 2017; Zhang et al., 2020). There is also a direct connection between SCBs and safety participation. Studies show that SCBs act as accident prevention catalysts when there is a significant reduction in the number of safety violations committed by employees in the workplace (Li et al., 2020). It has also been reported that a high level of safety participation among the employees is due to the SCBs (Li et al., 2020).

The main role of SCBs is to reduce occupational accidents and minimize risks, workplace hazards, and property damages. SCBs apply the concept of supervisor and employee engagement, which is based on affiliation and trust (Hofmann et al., 2003; Wijewardena, 2014; Zhang et al., 2020). Besides that, SCBs also apply the concepts of altruism and courtesy. Altruism emphasizes the discretionary

behaviour of helping other employees at the workplace to solve a problem or any task. Meanwhile, courtesy highlights the discretionary behaviour of avoiding any conflict between co-workers at the workplace.

Apart from that, another SCB concept that plays a significant role is the voluntary behaviour approach, which emphasizes the construction of personnel safety behaviour through the mutual support of the employees at the workplace to achieve the organizational safety goals further (Li et al., 2020). All the SCBSCB concepts are crucial to further improving the quality of work performance. Through these approaches, SCBs can achieve a higher safety standard at the organizational level and subsequently minimize future occupational accident risks and hazards (Li et al., 2020).

A study by Hofmann et al. (1995) further measures the role of safety citizenship through six sub-dimensions: civic virtue, helping, stewardship, voice, initiating safety-related changes, and whistleblowing. Firstly, civic virtue is defined as the employees' positive involvement in organizational activities, such as attending safety meetings. Secondly, helping is associated with the assistance provided by the employee to his other colleague. Next, stewardship and voice are focused on taking care of the other employees' well-being and on whether there is improvement in their colleagues' work activities. Subsequently, initiating safety-related changes targets the improvement of the organization. Finally, whistleblowing is the action taken towards those who violate safety at the workplace and which recognizes those who protect their colleagues from any unsafe work situation or any consequences that could be associated with an occupational accident (Hofmann et al., 1995). Thus, in this study, the SCBs are further investigated based on the following six sub-dimensions:

2.3 Safety-Specific Transformational Leadership and Civic Virtue

Civic virtue is a behaviour that expresses how concerned the employees are about the organization's well-being (Clark et al., 2014). Employees who are highly worried about the organization will actively participate in occupational safety and health activities (Clark et al., 2014). Apart from that, civic virtue also portrays the employee's loyalty towards the organization. The employees usually do not display any problems with the safety and health policy, procedures, or any activities implemented by the organization. They indeed show high safety commitment and involvement (Clark et al., 2014; Srithongrung, 2011).

Although Nurjanah et al. (2020) did not study the dimensions of OCB separately, it has already been mentioned that the variable of OCBs has been integrated with the other five OCB components, and civic virtue is one of the included components (Nurjanah et al., 2020). The study, which involved civil servants at the Inspectorate General of the Ministry of Education and Culture in Jakarta,

Indonesia, confirmed that the proactive leadership style shown by their leaders had significantly improved their OCBs (Khan et al., 2020; Nurjanah et al., 2020).

Moreover, a study by Khan et al. (2020) further confirmed that transformational leadership has significantly fostered civic virtue behaviour among the supervisors and employees of the hospitality industry in Anhui province, China. Transformational leadership roles played by the leaders further promote the employees' happiness, well-being, and physical health (Khan et al., 2020). As a result, the dimension of civic virtue under the OCB construct has become an important condition for the strong development of the service industry. Based on the empirical pieces of evidence discussed above, SSTL can significantly influence the SCBs of civic virtue. Thus, the following hypothesis is formulated:

H1: SSTL has a positive and significant influence on civic virtue.

2.4 Safety-Specific Transformational Leadership and Helping

The dimension of helping under the OCBs is also known as altruism, which consists of the discretionary helping behaviour practised by employees. The study by Dash and Pradhan (2014) reveals that altruism includes all helping and volunteering behaviours. Both employees and leaders who can foster altruism and helping behaviour can cultivate a positive and healthy interpersonal relationship, which subsequently results in a better work climate (Ahmad et al., 2014; Dash and Pradhan, 2014). Punj and Krishnan (2006) reported that transformational leadership significantly influenced altruism. Altruism, which is one of the dimensions under the OCBs, has proven to enhance organizational performance (Punj and Krishnan, 2006). Meanwhile, Majeed et al. (2017) reported that transformational leadership has significantly influenced OCBs based on a study conducted among teachers in public-sector higher education institutions in Pakistan. Based on the empirical pieces of evidence discussed above, SSTL can significantly influence the SCB's efforts to help. Thus, the following hypothesis is formulated:

H2: SSTL has a positive and significant influence on helping.

2.5 Safety-Specific Transformational Leadership and Stewardship

Organizational stewardship is measured by the organization's ability to use leadership influence to contribute back to society. Stewardship behaviour is a situation where the employee trusts the vertical relationship of leader–subordinate with the organization (Rashid et al., 2019). The leader's supervisory role, which requires them to take care of their employees, will enhance the trust between them and ensure the employee's well-being.

A cross-sectional study conducted among mental health service providers in San Diego reported that transformational leadership has significantly increased employee well-being through better personal accomplishment (Green et al., 2014). Based on the core value of transformational leadership, leaders are expected to play a vital role in supervising and monitoring their employee's daily work. The leader needs to understand whether the employees are in a distressed situation or feeling lost while performing their work. A proactive leader will be able to detect such a situation and help take care of the employees so that the issue will not affect their well-being (Green et al., 2014).

A similar finding has also been reported in a longitudinal study undertaken on Danish eldercare workers (Munir et al., 2010). A positive and significant association between transformational leadership and a reduction in employees' depression was recorded. Working in the eldercare centre indeed puts greater pressure on the employees; however, the transformational leadership that the eldercare centre's leaders have practised has had a positive impact on the employees. As a result, leaders can ensure employee well-being. Based on the empirical pieces of evidence discussed above, SSTL can significantly influence the SCBs of stewardship. Thus, the following hypothesis is formulated:

H3: SSTL has a positive and significant influence on Stewardship.

2.6 Safety-Specific Transformational Leadership and Voice

Wang et al. (2019) defined voice behaviour as a form of communication used by employees to improve the current situation or apply a change-oriented approach for a healthier situation at the workplace. Normally, employee voice has also been used to aim for a better status quo among the employees (Parker and Collins, 2010). This subsequently helps to cultivate a better work environment and prevent any organizational harm.

Voice behaviour is one of the dimensions under the OCBs that allows employees to communicate and voice their thoughts at work (Wang et al., 2019). The employees have been encouraged to speak up to their leaders on any issue that becomes a concern for them. Nevertheless, voicing a problem or issue, especially one related to the leaders themselves, is a challenging task. Thus, the element of transformational leadership, which highlights traits like building trust and good rapport in the vertical relationship of leader–subordinate, is important to motivate the employees to speak the truth (Liu et al., 2010).

Similarly, the study by Rasheed et al. (2021) also confirmed that transformational leadership has significantly influenced the voice behaviour of employees at small and medium-sized enterprises (SME). The employees are more confident in speaking up about their concerns or issues with their leader. The boundaries that

exist between leader and subordinate can be removed, and a healthier relationship between both parties can be further fostered (Rasheed et al., 2021). Based on the empirical evidence discussed above, SSTL can significantly influence the SCBs of voice. Thus, the following hypothesis is formulated:

H4: SSTL has a positive and significant influence on voice.

2.7 Safety-Specific Transformational Leadership and Initiating Safety-Related Changes

Safety-related changes are being measured through the safety improvements that can be achieved by the employees to improve organizational performance (Hofmann et al., 1995). An improvement in the employees' safety behaviour can help the organization reduce any unwanted incidents and minimize the accident risk at the workplace.

A study by Shi (2021) further links safety behaviour with safety compliance and safety participation. Safety compliance concerns the employee's ability to comply with the organization's safety rules and procedures such as wearing personal protective equipment provided by the organization (Shen et al., 2017). Meanwhile, safety participation refers to an employee's voluntary participation in safety activities, including attending safety meetings and helping co-workers on issues relating to safety (Shen et al., 2017; Arief et al., 2020).

Moreover, an extensive literature review also reported that SSTL could reduce any near-miss incident through the mediating role of the safety climate (Isha et al., 2019). The researchers further reported that employees who work under leaders with SSTL values are well equipped with safety awareness. The leaders believe that any near-miss incidents should not be routine and that such incidents should not happen again in the future (Isha et al., 2019). Based on the empirical pieces of evidence discussed above, SSTL can significantly influence SCBs in initiating safety-related changes. Thus, the following hypothesis is formulated:

H5: SSTL has a positive and significant influence on initiating safety-related changes.

2.8 Safety-Specific Transformational Leadership and Whistleblowing

Whistleblowing is defined as an action taken by the employees to disclose or expose any unlawful or immoral practices or activities committed by the leaders to the organization's management (Caillier, 2015). In an organization, the whistleblowing process involves two parties: the employees and their supervisors. The supervisors are usually the first to receive the employees' complaints, and they indeed play a critical role in the whistleblowing process (Caillier, 2013, 2015).

The whistleblowing process is one of the most important occasions in the organization because of the effect of the complaints made by the employees to the supervisor or the organization's management. It is the responsibility of the supervisor or of the organization's management to set a friendly tone and eliminate the hostile environment after receiving the complaint (Bhal and Dadhich, 2011). Or else the employees will no longer want to report or disclose any unlawful behaviour or activities committed by the wrongful party due to the hostile treatment they receive (Bhal and Dadhich, 2011).

The literature on the relationship between transformational leadership and whistleblowing needs to be more extensive. A comprehensive review of the literature found only a few studies. A survey by Caillier (2013) reported that transformational leadership is positively associated with whistleblowing. This indicates that the significant practices of transformational leadership applied in the organization have put the employees in a comfortable position to report any wrongful behaviour (Caillier, 2013, 2015). Rabie and Abdul Malek (2020) further reported that ethical leadership positively impacts the intention of the telecom sector's employees to act as whistle-blowers in the workplace, and Mohamed-Isa et al. (2020) proposed that ethical leadership positively influences whistleblowing intention in their conceptual paper. Based on the empirical pieces of evidence discussed above, SSTL can significantly affect the SCBs of whistleblowing. Thus, the following hypothesis is formulated:

H6: SSTL has a positive and significant influence on whistleblowing.

2.9 The Moderating Role of Safety Consciousness

Safety consciousness is defined as an individual's insight and understanding of the working conditions and circumstances, which can further help to improve the safety state of the organization (Meng and Chan, 2020). Awareness of safety and health is crucial for employees, especially when they are working in a highly hazardous industry. Safety consciousness and alertness help to avoid accidents at the workplace.

Safety consciousness applies the concept of positive self-efficacy, which helps the individual execute behaviour based on his capacity without jeopardizing his safety and health (Meng et al., 2020). This will help reduce any unwanted risk at work, even in the absence of supervision from the supervisor. Safety consciousness also helps in promoting safety performance. Hence, employees show greater responsibility for abiding by the organization's safety standards and policies (Meng and Chan, 2020).

Besides that, safety awareness proved to significantly influence safety behaviour in a study conducted among healthcare professionals in Ankara, Turkey (Uzuntarla

et al., 2020). Employees with high safety awareness show better judgment and the ability to terminate any work hazard or risk. Healthcare personnel working in hazardous conditions and environments are prone to occupational accidents and diseases. As a result, the management highly emphasized cultivating safety awareness and consciousness among the employees (Uzuntarla et al., 2020).
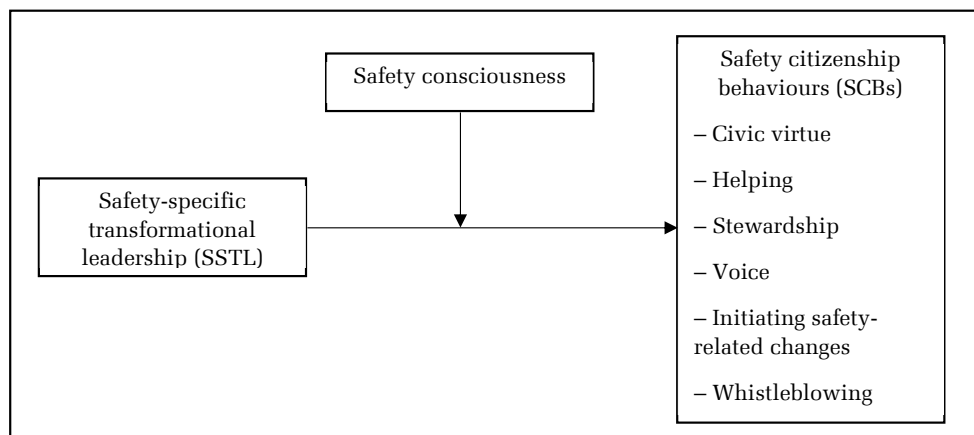

Figure 1. *A research framework*

Based on the literature discussed above, it can be summarized that safety consciousness can help influence the outcome of the SCBs. As proposed by MacKinnon (2011), a variable is considered a moderator when it can affect the strength of the relationship between one variable (i.e. an independent variable) and another variable (i.e. a dependent variable). Therefore, it clearly shows that safety consciousness plays a moderator role in this study. Safety consciousness may likely play a moderator role in this study because it will facilitate the positive effect SSTL has on the SCB of railway workers. As a result, public railway workers with a high degree of safety consciousness are more inclined to participate in SCB activities than employees who have a low level of safety consciousness; therefore, the following hypotheses are formulated:

H7: Safety consciousness moderates the relationship between SSTL and SCB, in which the relationship is stronger when safety consciousness is higher.

H7a: Safety consciousness moderates the relationship between SSTL and civic virtue, and the relationship is stronger when safety consciousness is higher.

H7b: Safety consciousness moderates the relationship between SSTL and helping, and the relationship is stronger when safety consciousness is higher.

H7c: Safety consciousness moderates the relationship between SSTL and stewardship, in which the relationship is stronger when safety consciousness is higher.

H7d: Safety consciousness moderates the relationship between SSTL and voice, in which the relationship is stronger when safety consciousness is higher.

H7e: Safety consciousness moderates the relationship between SSTL and initiating safety-related changes, and the relationship is stronger when safety consciousness is higher.

H7f: Safety consciousness moderates the relationship between SSTL and whistleblowing, and the relationship is stronger when safety consciousness is higher.

2.10 Transformational Leadership Theory

Transformational leadership theory is a leadership style in which a leader works with a subordinate to inspire, guide, and execute the required changes towards achieving the desired behaviour or outcome (Khan et al., 2020). This theory emphasizes the importance of an effective leader in fostering and cultivating the desired result. A good leader is expected to act accordingly to set an example for the employees. Another crucial aspect of this theory is the engagement between the leader and the subordinate.

Having good communication and rapport in this vertical relationship can further develop trust, belief, and motivation, which finally results in the anticipated finding (Lai et al., 2020). The transformational leadership theory is fit to underpin this research, which applies a similar concept of cultivating the leader–subordinate relationship. Such a relationship is vital to encourage SCBs, which can further help to avoid any unwanted incidents and accidents at the workplace. Apart from that, the transformational leadership theory also comprises four dimensions: idealized influence, inspirational motivation, intellectual stimulation, and, finally, individualized consideration (Lai et al., 2020).

The application of the Transformational Leadership Theory and the research model can be seen through the vertical relationship between leader and subordinate, which helps to ensure the smooth transition between the SSTL and SCBs, specifically on the six dimensions of civic virtue, helping, stewardship, voice, influence in initiating safety-related changes, and whistleblowing. As mentioned in the literature, SSTL, which applies the concept of transformational leadership theory, has significantly influenced Indonesian factory workers' safety behaviour (Arief et al., 2020). The idea of transformational leadership theory, which emphasizes the leader's role to guide and inspire the employees' motivation towards anticipated safety behaviour, has successfully led to better safety performance among the factory workers (Arief et al., 2020).

3. Methodology

This study is being undertaken by 327 employees of the public Light Rapid Transit (LRT) Railway Service Company. The respondents are the technical employees who perform rail-related duties such as hostlers (train drivers), rail maintenance and repairing railway equipment, and rail operation (supervising, monitoring, and controlling train services). They are highly exposed to hazards and risks at the workplace. At the end of the data collection process, only 98 completed questionnaires were returned, representing 30% of the response rate. The low response rate justifies how stressful their work is to serve the general public.

Structured survey questions consist of twelve demographic items, eight items of SSTL, and seven items of safety consciousness, which were adopted from Barling et al. (2002). The SSTL items consist of four sub-dimensions (i.e. idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration). Some of the included items are: "My manager shows determination to maintain a safe work environment." (idealized influence of SSTL); "My manager talks about his or her values and beliefs about the importance of safety." (inspirational motivation of SSTL); "My manager suggests new ways of doing our jobs more safely." (intellectual stimulation of SSTL); "My manager spends time showing me the safest way to do things at work." (individualized consideration of SSTL); "I know what protective equipment and clothing is required for my job." (safety consciousness).

Items for SCBs were adopted from Hofmann et al. (2003), which measure the six sub-dimensions of SCBs (i.e. helping, voice, stewardship, whistleblowing, civic virtue (keeping informed), and initiating safety-related changes). Some of the items are: "I volunteer for safety committees." (helping); "I make safety-related recommendations about work activities." (voice); "I will be a champion to protect fellow working colleagues from safety hazards" (stewardship); "I prefer to explain to other working colleagues that I will report safety violations." (whistleblowing); "I will be a champion to attend safety meetings." (civic virtue, keeping informed); "I try to improve safety procedures." (initiating safety-related changes).

The questionnaire is measured using a five-point Likert-type scale ranging from "strongly disagree" (1) to "strongly agree" (5) and is prepared in both English and Malay. The original instruments (English) were translated into Malay by academic experts to ensure the consistency of the translation process. The data were analysed using SPSS and SmartPLS 4.0.8.3.

4. Results and Analysis

4.1 Demographic and Descriptive Results

The survey reveals that the majority of rail transport operators are male, with 69.4% having a diploma and 17.3% having a related certificate. The average age range is between 26 and 35 years, with a minimum of five years of experience. Most of them have never experienced any occupational injuries.

Table 1 presents the descriptive statistics, including the means and standard deviations of the variables under study. As shown in *Table 1*, the mean value of all the constructs ranged between 3.293 and 3.967, and the standard deviation ranged between 0.673 and 1.011.

Table 1. *Results of the descriptive statistics of all the latent constructs (N = 98)*

Latent Constructs	Items	Mean	Std. Dev.
SSTL	8	3.654	0.905
Safety Consciousness	7	3.967	0.673
Civic Virtue	3	3.293	1.011
Helping	6	3.728	0.732
Stewardship	5	3.559	0.836
Voice	4	3.648	0.732
Initiating Safety-Related Changes	4	3.747	0.739
Whistleblowing	5	3.549	0.769

4.2 Common Method Variance

This study addressed common method bias (CMV) by using data from all respondents simultaneously. To minimize single-source bias, procedural and statistical remedies were applied. Procedural remedies included obtaining expert opinions, checking content validity, employing reverse-worded questions, and emphasizing anonymity. Statistical remedies included Harman's single-factor method, which explained only 34.59% of the total variance, indicating no common method bias. This approach ensured confidentiality and honesty in respondents' responses (Podsakoff et al., 2003). The study conducted a full collinearity test to address single-source bias. Five out of eight variables had a VIF of less than 5, while three variables had a VIF of more than 5, indicating that single-source bias is not a significant issue (refer to *Table 2*) (Kock, 2015).

Table 2. *Full collinearity testing*

Virtue	Help	ISRC	Stew	Voi	Whistle	SSTL	Scons
5.002	5.231	2.310	3.755	3.680	5.605	2.541	3.804

Notes: ISSTL – safety-specific transformational leadership, Scons – safety consciousness, Help – helping, ISRC – initiating safety-related changes, Stew – stewardship, Virtue – civic virtue, Voi – voice, Whistle – whistleblowing.

4.3 Measurement Model Evaluation

The measurement model underwent convergent and discriminant validity tests, with all constructs reporting loading values above 0.7. The composite reliability (CR) and average variance extracted (AVE) were also above 0.7 and 0.5 respectively (Hair et al., 2014) (refer to *Table 3*).

Table 3. *Results of the measurement model*

Construct	Item	Loading	CR	AVE[a]
Virtue	Virtue1	0.943	0.968	0.911
	Virtue2	0.972		
	Virtue3	0.949		
Help	Help1	0.821	0.941	0.727
	Help2	0.864		
	Help3	0.879		
	Help4	0.907		
	Help5	0.877		
	Help6	0.757		
ISRC	ISRC1	0.837	0.904	0.701
	ISRC2	0.876		
	ISRC3	0.857		
	ISRC4	0.776		
Stew	Stew1	0.908	0.941	0.799
	Stew2	0.920		
	Stew3	0.922		
	Stew4	0.821		
Voi	Voi1	0.891	0.924	0.752
	Voi2	0.808		
	Voi3	0.876		
	Voi4	0.892		
Whistle	Whistle1	0.736	0.930	0.727
	Whistle2	0.904		
	Whistle3	0.835		
	Whistle4	0.895		
	Whistle5	0.884		

Construct	Item	Loading	CR	AVE[a]
SSTL	SSTL1	0.851	0.971	0.810
	SSTL2	0.898		
	SSTL3	0.910		
	SSTL4	0.912		
	SSTL5	0.925		
	SSTL6	0.925		
	SSTL7	0.905		
	SSTL8	0.872		
SCons	SCons4	0.870	0.923	0.751
	SCons5	0.855		
	SCons6	0.891		
	SCons7	0.848		

Notes: Stew5, SCons1, SCons2, and SCons 3 were deleted due to low loading; ISSTL – safety-specific transformational leadership, Scons – safety consciousness, Help – helping, ISRC – initiating safety-related changes, Stew – stewardship, Virtue – civic virtue, Voi – voice, Whistle – whistleblowing.

Upon completing convergent validity, discriminant validity, which refers to the extent to which items measure distinct concepts, was assessed. This was evaluated using the HTMT ratio criterion, which is known to be more reliable in determining discriminant validity (Henseler et al., 2016). The HTMT criterion results in this study indicated that discriminant validity is achieved with an exception. The highest correlation found between whistleblowing and civic virtue is 0.92, which is beyond the conventional yardstick of 0.85 (Henseler et al., 2016). Similarly, as shown in *Table 4*, the correlation between whistleblowing and stewardship is 0.898, the correlation between stewardship and civic virtue is 0.864, and the relationship between voice and helping behaviour is 0.875, which is also beyond the value suggested by Hessler et al. (2015).

Table 4. *Heterotrait-monotrait (HTMT) criterion for discriminant validity*

	Virtue	Help	ISRC	SSTL	SConcs	Stew	Voice	Whistle
Virtue								
Help	0.769							
ISRC	0.602	0.815						
SSTL	0.536	0.585	0.566					
SCons	0.432	0.798	0.717	0.750				
Stew	0.864	0.768	0.606	0.627	0.553			
Voi	0.691	0.875	0.759	0.638	0.767	0.748		
Whistle	0.920	0.792	0.673	0.619	0.515	0.898	0.823	

Note: Discriminant validity is established at $HTMT_{0.85}/HTMT_{0.90}$.

Thus, the HTMT inference assessment was deployed using the confidence interval of HTMT through the bootstrapping method (Henseler et al., 2016). In establishing discriminant validity, the confidence interval of the 28 relationships should not be greater than the value of 1. The HTMT inference results based on the confidence interval value, as shown in *Table 5*, indicate that the confidence interval does not show a value of 1 on any of the constructs (Henseler et al., 2016), which confirms discriminant validity. Therefore, this study achieves both types of validity.

Table 5. *Heterotrait-monotrait (HTMT) inference criterion for discriminant validity*

	95.00%
Help -> Virtue	0.853
ISRC -> Virtue	0.780
ISRC -> Help	0.908
SSTL -> Virtue	0.726
SSTL -> Help	0.760
SSTL -> ISRC	0.781
SCons -> Virtue	0.629
SCons -> Help	0.889
SCons -> ISRC	0.825
SCons -> SSTL	0.878
Stew -> Virtue	0.924
Stew -> Help	0.893
Stew -> ISRC	0.801
Stew -> SSTL	0.771
Stew -> SCons	0.737
Voi -> Virtue	0.797
Voi -> Help	0.956
Voi -> ISRC	0.866
Voi -> SSTL	0.746
Voi -> SCons	0.874
Voi -> Stew	0.866
Whistle -> Virtue	0.961
Whistle -> Help	0.884
Whistle -> ISRC	0.834
Whistle -> SSTL	0.756
Whistle -> SConcs	0.689
Whistle -> Stew	0.956
Whistle -> Voi	0.918

Notes: ISSTL – safety-specific transformational leadership, Scons – safety consciousness, Help – helping, ISRC – initiating safety-related changes, Stew – stewardship, Virtue – civic virtue, Voi – voice, Whistle – whistleblowing.

4.4 Structural Model

SmartPLS 4.0.8.3 was used to examine the hypothesized paths, and the hypothesized relationships are depicted in *Table 6*. Results indicate that a positive relationship exists between SSTL and civic virtue (β = 0.457, t = 2.598, p < 0.01), thus supporting H1. Additionally, a significant positive relationship between SSTL and stewardship (β = 0.454, t = 2.566, p 0.01) reveals that H4 is also supported. It also shows a significant positive relationship between SSTL and voice (β = 0.228, t =2.466, p < 0.01). Hence, H5 is supported. Similarly, a significant positive relationship between SSTL and whistleblowing (β = 0.520, t =4.169, p < 0.01) is indicated, which supports H6. However, there is no relationship between SSTL and helping (β = 0.095, t =0.685, p > 0.05) and likewise between SSTL and initiating safety-related changes (β = 0.143, t = 0.654, p > 0.05); therefore, H2 and H3 are not supported (refer to *Table 6*).

Significantly, the findings from *Table 6* demonstrated the highest significant standardized beta coefficient (β = 0.520), which indicates that whistleblowing is the most considerable construct that SSTL predicts among rail transport operators in Malaysia. Stewardship, civic virtue, and voice follow this.

As presented in *Table 6*, hypotheses 7a–7f state that safety consciousness moderates the relationship between SSTL and dimensions of SCB, such that the relationship is stronger when the level of safety consciousness is high. Specifically, this relationship was stronger (i.e. more positive) for individuals with high safety consciousness than for individuals with low safety consciousness. The finding showed that the interaction terms representing SSTL * safety consciousness on initiating safety-related changes (β = 0.121, t = 1.684, p < 0.05) and SSTL * safety consciousness on stewardship changes (β = 0.130, t = 1.687, p < 0.05) were statistically significant. Therefore, hypotheses H7c and H7d are supported. However, the moderation result also shows that safety consciousness consequences did not moderate the relationship between SSTL and other dimensions of SCB; hence, H7a, H7b, H7e, and H7f are not supported.

Table 6. *Structural model*

	Std. Beta	Std. Dev	t-value	p values	BCI LL	BCI UL	f2	
SSTL -> Virtue	**0.457**	**0.176**	**2.598**	**0.005***	**0.128**	**0.709**	**0.149**	**Small**
SSTL -> Help	0.095	0.138	0.685	0.247	-0.118	0.329	0.010	
SSTL -> ISRC	0.143	0.218	0.654	0.256	-0.132	0.597	0.018	
SSTL -> Stew	**0.454**	**0.177**	**2.566**	**0.005****	**0.124**	**0.714**	**0.171**	**Medium**
SSTL -> Voi	**0.228**	**0.093**	**2.466**	**0.007****	**0.100**	**0.400**	**0.055**	**Small**
SSTL -> Whistle	**0.520**	**0.125**	**4.169**	**0.001****	**0.284**	**0.701**	**0.222**	**Medium**

	Std. Beta	Std. Dev	t-value	p values	BCI LL	BCI UL	f2	
SCons x SSTL -> Virtue	0.106	0.077	1.374	0.085	-0.026	0.227	0.022	
SCons x SSTL -> Help	0.009	0.059	0.161	0.436	-0.090	0.102	0.000	
SCons X SSTL -> ISRC	**0.121**	**0.072**	**1.684**	**0.046***	**0.005**	**0.237**	**0.036**	**Small**
SCons x SSTL -> Stew	**0.130**	**0.078**	**1.678**	**0.047***	**0.017**	**0.273**	**0.039**	**Small**
SCons x SSTL -> Voi	0.104	0.063	1.660	0.049	-0.005	0.202	0.031	
SCons x SSTL -> Whistle	0.126	0.092	1.374	0.085	-0.022	0.277	0.036	

Notes: ISSTL – safety-specific transformational leadership, Scons – safety consciousness, Help – helping, ISRC – initiating safety-related changes, Stew – stewardship, Virtue – civic virtue, Voi – voice, Whistle – whistleblowing.

As recommended by Dawson (2014), using two-way interaction with a continuous moderator, the result of the path coefficients (β) was used to plot this relationship. *Figures 2–3* indicate the relationship between SSTL and initiating safety-related changes and the relationship between SSTL and stewardship. The relationship is stronger (i.e. more positive) for individuals with high safety consciousness than for individuals with low safety consciousness. This indicates that initiating safety-related changes and stewardship increase for rail transport operators when both specific transformational leadership and safety consciousness are high (see *figs. 2–3*).
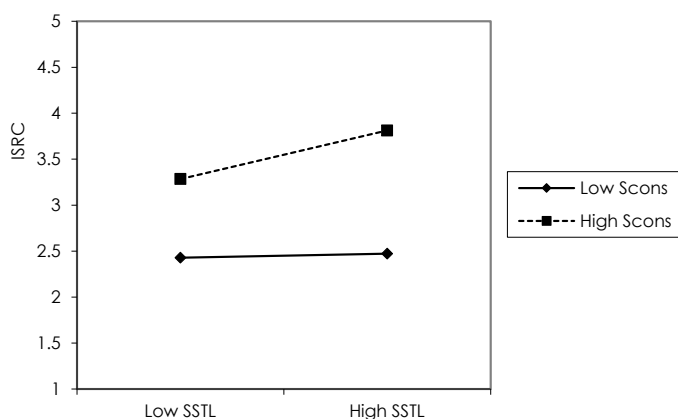

Figure 2. *Interaction effect of SSTL and safety consciousness on initiating safety-related changes*
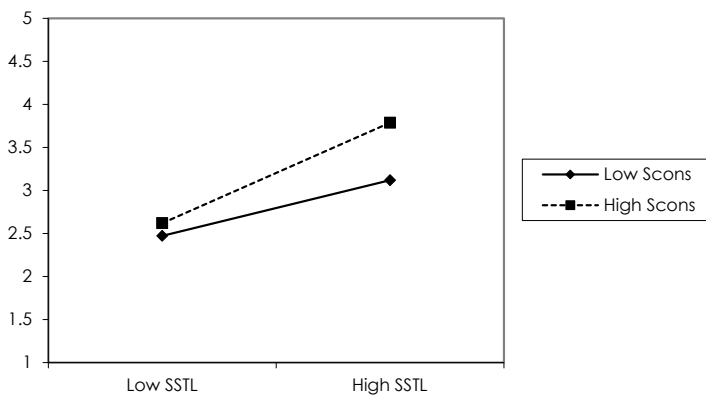
Figure 3. *Interaction effect of safety-specific transformational leadership and safety consciousness on stewardship*

PLS predict is a sample-based procedure for generating case-level predictions on items or constructs. It uses a 5-fold procedure to assess predictive relevance. If all item differences are lower than strong predictive power, predictive power is assumed. If all differences are higher, low predictive power is confirmed. The PLS model has moderate predictive power, with most errors lower than the LM model (Shmueli et al., 2019). *Table 7* indicates that the majority of the item's errors in the PLS model were lower than in the LM model, suggesting that the present model has moderate predictive power.

Table 7. *PLS predict*

	PLS	LM	PLS-LM	
	RMSE	RMSE	RMSE	Q² predict
Virtue1	1.019	1.003	0.016	0.142
Virtue2	0.985	0.989	-0.004	0.138
Virtue3	0.950	0.982	-0.032	0.192
Help1	0.833	0.850	-0.017	0.311
Help2	0.847	0.764	0.083	0.331
Help3	0.633	0.731	-0.098	0.374
Help4	0.698	0.775	-0.077	0.294
Help5	0.613	0.723	-0.110	0.417
Help6	0.613	0.682	-0.069	0.285
ISRC1	0.831	0.879	-0.048	0.224
ISRC2	0.740	0.812	-0.072	0.287
ISRC3	0.745	0.874	-0.129	0.257
ISRC4	0.791	0.814	-0.023	0.165
Stew1	0.835	0.925	-0.090	0.201
Stew2	0.862	0.941	-0.079	0.170

	PLS	LM	PLS-LM	
Stew3	0.887	0.956	-0.069	0.222
Stew4	0.767	0.946	-0.179	0.276
Voi1	0.621	0.662	-0.041	0.390
Voi2	0.786	0.889	-0.103	0.201
Voi3	0.718	0.813	-0.095	0.327
Voi4	0.682	0.691	-0.009	0.376
Whistle1	0.966	0.987	-0.021	0.033
Whistle2	0.782	0.764	0.018	0.169
Whistle3	0.750	0.873	-0.123	0.184
Whistle4	0.937	0.977	-0.040	0.156
Whistle5	0.743	0.748	-0.005	0.277

Notes: ISSTL – safety-specific transformational leadership, Scons – safety consciousness, Help – helping, ISRC – initiating safety-related changes, Stew – stewardship, Virtue – civic virtue, Voi – voice, Whistle – whistleblowing.

5. Discussions

Based on the results, it is evident that there is a significant and positive relationship between SSTL and civic virtue. This is consistent with previous studies by Khan et al. (2020) and Nurjanah et al. (2020). A plausible reason is that leaders in the present study demonstrated SSTL effectively. This inspires and motivates the employees to go beyond their job responsibilities and contribute to the greater good of the organization. This inspiration has ultimately led to a sense of civic duty and civic virtue among employees.

The current research also substantiates a significant and positive relationship between SSTL and stewardship. This result is consistent with the findings reported by Rashid et al. (2019) and Green et al. (2014). It is important to note that safety-specific transformational leaders often create a shared vision that emphasizes the importance of safety and health in an organization. This shared vision can foster a sense of stewardship among employees, encouraging them to be continuously responsible for all safety and health matters in the organization.

The findings also revealed that there is a significant and positive relationship between SSTL and voice. This is in line with findings documented in studies by Rasheed et al. (2021) and Liu et al. (2010). Safety-specific transformational leaders often actively advocate good safety and health practices, including the safety and well-being of organizational members. Therefore, when employees feel that their leaders care about their safety and well-being, they are more likely to feel psychologically safe. They are also more comfortable expressing their opinions and concerns as they think that their input is valued.

The study also reported a significant and positive relationship between SSTL and whistleblowing. This is consistent with findings in previous studies by Caillier

(2013). SSTL creates an environment where employees feel comfortable voicing their concerns regarding safety and health practices in the organization. Most importantly, they will not be punished for speaking their mind. The culture of openness and trust nurtured by safety-specific transformational leaders encourages employees to engage in whistleblowing behaviour specifically related to safety and health matters.

The findings reported that there was no significant relationship between SSTL and helping behaviour. This result is inconsistent with earlier studies reported by Punj and Krishnan (2006) and Majeed et al. (2017). It is worth noting that the vast majority of the employees in the present study are in the age group of 26–35 years old. Generally, employees in this age group are in the early stages of their careers. They are considered part of the millennial generation, which is known for valuing work–life balance, career advancement, and a sense of purpose in their work. Hence, they may have different priorities in their job and may not consider helping behaviour a priority. They may prioritize completing their tasks over helping others, especially if they perceive helping behaviour as a distraction from their work. Since they are still in the early stages of their careers, they may be dealing with a certain level of complexity when performing tasks assigned to them. If the tasks are too challenging or require too much time, employees may not have the capacity to engage in helping behaviour.

The findings reported that there was no significant relationship between SSTL and initiating safety-related changes. This is inconsistent with prior findings by Shen et al. (2017) and Arief et al. (2020). Initiating changes is undeniably a daunting task, especially for employees who are in the early stages of their careers, because it requires strenuous efforts and a great deal of passion and commitment. They may need more time to be ready to be empowered by leaders to take ownership of workplace safety and initiate changes for a safer workplace. Additionally, the effectiveness of leaders in initiating changes boils down to how the leaders' actions are perceived by employees (Walk, 2023). If employees do not perceive the leaders' actions as transformative enough in advocating good safety practices, they are less likely to partake in safety change initiatives.

Some of the reasons for the lack of significance in some hypotheses, such as the relationships between SSTL and helping behaviours and initiating safety-related changes, could be as follows: either employees view helping and initiating changes as more discretionary or individualistic actions, less influenced by leadership and more by personal motivation or situational factors, or leadership styles may not as directly influence these particular behaviours as other behaviours like whistleblowing or stewardship, which are more closely tied to ethical considerations and organizational culture. The impact of SSTL may be more subtle and context-dependent than previously thought, as these findings contradict the body of research that claims transformational leadership always improves positive behaviours (Barling et al.,

2003; Clarke, 2013; Mullen et al., 2011). Additionally, the moderating effect of safety consciousness was only significant for a subset of behaviours, indicating that individual differences and perceptions of safety are important factors in how leadership influences behaviour and emphasizing the significance of personalized and context-aware leadership strategies.

Based on the moderation analysis, it was found that safety consciousness significantly moderated the SSTL and initiated safety-related changes. Safety consciousness also significantly moderated the SSTL–stewardship link. In other words, both of the empirical links are stronger for individuals with high safety consciousness and vice versa. This indicates that safety-related change initiatives and stewardship behaviour can be elevated substantially when employees experience higher SSTL and have a higher level of safety consciousness. The findings are consistent with the preceding study by Meng and Chan (2020). One plausible reason is that employees who have higher safety consciousness may be more receptive to SSTL and more likely to exhibit behaviours that support stewardship and initiate changes (Podsakoff et al., 2003). Conversely, employees with low safety consciousness may be more resistant to SSTL and less likely to engage in stewardship behaviour and change initiatives. This justifies the significant moderating role of safety consciousness in the present study.

5.1 Theoretical Implications

There are various theoretical contributions to this study. First, this study builds on previously established research frameworks about the variables that affect employee safety behaviour, specifically SCBs. Prior studies have concentrated on safety leadership, transactional leadership, and transformative leadership (Barling et al., 2002). However, more obvious and more specialized SSTL should have been given more attention. Our research closes this gap by looking at SSTL and safety consciousness in one model. Although this topic is understudied, the current study emphasizes the crucial role safety consciousness plays in determining employee SCBs. Consequently, by highlighting its positive impacts in encouraging SCBs in the railway sector in Malaysia, which expanded leadership and SCBs, the study provides an understanding of various boundary situations where SSTL may promote SCB. This study verifies the positive effects of SSTL on SCB by including safety consciousness as a moderator (Meng and Chan, 2020).

5.2 Practical Implications

Railway organizations are recommended to prioritize the implementation of safety-specific transformational leadership (SSTL) practices by prioritizing the

most effective areas, such as fostering civic virtue, stewardship, whistleblowing, and voice. It is the responsibility of leaders to promote open communication and create a safe workplace environment where workers may report safety issues without worrying about facing consequences. These principles can be reinforced via regular training and workshops on the value of safety, ethical behaviour, and each employee's role in upholding safety standards. Further ingraining these practices into the company culture can be achieved by creating explicit policies and processes for reporting safety concerns as well as by honouring and rewarding staff members who go above and beyond in their safety practices.

Railway organizations must incorporate safety measures into their everyday operations and decision-making procedures in order to cultivate a safety-conscious workforce. This can be accomplished by forming safety committees with members from all organizational levels to guarantee that safety is taken into account in every conversation. This kind of thinking can be strengthened by offering continuing education and training that highlights the value of safety consciousness and, in particular, by emphasizing the advantages of adhering to strict safety regulations. In addition, conducting frequent safety audits and feedback loops – where staff members may offer feedback on safety procedures and witness concrete modifications based on their recommendations – will foster a sense of accountability and ownership for upholding a secure workplace.

However, the study's limitations suggest the need for further research to validate findings across different cultural contexts and explore additional leadership characteristics beyond SSTL. Future studies should employ longitudinal or experimental methods to establish causality more reliably and incorporate a broader range of leadership variables. By addressing these limitations and continuing to explore the interaction between safety consciousness and leadership, railway organizations can further enhance safety initiatives and contribute to the well-being of employees and the general public in Malaysia's public transport sector.

6. Conclusions

The study explores the relationship between safety and citizenship behaviour (SSTL) and safety and citizenship behaviour in the railway transport sector. It has found a significant association between SSTL and civic virtue, stewardship, voice, initiating safety-related changes, and whistleblowing. The research recommends that leaders set an example by adhering to safety regulations and motivating others. The study also suggests updating safety protocols to raise workers' safety consciousness.

References

Abdelmotaleb, M.; Saha, S. K. (2018). Corporate social responsibility, public service motivation and organisational citizenship behavior in the public sector. *International Journal of Public Administration* 42(11): 929–939.

Ahmad, R.; Ngah, A. H.; Mohamed, A. M. (2024). Examining the linkage between transformational leadership styles and succession planning programs in Malaysian public universities. *International Journal of Public Administration* 47(3): 172–185.

Andriessen, J. H. T. H. (1978). Safe behaviour and safety motivation. *Journal of Occupational Accidents* 1(4): 363–376.

Arief, Z.; Eliyana, A.; Anggraini, R. D.; Sari, P. A. (2020). The effect of safety-specific transformational leadership and safety-specific passive leadership on safety behaviors mediated by safety climate. *Systematic Reviews in Pharmacy* 11(11): 1715–1726.

Barling, J.; Kelloway, E. K.; Iverson, R. D. (2003). High-quality work, job satisfaction, and occupational injuries. *Journal of Applied Psychology* 88(2): 276–283.

Barling, J.; Loughlin, C.; Kelloway, E. K. (2002). Development and test of a model linking safety-specific transformational leadership and occupational safety. *Journal of Applied Psychology* 87(3): 488–496.

Bass, B. M. (1985). *Leadership and performance beyond expectations*. Free Press.

Bhal, K. T.; Dadhich, A. (2011). Impact of ethical leadership and leader–member exchange on whistle blowing: The moderating impact of the moral intensity of the issue. *Journal of Business Ethics* 103(3): 485–496.

Blau, P. M. (1964). E*xchange and power in social life*. Wiley.

Burns, J. M. (1978). *Leadership*. Harper and Row.

Caillier, J. G. (2013). Do employees feel comfortable blowing the whistle when their supervisors practice transformational leadership? *International Journal of Public Administration* 36(14): 1020–1028.
    (2015). Transformational leadership and whistleblowing attitudes. *The American Review of Public Administration* 45(4): 458–475.

Cesário, F.; Magalhães, S. (2017). Human resources management, citizenship behavior, and turnover intention in the Portuguese public administration. *International Journal of Public Administration* 40(11): 979–988.

Chin, E. S. M. (2021). *Full report on May 24's LRT collision to be presented to Cabinet tomorrow, says transport minister*. Malay Mail.

Clark, O. L.; Zickar, M. J.; Jex, S. M. (2014). Role definition as a moderator of the relationship between safety climate and organizational citizenship behavior among hospital nurses. *Journal of Business and Psychology* 29(1): 101–110.

Clarke, S. (2013). Safety leadership: A meta-analytic review of transformational and transactional leadership styles as antecedents of safety behaviours. *Journal of Occupational and Organizational Psychology* 86: 22–49.

Dash, S.; Pradhan, R. K. (2014). Determinants and consequences of organizational citizenship behavior: A theoretical framework for Indian manufacturing organisations. *International Journal of Business and Management Invention* 3(1): 18–27.

Dawson, J. F. (2014). Moderation in management research: What, why, when and how. *Journal of Business and Psychology* 29: 1–19.

Green, A. E.; Albanese, B. J.; Shapiro, N. M.; Aarons, G. A. (2014). The roles of individual and organizational factors in burnout among community-based mental health service providers. *Psychological Services* 11(1): 41–49.

Hair, J. F.; Hult, G. T. M.; Ringle, C. M.; Sarstedt, M. (2014). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage.

Henseler, J.; Hubona, G.; Ray, P. A. (2016). Using PLS path modeling in new technology research: Updated guidelines. *Industrial Management and Data Systems* 116(1): 2–20.

Hofmann, D. A.; Jacobs, R.; Landy, F. (1995). High reliability process industries: Individual, micro, and macro organizational influences on safety performance. *Journal of Safety Research* 26(3): 131–149.

Hofmann, D. A.; Morgeson, F. P.; Gerras, S. J. (2003). Climate as a moderator of the relationship between leader–member exchange and content-specific citizenship: Safety climate as an exemplar. *Journal of Applied Psychology* 88(1): 170–178.

Hughes, R. L.; Rosenbach, W. E.; Clover, W. H. (1983). Team development in an intact, ongoing work group: A quasi-field experiment. *Group and Organization Studies* 8: 161–186.

Irshad, M.; Majeed, M.; Khattak, S. A. (2021). The combined effect of safety-specific transformational leadership and safety consciousness on psychological well-being of healthcare workers. *Frontiers in Psychology* 12.

Isha, A. S. N.; Miza, M. Z.; Azeem, S.; Zahid, M. (2019). The role of safety-specific transformational leadership in reducing near miss incidents, using safety climate as a mediator. *Proceedings of the 3ʳᵈ International Conference on Accounting, Management and Economics 2018* (ICAME 2018).

Khan, N. A.; Khan, A. N.; Soomro, M. A.; Khan, S. K. (2020). Transformational leadership and civic virtue behavior: Valuing act of thriving and emotional exhaustion in the hotel industry. *Asia Pacific Management Review* 25(4): 216–225.

Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of E-Collaboration* 11(4): 1–10.

Kyriakidis, M.; Pak, T. K.; Majumdar, A. (2015). Railway accidents caused by human error. *Transportation Research Record* 2476: 126–136.

Lai, F.-Y.; Tang, H.-C.; Lu, S.-C.; Lee, Y.-C.; Lin, C.-C. (2020). Transformational leadership and job performance: The mediating role of work engagement. *SAGE Open*, 10(1): 215824401989908.

Land Public Transport Act 2010 (Act 715). (2011).

Li, M.; Zhai, H.; Zhang, J.; Meng, X. (2020). Research on the relationship between safety leadership, safety attitude and safety citizenship behavior of railway employees. *International Journal of Environmental Research and Public Health* 17: 1864–1881.

Liu, W.; Zhu, R.; Yang, Y. (2010). I warn you because I like you: Voice behavior, employee identifications, and transformational leadership. *The Leadership Quarterly* 21: 189–202.

Lourdes, M.; Singh, D. (2006). Train overshoots LRT terminal and left dangling. *The Star*.

Lu, H.; Wu, T.; Shao, Y.; Liu, Y.; Wang, X. (2019). Safety-specific leadership, goal orientation, and near-miss recognition: The cross-level moderating effects of safety climate. *Frontiers in Psychology* 10: 113.

MacKinnon, D. P. (2011). Integrating mediators and moderators in research design. *Research on Social Work Practice* 21(6): 675–681.

Majeed, N.; Ramayah, T.; Mustamil, N.; Nazri, M.; Jamshed, S. (2017). Transformational leadership and organizational citizenship behavior: Modeling emotional intelligence as mediator. *Management and Marketing* 12(4): 571–590.

Mashi, M. S.; Subramaniam, C.; Johari, J. (2020). The effect of management commitment to safety, and safety communication and feedback on safety behavior of nurses: The moderating role of consideration of future safety consequences. *The International Journal of Human Resource Management* 31(20): 2565–2594.

Mashi, M. S.; Subramaniam, C.; Johari, J.; Hassan, Z.; Abubakar, S. S. (2022). HR practices and hotel employee service innovative behavior: The moderating role of creative self-efficacy. *Journal of Quality Assurance in Hospitality and Tourism* 23(6): 1623–1651.

Meng, X.; Chan, A. H. S. (2020). Demographic influences on safety consciousness and safety citizenship behavior of construction workers. *Safety Science* 129: 104835.

Mirza, M. Z.; Isha, A. S. N. (2020). Safety-specific transformational leadership, safety climate and occupational accidents. *Journal of Applied Structural Equation Modeling* 4(2): 44–52. https://doi.org/10.47263/JASEM.4(2)04.

Mohamed-Isa, A.; Abdul Latiff, A. R.; Osman, M. N. H.; Ahmad, A. (2020). Determinants of whistleblowing intention in organization. *Journal of Environmental Treatment Techniques* 9(1): 54–58.

Mullen, J. E.; Kelloway, E. K.; Teed, M. (2011). Inconsistent leadership as a predictor of safety behaviour. *Work and Stress* 25: 41–54.

Munir, F.; Nielsen, K.; Gomes Carneiro, I. (2010). Transformational leadership and depressive symptoms: A prospective study. *Journal of Affective Disorders* 120(1–3): 235–239.

Neal, A.; Griffin, M. A. (2006). A study of the lagged relationships among safety climate, safety motivation, safety behavior, and accidents at the individual and group levels. *Journal of Applied Psychology* 19(4): 946–953.

Nurjanah, S.; Pebianti, V.; Handaru, A. W. (2020). The influence of transformational leadership, job satisfaction, and organizational commitments on organizational citizenship behavior (OCB) in the inspectorate general of the Ministry of Education and Culture. *Cogent Business and Management* 7(1): 1793521.

Parker, S. K.; Collins, C. G. (2010). Taking stock: Integrating and differentiating multiple proactive behaviors. *Journal of Management* 36(3): 633–662.

Podsakoff, P. M.; MacKenzie, S. B.; Lee, J.-Y.; Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *The Journal of Applied Psychology* 88(5): 879–903.

Punj, A.; Krishnan, V. R. (2006). Transformational leadership and altruism: Role of power distance in a high power distance culture. Conference: *Proceedings of the Annual Conference of the Administrative Sciences Association of Canada*. 1–14.

Rabie, M. O.; Abdul Malek, M. (2020). Ethical leadership and whistleblowing: Mediating role of stress and moderating effect of interactional justice. *SEISENSE Journal of Management* 3(3): 1–11.

Rainey, H. G. (2003). *Understanding and managing public organizations*. Jossey-Bass.

Rasheed, M. A.; Shahzad, K.; Nadeem, S. (2021). Transformational leadership and employee voice for product and process innovation in SMEs. *Innovation and Management Review* 18(1): 69–89.

Rashid, M.; Tasmin, R.; Qureshi, M. I.; Shafiq, M. (2019). A PLS analysis on the relationship between servant leadership and academicians OCB in MTUN universities. *International Journal of Engineering and Advanced Technology* 8(5C): 1360–1368.

Ravindran, S. (2022, 16 December). Mayor: Public transport ridership rising in KL. *The Star Online*.

Shahrudin, H. S. (2015). Monorail catches fire at Titiwangsa station. *New Straits Times*.

Shen, Y.; Ju, C.; Koh, T. Y.; Rowlinson, S.; Bridge, A. J. (2017). The impact of transformational leadership on safety climate and individual safety behavior on construction sites. *International Journal of Environmental Research and Public Health* 14(1): 45–62.

Shi, H. (2021). The effects of safety-specific transformational leadership and active transactional leadership on mindful safety practice adoption in the

Chinese petroleum industry. *International Journal of Occupational Safety and Ergonomics* 28(3): 1929–1936.

Shmueli, G.; Sarstedt, M.; Hair, J. F.; Cheah, J.-H.; Ting, H.; Vaithilingam, S.; Ringle, C. M. (2019). Predictive model assessment in PLS-SEM: Guidelines for using PLS predict. *European Journal of Marketing* 53(11): 2322–2347.

Srithongrung, A. (2011). The causal relationships among transformational leadership, organizational commitment, and employee effectiveness. *International Journal of Public Administration* 34(6): 376–388.

Statistic of Rail Transport. (2021). Ministry of Transport Malaysia.

Uzuntarla, F.; Kucukali, S.; Uzuntarla, Y. (2020). An analysis on the relationship between safety awareness and safety behaviors of healthcare professionals, Ankara/Turkey. *Journal of Occupational Health* 62(1): e12129.

Walk, M. (2023). Leaders as change executors: The impact of leader attitudes to change and change-specific support on followers. *European Management Journal* 2(41): 154–163.

Wang, Z.; Xu, S.; Sun, Y.; Liu, Y. (2019). Transformational leadership and employee voice: An affective perspective. *Frontiers of Business Research in China* 13: 1–14.

Wijewardena, N.; Samaratunge, R.; Härtel, C. (2014). Creating better employees through positive leadership behavior in the public sector. *International Journal of Public Administration* 37(5): 288–298.

Yusoff, I.; Ng, B.-K.; Azizan, S. A. (2021). Towards sustainable transport policy framework: A rail-based transit system in Klang Valley, Malaysia. *PLOS ONE* 16(3): e0248519.

Zhang, J.; Zhai, H.; Meng, X.; Wang, W.; Zhou, L. (2020). Influence of social safety capital on safety citizenship behavior: The mediation of autonomous safety motivation. *International Journal of Environmental Research and Public Health* 17(3): 866.

Zheng, J.; Gou, X.; Griffin, M.; Goh, Y. M.; Xia, N. (2022). Temporal leadership, attentiveness, and safety behaviors: The moderating roles of abusive supervision and safety consciousness. *Safety Science* 147: 105633.