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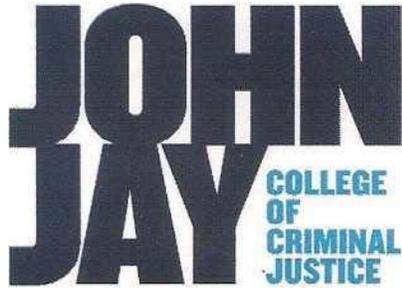
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Comparative Study of Uniformed/Undercover Loss Prevention Agents in Reducing
Shrinkage in Retail Businesses

A Thesis Presented in Partial Fulfillment of the Requirements
for the Master of Arts in Criminal Justice
John Jay College of Criminal Justice
City University of New York

Rustam Zakirov

June 2017



Program Director Thesis Approval

As director of the Criminal Justice Program at John Jay College of Criminal Justice, CUNY, I confirm that I have received all original committee signatures and have given my approval for depositing the following master's thesis presented in partial fulfillment of the requirements for the degree of Master of Science/Arts in Criminal Justice:

Comparative Study of Uniformed/Undercover Loss Prevention Agents in Reducing Shrinkage in Retail Businesses

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Summer 2017

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A handwritten signature in blue ink, appearing to be "JM", written over a horizontal line.

Abstract

This research examines the effectiveness of loss prevention strategies, specifically, uniformed and undercover Loss Prevention Agents (LPA), to determine the proper implementation of these strategies and provide necessary recommendations for the retail stores to lower the rate of shrinkage. It has been found that to date \$13 billion worth of merchandise is stolen per year nationwide. Therefore, in order to reduce shoplifting, retail stores implement various loss prevention strategies among them: LPAs and others. Much research has been conducted in order to find an effective strategy for reducing shoplifting which among others impacts the rate of shrinkage. However, to date, prior researchers acknowledge that there is still debate about the effectiveness of loss prevention strategies and therefore should be further studied. Hence, this study, utilizing data from a retail store for two fiscal years, will compare the rate of shoplifter apprehension by two types of LPAs (uniformed vs undercover) as well as the effectiveness of security devices (closed-circuit television, product protection device, etc.). In addition, this study will utilize non-parametric quantitative data collection method and analysis of shoplifter apprehension and merchandise recovery reports which will be used as a basis for recommendations regarding future research.

Key Words: loss prevention agent (LPA), undercover LPA, uniformed LPA, shoplifting, shrinkage, retail store

Table of Content

Introduction	5
Shoplifting is a Major Problem	8
Identifying Shoplifters	12
Definitional Issues	15
Motivated Offender	16
Suitable Target.....	17
Capable Guardians in Shoplifting.....	18
Environmental design	18
Security devices	20
CCTV	20
LPA.....	22
Other shoppers and employees	24
Methodology.....	26
Sampling.....	26
Procedures	27
Data Analysis.....	27
Data Collection Technique	29
Limitations.....	29
Definition of Variables:	30
Descriptive Statistics	30
Findings	31
Discussion.....	42
Recommendations	42
Conclusion.....	43
Reference	45

Introduction

Shoplifting is a crime that occurs when someone steals merchandise “offered for sale in a retail store, usually by concealing it in a purse, pocket, and bag or under a coat” (Yaniv, 2009). According to National Association for Shoplifting Prevention, one in eleven people committed shoplifting in their lifetime, a majority of them men. Around \$13 billion worth of merchandise is stolen per year from retail stores in the United States (NASP, 2017). “Traditionally, shoplifting has been a research subject of psychologists and criminologists, who have mainly investigated the characteristics and motivations of shoplifters” (Yaniv, 2009, 608). In addition, since prior studies indicate that the majority of consumers shoplift from stores, it is recommended to examine shoplifting as a form “of consumer behavior rather than as a criminal act” (Yaniv, 2009, 608). However, even if many scholars have studied shoplifting through the theoretical framework, there is still a lack of studies regarding the economic aspects of shoplifting.

What we do know is that in order for the retail stores to reduce shoplifting, various loss prevention strategies have been implemented among them: anti-theft messages, the introduction of loss prevention agents (LPAs) and installation of closed-circuit television (CCTV). In Australia, for example, Nelson & Perrone (2000), acknowledge the fact that shoplifting is a major crime, however, it is not being studied and therefore the retail stores are not aware what measures to take to prevent crime. Specifically, Nelson & Perrone find that due to lack of preventive strategies for shoplifting, the retailers rather than measure losses caused by shop theft are instead raising prices for the products in order to balance out the shrinkage. However, if such data were available, retail business owners could take steps to prevent these losses rather than increase prices. By raising prices for the product, small retail businesses are more negatively impacted than the large retailers, since large retailers have more avenues to spread the increase. Therefore, these researchers recommend that an “anti-retail-theft” message be spread among the community so its members can self-police as well as change the perceptions in the society and

abstain from shoplifting. However, in order for this shoplifting intervention be successful, researchers are calling for not just the community to join, but also for the government to take part since it is in the country's interest to lower crime such as shoplifting. In particular, when the retail store is big and contains a large number of products and popular consumer brands, they are likely to hire a loss prevention agent (LPA). The LPA will not only walk the floors but also manage CCTV in order to identify and apprehend shoplifters. Continually, CCTV allows the retail store to have a better, innovative control of the store, as well as video evidence if the shoplifter denies committing the crime. It is apparent that all these strategies can be considered effective since they are focusing directly on stopping the shoplifter. However, various researchers acknowledge that some are not effective and should be thoroughly examined.

Therefore, the purpose of this study is to examine the effectiveness of loss prevention strategies, specifically, uniformed and undercover LPAs, as well as to determine the proper implementation of these strategies and provide necessary recommendations for the retail stores to lower the rate of shrinkage.

Research Question

Which loss prevention strategy (uniformed or undercover LPA) is more effective in reducing shrinkage in a retail store?

Hypothesis

Retail stores utilizing uniformed LPAs compared to undercover loss prevention strategies will have a lower rate of store shrinkage.

Theoretical Framework

The underlying theoretical framework of this study revolves around the idea that LPAs can significantly impact the rates of shrinkage at a store. Routine Activity theory is the best theory to support this. It was first proposed by Cohen and Felson in 1979 which stated that in

order for the crime to take place, three elements must be present, (1) motivated offender, (2) suitable target, (3) the lack of capable guardians (p. 206). By applying this theory in a retail store environment, it is apparent that shoplifters, who are motivated offenders, are entering the premises to steal merchandise. The LPAs have a role of capable guardians, where a uniformed LPA acts as a general deterrence, meaning with his presence in the store, all consumers, including potential shoplifters, are made aware that they are being watched; while an undercover LPA acts as a specific deterrence, meaning he deters only the apprehended shoplifters.

At the same time, Cornish and Clarke proposed Rational Choice Theory. This also relates to the shoplifters as motivated offenders because their theory argues that “individuals choose a course of action that is most in line with their personal preferences” (Amadae, 2016). In other words, any person is a rational being who weighs out the costs and benefits before committing a crime. However, when it comes to shoplifting, according to Schlueter et. al. (1989) shoplifters can be divided into two distinct groups: rational and non-rational. These authors identified the key elements that distinguish the two groups of shoplifters on a personal level which include demographics, problems shoplifters faced which might have forced them to steal, shoplifters’ perceptions of shoplifting, apprehension, arrest, and prosecution. In addition, the authors examined the act, meaning shoplifting itself, to further find distinctions between two groups which include the type of stores being targeted, the items stolen as well as their value, shoplifters’ reactions to their arrests, as well as the impact the arrest has caused on their relationship with other people and their attitude towards shoplifting. After surveying and gathering data, the authors came to the conclusion, those nonrational shoplifters are the ones that pose greater risk since they strongly believe that they will not be apprehended, and once they are, this incident rarely changes their perceptions (Schlueter, et. al. 1989, 233) For the present study, it can be concluded that utilizing rational choice theory in order to identify which type of loss

prevention agent will reduce the level of shoplifting shrinkage will not fully grasp all types of shoplifters, as it mainly focuses on the rational types of offenders. Though, interestingly, Schlueter et al. recommend that non-rational shoplifters “might be deterred if uniformed store security were more visible at store entrances and within the aisles of the store” (p.237) which partly supports this study’s hypothesis, but cannot be considered as an answer to the research question.

Shoplifting is a Major Problem

Shoplifting is a major problem affecting the economy of the retail stores and the society as a whole. Budden, et al. (1991) are one of the earliest researchers to conduct a national study regarding the impact of shoplifting as well as provide reasons for studying this type of crime. In the purpose of the study, they state that “shoplifting is the costliest crime affecting retail stores. Estimates of its cost vary, but typically are in the tens of billions of dollars annually” (p. 62). Throughout the study, researchers examine the prevalence of shoplifting in the US population and conclude that around 10% of the US population has shoplifted at least once in their lifetime in 1991 which researchers and surveyed store managers consider being alarming. In particular, they suggest that shoplifting leads to the loss of billions of dollars “for local, state and federal government tax coffers due to an increase in sales taxes, income taxes, and property or inventory taxes” to balance out the loss (p.62). Therefore, an increase in the rate of shoplifting impacts on a broader spectrum and should be policed with the newest and strongest technological devices and other types of security strategies. Even if Budden et al. were the first national study conducted about shoplifting, it provided a general overview of the importance of studying and preventing shoplifting.

Continually, Yaniv (2009) also notes that the costs of shoplifting impact the society due to price increases that retail stores often come to in order to balance out the loss of shoplifting. He focuses on examining shoplifting from an economic standpoint and reviews how the rate of shoplifting impacts the use of store security and price determination in retail stores. In contrast to other scholars, Yaniv hypothesizes that the most “rational response to increased shoplifting involves a reduction in both monitoring and prices” (608). In contrast to other scholars, Yaniv states that it is in the best interest of the retail stores to save on spending for security protective devices and persons especially when there is an increase in shoplifting. In supporting his argument, he provides a statistical calculation which shows that if retail stores will spend a lot on security and devices, yet there will be a high rate of shoplifting, the retail store revenue will not receive an increase from the fines charged on the caught shoplifter, rather the revenue will decrease due to spending on the security. In other words, the cost of the security devices doesn’t match to the fines imposed on the caught shoplifter and will cover only a small portion of the expenses for the security devices. Further, Yaniv argues that it will be wiser for retail stores to lower their prices once there is an increase in shoplifting than increasing the prices, which is often done. Specifically, when retail stores have tremendous shoplifting losses, they have a tendency to increase prices to balance out the year-end revenue, which only puts them at greater risk as the shoplifters will likely to come back to now shoplift items that now cost more than before, hitting the store revenue even more than before the price increase. As a result, there is, even more, loss in revenue. Therefore, Yaniv concludes that retail stores, who want to increase their year-end revenue or at least keep it stable, should lower prices and lower the spending for security when there is a significant increase in shoplifting. Overall, Yaniv (2009) states that by reducing the security expenses and prices for goods, the retail stores can protect themselves from tremendous losses whenever there is a spike in shoplifting. Yet, his hypothesis doesn’t take into

account, employee theft which according to other scholars is an issue that worries the retail store more than customer shoplifting. In order to battle it, there is a need for security and protective devices. Yaniv's recommendation for retail stores to reduce prices will probably not be considered by the retail stores because shoplifting doesn't occur every day unlike consumer purchases, and as an end result, the store will not achieve its desired revenue which will cost them their business.

Ultimately, society as a whole suffers when business viability becomes vulnerable. Another study was able to reject the hypothesis that theft is "mainly concerned with the poor stealing food to survive or pensioners stealing tins of cat food for their pets" arguing that retail theft is a serious issue impacting businesses on a wider level. In particular, Bamfield (2004) conducted a first known study to have gathered surveys from all retailers across Europe from 2001-2002. In particular, the survey asked loss prevention managers to provide information about their shrinkage losses as well as year-end retail sales in order to derive the percent of shrinkage from the total revenue. After gathering the data of shoplifting, Bamfield found that loss prevention managers find customer theft as the most important problem in retail "followed by employee theft, security costs and supplier theft" (p. 235). In particular, loss prevention managers considered that shoplifting accounts for around 80% from the total shrinkage followed by employee theft which accounted for nearly 20%. The common factors of the retail stores across Europe were that the retailers reported mostly the same high priced goods and products to be the number one target in the stores. In addition, a majority of retailers were unsatisfied with law enforcement. Retailers reported that law enforcement often doesn't come to arrest the shoplifter if he was caught by retail loss prevention agents for stealing small value goods. The reason for this is because in national criminal codes of certain European countries in order for a shoplifter to be charged with a misdemeanor, he must steal goods of a certain minimum value

and if it is below then the shoplifter will be charged with something lesser and as a result will not be prosecuted at all. Therefore, only 24% of customer shoplifters were reported to the police since the loss prevention agents cannot detain a shoplifter for a long period of time. Besides shoplifter apprehension can turn into a big scene at the store, in front of consumers which can lead to consumer dissatisfaction with the store's environment leading to the loss of sales, just to apprehend one shoplifter. As a result, this undermines the retailer's loss prevention approach since the police don't tend to work together with the retailer's loss prevention agents to deter potential recidivists as well as the community as a whole. Further, since the survey was distributed to nearly 16 countries in Europe, in different languages, Bamfield derived the similarities and differences among the retailers. In particular, when it comes to smaller retail stores, it was revealed that they tend to spend less on security and protective devices and therefore, on average can apprehend from one to two shoplifters per store per year. Further, besides apprehension, shoplifters were also banned from entering the retail stores they were caught in. However, a majority of the retail stores reported that they would impose banning only to of. The practice of banning was more of a self-imposed provision and it was not supported by any law, yet no European court has overturned a retailer's right to ban shoplifters. Overall, Bamfield shows many similarities and differences among retailers in Europe to satisfy his main purpose of the study which was to "provide retail managers with comparable data on retail theft and loss prevention" to help them make the right decisions about ways of managing their shrinkage.

Besides Bamfield, the National Retail Security has been gathering information on retail theft and shrinkage for many years including 2016 (Hollinger et al. 2016). In particular, they found that "48.1% of retailers reported increases in overall inventory shrink" (p.7). In addition, the highest number of apprehensions was reported by grocery and supermarkets, the nationwide

average being 12,953.67 per year which is an overwhelming finding. This shows that nationwide, groceries and supermarkets are likely to have shoplifters. However, according to the overall inventory shrink nationwide, results show that there was a shrink increase in the grocery sector from 3.2% to 3.6%. Therefore, grocery and supermarkets can be considered as the number one target by shoplifters.

The reason why there is such high rate of shoplifting is that the items sold in groceries and supermarkets are of low value compared to clothing and jewelry retail stores and don't have alarm security devices attached to the items which can be easily hidden under clothing (Bamfield, 2004, 239). In addition, shoplifters are likely to assume that the grocery and supermarket managers are likely to let them go and not try to apprehend them because the items are inexpensive and when it comes to supermarkets, they have item insurance. Even if the item was stolen, the brand company will send them a new one free of charge.

Identifying Shoplifters

In order to identify which security strategies will lower the rate of shrinkage, it is best to identify the party who has to be deterred as well as apprehended. Therefore, Nelson & Perrone (2000) found it interesting to further investigate shoplifting and focus on who actually shoplifts in retail stores. Like the earlier-mentioned scholars, Nelson & Perrone (2000), state that shoplifting is a serious issue in many countries. They further note that it is tough to provide concrete results since accurate data on shoplifting is not often available. Therefore, only approximate conclusions can be made about who is a typical shoplifter?

One of the first characteristics that Nelson & Perrone (2000) focus on is age. Specifically, they state that majority of retail managers and loss prevention agents ought to be suspicious of youngsters and those with attitude and consider them being potential shoplifters. In this case, the

authors note that the store security personnel may be biased and as a result overlook other shoplifters. In fact, they state that other age groups, such as the elderly, may account for the majority of shoplifting since they are often overlooked by the store security and viewed as non-threatening. The authors though do take into account that there is certainly a percentage of adolescents who shoplift, some for a thrill of not being caught, and others if peer-pressured by other adolescents. In terms of gender, Nelson & Perrone (2000) cite prior studies where it was affirmed that women tended to shoplift more often than men, however, in recent days this phenomenon shifted and now men are found to be the common shoplifters. In addition, these authors also looked at the employment status of shoplifters who had been caught and found that majority of them were unemployed. Therefore, they concluded that such people may shoplift for food or an item that they can then resell on the streets.

The psychological health of the shoplifter should not be ignored as well. Nelson & Perrone (2000) cite other authors who conclude that majority of shoplifters may commit the crime due to emotional distress which they have exhibited from many reasons, including drug/alcohol addiction, kleptomania, or other compulsive disorders. At this point, the authors note that in Australia researchers created a project to find a correlation between drug use and shop theft. After gathering these findings, they concluded that simply increasing security or toughening criminal sanctions for shoplifting will not deter the shoplifters, especially, those with emotional distress. Therefore, they recommend that the community as a whole has to be deterred and work with the retail store to stop and police the shoplifters.

It can be suggestive that Nelson & Perrone (2000) find that there is no concrete data on the type of shoplifter because the characteristics of a usual shoplifter depend on the community where the retail store is located as well as the products that are sold. Therefore, the results of this

study may only be referred to for future studies but may differ with the findings of other studies due to the locations where the studies were conducted.

In regards to the psychological condition of the shoplifter, the National Association of Shoplifting Prevention (NASP, 2017) conducted a study in order to find the socio-demographic factors that increase prevalence of shoplifting in the US population, identify common impulsive and/or antisocial behaviors among shoplifters, as well as examine “lifetime and 12-month prevalence of psychiatric disorders associated with shoplifting and the current levels of psychosocial functioning in several domains, and 4) estimate lifetime and 12-month rates of mental health treatment-seeking among individuals with a lifetime history of shoplifting” (p. 905).

In order to fulfill the purposes of their study, Blanco et al (2008), using face-to-face surveys gathered data from 43,000 adults of 18 years old and older derived from the US Bureau Census from 2001-2002. This allowed the researchers to not just gather information about the participant’s rate of shoplifting, as well as identify the sociodemographic factors and psychological/psychosocial, mental health of the participant using DSM-IV. After statistically analyzing the data, researchers found that 11.3% of the US population is career shoplifters whereas Yaniv (2009) found that in 1991, 10% of shoplifters nationwide stole at least once in their lifetime. The majority of shoplifters were men, Native Americans, followed by non-Hispanic whites. In terms of age and marital status, a person 18-29, never married is disproportionately likely to shoplift. Meanwhile in terms of education and income level, those with some college education, with “over \$35,000 and family incomes over \$70,000” are prone to shoplifting. Further, they have found a significant correlation between shoplifting and antisocial behaviors and found that 89% of shoplifters had at least one diagnosed a psychiatric disorder. Specifically, a majority of participants who shoplifted have also made money illegally as well as

scammed people for money. Besides, there were also strong correlations found with shoplifting and 12-month and lifetime mental health treatment seeking. For instance, a majority of shoplifters have been diagnosed with “antisocial personality disorder, substance use disorders, pathological gambling, and bipolar disorder” (Blanco et al, 2008, 910). This study has made significant findings that there is a strong correlation between shoplifting and psychological disorder. Therefore, it can be concluded that majority of shoplifters are prone to commit other types of crimes for economic gain. In addition, this study breaks the theory that shoplifters are those who are in need of food, rather a majority of them have a stable middle to high income. One of the important findings was that there is a strong tendency for shoplifters when uncaught to commit more serious crimes. This aspect is troubling and again points to the necessity of further research on the effectiveness of security strategies for apprehending shoplifters, which in turn can eliminate future crime as well as a lead towards a possible detection of a psychiatric disorder among the shoplifters and recommend treatment.

Definitional Issues

In order to better examine the preventive strategies for shoplifting, it is better to first define the key elements of both the crime as well as terms related to the retail business and the preventive strategies that are commonly utilized to prevent the rate of shoplifting. Specifically, in order for the act to be considered “shoplifting in retail business” it must have the following actions such as “(1) willfully taking/possession of or concealing unpurchased goods that are offered for sale, (2) with the intention of converting the merchandise to the personal use without paying the purchase price” (Shoplifting, n.d.). Since these definitions are quite broad, the East Coast Store (one of the retail stores located in Brooklyn, NY which provided the data for this

study but requested to stay anonymous) in its internal policy adjusted them to better fit their business policies and require the following:

- 1) Shoplifter enter the store area
- 2) Remove product from display
- 3) Conceal or take possession of the product
- 4) Closely observe to make sure there is no attempt to pay for product or leave product in

the store

- 5) Pass the last point of purchase

These requirements are often mentioned in the retail store manuals on how to apprehend shoplifters and at the same time not violate the rights of purchasing of the individual. Further, a “shoplifter is a person who steals goods from a retail store while posing as a customer” (Shoplifter, n.d.). In retail businesses, a shoplifter can be considered as a customer who attempts to take the product(s) without the intention to pay.

Motivated Offender

When it comes to studying shoplifting as a phenomenon, various scholars review the specifics of this crime within the theoretical framework. One of the earliest studies was conducted by Schlueter, et al. (1989) to examine whether shoplifters can be classified as being rational, non-rational based on the specifics of their criminal behavior. Between 1982 and 1985 researchers interviewed 132 adult middle-class shoplifters. During the interview, the participants talked about their shoplifting experience as well as identify what they stole and why. This allowed the researchers to classify whether a shoplifter was "rational" "non-rational" or "mixed" (p. 228). Specifically, researchers define each category of shoplifters stating that the rational shoplifters are those “whose theft was calculated to achieve a goal”. In the gathered sample, rational shoplifters shoplifted for many reasons including “financial gain, thought they could get

away with it” (p.229). Meanwhile, the non-rational shoplifters were defined as those who shoplifted because they were “anxious, depressed, ill”, and others (p.230). Finally, the smallest percentage from the sample was mixed shoplifters and was defined as those who had answers similar to both the rational and non-rational groups. After analyzing data, researchers found that the majority of shoplifters in their sample were rational as well as that there are certain demographic differences between the types of shoplifters (p. 237). A majority of shoplifters have targeted similar types of stores and have picked up similar items in value as well as have a similar frequency of shoplifting. However, they find that non-rational shoplifters pose a greater threat to the retail stores since they show almost no deterrence after apprehension. Therefore, researchers recommend that when it comes to non-rational shoplifters retail stores should hire uniformed officers who will be visible in the store and possibly deter non-rational offenders.

Suitable Target

Retail community stores tend to be in high demand and do not have expensive security systems because its product sales are affordable to the majority of the public. According to the NRF, the top 100 retail stores of 2016 chart, the most popularly known retail companies which have the highest annual revenue are those that sell various brands and products, as well as have a pharmacy. For instance, the East Coast Store is in the first quartile of the top 100 Retailers in 2016 (Kantar Retail, 2016). All products are placed neatly on open shelves, so it will be most comfortable for the consumers to pick up the selected item. However, the downside is that such retail stores are often targeted by shoplifters.

When it comes to identifying the effectiveness of security strategies in retail stores, it is important which products should be mainly secured in order to combat the high costs of shoplifting. Therefore, the above-mentioned, Bamfield, J. (2004), collected data on the most-stolen types of merchandise in retail stores from 16 European countries. After collecting surveys

from the retail security, he found that potentially any item in the store can be stolen. However, there are also items that are the number one target and are usually those which are of “high value; relatively small size; “designer” brand, or manufactured by well-known company; in great or regular demand by the public; and snob appeal, a cult, trend, or craze, particularly where supply is less than demand” (p. 237). Items that fit these criteria can be easily hidden in clothes and shoplifters can walk out of the store without suspicion.

Capable Guardians in Shoplifting

Environmental design

In order to implement a security strategy that will suit the design of the store, it is also important to first understand the mindset of a shoplifter when he enters a retail store. In fact, Carmel-Gilfilen (2013) conducts a study in order to examine which features of store security and design deter and/or facilitate novice and expert shoplifters using a verbal protocol to gather data. Specifically, a verbal protocol is “a psychological method for collecting and analyzing thought sequences”, in other words, it is recording the person’s verbalization while he/she is completing a task. As a result, the gathered data will be unbiased since the recorded shoplifters will be in action while sharing their thoughts about store security and design. In addition, the author applies a set of criminological theories, including Cohen & Felson’s Routine Activity Theory. In particular, he states that the present study reflects the general argument of the Routine Activity Theory, the fact that the environmental impacts a potential offender as to whether to commit the crime (p.86).

After conducting the study, Carmel-Gilfilen (2013) found that the first thing that both novice and expert shoplifters pay attention to when planning to shoplift is the security and store design. Specifically, in terms of security, both types of shoplifters primarily focused on

“surveillance, security tagging, employee positioning”, while in terms of store design, both shoplifters focused on “item accessibility, store layout, and fixture design” (p.99). Meanwhile, in terms of shoplifting facilitators, both types of shoplifters noted that when it comes to storing design, the use of “tall shelves and blocky furniture” creates blind spots for the surveillance and shoplifters can use this to their own advantage. Therefore, the author proposes solutions that marry security and good design and states that retail managers should thoroughly plan the design of their store and possibly include “wide, clear aisles, clear lines of sight”, align registers with the aisles, so the cashiers can be figures of deterrence in order to minimize blind spots and utilize CCTV to its fullest capabilities.

It should be noted that novice and expert shoplifters differ in their methods of shoplifting. Specifically, in contrast to the novice, expert shoplifters try to find a way to „break-off” what may be a deterrent, for instance, taking off the product protection devices (PPD) from the item. Since both types of shoplifters focus on different features of security and store design as potential deterrents and facilitators, then store managers cannot implement them all since they will be implementing facilitators to shoplifting as well, which will only increase the rate of shrinkage. Therefore, it is recommended for retail managers to extract „personalized” security and store design measures which will deter shoplifters in their retail stores.

Carmel-Gilifilen’s study has provided a direct link between store security and design as potential deterrents of shoplifting if utilized and placed in an appropriate manner. However, this study doesn’t contain strong reliability since it was conducted only in two retail stores quite similar to each other. As a result, this study doesn’t cover the impact of the size of the retail stores, type of product sold, location, prices, and other aspects of a retail store that is different from others.

*Security devices*CCTV

One of the common strategies for apprehending shoplifters in retail stores is by installing closed-circuit television camera (CCTV). In present day CCTV is a common tool utilized by any retail store in order to watch for potential shoplifters. CCTV was first introduced in New York in 1968 in order to fight crime on the streets and has slowly become a useful security measure in various organizations, businesses, including retail stores (Delgado, 2013). Beck and Willis (1999) examined the effectiveness of CCTV in retail stores to deter shoplifting and other crimes committed by consumers and employees. Specifically, researchers compared the crime rate in retail stores before and after the installation of CCTV surveillance. In addition, they have also compared the crime rate after the three-month period from the time of installation and compared it to the six-month period following the introduction to see the effectiveness of CCTV. During the study, researchers installed CCTV surveillance in 10 stores and divided them into three types of retail businesses, those with high level, medium level, and low-level crime rates. In order to measure effectiveness, they calculated a percentage value of the stolen goods from the percentage of the goods that were sold. After conducting their study, Beck & Willis found that after installing CCTV surveillance for three months, there was a significant reduction in crime. Specifically, there was “a reduction from 1.96% to 1.62% percent in high-level stores, from 2.53% to 2.03% in medium-level stores, and from 3.08% to 2.38% in low-level stores” (Beck & Willis, 1999, 257). It should be noted that the low-level stores have received the most reduction compared to others. From this data, it can be hypothesized that CCTV surveillance is a successful security strategy for lowering the rate of shoplifting and employee theft.

However, when the researchers gathered the data for the six-month surveillance from the time of installation, the results were unexpected. In particular, there was “an increase from

1.96% to 2.70% in high-level stores, a reduction from 2.40% to 1.97% in medium-level stores, and a reduction from 2.63% to 1.93% in low-level stores” (Beck & Willis, 1999, 259). Therefore, the researchers suggested that it is significant to first identify the crime rate of the retail business since this data will allow the business to decide what type of security strategies will better satisfy their requirements and apprehend the shoplifting and internal theft in their business.

Besides examining the deterrent effect of CCTV, Guffey, et.al (1979) examine shopper’s attitudes toward shoplifting and shoplifting preventive devices. In particular, authors mention that there are hundreds of anti-shoplifting devices. Three major categories of security devices are “electronic article surveillance, closed-circuit television, and cables attached to locks and chains”. Researchers hypothesized that the presence of certain security devices impacts the consumer’s comfort or discomfort. To determine the levels of awareness of specific devices and comfort or discomfort with them the respondents were asked to rank their overall level of awareness of, and comfort with, 10 different shoplifting prevention techniques that were in use in the mall. The results showed that the respondents were most aware of the locked display cases and observation mirrors that were used by several of the mall merchants. Observation towers, two-way mirrors, and dressing room checkers were used only by two mall merchants and had substantially lower levels of customer recognition. Overall, the preventive methods showing the least proportion of respondent discomfort were typically non-personal security devices, such as locked display cases, magnetic detectors, and rings or chains on the merchandise. Meanwhile, shoplifting protection devices that had proportionally higher discomfort levels generally involved human observations of the consumers. Specifically, 35 percent of the respondents indicated that dressing room checkers made them feel uncomfortable. The use of two-way mirrors was disturbing to 29 percent of the respondents. It should be noted that since CCTV

caused discomfort to only 24 percent of respondents, it can be considered that this security method that overtime is being unnoticed and therefore is an effective method for observing the retail store to identify shoplifters while they are committing the offense.

LPA

One of the common ways for combatting shoplifting and reducing shrinkage is by hiring a loss prevention agent (LPA) to monitor the premises and apprehend the shoplifter to return stolen merchandise. Besides examining the shoppers' attitudes towards shoplifting, Guffey, et. al (1979) analyze the shoppers' attitudes towards the LPAs in the store. Researchers note that potentially shoppers are likely to have a negative attitude towards shoplifting, yet they might have mixed attitudes towards LPAs because they can cause discomfort. Therefore, they hypothesized that since many prevention strategies "are deliberately obtrusive, they will have varying levels of acceptance among the study respondents" (p. 80).

After "self-administered questionnaires were given to a randomly selected" shoppers at a regional shopping center located in the southeastern United States, Guffey et. al. found that respondents reported having proportionally higher discomfort levels towards LPAs since it involved human observations of the customers (p.80). Specifically, 25% of respondents reported uneasiness from uniformed guards, floor walkers, and TV surveillance.

Guffey et al. also found that retail stores yearly face high monetary losses due to shoplifting. They regularly invest between \$80 million and \$90 million per year in protective devices and to establish a handful of programs to train employees and shoppers on how to detect and report shoplifting. For instance, in Kansas City, besides LPAs, other employees are also motivated to apprehend shoplifters and are provided with a cash bounty for every caught shoplifter.

From the above-mentioned study, it is safe to say that in order to measure the effectiveness of a uniformed LPA, the consumers' attitudes must not be disregarded and their uneasiness of the LPA may lead to different conclusions. On one hand, it may seem that the LPA is doing his or her job effectively since it is discomforting the consumers and so must discomfort potential shoplifters. On the other hand, the consumers' uneasiness may affect the LPAs job since their discomfort may cause the LPAs suspiciousness of them and therefore, he or she may disregard a shoplifter who ends up taking an unpurchased item and leave the store premises.

Another type of LPA being studied is an undercover LPA. The duty of this type of LPA is the same as that of the uniformed guard, the only difference being that an undercover LPA works in plain clothes and doesn't introduce himself as a store employee until after apprehending a shoplifter. Other researchers such as Pretious et al., (1995) examine the types of security strategies retail managers use in the UK as well which strategies, store managers consider being most effective in reducing shrinkage and ensuring safety for the employees and the consumers. Scholars note that shoplifting in the UK is a major problem as well. For instance, from 1993-1994, the cost of shoplifting went up to \$2.15 billion. Therefore, Pretious et al. find it necessary to study security strategies that are available in retail stores in Dundee and which store managers would like to implement. After conducting a survey of 117 retailers, 109 agreed to participate, out of which "only 10% of the respondents reported using plain clothes/undercover in their stores and states that they were highly effective" (p.32). Meanwhile, out of all the participants, 25% stated that they would choose undercover LPA as a security method. However, out of all the store managers who participated in the study only 17% utilized uniformed guards as a security strategy. The significant finding is that "nearly 40% of store managers overall would choose this security method" (p.32). This shows that only a small portion of retail stores in Dundee, UK utilize uniformed guards, but many other stores would like to move to this security

strategy since they consider it to be effective in reducing the shrinkage as well as maintaining overall security of the premises.

Other shoppers and employees

Interestingly, retail store security devices, employees, LPAs are not the only tools utilized for reducing shrinkage in retail stores. Consumers when bystanders to the crime of shoplifting may have a tendency to aid the LPA and the retail store in apprehending the shoplifter by reporting a crime to the employee. In order to better identify the role consumers play in apprehending shoplifters, Gelfand et al. (1973) examine “conditions under which bystanders would take action in the interests of a chain drug-variety firm which was the apparent victim of shoplifting” (p. 278). After conducting a fake shoplifting scenario, where a 21-year old male, dressed like a hippie, was evidently shoplifting, researchers were astonished by the findings they gathered. Out of the total number of consumers in the retail store, only 28% percent observed the incident. Specifically, after the fake shoplifter was caught, the consumers were interviewed on the way out of the store and only 94 of the consumers out of 403 respondents admitted to observing the shoplifting in progress. Surprisingly, out of those who observed 26 observers (28%) reported shoplifting to one of the employees. This finding is tremendously low and shows that consumers, even if bystanders who observed the crime being committed, have a low tendency for reporting a crime and are, therefore, not a helpful source for apprehending shoplifters and reducing shrinkage. Researchers note that the primary reason for such low responsiveness is due to the consumers’ total absorption of his or her tasks as well as the type of shoplifting being committed. In particular, during the interview, participants stated that they haven’t observed the shoplifting because it did not contain any loud noises, such as ripping off the bags, garbled cries, or loud noises of something falling. In other words noises from a close to violent behavior. Among those who have observed, but didn’t report the crime, a

majority of them responded that they believed their reporting is unnecessary since they assumed that the store is already being guarded by security guards who observe the premises through surveillance or other forms of security devices. This shows that consumers feel safe with the store premises and therefore are not on high alert even if shoplifting is taking place right in front of them.

Continually, in order to ensure that the retail employee team will work together to reduce the shrinkage, other employees, whose duties do not require them to apprehend shoplifters, are also trained for how to notify an LPA of a potential shoplifter as well as stand next to the entrance/exit to stop the shoplifter; mainly to recover the stolen merchandise. It should be noted that among the duties of the LPA and other associates is to recover and safeguard the stolen merchandise. If a shoplifter is apprehended but flees, the LPA is not allowed to run after the shoplifters; his or her goal is to return the merchandise and call the officials. For instance, McAllister (1998) examines the various types of store security practiced in retail stores. In particular, she conducted a survey of the retail stores that are part of the National Retail Federation (NRF) to find the types of security strategies used and how they are implemented. Among them, she finds that employees go through security training, which is an informal training. Among the ones being surveyed, around half reported that when a new employee is hired, he or she is partnered with a senior employee who informally trains him how to notify an LPA or another staff member of a shoplifting in progress. In addition, surveys revealed that retailers tend to place a specific salesperson at the entrance/exit that will both greet the customers as well as being a "security observer". Retailers found this method to be useful especially during holiday seasons when the store is most often crowded. Therefore, according to the retailers from the NRF, employees are another effective method for identifying a shoplifter and informing the LPA for apprehension. This allows the retail stores to have a sense of unity and teamwork among

the staff members which builds on a healthy environment for the entire store, including the shoppers.

Going further in examining the cases of shoplifters, it is important to learn who actually reports them. Above mentioned Gelfand, et. al. (1973) also examines the common characteristics of shoppers who are likely to notify a store employee of a shoplifter or even try to help apprehend the criminals. Specifically, they find that majority of customers who reported shopliftings in progress were male. Interestingly, a majority of the people who reported the crime in progress were raised in rural rather than large city environments. Therefore, researchers conclude that utilizing the arguments of the social learning theory, people raised in the city tend to have a depersonalizing effect” from their city life and define a shoplifting in progress not to be their business unlike people raised in rural areas. This shows that shoppers tend to assist store employees and notify them of a crime in progression, and even provide assistance during apprehension if raised in rural areas.

Methodology

The hypothesis for this study is that retail stores utilizing uniformed LPAs compared to undercover loss prevention strategies will have a lower rate of store shrinkage.

Sampling

In order to answer the research question as well as test the hypothesis, data for uniformed and undercover LPA arrests and shrinkage rate has been collected from one retail store located in Brooklyn, New York. The sample of this study is the retail store's Census of arrests for the fiscal years of 2014 and 2015. The gathered reports contain the type of LPA (uniformed/ undercover), the number of apprehensions, and the amount of shrink achieved for each fiscal year.

Procedures

From July 2014, the retail store was administered with a uniformed LPA. His duties were to observe, investigate and detain for authorities individuals that commit criminal acts in the assigned store location. Then starting from July 2015 till July 2016, the retail store was administered with an undercover LPA whose duties were the same as the uniformed LPA, but the undercover agent wore plain clothes and instead of standing at a post, had to walk around the store pretending to be a customer. Two types of LPAs were placed in separate years because the primary focus is to find out how undercover and uniformed loss prevention agents affect the rate of shoplifting, their tactics of observing and apprehending the shoplifter.

Data Analysis

Since this is a secondary analysis of administrative data study, in one retail store there will be two subjects studied; first, a uniformed LPA for 2014 fiscal year and an undercover LPA for 2015 fiscal year in three shifts per day. For both fiscal years, the frequency of recovered merchandise by its cost in range will be examined. This will allow us to find the frequent total amount of dollars of merchandise that shoplifters tend to steal. Further, when examining the effectiveness of LPAs, a frequency table is constructed to measure the total number of cases for each fiscal year. This will allow us to compare both years by the number of cases that an LPA has performed. We will further, combine the two above mentioned frequency tables into one in order to examine what is the common range of cost of merchandise that shoplifters tend to steal for each fiscal year as well as whether there is a pattern of the two years.

In order to eliminate any spurious correlations when examining the effectiveness of uniform and undercover LPA, we will consider examining the effectiveness of the LPA based on his or her gender and age solely for differentiating the three LPAs without providing any other

features that can be identifiable. For this study, to cover three shifts per day, there was a total of three LPAs in each year. Since there is only one subject per shift (eight hours), this will allow to gain better results and eliminate limitations concerning different individual approaches to combating shoplifting. Specifically the three shifts are: Shift 1 (8am – 4pm), Shift 2 (4pm-12am), Shift 3 (12am – 8am). In 2014 and 2015 the same three LPAs were covering the shifts and only changed their uniform to undercover in 2015. First LPA was a female of 35 years of age, the second was a male of 43 years of age and third was a male of 25 years of age. Therefore, we will construct a frequency table that will show the total number of cases each LPA performed for both years. Continually, we will examine the effectiveness of uniform and undercover LPA through the number of cases each has performed as well as dividing the value of each case by the range of the cost of the recovered merchandise. This will allow us to compare the two types of LPAs and understand which category of the cost of recovered merchandise which type of LPA recovers most and least. Finally, a cross tabulation will be created to explore the frequency of the cost of recovered merchandise (how much shoplifters tend to steal) in each shift for each fiscal year. The rate of apprehended shoplifters per shift will also be compared to examine the relationship between daytime and the frequency of shoplifting. Major differences between two fiscal years are not expected since the data is gathered from one retail store location and the premises have not changed including the types and a total number of employees, store policies, store structure nor any other aspects that may impact the results of this study. The rationale for picking the above-mentioned subjects and comparing them based on the working shifts and style of security (undercover vs. uniformed) will allow gathering enough data that will provide answers to the research question.

Data Collection Technique

For this study, the data is collected from reports provided by Loss Prevention District Manager (LPDM) of one retail store from Brooklyn, NY. The data consists of the rate of shrinkage, a number of arrests for two fiscal years 2014 – 2015 and 2015-2016. This will allow us to examine the effectiveness of undercover and uniformed LPAs as well as their impact on the rate of shrinkage. From this examination, we can reach some tentative conclusions about which type of strategy is more effective and appropriate for similar retail stores. Therefore, this study will utilize a non-parametric quantitative data collection method and analysis because there is an absence of known shoplifter population mean, which will allow the study to reach tentative conclusions about the rate of effectiveness of two LPAs and compare them.

Limitations

In this study, there are following limitations. For instance, the reported data is reflecting one retail store, therefore, this study cannot make accurate conclusions in regards to other retail stores. Further, the analyzed data reflects only two fiscal years, 2014 and 2015, and since each year reflects different LPA strategies, this study cannot make a prediction that can be supported by a pattern. In addition, the analyzed data was already collected by the retail store management, prior to this study, therefore, if this was a controlled experiment, many spurious correlations would have been eliminated by taking into attention the necessary variables that also impact the rate of shrinkage, and data would have been collected on them as well. Moreover, the shoplifter population means is unknown, so this study cannot extract what percentage of the total number of shoplifters was apprehended by the uniformed vs the undercover LPA. In terms of the rate of shrinkage, this study cannot create a pie chart for each fiscal year that will show out of the total

rate of shrinkage, what is the percent of the shoplifter apprehension along with other aspects that impact the rate of shrinkage such as damaged goods, and others.

Definition of Variables:

Independent variable I: Uniformed LPAs “wear blazers or uniforms and stationed at the front of the store or allowed to patrol to deter theft and refer to customers” (Hayes, 2007, p.44)

Independent variable II: Undercover LPAs perform an undercover investigation which “is nothing more than surreptitious placement of properly trained and skilled investigators” who are dressed in plain clothes, usually posing as a shopper for the purpose of identifying and apprehending shoplifters (Ferraro, 2000, p. 127).

Dependent Variable: Retail Shrinkage for each fiscal year. According to Smallbusiness.chron.com “Retail shrinkage is the portion of your inventory that gets lost or stolen. Your shrinkage rate is expressed as a percentage based on the value of lost inventory divided by sales during the same period.”

Descriptive Statistics

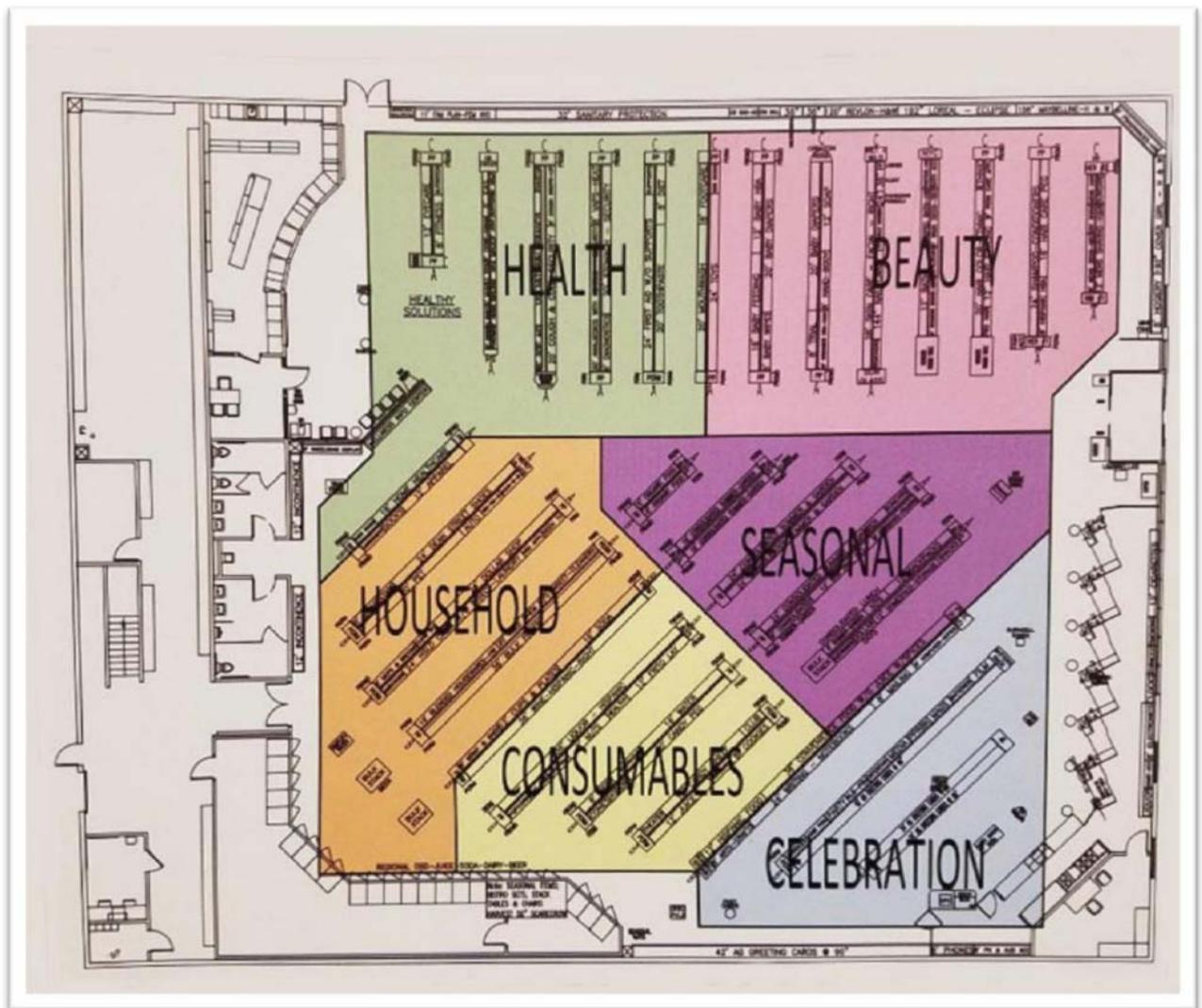
This study will examine the effectiveness of undercover vs uniformed LPAs using the number of cases and the different ranges in prices of recovered merchandise and three work shifts. With the gathered data I will use SPSS to create frequency tables, cross-tabulations, and bar charts allowing comparisons of the effectiveness. These analyses will provide visual results to indicate which type of LPA is most effective for reducing the retail shrinkage. From these comparisons, further discussion and recommendations for similar retail businesses will result. Further, in terms of bivariate measures of association, the type of LPA (undercover/uniformed) is

a nominal variable, while the number of arrests and range of value of recovered merchandise as a scale level of measurements and finally the rate of retail shrinkage as a nominal level of measurement.

Findings

Shoplifting is not just a problem in the United States, but an international problem as well (Bamfield, 2004). There is a current lack of solid studies that can potentially recommend to retail businesses what type of security strategies will be effective for their type of business. The majority of the recommendations state that retail businesses have to identify their level of crime and only then it will be easier for them to pick the most appropriate style of loss prevention strategy that will lower the rate of shoplifting and internal theft. Yet it is common agreement on the fact that more technological loss prevention strategies have to be installed in addition to other types of measures to better fit the environment as well as not hinder on the consumers' comfort.

From the above-mentioned literature and below findings, it can safely be concluded that uniformed LPA is a more effective strategy than undercover LPA for reducing the rate of shrinkage at a retail store. This conclusion is supported by the following:



Note: This is the store's design and disposition of aisles based on the category of items. Colors used to differentiate the aisles were chosen by the store

1. Based on the store design, it was found that Beauty supplies are placed close to the entrance/exit of the store. This section has more shelves and aisles than the other five sections. As a result, it contains more products, small in size, and expensive brands than any other section. These characteristics place Beauty supplies as a suitable target. Above mentioned characteristics of the Beauty supplies motivate the offender (shoplifters) to steal the item(s). With this regard, among others, capable guardians, uniformed LPA and undercover LPA play different roles. Specifically, uniformed LPA stands behind the podium next to the CCTV monitor which is close by the entrance/exit of the store, and as a result uniformed LPA can control the beauty section

both through CCTV and by physical presence. Uniformed LPAs are “a good deterrent” since he or she is visible to potential shoplifters while standing next to the exit which potentially may block a shoplifter from running away (Cardone et al., 2017). An undercover LPA’s responsibility is to walk the floors in plain clothes through all the store sections and aisles, without having the ability to look at the CCTV monitor. As a result, an undercover LPA is in control of the section where he is walking and others are invisible to him. Therefore, if an undercover LPA is monitoring another section, Beauty section becomes an easy target for the shoplifter, since the capable guardian is absent from the suitable target. However, the shoplifter will not be aware whether the Beauty section is being watched by an undercover LPA or not, if so, then he will likely be apprehended, and if not, then the Beauty section becomes an easy target.

2. Table 1 shows frequency and percentage of recovered merchandise for 2014 and 2015. The study shows that frequency of recovered merchandise for 2014 and 2015 in range of \$1-\$20 is 60 which is 42%, in range of \$21-\$40 frequency 28 which is 19.6%, in range of \$41-\$60 frequency 8 which is 5.6%, in range of \$61-\$80 frequency 15 which is 10.5% and range of 81 and more frequency is 32 which is 22.4%. The highest percentage of recovered merchandise for 2014 and 2015 is 42% in the range of \$1-\$20 and lowest in the range of \$41-\$60 is 5.6%. These numbers allow us to conclude that shoplifters for study period tend to steal inexpensive merchandise which can easily fit in the pockets or small purse. This is likely due because if the shoplifter is motivated to shoplift inexpensive item because if he/she will be apprehended, he/she expects the LPA to either not call the police, since the value of the item is small, or if the LPA will call the police, then the police might use their discretion and not arrest the shoplifter since the value of the stolen item was small. As a result, shoplifter calculates the many chances of him withstanding the police arrest.

Table 1

Percentage of Stolen Merchandise for 2014 and 2015

Range of Amount in \$	Frequency	Percent	Valid Percent
Valid 1-20	60	42,0	42,0
21-40	28	19,6	19,6
41-60	8	5,6	5,6
61-80	15	10,5	10,5
81-more	32	22,4	22,4
Total	143	100,0	100,0

3. Table 2 shows frequency and percentage of numbers of cases performed by uniformed and undercover LPAs in total for 2014 and 2015. For 2014 number of cases 54 which is 37.8%, and for 2015 number of cases 89 which is 62.2% and it is much more than the previous year when LPAs worked as the undercover. These numbers allow us to conclude that since undercover LPA in plain clothes invisible for potential shoplifters he or she demonstrates a lack of capable guardian in the store and motivate offenders to target the merchandise.

Table 2

Frequency of Cases in 2014 and 2015

	Frequency	Percent	Valid Percent
Valid 2014 (Uniformed LPA)	54	37,8	37,8
2015 (Undercover LPA)	89	62,2	62,2
Total	143	100,0	100,0

4. Table 3 shows a number of cases by the amount for 2014 and 2015. In range of \$1-\$20 for 2014 – 24 cases, for 2015 – 36 case, in range of \$21-\$40 for 2014 – 13 cases, for 2015 - 15 cases, in range of \$41-\$60 for 2014 – 1 case, for 2015 – 7 cases, in range of \$61-\$80 for 2014 - 4 cases, for 2015 – 11 cases, in range of \$81 and more for 2014 – 12 cases, for 2015 20 cases. We

can see that in 2015 in all ranges was more frequency than in 2014. These numbers allow us to conclude that shoplifters tend to steal inexpensive merchandise despite the presence of uniformed or undercover LPA.

Table 3

Number of Cases by Amount for 2014 and 2015

		Stolen in \$					Total
		1-20	21-40	41-60	61-80	81-more	
Year	2014	24	13	1	4	12	54
	2015	36	15	7	11	20	89
Total		60	28	8	15	32	143

5. Table 4 shows frequency of cases performed by different characters of LPAs in 2014 and 2015. For 35 years old female LPA frequency of cases is 48 which is 33.6%, for 43 years old male LPA frequency of cases is 64 which is 44.8% and for 25 years old LPA frequency 31 which is 21.7%. In a total number of cases for 2014 is 54 and for 2015 is 89. The number of cases performed by each type of LPA is not significantly different, and therefore we cannot make a conclusion about which character is more effective.

Table 4

Number of Cases by LPA Character for 2014 and 2015

		Frequency	Percent	Valid Percent
Valid	Female 35yrs old	48	33,6	33,6
	Male 43yrs old	64	44,8	44,8
	Male 25yrs old	31	21,7	21,7
Total		143	100,0	100,0

6. Table 5 shows frequency of cases of recovered merchandise by a different range and by the different character of LPAs for 2014 and 2015. For 35 years old female LPA in the range of \$1-\$20 frequency is 41, in the range of \$21-\$40 frequency is 4, in the range of \$41-\$60 frequency is

2, in the range of \$61-\$80 frequency is 1 and in the range of \$81 and more frequency is 0. For 43 years old male LPA in the range of \$1-\$20 frequency is 8, in the range of \$21-\$40 frequency is 16, in the range of \$41-\$60 frequency is 5, in the range of \$61-\$80 frequency is 7 and in the range of \$81 and more frequency is 28. The frequency of the range of \$1-\$20 for 25 years old male LPA is 11, in the range of \$21-\$40 frequency is 8, in the range of \$41-\$60 frequency is 1, in the range of \$61-\$80 frequency is 7 and in the range of \$81 and more frequency is 4. This chart allows us to conclude that in this retail store, female 35 years old and male 25 years old LPAs performed more cases that dealt with inexpensive merchandise of \$1-20 meanwhile, male 43years old tends to perform cases with merchandise that value somewhere between \$81-more. In terms of other ranges, there are no significant differences in LPAs performance.

Table 5

Amount of Recovered Merchandise by Different Character of LPAs

		Stolen_in_\$					Total
		1-20	21-40	41-60	61-80	81-more	
LPA_Charac	Female 35yrs old	41	4	2	1	0	48
	Male 43yrs old	8	16	5	7	28	64
	Male 25yrs old	11	8	1	7	4	31
Total		60	28	8	15	32	143

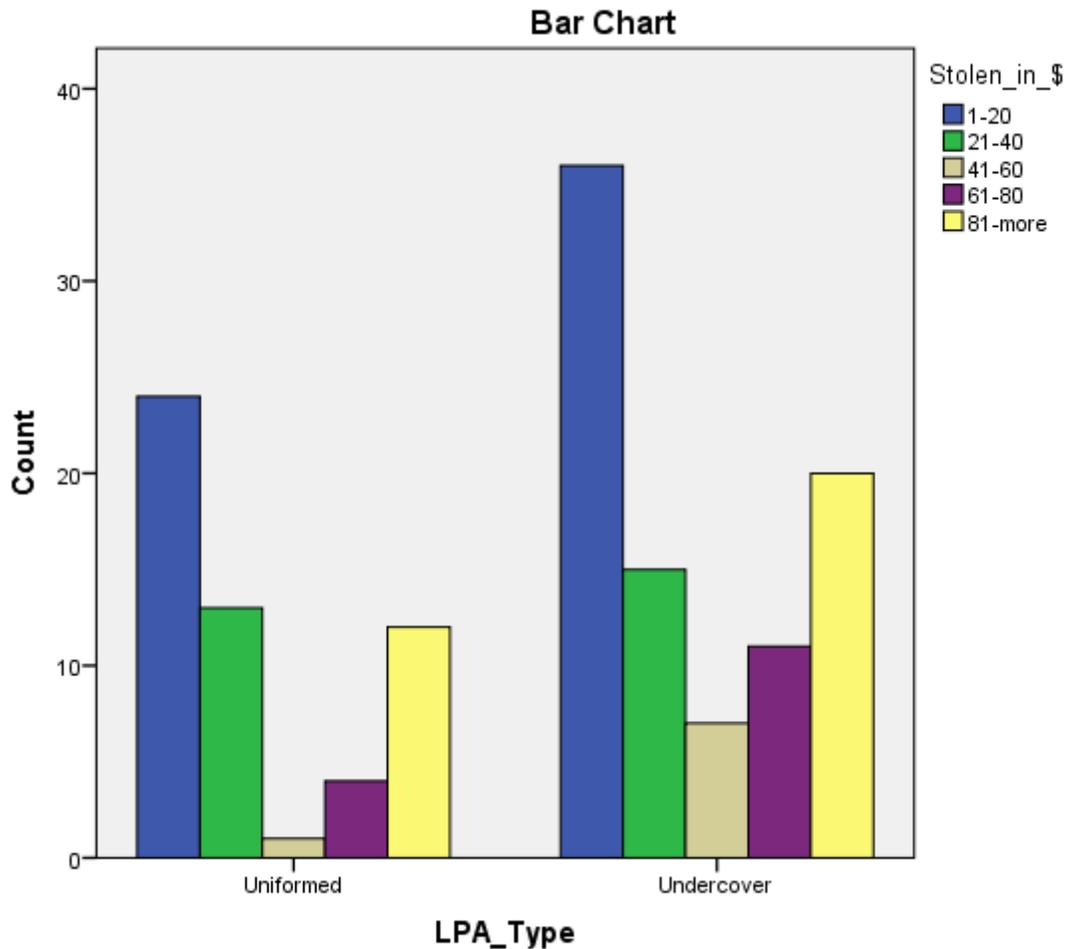
7. Table 6 shows the amount of recovered merchandise in different ranges by uniformed LPA for 2014 and undercover LPA for 2015. In range of \$1-\$20 for uniformed LPA frequency of cases is 24 and for undercover LPA is 36, in range of \$21-\$40 frequency of cases for uniformed LPA is 13 and for undercover is 15, in range of \$41-\$60 frequency of cases for uniformed LPA is 1 and for undercover LPA is 7, in range of \$61-\$80 for uniformed LPA frequency of cases is 4 and for undercover is 11, in range of \$81 and more for uniformed LPA frequency of cases is 12 and for undercover LPA is 20. In the total number of cases for uniformed LPA for 2014 is 54 and for

undercover LPA for 2015 is 89. This data allows us to conclude that an Undercover LPA has made significantly more merchandise recoveries, unlike Uniformed LPA. In addition, when comparing 2014 and 2015, it can be concluded that there is a pattern in the recoveries, with the most common being those that value somewhere between \$1-20.

Table 6

Amount of Recovered Merchandise by Different Type of LPAs

		Stolen in \$					Total
		1-20	21-40	41-60	61-80	81-more	
LPA_Type	Uniformed (2014)	24	13	1	4	12	54
	Undercover (2015)	36	15	7	11	20	89
Total		60	28	8	15	32	143



8. Table 7 shows a number of recovered merchandise for 2014 and 2015 by different price ranges in three work shifts. In 2014, the range of \$1-\$20 in morning shift frequency is 6, in day shift frequency is 17 and in night shift frequency is 1. In the range of \$21-\$40 in morning shift frequency is 2, in day shift frequency is 10 and on the night shift, the frequency is 1. In the range of \$41-\$60, in morning shift frequency is 1 and of the day and night shifts frequency is 0. In range \$61-\$80, in morning and night shifts frequency is 0 and in day shift frequency is 4. In the range of \$81-more in morning shift frequency is 4, in day shift frequency is 8 and in night shift frequency is 0. In Total, in 2014, during the morning shift, the frequency is 13, in day shift frequency is 39 and in night shift frequency is 2.

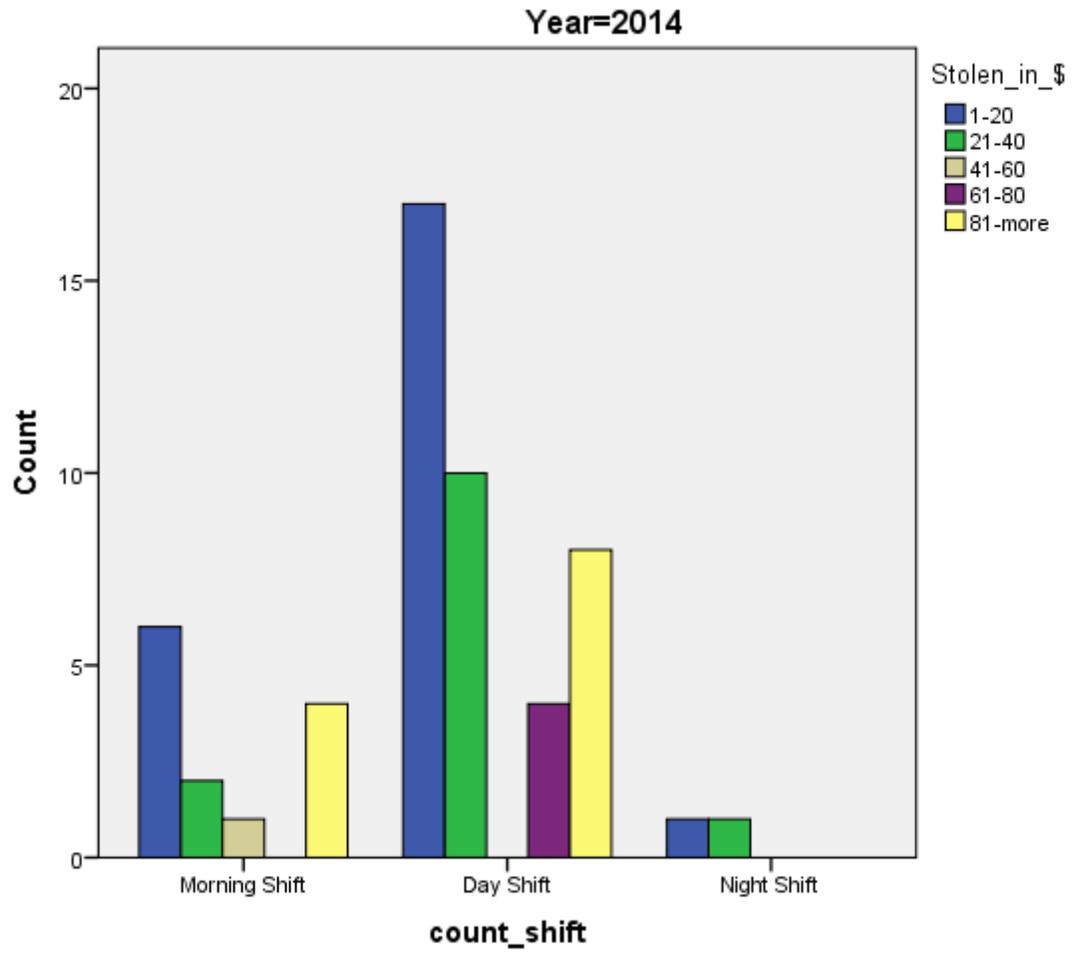
In 2015, the range of \$1-\$20 in morning shift frequency is 17, in day shift frequency is 18 and in night shift frequency is 1. In the range of \$21-\$40 in morning shift frequency is 7, in day shift frequency is 8 and on the night shift, the frequency is 0. In the range of \$41-\$60, morning shift frequency is 3, in day shift frequency is 4, and on the night shift frequency is 0. In range \$61-\$80, in morning shift frequency is 7, in day shift frequency is 3 and in the night shift frequency is 1. In the range of \$81-more in morning shift frequency is 9, in day shift frequency is 7 and in night shift frequency is 4. In Total, in 2015, during the morning shift, the frequency is 43, in day shift frequency is 40 and in night shift frequency is 6.

From Table 7 it can be concluded that the price range of the most commonly recovered merchandise is \$1-20 and which is most often is recovered during the day shift in both 2014 and 2015. Further, the products which price range from \$21-40 are the second commonly targeted merchandise and which are also most commonly recovered during the day shift.

Table 7

Recovered Merchandise by Price Range and Shift per Year

Year	Stolen in \$					Total		
	1-20	21-40	41-60	61-80	81-more			
2014	count_shift	Morning Shift	6	2	1	0	4	13
		Day Shift	17	10	0	4	8	39
		Night Shift	1	1	0	0	0	2
		Total	24	13	1	4	12	54
2015	count_shift	Morning Shift	17	7	3	7	9	43
		Day Shift	18	8	4	3	7	40
		Night Shift	1	0	0	1	4	6
		Total	36	15	7	11	20	89
Total	count_shift	Morning Shift	23	9	4	7	13	56
		Day Shift	35	18	4	7	15	79
		Night Shift	2	1	0	1	4	8
		Total	60	28	8	15	32	143



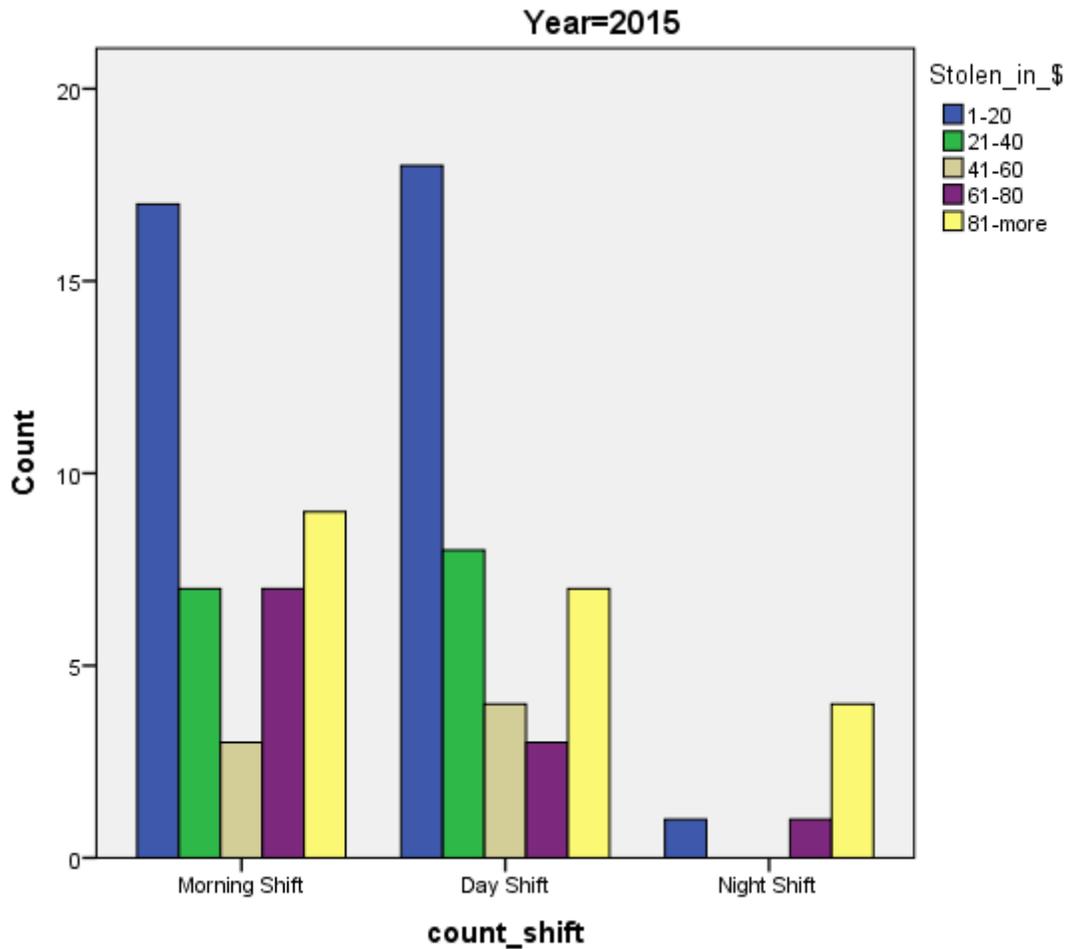


Table 8

Uniformed	Undercover
Shrink \$	
2014	2015
\$174000	\$184000

This table shows the overall amount of shrinkage for fiscal years 2014 and 2015. This allows us to conclude that in 2014 there is lower shrinkage which was obtained by the uniformed LPA.

As a result, upon satisfying the purpose of this study, which is to examine the effectiveness of loss prevention strategies, specifically, uniformed and undercover LPAs to lower the rate of shrinkage, this study supports the hypothesis which states that retail stores utilizing

uniformed LPAs compared to undercover loss prevention strategy strategies will have a lower rate of store shrinkage.

Discussion

Responsibilities of the uniformed and undercover LPAs vary. In addition to apprehending shoplifters and reducing the rate of shrinkage in the retail store, an additional function is customer service/support. However, the undercover LPA is excused from this additional task in order not to identify himself as a store employee. However, the local retail store is a place where the residents of the community come not just to purchase goods, but also to socialize and so it is significant for the store to have good customer service since it impacts to revenue. Therefore, an unanswered question remains, since the undercover LPA doesn't provide customer service, can he or she be considered as effective an employee as his or her uniformed counterpart?

In addition, undercover LPAs do not utilize CCTV which the important evidence during an arrest or later in court to support the LPAs claim that a person has in fact shoplifted. Of course, it should be noted that the undercover LPA is a primary witness who observed the shoplifting being committed. Still, he or she may be challenged as biased or may be unable to attend to all court hearings for each offender. In addition, the arrest process makes him or her identifiable and therefore no longer undercover.

Recommendations

Since the findings of this study suggest that uniformed LPA is more effective than undercover LPA, it is recommended for the retail store to utilize uniformed LPA as a primary security strategy. However, size and location of the store should not shrinkages and placement of the uniformed LPA should be during the shifts when the store is highly populated. It is further

recommended for future studies to examine whether a combination of undercover and uniformed LPA will be an effective strategy and whether it will grant better security coverage of the retail store.

According to the above-mentioned findings, uniformed LPA acts as a deterrent since he is visible as a store employee, unlike undercover LPA. To keep up the effectiveness of the undercover and/or uniformed LPA, the retail store management should create specific and clear guidelines and procedures for an LPA to follow. This will allow having a consistent successful task for every LPA not just within one retail store, but a whole district. This will also allow accessing the effectiveness of prescribed duties and eliminate/revise them for better quality.

It is crucial for the retail store management to gather data on the effectiveness of security strategies being utilized. This will allow not only examining which style of security is appropriate for each retail, as well as having a database that can be referred to. The gathered database will benefit the budget of the retail stores as they will not spend on already known to them ineffective security strategies as well as it will benefit researchers as they will examine the data and make recommendations for the retail stores.

In addition to accessing the effectiveness of LPAs, the retail store management should also access the electronic devices for malfunction used to secure supplies and monitor the store. A total number will allow the LPAs to be more effective.

Conclusion

This study examined the effectiveness of loss prevention strategies, specifically, uniformed and undercover LPAs and found that uniformed LPA is a more effective loss prevention strategy for reducing the rate of shrinkage. The effectiveness of the LPA depends on

work shifts, LPA's personal characteristics (age, gender), and store design. In addition, this study showed a direct correlation between Routine Activity Theory and loss prevention strategies for apprehending shoplifters, where a shoplifter is a motivated offender, the store goods are suitable targets and LPA as a capable guardian. Within the store environment, the Routine Activity Theory is applicable and provided a framework through which the effectiveness of the undercover and uniformed LPAs was assessed.

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