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My Store, My Castle!

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Abstract/Summary

Shoplifting in supermarkets results in substantial economic, social, and psychological losses. The prevalence of ongoing shoplifting incidents suggests that existing measures of retail crime prevention are inadequate and that alternative shoplifting prevention methods must be explored in the supermarket context. In this study, the role of frontline service employees (FLEs) in crime prevention is explored through the lens of guardianship behaviour and the moral beliefs of employees. A cross-sectional online survey was developed to explore the relationship between moral beliefs and guardianship, and usable responses were collected from a total of 507 supermarket FLEs in New Zealand. The theory of planned behaviour (TPB) was applied to predict the proclivity of FLE guardianship behaviour, and the findings suggest that employee moral beliefs positively influence the guardianship behaviour of FLEs. This study offers three significant contributions: conceptually, the findings identify and establish a causal relationship between FLE moral beliefs and their guardianship behaviour; secondly, from a managerial perspective, the findings suggest strategies for recruitment and further nurturing of FLEs aiming toward better shoplifting prevention; finally, from a contextual viewpoint, this research provides empirical evidence on FLE guardianship for effective deterrence of shoplifting.

Keywords:

Moral beliefs, guardianship, situational crime prevention, theory of planned behaviour (TPB), frontline service employees, supermarkets

Track

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Introduction

Worldwide, inventory shrinkage is a common retail problem (Ceccato & Armitage, 2018). Floridia and Hollinger (2017) define inventory shrinkage as “*shortages between book values and actual on-hand delivery*” (p. 1013). The sources of inventory shrinkage in retail include shoplifting, burglary, supplier fraud, administrative error, and employee theft (Cozens, 2018, Beck, 2017), with inventory shrinkage and retail crime having a significant negative financial impact on supermarkets particularly (Smith, 2013). Shoplifting is one of the most prevalent retail crimes in supermarkets (Aloysius et al., 2019) and a major contributor to unplanned reductions in inventory (Bamfield, 2018). Shoplifting is defined as “*the theft of merchandise offered for sale in a retail store, usually by concealing it in a purse, pocket, bag or under a coat...it can also include behaviour such as changing price tags on merchandise...and ‘grazing’ (eating a store’s goods without payment)*” (Bai et al., 2019, p. 380). Supermarkets constantly strive to control shoplifting (Korgaonkar et al., 2020), to offset the high financial (Armitage et al., 2018), social (Korgaonkar et al., 2020, Clarke, 2018) and emotional losses (Hayes, 2006). Kajalo and Lindblom (2011) estimate that retailers spend an average of 0.40 per cent of their business turnover on security and surveillance. According to the 2017 retail crime survey, New Zealand retailers invest \$514 million in loss prevention measures, and a total of approximately \$1.1 billion is lost yearly as a result of the retail crime (Guthrie & Mulder, 2017). Retail security measures include rigorous apprehension strategies (Fennelly et al., 2020), contemporary and advanced security equipment (Sidebottom et al., 2017), appointing uniformed security guards (Kajalo & Lindblom, 2011) and utilising private detectives in plain clothing (Gill et al., 1999, Zakirov, 2017). Nonetheless, the consistency in reported shoplifting rates highlights a need for the exploration of alternative security measures to deter retail crime.

A good example of the limitations of traditional measures used to prevent shoplifting is the use of electronic deterrents. In any retail setting, electronic devices have their limitations. For instance, in a retail store, Closed-circuit Televisions (CCTVs) are unable to cover all spots vulnerable to crime (Willis et al., 2017); Radio-Frequency Identification (RFID) tags are ineffective if they come in contact with merchandise used with anti-RFID technology (Nayak, 2019); Graphical Information System (GIS) tags are useless without a proper Geographical Positioning System (GPS) instore, etc. Regarding physical deterrents to shoplifting, common techniques, such as the use of formal security personnel, also have their weaknesses, with shoplifters avoiding areas clearly manned by such personnel. This suggests that dependence on surveillance equipment and formal security personnel alone is not an optimal solution to combat shoplifting at supermarkets, rather that other potential, intangible measures, such as improved social bonds (De Buck & Pauwels, 2019) and quality relationships with stakeholders (e.g., Potdar et al., 2018) may also be useful in reducing such crimes. Thus, drawing on the evidence of ongoing retail crime prevalence, and the failure of traditional measures to adequately reduce the issue in supermarkets particularly, this research focuses on one stakeholder group, that of frontline service employees, and their potential role as mitigators of retail crime. Frontline service employees are involved in the day-to-day operations of supermarkets and their primary area of work is the space where actual incidents of shoplifting take place and therefore, seeking additional help from frontline service employees can be considered an effective strategy to mitigate in-store shoplifting incidents.

Review of Literature

Human guardianship in crime prevention

A guardian is an individual who may inadvertently or otherwise watch the potential target of crime, such as an object, an individual, or a group of people (Hollis-Peel et al., 2011). Guardians may unintentionally have “*the goal of protecting targets*” and “*are highly varied*” in the way they perform guardianship behaviour (Sampson et al., 2010, p. 39). In guardianship literature, anyone that protects the target from criminal activity is considered a human guardian (Hollis & Wilson, 2014). These human guardians are correlated and can reduce or affect crime (Hollis-Peel et al., 2011) since “*the offender moves away from handlers toward a place without a manager and a target without a guardian*” (Hollis et al., 2015, p. 260).

Guardianship theory suggests that individuals’ motivations are to protect susceptible objects and targets in perceived vulnerable criminal situations (Leclerc & Reynald, 2017). A guardian is therefore an individual who “*keeps an eye on the potential target of crime...[including] anybody passing by, or anybody assigned to look after people or property*” (Hollis-Peel et al., 2011, p. 55). Often, the term ‘guardian’ refers to ordinary citizens, unlike private security guards and police who have the formal responsibility to safeguard vulnerable objects and targets (Hollis-Peel et al., 2011). Guardians are inclined to keep a close watch on a vulnerable object or target to crime so that their mere attendance may encourage feelings of fear among potential offenders that someone is watching their behaviour and discouraging them from executing their intended criminal actions (Hollis & Wilson, 2014). In this sense, when compared with formal surveillance personnel, a guardian is an individual whose simple or unintended appearance provides a gentler reminder to potential offenders that someone is watching their actions (Robinson et al., 2019).

Guardianship and the theory of planned behaviour (TPB)

The theory of planned behaviour (Ajzen, 1991) is “*a model that suggests that attitudes, subjective norms and perceived behavioural control predict intentions to perform a behaviour*” (Fogel & Janani, 2010, p. 136). TPB has been previously used to predict behaviour based on the moral awareness, judgement, and beliefs of an individual (e.g., Martinez and Jaeger, 2016, Phau and Liang, 2012). In regard to guardianship, the TPB may offer a means to measure the extent to which moral belief drives the expression of guardian-like behaviour and supports ongoing safeguarding actions in an environment by producing favourable emotional outcomes of that behaviour. In this context, there are three conceptually independent predictors of intention to perform a given behaviour (Zaremohzzabieh et al., 2019). The first predictor is the attitude towards performing a certain form of behaviour. Attitude is known as an individual’s positive or negative feelings toward a particular behaviour (McBride, Carter, & Phillips, 2020). The second predictor is the subjective norm (SN). SN refers to the social pressure individual experiences to engage in or avoid a particular behaviour (Kim & Hwang, 2020). The third predictor is perceived behavioural control (PBC). This is an individual’s perception of simplicity or complexity in executing a particular behaviour (Lee & Lina Kim, 2018). These predictors offer a framework within which to measure frontline service employee intentions towards guardianship behaviour. Building on the work of Pawlak, Malinauskas, and Rivera (2009), a frontline service employee’s positive attitude toward exhibiting guardianship would be influenced by the belief that practising guardianship behaviour is the frontline service employee’s moral responsibility (value). The belief-centred measures of the primary predictors of intention to perform a certain behaviour in a specific situation are envisioned as syntheses of expectancy and value (Townsend & Dawes, 2007).

The standards for building and quantifying all the earlier stated constructs have been extant research studies to envisage varied types of (planned) behaviours. Building on Potdar et al. (2018), these behaviours include: academic misconduct or cheating (Coren, 2012), acceptance

of instant messaging (Lu, Zhou, & Wang, 2009), alcohol consumption (Cooke et al., 2016), citizen-centric adaptation of e-government (Rana, Dwivedi, & Williams, 2013), employee theft behaviour (Moorthy et al., 2015), mobile banking (Alalwan et al., 2016), online banking (Nasri & Charfeddine, 2012), online tax filling (Hung, Chang, & Yu, 2006), organic food purchase (Arvola et al., 2008) and consumption (Al-Swidi et al., 2014), shoplifting (Bai, Wu, & Cheung, 2019), start (Karimy et al., 2012) and quit (Rise, Kovac, Kraft, & Moan, 2008) cigarette smoking, tax compliance (Taing & Chang, 2021), etc. However, the theory of planned behaviour has never been used to empirically investigate frontline service employee guardianship behaviour specifically, thus the aims of this study.

Moral beliefs and guardianship

Extant literature suggests various definitions of moral beliefs. Generally, morals are considered as an individual's "knowledge of right and wrong, virtues, ethics, or lessons of conduct and behaviour" (Schoepfer & Piquero, 2006, p. 55). Likewise, Xu and Hu (2018) suggest that moral beliefs are "an individual's judgement of right or wrong about specific behaviour [action]" (p. 3690). Further, criminology and sociology literature suggest moral commitments influence individuals' social control (Schoepfer & Piquero, 2006). Moral beliefs could, therefore, be argued to be more pervasive and fundamental than contemporary norms and expectations. Wilson (2012) suggests that individuals acquire and adapt their sense of morality not only through parental and religious socialisation (Ester & Halman, 1994) to positively influence adaptations (Arsenio & Gold, 2006; Greif & Tadelis, 2010), but that the acquisition of morality is itself part of social evolution, explaining fundamental, deep emotional stirrings and behavioural orientations when issues of 'right' or 'wrong' are perceived.

The socialisation and upbringing of individuals involve learning and practising the norms, expectations, and beliefs prevalent in their social environment. Their inculcation results in "...attachment, commitment, involvement, and beliefs" (Matsueda, 1989, p. 430). And also, individuals form part of employees' personality characteristics which they bring to their place of work. Where the driving role of moral beliefs in planned behaviour is considered, an understanding of what societal principles of governance and interaction distinguish 'right' from 'wrong', or 'good' from 'bad' in the context under study. Frontline supermarket employee guardianship behaviour evokes a moral dimension as it involves more than just conventional adherence to values and norms, rather it is centred on a perception of 'right' or 'wrong' behaviour as having an overall outcome of the whole social ecology of the business. To better understand the relationship between moral beliefs and guardianship, the first research question of this study thus asks:

RQ1: What is the role of moral beliefs in relation to employees as potential guardians of supermarket property?

Moral beliefs generally underpin two types of behaviours. These are: a) controlling self-desire for deviant behaviour; and b) extending support to deter deviant behaviours of others. In the present context, and according to social control theory, individuals are likely to deter deviant behaviour of others due to the norms and expectations acquired during socialisation, based on habits and a sense of and desire for equilibrium (Parsons et al., 2017, Costello, 2000, Parsons, 1951). Routine activity theory (RAT) (Felson & Cohen, 1980, Cohen & Felson, 1979) "*is based on the notion of opportunities of crime...crimes are highest where motivated offenders intersect in time and space with attractive targets that lack capable guardianship. Therefore, crime is the result of the simultaneous convergence of three conditions: (1) motivated offenders, (2) suitable targets and (3) the absence of capable guardians*" (Petrescu et al., 2018, p. 320).

Further, RAT suggests that this desire for equilibrium involves people promoting situations and conditions that they consider ‘good’ or ‘right’. In the context of retail crime, these considerations allow for the concept of situational crime prevention to come to the fore and suggest human guardianship as a potential measure of crime prevention (Hollis-Peel et al., 2011, Hollis et al., 2013, Hollis and Wilson, 2014, Hollis et al., 2015). In the context of employees, Peterson (2003) suggests that employee moral beliefs influence their decision-making which may include their organizational commitment, their intention to leave, or stand up for their place of work in public, etc. Yet, studies on crime prevention with the help of human guardianship – in this case, employees, based on their moral beliefs remain scant. Our second research question (RQ), therefore, is:

RQ2: To what extent are moral beliefs a behavioural predictor for frontline service employees’ guardianship behaviour (i.e., willingness to prevent crimes)?

Development of hypotheses

Figure 1 explains the path model of the proposed hypotheses that predict the guardianship behaviour of frontline service employees based on their moral beliefs. This model posits that an employee’s guardianship behavioural intentions are predictive of their actual guardianship behaviour. The employee’s attitude towards guardianship behaviour, their subjective norms, and perceived ease or difficulty to practice guardianship behaviour all influence the guardianship behavioural intentions of employees. The theory of planned behaviour argues for the incorporation of additional variables in its original model to further account for situationally relevant variables (Ajzen, 1991, Guthrie et al., 2006, Potdar et al., 2018). Moral beliefs, in general – an individual’s morality is a higher-order construct with a significant capability of shaping their social behaviour (Eisend, 2019). The extant literature on guardianship is silent on an empirical assessment of the relationship between retail employee moral beliefs and shoplifting prevention. Additionally, in the extant literature, there is no evidence of the application of the theory of planned behaviour to predict an individual’s shoplifting prevention behaviour with, specifically, moral beliefs as an individual difference factor. Therefore, in the present context, frontline service employees’ moral beliefs are considered as an additional variable and individual difference factor (e.g., Li et al., 2018).

This section develops hypotheses for testing relationships between various significant variables in the present context. First, based on extant literature, we hypothesize relationships between moral beliefs, guardianship behavioural intention, and guardianship behaviour.

Extant criminology literature suggests that an individual’s morality may influence their criminal intention and deviant behaviour (e.g., Eisend, 2019, Hati et al., 2020, Farmer & Dawson, 2017, Silver & Abell, 2016). Conversely, individuals’ effective self-control derived from morality may positively influence their crime prevention intention and behaviour (e.g., Svensson et al., 2010, Wikström and Svensson, 2010, Pratt, 2016). It is therefore hypothesized that individuals’ moral beliefs positively influence their decision-making directed at guardianship behavioural intentions and their actual guardianship behaviour:

H₁: There is a positive relationship between moral beliefs and guardianship behaviour.

Similarly,

H₂: There is a positive relationship between moral beliefs and guardianship behavioural intentions.

Attitude towards guardianship behaviour and guardianship behavioural intention

The theory of planned behaviour (Ajzen, 1991) suggests that an individual's attitude towards a behaviour may develop the individual's intention to engage in that particular behaviour (e.g., Paul et al., 2016, Hamelin et al., 2018). The greater the individual feels that the behaviour is favourable for himself/herself, the more likely it is that the individual intends to practice that behaviour (e.g., Culiberg, 2014, Tjiptono et al., 2016). Therefore, it is posited that:

H₃: There is a positive relationship between attitude toward guardianship behaviour and guardianship behavioural intention.

Subjective norms and guardianship behavioural intention

Extant literature suggests a positive link between individuals' perceptions regarding their behaviour and the expectations from significant others towards that behaviour (e.g., Read et al., 2013, van der Merwe & Maree, 2016). In the present context, such normative expectations held by significant others may also include those from, colleagues, supervisors, managers, supermarket owners, and customers. There is extant literature that supports the influence of subjective norms and employee decision-making regarding the intention to practice potential behaviour (e.g., Sousa & Coelho, 2011, Gregory-Smith et al., 2015). Hence, it is hypothesized that:

H₄: There is a positive relationship between subjective norms and guardianship behavioural intention.

Perceived behavioural control (PBC), guardianship behavioural intention, and guardianship behaviour

Perceived behavioural control suggests that an individual's perceptions of ease or difficulty to participate in potential behaviour affect the decision to pursue it (Hau & Kang, 2016, Arora & Sahney, 2018). Since guardianship is a positive behaviour that is helpful for supermarkets to deter losses from shoplifting, it is expected that a frontline service employee is likely to have guardianship behavioural intention if he/she perceived that the behaviour is easy to pursue. Hence, it is hypothesized that:

H₅: There is a positive relationship between perceived behavioural control and guardianship behavioural intention.

Further, the theory of planned behaviour regards perceived behavioural control as a predictor of an individual's actual behaviour (Armitage et al., 1999, e.g., Culiberg, 2014, Tjiptono et al., 2016). Hence, it is posited that:

H₆: There is a positive relationship between perceived behavioural control and guardianship behaviour.

Guardianship behavioural intention-guardianship behaviour

A central predictor of an individual's behaviour is their intention to perform the behaviour (Paul et al., 2016). These intentions are influenced by motivational factors that indicate an individual's willingness to try and endeavour to perform the behaviour (e.g., McNeill & Venter, 2019, Mumuni et al., 2018). Therefore, the stronger an individual's intention to perform a certain behaviour, the stronger are the chances that the individual will perform it:

H7: There is a positive relationship between guardianship behavioural intention and guardianship behaviour.

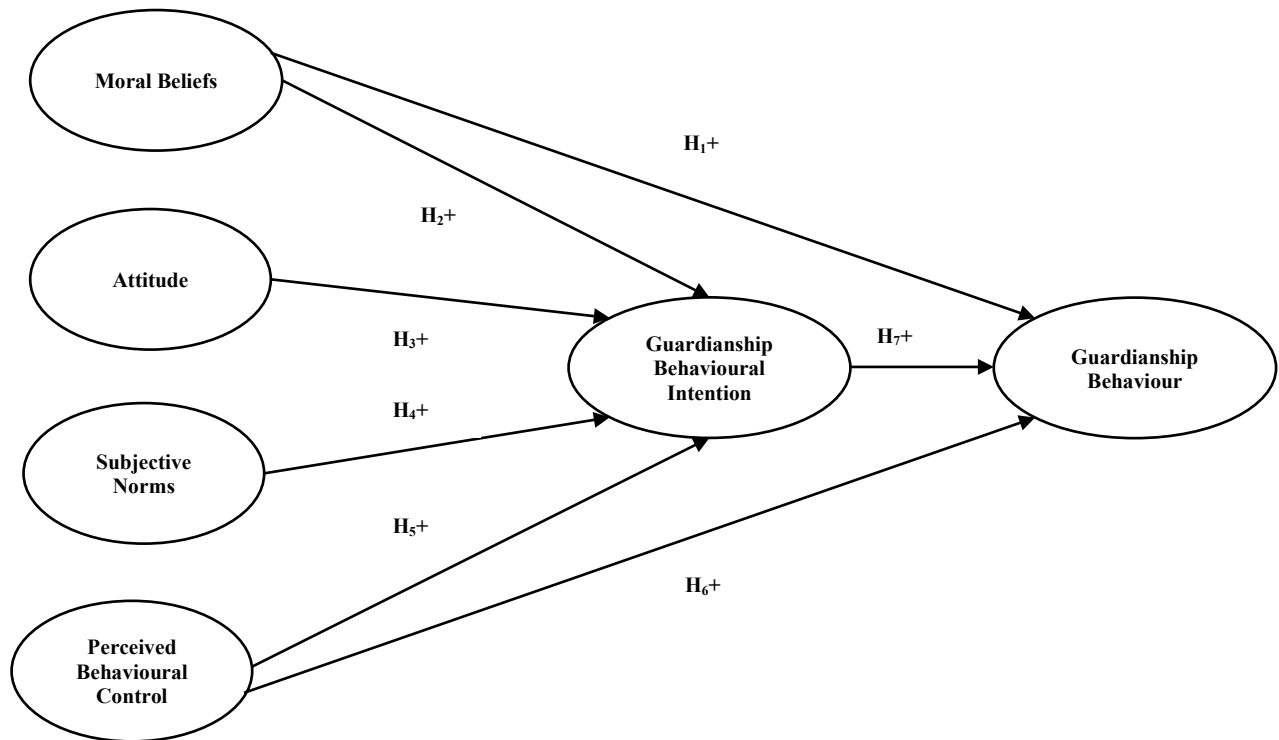


Figure 1: Path Model of Proposed Hypotheses

Research method

This study uses a quantitative approach for testing the hypotheses by logical empiricism. In this section, initially, the procedure for developing the research instrument is presented followed by details on piloting and administering the research instrument for the main survey. We used IBM SPSS Statistics 28 software for assessing the validity and reliability of the results as well as the exploratory factor analysis (EFA). Further, we used IBM SPSS AMOS 28 Graphics software for confirmatory factor analysis (CFA) and structural equation modelling (SEM) that includes goodness of fit indices of the structural model.

The research instrument

To ensure the comprehensibility of the research instrument, a two-stage process was adopted prior to piloting. This comprised of academic feedback and interviews with individuals reflective of the profile of the target respondents. Once the scale items were finalised for inclusion in this study, the first draft of the questionnaire was circulated amongst eight experts in the academic field of marketing to seek their advice on the understanding and sense-making of the questions. Based on the suggestions of these experts, minor adaptations were made to the wording and the order of some of the scale items to ensure the understanding of the questions. For this stage, the refined questionnaire was distributed to a total of eight frontline service employees of a supermarket and their advice regarding the understandability of every question was sought. Each question was inspected by the pre-pilot respondent in the presence of the primary author. The feedback provided was incorporated into the questionnaire and it was tested for the pilot survey to gather suitable empirical evidence.

The final version of the survey research is divided into three sections. The first introduced the project and its objectives. The second section contained a consent form, and the third section contained the research instrument itself. The final part contained classification questions (see Appendix 1 for research instrument and classification questions). We utilised existing scales and adapted them as appropriate in the present context. This means the survey item was reworded to fit into the present context. For example, for the construct of 'Subjective norm', a scale item that Armitage et al. (1999) originally used was "People who are important to me think I (should not-should use cannabis)" (p. 305); is adapted to fit into the present context as "People important to me (family, friends, etc.) I think that I should safely try to stop shoplifting while I work at this supermarket" (p. 305). All constructs were measured using seven-point Likert scales ranging from 1=Strongly disagree to 7=Strongly agree.

Employee moral beliefs

This construct comprised a total of three scale items developed by (Tonglet, 2002) to measure *Employee Moral Beliefs*. The value of Cronbach Alpha for their study was $\alpha=0.830$ (Emilus, 2012). Again, to ensure contextual relevance, the wording and order of these items were adapted. The value of the Cronbach's Alpha for the present study was $\alpha=0.824$ suggesting a high degree of reliability (e.g., Gunden et al., 2020) and high internal consistency (e.g., Oral & Thurner, 2019).

The theory of planned behaviour constructs

These constructs of *Employee attitude towards guardianship behaviour*, *Employee subjective norms*, *Employee perceived behavioural control*, *Employee guardianship behavioural intentions*, and *Employee guardianship behaviour* respectively use a total of five, three, three, three, and five scale items developed by (Armitage et al., 1999) to measure the construct. The Cronbach's Alpha for these scales in their study was respectively identified as $\alpha=0.78$, $\alpha=0.83$, $\alpha=0.88$, 0.82 , and 0.89 . Further, the present study respectively achieved Cronbach's Alpha values for these scales as $\alpha=0.88$, $\alpha=0.87$, $\alpha=0.82$, $\alpha=0.88$, and $\alpha=0.87$, again - suggesting a high degree of reliability (e.g., Zhang & Liu, 2017) and high internal consistency (e.g., Jørgensen & Guesalaga, 2018).

Administration of the pilot and main surveys

Piloting of the research instrument was conducted during the second week of August 2018 at one national supermarket in a conurbation of New Zealand. Prior to this, a written request was sent to the *Store Manager* of this supermarket. The only criteria for participation in this study were one full year's employment (either full-time or part-time) with this supermarket based on the assumption that a period of one year is deemed sufficient to develop an understanding of the work culture and atmosphere of the supermarket. Once the *Store Manager's* permission was received, a *Call for Participation* was posted on the staff notice board together with a total of 100 removable pieces of paper with the web link of the online survey instrument. These pilot respondents were requested to fill out the online survey instrument uploaded at the web link within seven days. On the eighth day, the web link was disabled to close the pilot survey. A total of forty-five respondents completed the pilot survey. Since the majority of the pilot respondents informally and verbally suggested including 'Transgender' as an option for the 'Gender' section in the 'Demographics' part of the research instrument, it was included in the relevant part of the research instrument for the main survey. Because the value of the Cronbach's Alpha for all constructs in the pilot survey was between 0.824 and 0.88 - suggesting a 'very good' level of internal consistency, the same instrument was used for the main survey.

New Zealand is one of the fastest-growing economies in the world (The World Bank, 2021). Considering its relatively remote location from the rest of the world and the constantly growing number of immigrants, we decided to choose New Zealand as our research location. Further, according to a '2020 Retail Trade Survey', supermarkets contain the biggest retail trade in New Zealand among all retail industries (StatsNZ, 2021). Therefore, considering the significance of supermarkets in New Zealand's retail industry, we decided to conduct our research in this context. The target population for this study is the frontline service employees of national supermarket chains. To help with the administration of the questionnaire, one of the two (for the sake of convenience we term them as X and Y) major supermarket chains in New Zealand (X) was approached. A formal confidentiality agreement was signed in September 2018 between our public education and research establishment and X. Referring to this Confidentiality agreement, all stores (i.e., store managers) under X were contacted by the head office of this food supplier via email to inform them about the research and seeking the cooperation of all stores in administering the questionnaire. A web-based digital survey was administered using an online software service known as Qualtrics™. Within the next fortnight, X sent another email with a web link to the digital online survey to all the stores for distribution to staff. The digital online survey was compatible with personal computers, laptops, palmtops, smartphones and so forth. This web link contained the 'Information Sheet on the survey' and the 'Consent Form' for the participants to click before the actual survey was presented to them. All the respondents gave their consent to complete the survey after reading and understanding the standard privacy policy mentioned in the 'Information Sheet' of the survey. By the end of September 2018 after distributing the survey weblink, a total of 371 responses had been collected. In the first week of October 2018, a follow-up email was sent to the participating stores and a further 204 responses were received before the survey link was de-activated by the end of October 2018 after distributing the survey weblink. Out of these 371+204 =575 filled questionnaires, 68 questionnaires were either returned unanswered or were answered by employees below 18 years of age or were largely incomplete. Hence, we used a total of 575-68=507 usable questionnaires in this study.

Analysis and results

Analysis was carried out on 507 usable responses from 35 stores across the South Island of New Zealand under food supplier X. Most of the respondents were males [292 (57.6%)], with 214 (42.2%) females and one transgender respondent (0.2%). Additionally, the employment status (at their respective supermarket) of the majority of respondents was full-time [376 (74.2%)] with 131 respondents' employment status part-time (25.8%).

As the present study used cross-sectional data, it was necessary to assess the potential risk of common method variance (CMV). Initially, a marker variable evaluation technique was employed (Malhotra et al., 2017). This technique is used "*to measure [a marker variable's] smallest correlation coefficient with the study's theoretical predictors, partialling out the coefficient from the bivariate correlations, and then comparing these results with [those] obtained from the unadjusted correlations*" (Frazier et al., 2009, p. 38). The survey item '*It is hard for me to think about this supermarket as being mine*' was used as it was theoretically distinct from the predictor and outcome variables (Lindell & Whitney, 2001) used in the study. A partial correlation analysis revealed that the unadjusted correlations maintained their size and pattern of significance (Frazier et al., 2009) indicating minimal correlation deviations (Becker et al., 2009).

Additionally, a variant of the marker variable technique was employed (Malhotra et al., 2006) to further evaluate the potential risk of CMV (Frazier et al., 2009). To this end, a correlation

matrix from a modified structural model was used to compare results with an original correlation matrix. The presence of common method bias is highly unlikely if the comparison of the original and modified matrices indicates an absence of variations in sign (i.e. positive or negative) or significance levels (Frazier et al., 2009). The findings suggested that there was no significant difference between the results of the modified and original correlation matrices. The correlations in the original matrix continued to remain significant in the modified matrix, and the structural model generated outcomes that were similar to the original path model. Both analyses suggest the absence of CMV in this study.

Exploratory factor analysis (EFA)

Since the scale items used in the research instrument for this study were adapted from other studies but had never been tested together within a retail context, an assessment of the nature of the association between them was considered essential (Albers & Lakens, 2018). Hence, an Exploratory Factor Analysis (EFA) was conducted to identify and confirm any potential underlying dimensions within the data. The EFA analysis adopted principal component analysis (PCA) with varimax rotation. All components loaded consistently and the Cronbach alphas for all scales were either the same or better as previously reported. Therefore, no item was excluded from further analysis.

Validity of scales

The validity of all the scales was further established by utilising the convergent and discriminant scores. The details of the validity scores are shown in Table 1. Column 2 (C2) contains composite reliability (CR) scores for all constructs/components which are found to be above the acceptable score of 0.70. Column 3 (C3) contains the scores of convergent validities or Average Variance Extracted (AVE). These scores are above the acceptable score of 0.5. Furthermore, Column 4 (C4) contains the scores of discriminant validity or Maximum Shared Variance (MSV). All these scores of MSV are accepted since they are less than the values of AVE shown in Column 3 (C3).

Sr. No.	Column 1 (C1)	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11
	Construct	CR	AVE	MSV	MaxR(H)	MB	SN	Attitude	PBC	Intention	GB
Row 1 (R1)	MB	0.813	0.594	0.500	0.841	0.771					
R2	SN	0.874	0.698	0.100	0.878	0.054	0.835				
R3	Attitude	0.876	0.587	0.015	0.879	0.121	0.078	0.766			
R4	PBC	0.826	0.615	0.212	0.852	0.220	0.297	0.021	0.784		
R5	Intention	0.877	0.703	0.537	0.877	0.498	0.316	0.047	0.440	0.838	
R6	GB	0.877	0.642	0.537	0.885	0.707	0.299	0.085	0.460	0.733	0.801

*Diagonal values in bold are the square roots of the AVEs and off-diagonal values are correlations of the latent values

Table 1: Analysis of Convergent and Discriminant Validity of Scales

Column 5 (C5) contains the MaxR(H) scores that are projected to ensure the reliability of all the constructs/components. These scores are accepted as they are above the accepted value of 0.70. It is important to note that the MaxR(H) are considered more robust compared to the composite reliability (CR) scores. The diagonal values in bold are the square roots of the AVEs and the off-diagonal values are correlations of the latent variables. The test of discriminant validity is satisfied as the square roots of AVE values are higher than the correlations between any pair of constructs (see Table-1). Overall, since the AVEs are greater than 0.5 and each value of MSV is smaller than its respective AVE value, the scales are showing both convergent and discriminant validity. Based on the EFA, the reliability (Cronbach's alpha-discussed earlier) and validity of the scale items suggests that the scale items are both highly reliable and

valid for conducting further analysis. The next section outlines the analysis of the confirmatory factor analysis (CFA) and the testing of the hypotheses. Furthermore, the structural/path model is tested for the ‘goodness of fit’ so that the hypotheses may be assessed considering the obtained findings.

The measurement model and Confirmatory factor analysis (CFA)

Based on the results of EFA, further analysis of the measurement model was executed. In total, five factors and twenty-two indicators were tested in the measurement model. Furthermore, Table 2 presents the standardized regression weights for the measurement model.

Sr. No.	Regression Path	Regression Weight	CR	AVE
I	Employee Moral Beliefs (MB)			
1	Shoplifting is - against my principles. (MB1)	0.78	0.813	0.594
2	Wrong for me to ignore shoplifting. (MB2)	0.84		
3	Feel guilty to see and ignore shoplifting. (MB3)	0.70		
II	Employee Attitude towards Guardianship Behaviour (A)			
4	Stopping shoplifting is a good thing to do. (A1)	0.70	0.876	0.587
5	It satisfies me when I can safely stop shoplifting. (A2)	0.70		
6	Stopping shoplifting is a positive thing to do. (A3)	0.86		
7	Shoplifting prevention is a useless act. (A4)	0.85		
8	Shoplifting prevention is a rewarding act. (A5)	0.84		
III	Employee subjective Norms (SN)			
9	People important to me - would think that I should safely try to stop shoplifting. (SN1)	0.82	0.874	0.698
10	Would like me to safely stop shoplifting. (SN2)	0.86		
11	Would want me to safely stop shoplifting. (SN3)	0.83		
IV	Employee perceived behavioural control (PBC)			
12	While shopping at this supermarket, I feel that I am safely able to stop shoplifting if I witness others doing it. (PBC1)	0.70	0.826	0.615
13	While shopping at this supermarket, I am confident that I can safely stop shoplifting if I witness others doing it. (PBC2)	0.88		
14	While shopping at this supermarket, I am highly likely to safely stop shoplifting if I witness others doing it. (PBC3)	0.77		
V	Guardianship Behavioural Intention (I)			
15	Intend to stop shoplifting. (I1)	0.84	0.877	0.703
16	Want to stop shoplifting. (I2)	0.86		
17	Will certainly stop shoplifting. (I3)	0.81		
V	Guardianship Behavioural Intention (GB)			
18	While working at this supermarket- I have always done all the things that were suggested in training to safely stop shoplifting. (GB1)	0.71	0.877	0.642
19	Sometimes, I might not follow the correct procedure to safely stop shoplifting. (GB2)	0.79		
20	I have always followed the supermarket's instructions to safely stop shoplifting. (GB3)	0.78		
21	I have always tried to be alert to safely stop shoplifting. (GB4)	0.78		
22	I have always been motivated to safely stop shoplifting. (GB5)	0.74		

(Significant at the $p < 0.001$)

Table 2: CFA Standardized Regression Weights

Further, there exists no perimeter for terming correlations as ‘high’ correlations. The literature suggests that values exceeding 0.9 require further investigation and quite often, correlations

exceeding 0.8 may show the presence of a problem in the data. In this case, the highest inter-correlation value is 0.61 and hence there is no presence of high inter-correlation.

A maximum likelihood estimator with robust standard errors (Lai, 2018) was used to assess both measurement and structural models (e.g., Kautish et al., 2021). The reason for using the maximum likelihood estimator is that it is deemed superior to normal theory-based maximum likelihood as it is less dependent on the assumption of multivariate normal distribution, which is not applicable in the present study (Rauschnabel, 2018).

The overall goodness-of-fit indicators for the SEM model may be seen in Table 3.

Sr. No.	Indicators of Overall Fit	Measures of Overall Fit
1	$\chi^2 (df)$	607.021 (211)
2	$\chi^2/(df)$	2.876
3	p	.000
4	GFI	0.892
5	AGFI	0.889
6	RMSEA	0.071
7	NFI	0.902
8	CFI	0.924
9	NNFI (TLI)	0.915
10	SRMR	0.064

Table 3: Goodness-of-Fit Indices for the Measurement Model

Results presented in Table 3 suggest a satisfactory measurement model fit. $\chi^2/(df) < 3$ suggests an acceptable fit between the hypothetical model and sample data (Kautish et al., 2021, Kline, 2015). The Goodness-of-Fit Index (GFI) specifies the all-inclusive fit of the squared residuals projected against the actual data. Nonetheless, with this value, it suggests no amendments are necessary with respect to the degrees of freedom (Hooper et al., 2008, Tabachnick & Fidell, 2007). Further to this, the Adjusted Goodness-of-Fit Index (AGFI) fine tunes for the number of degrees of freedom (Hooper et al., 2008). In both cases, a value close to zero (0.0) specifies a poor fit and a value close to one (1.0) indicates a good fit. While to consider a model as a good fit model the cut-off for AGFI is 0.90 and for GFI is 0.95; whereas, AGFI and GFI values, respectively as low as 0.85 (e.g., Dixit et al., 2017) and 0.89 (e.g., Naumann et al., 2020) signify that the model is a moderate model fit. Therefore, the values of GFI (0.892) and AGFI (.889) are deemed to be acceptable [respectively e.g., Randrianasolo and Arnold (2020) and Sop and Kozak (2019)]. Additionally, the RMSEA (0.071) and SRMR (0.064) values are less than 0.1, suggesting that the measurement model is satisfactory [respectively e.g., Liu et al. (2017) and Mandler (2019)]. Moreover, the normed-fit index (NFI) assesses the projected model by equating its χ^2 to the χ^2 value of the independent model, that is, the model that resembles the totally distinct variables (Bollen & Long, 1992). A value close to zero (0) indicates a poor fit and a value close to one (1) indicates a good fit with values higher than or equal to 0.95 indicating a good fit. The NFI value for the measurement model is 0.902. Although, while the cut-off for NFI is 0.95 to consider a model as a good fit model, an NFI value between 0.90 and 0.94 signifies that the model is moderately fitting (e.g., Narteh, 2018). Hence, the NFI value of 0.902 is deemed to be acceptable. Additionally, the comparative fit index (CFI) employs a non-central χ^2 distribution with non-centrality parameters (Bentler, 1990). CFI values greater than or equal to 0.90 are indicative of an adequately fitting model (e.g., Thakur, 2019). The CFI value for the current model is 0.924. This value indicates an adequate fit model (Kreis & Mafael, 2014). Hence, the CFI value of 0.924 is deemed acceptable. Finally, the root means

square error approximation (RMSEA) relates and equates the proposed model to a seamless or saturated model consequently permitting an approximation of its deficiency of getting fit (Bentler, 1990). Values of less than 0.05 indicate a good-fitting model and while considering the degrees of freedom, values as high as 0.08 are considered acceptable (Dewnarain et al., 2021). The RMSEA value, in this case, is 0.071 suggesting this model is deemed acceptable (e.g., Liu et al., 2017).

Extant literature suggests that it may be accurate to consider χ^2 (chi-square) as a measure of fit instead of a test statistic with the assumption that a small and non-significant χ^2 value with allied degrees of freedom resembles a good fit. Nonetheless, the χ^2 is enormously sensitive to sample size and therefore other tests should be considered. In this case, the χ^2 value of 580.083 (df=194) is significant (p=.000). Hence, other tests were also carried out.

The Structural Model

The overall goodness-of-fit indicators for the structural equation model may be seen in Table 4. It should be noted that calculating the goodness-of-fit is more of a comparative practice than one with absolute norms. Therefore, researchers apply numerous measures while evaluating goodness-of-fit hence accomplishing a general agreement across dissimilar forms of measures as to the adequacy and appropriateness of a proposed model. At this step of the analysis, the complete measures of overall fit are assessed. These are now discussed in more detail below.

Sr. No.	Indicators of Overall Fit	Measures of Overall Fit
1	χ^2 (df)	580.083 (194)
2	χ^2/df	2.990
3	<i>p</i>	.000
4	GFI	0.90
5	AGFI	0.90
6	RMSEA	0.063
7	NFI	0.910
8	CFI	0.938
9	NNFI (TLI)	0.926
10	SRMR	0.059

Table 4: Goodness-of-Fit Indices for the Structural Model

Results presented in Table 4 suggest a satisfactory structural equation model fit. $\chi^2/df < 3$ suggests an acceptable fit between the hypothetical model and sample data (Kautish et al., 2021, Kline, 2015). While to consider a model as a good fit model the cut-off for AGFI is 0.90 and for GFI is 0.95; whereas, AGFI and GFI values, respectively as low as 0.85 (e.g., Dixit et al., 2017) and 0.90 (Kreis & Mafael, 2014) signify that the model is a 'decent' fitting model. Therefore, the values of GFI (0.90) and AGFI (0.90) are deemed to be acceptable [respectively, e.g., Minton et al. (2018) and Jeng (2017)]. Additionally, the RMSEA (0.063) and SRMR (0.059) values are less than 0.1, suggesting that the measurement model is satisfactory [respectively, e.g., Bose and Ye (2020) and van Esch et al. (2019)]. Moreover, the normed-fit index (NFI) assesses the projected model by equating its χ^2 to the χ^2 value of the independent model, that is, the model that resembles the totally distinct variables (Bollen & Long, 1992). As discussed earlier, a value close to zero (0) indicates a poor fit and a value close to one (1) indicates a good fit with values higher than or equal to 0.95 indicating a good fit. The NFI value for the structural model is 0.910. Although, while the cut-off for NFI is 0.95 to consider a model as a good fit model, an NFI value between 0.90 and above signifies that the model is moderately fitting (Rather, 2018). Hence, the NFI value of 0.910 is deemed to be acceptable (Guo & Wang, 2009). Additionally, the comparative fit index (CFI) employs a non-central χ^2

distribution with non-centrality parameters (Bentler, 1990). CFI values greater than or equal to 0.90 and lesser than 0.95 are indicative of an adequately fitting model (Cho & Hwang, 2020). The CFI value for the current model is 0.938. This value indicates an adequate fit model (Kreis & Mafael, 2014). Hence, the CFI value of 0.938 is deemed acceptable (Sung, 2020). Finally, the root means square error approximation (RMSEA) relates and equates the proposed model to a seamless or saturated model consequently permitting an approximation of its deficiency of getting fit (Bentler, 1990). Values of less than 0.05 indicate a good-fitting model and while considering the degrees of freedom, values as high as 0.08 are considered acceptable (Dewnarain et al., 2021). The RMSEA value, in this case, is 0.063 suggesting this model is deemed acceptable (Lopez & Balabanis, 2021).

Hypotheses testing

There is a statistically significant ($p=.00$ i.e. $p<.05$) and positive relationship between employee moral beliefs and guardianship behaviour (H_1 is accepted). When employee moral beliefs go up by 1 unit or standard deviation, guardianship behaviour goes up by 0.347 units. This suggests that employee moral beliefs evoke employee guardianship behaviour. In other words, employee moral beliefs facilitate their guardianship behaviour.

Hypothesis	Independent variable	→	Dependent variable	Standardised Beta Estimate (β)	Standard Error	Critical Ratio	p-Value	Result
H₁	Moral beliefs	→	Guardianship Behaviour	.347	.066	5.291	0.000	Significant (Accepted)
H₂	Moral beliefs	→	Guardianship Behavioural Intention	.376	.074	5.102	0.000	Significant (Accepted)
H₃	Attitude	→	Guardianship Behavioural Intention	.143	.062	2.297	0.02	Significant (Accepted)
H₄	Subjective Norms	→	Guardianship Behavioural Intention	.136	.045	2.996	0.00	Significant (Accepted)
H₅	Perceived Behavioural Control	→	Guardianship Behavioural Intention	.298	.051	5.820	0.00	Significant (Accepted)
H₆	Perceived Behavioural Control	→	Guardianship Behaviour	.167	.055	3.026	0.00	Significant (Accepted)
H₇	Guardianship Behavioural Intention	→	Guardianship Behaviour	.171	.060	2.865	0.00	Significant (Accepted)

Table 5: Statistical Results Related to all Hypotheses

There is a statistically significant ($p=.00$ i.e., $p<.05$) and a positive relationship between employee moral beliefs and their guardianship behavioural intention (H_2 is accepted). When moral beliefs go up by 1 unit or standard deviation, their guardianship behavioural intention goes up by 0.376 units. This suggests that employee moral beliefs evoke employee guardianship behavioural intention. In other words, employee moral beliefs facilitate their guardianship behavioural intention. There is a statistically significant ($p=.02$ i.e., $p<.05$) and positive relationship between attitude toward guardianship behaviour and guardianship behavioural intention (H_3 is accepted). When the employee attitude toward guardianship behaviour goes up by 1 unit or standard deviation, their guardianship behavioural intention goes up by 0.143 units. This suggests that employee moral beliefs evoke employee

guardianship behavioural intention. In other words, employee attitude toward guardianship, behaviour facilitates their guardianship behavioural intention.

Additionally, there is a statistically significant ($p=.00$ i.e., $p<.05$) and positive relationship between employee subjective norms and guardianship behavioural intention (H_4 is accepted). When levels of employee subjective norms go up by 1 unit or standard deviation, their guardianship behavioural intention goes up by 0.136 units. This suggests that employee subjective norms evoke employee guardianship behavioural intentions. In other words, employee subjective norms facilitate their guardianship behavioural intention. Further, there is a statistically significant ($p=.00$ i.e., $p<.05$) and positive relationship between employee-perceived behavioural control and guardianship behavioural intention (H_5 is accepted). When levels of employee perceived behavioural control go up by 1 unit or standard deviation, their guardianship behavioural intention goes up by 0.298 units. This suggests that employee-perceived behavioural control evokes employee guardianship behavioural intentions. In other words, employee-perceived behavioural control facilitates their guardianship behavioural intention.

In regard to H_6 , there is a statistically significant ($p=.00$ i.e., $p<.05$) and positive relationship between employees' perceived behavioural control and their guardianship behaviour (H_6 is accepted). In other words, when the level of employee perceived behavioural control goes up by 1 unit or standard deviation, their level of guardianship behaviour goes up by 0.167 units. This suggests that employee-perceived behavioural control evokes employee guardianship behaviour. In other words, employees' perceived behavioural control facilitates their guardianship behaviour.

Finally, there is a statistically significant ($p=.00$ i.e., $p<.05$) and positive relationship between employee guardianship behavioural intention and their guardianship behaviour (H_7 is accepted). When the level of employee guardianship behavioural intention goes up by 1 unit or standard deviation, their level of guardianship behaviour goes up by 0.171 units. This suggests that employee guardianship behavioural intention evokes employee guardianship behaviour. In other words, employee guardianship behavioural intention facilitates employee guardianship behaviour. Overall, the results shown in Table 5 suggest that frontline service employees' moral beliefs are instrumental in facilitating their in-store guardianship behaviour.

Discussion

The findings of this research have answered both research questions. The role of frontline service employees of a supermarket is pivotal in shoplifting prevention. Frontline service employees' moral beliefs indicate that they have a positive attitude toward practising good behaviour. As a result, while at work once they witness a negative incident of shoplifting, their moral beliefs trigger them to play the role of guardians and as a result, they stop in-store shoplifting incidents.

This study set out to detect the influence of frontline supermarket employees' moral beliefs on their intentions to practice guardianship behaviour for in-store shoplifting prevention. The results of the beta weights demonstrated that Moral Beliefs predict intentions to engage almost three times as strongly as the attitude towards the act as well as those of perceived norms. Moral Beliefs also predict the latent variable of behaviour much more strongly than Intentions.

Furthermore, the low correlation between Subjective Norms and Moral Beliefs supports our assumption derived from the literature that moral beliefs function at a fundamentally affective

level and are deep-seated to the extent that they function independently of subjective norms. This is highlighted by the fact that New Zealand is a country of immigrants, and while our survey instrument did not ask for ethnicity, the 2013 census of NZ citizens registered more than 25% of the population as being born overseas. The situationally specific survey items (see Appendix 1) therefore leave little doubt that the affective reactions to the exposure of theft create an immediate and strong tendency to act and prevent it.

The theoretical contribution of the model tested here would further support the theoretical underpinnings of the theory of planned behaviour. While the attitude towards the intention to act, as well as the perceived socially normed expectations to act, are all significant, employees' moral aptitudes are far stronger predictors of guardianship behaviour. Confirming the work of Fishbein and Ajzen (2011), the results demonstrate that the theory requires contingent and situationally relevant information to be included in order to capture the complexity of intentional behaviour.

Limitations of the research

It is essential to highlight the limitations of this study, so they may be considered in future areas of research. Firstly, this study utilises data from one type of retailing sector, in essence, from supermarkets. Therefore, generalisability may not be assumed. Given the unique work structure, size, and volume of supermarkets within New Zealand, caution needs to be applied while considering to which extent the results apply to other types of stores in the retailing sector, such as department stores, convenience stores, dairies, malls, warehouse stores, discount stores, speciality stores and so forth. Thus, replications of the research findings would be appropriate to investigate the generalizability of the results. Secondly, although the focus of this is on supermarkets, this study focuses on supermarket stores that are managed by X (as mentioned earlier, one of the two food supplier companies in New Zealand). Therefore, to understand any potential organizational and cultural differences and their effects, a comparative study encompassing employees of other supermarkets could be considered. Thirdly, supermarket employees were the central focus of this study and therefore, it is inappropriate to generalize the results of this study to other supermarket stakeholders, such as external customers, merchandisers, suppliers and so forth. Fourthly, these findings are primarily based on cross-sectional data. Whilst every effort has been undertaken to provide the theoretical underpinnings of causality, longitudinal data could provide supplementary evidence. Research designs that include follow-ups may be appropriate to identify potential changes (both - positive and negative) over a period of time and/or as the employees require familiarity with their supermarkets and as the life cycle of their association progresses. Finally, this study did not propose a re-specified model with the help of modification indices, therefore, the best-fit model for its replicability has not been established. This suggests that an approximation of a best-fit model against further pertinent data sets from the same population to build on the replicability of the findings will be appropriate.

Scope for future research

There are several potential directions that exist for further research in the future. Firstly, transactional comparative studies with supermarket/retail stores in the North Island of New Zealand as well as in other countries may be carried out in the future. This is to find out any potential differences in the results and suggest potential solutions for the same. A second potential future research area is conducting longitudinal studies since they may shed light on the emergent nature of frontline service employees' moral beliefs for more sophisticated shoplifting prevention. This is important especially since it is related to the simultaneous analysis of retail crime figures to identify potential correlations. A third potential future

research area is examining the role of other retail stakeholders, such as customers, merchandisers and suppliers who visit supermarkets on a day-to-day basis with the help of other higher-level conceptual constructs such as psychological ownership, employee engagement, organizational attachment, interactional justice, workplace spirituality etc. Finally, it would also be interesting to research whether these results are consistent across nationwide supermarkets as well as comparing supermarkets based in urban and rural areas within New Zealand and other countries.

Research implications

The findings of this research offer three significant contributions. These are to the theory, to supermarket managers, and to the consumer community - at large.

Theoretical implications

Conceptually, the findings identify and establish a causal relationship between frontline service employees' moral beliefs and their guardianship behaviour by employing the theory of planned behaviour. From a contextual perspective, the findings demonstrate how the presence of moral beliefs may manifest in the intention and behaviour of a frontline service employee to intervene and prevent shoplifting incidents from occurring. This, therefore, suggests frontline service employees' moral beliefs as an additional variable and individual difference factor that can be used with the theory of planned behaviour to predict shoplifting prevention behaviour and makes a theoretical contribution to the criminology literature on guardianship.

Managerial implications

The research findings provide some interesting exploration of avenues into how frontline service employees may be motivated so that their moral beliefs are elevated, to the extent that they are prepared to intervene to prevent shoplifting incidents from occurring. For example, supermarket managers may design, develop, and organise frequent training programmes to further enrich the moral beliefs of frontline service employees. Additionally, tests and surveys may be designed and developed that are useful to recruit candidates with an optimal moral quotient so that their help in this space may be sought in the future.

Consumer implications

Extant research suggests that retailers (in this context – supermarkets) increase the prices of products to cover some losses from shoplifted goods (e.g., Korgaonkar et al., 2020). When frontline service employees with high-level moral beliefs can help retailers to more effectively deter shoplifting incidents, this will help in the reduction of losses and therefore, retailers are required to no more increase prices of products to cover their losses. Eventually, consumers need not have to pay more and benefit from frontline service employees' guardianship behaviour.

Conclusion

This study employs the theory of planned behaviour (TPB) to predict whether frontline service employees of supermarkets can be effective guardians for the prevention of in-store retail crime, specifically - shoplifting incidents. Our research suggests that frontline service employees' moral beliefs are instrumental in their in-store on-duty guardianship behaviour. Effectively, this research makes a phenomenal contribution to the existing literature on situational crime prevention, extending understanding of the retail context, and providing analysis of the supermarket context specifically. Apart from the traditional electronics, hardware measures and designated in-store security personnel, supermarket management may

employ, encourage and involve frontline service employees to become active guardians of their place of work, which is shown to be a very promising endeavour. This is a novel contribution to both crime prevention and food retail streams of literature.

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