

# Thefts: The Knowledge and Attitudes of Pharmacists Towards Financial Losses in Pharmacies

## Hırsızlıklar: Eczacının, Eczanedeki Finansal Kayıplar Hakkındaki Bilgi ve Tutumları

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**ABSTRACT Objective:** Financial losses in pharmacies could be in many different ways. Fire, flood, insufficient stock controls, inside or outside robberies may cause financial loss and this should be measured and taken into consider. This study focuses on the losses occurred by robberies in the pharmacies. The main aim of this research is to determine the robberies and pharmacists prevention methods against those losses. **Material and Methods:** The survey was conducted in Mecidiyeköy District of İstanbul. The survey questions were designed by the researchers. Surveys were filled by the pharmacists via face to face interviews. The characteristics of pharmacies, demographics of pharmacists and robberies were recorded. The results were given by descriptive statistics, in other words as tables, percentages, and graphics. And due to insufficient number of participants, no statistical analyses are done. **Results and Conclusion:** Survey was conducted with thirty six pharmacists. It is found that financial loss of pharmacies changes from one to forty percent. In twenty four pharmacies (24/36) robbery has happened at least one time and it is found out that there is a relationship with the size (meter square) of the pharmacy. Also it is declared that installing camera and alarm systems are commonly used for preventing robberies. It is understood that financial losses may generate because of price decrease changes or shortcuts of reimbursement authorities.

**Key Words:** Pharmacy; pharmacy management; security of pharmacy; financial loss

**ÖZET Amaç:** Eczanelerde muhtemel finansal kayıplar birçok farklı şekilde olmaktadır. Finansal kayıplar; yangın, su baskını, stok kontrolsüzlüğü, iç ve dış hırsızlıklar sonucu oluşabilir ve bu durumda eczanenin yönetiminde finansal kayıpların ölçülmesi ve değerlendirmeye alınması gereklidir. Bu çalışmada eczanelerde, özellikle hırsızlık sebebi ile oluşan finansal kayıplar üzerine yoğunlaşmıştır. Eczacının hırsızlıklar ve önlenmesi konusundaki tutumu ve bilinç düzeyleri çalışmanın esas olarak irdedeği konulardır. **Gereç ve Yöntemler:** İstanbul ili Mecidiyeköy Semtinde yer alan eczanelerde anket çalışması yapılmıştır. Araştırmacılar tarafından hazırlanan anketin soruları yüz yüze uygulanan görüşmeler vasıtası ile toplanmıştır. Eczanenin özellikleri ve eczacıların demografik özellikleri ile eczanede meydana gelen hırsızlıklar kayıt altına alınmıştır. Çalışma 2010 yılında gerçekleştirilmiştir ve İstanbul'un sadece bir bölgesini temsil etmektedir. Sonuçların sunulmasında tanımlayıcı istatistik kullanılmıştır. Yani veriler tablolar, yüzdeler ve grafikler halinde sunulmuş, katılımcı sayısı yeterli olmadığı için karşılaştırmalar ve istatistiksel değerlendirmeler yapılmamıştır. **Bulgular ve Sonuç:** Araştırmada 36 eczacı ile görüşülmüştür. Finansal kayıpların %1-40 arasında değişkenlik gösterdiği, 36 eczanenin 24'ünde hırsızlık olayının eczanede ve eczacının hayatında en az bir defa yaşandığı bildirilmiştir. Hırsızlık olaylarının sıklığının eczanenin büyüklüğüne bağlı olarak arttığı gözlenmiştir. Eczacılar bu kayıpları önlemek amacıyla, en çok kamera kontrol ve alarm sistemini tercih ettiklerini ifade etmişlerdir. Eczanelerdeki finansal kayıpların sadece hırsızlıklardan değil, aynı zamanda geri ödeme kurumlarının uyguladığı kurumsal kesintiler ve fiyat düşüş değişikliklerinden de kaynaklandığı sonucuna ulaşılmıştır.

**Anahtar Kelimeler:** Eczane; eczacılık işletmeciliği; eczane güvenliği; finansal kayıplar

Financial loss means loss of money or decrease in financial value. Financial losses may occur due to insufficient management of inventory control or security systems etc. Financial loss, resulting from economic crimes has important effect in all business sectors. PricewaterhouseCoopers (PwC)-Turkey's Commercial Dispute Resolution and Director of Forensic Studies conducted a Global Economic Crime Survey between July and November 2009. According to this survey, it is found that Russia and South Africa have the highest fraud incidence which is 71% and 62% respectively. Turkey's fraud incidence is found to be 15% and on the other hand Hong Kong and Japan have the least fraud incidence; 13% and 10% respectively.<sup>1</sup> All around the world, different kinds of businesses are suffering from crimes ending up with financial losses.

In most of the countries the increasing crime rates create new security problems for pharmacies. Crimes against the patient, even if few in number, can generate adverse publicity, and also seriously damage the pharmacy's reputation. When establishing credit procedures to protect a pharmacy from incurring losses through bad debts, care must again be taken to avoid offending the patient. Whether dealing with an organized crime, effort or with the theft management has a responsibility to take preventive action.

Providing security in a pharmacy is the broad task of protecting patients, visitors, employees and assets; like stocks of pharmacy. Pharmacists should consider an advanced security precautions because as the incidence of crimes increase, it's getting harder for pharmacists to protect their customers from any harm that can happen. Advanced security is also needed for pharmacies to avoid financial losses.<sup>2</sup> Security efforts in pharmacies may involve; key controls, locks, access control, alarm systems, communication systems, lighting, camera systems, inventory control, credit and billing procedures, computer security, staffing, pre-employment screening, employee training, emergency procedures, safety procedures, record keeping and more.<sup>3</sup>

A pharmacy needs a security program designed to train its staff to prevent the preventable security incidents. This program should lead personnel to react quickly, appropriately, and effectively, whenever possible, to any unpreventable security incidents. Each pharmacy should continually review its security procedures. Whenever necessary, the procedures should be updated to meet changing security needs. Pharmacy's security program should involve;

- Locks, key control
- Protection of assets (Money on hand, inventories, equipment)
- Emergency procedures
- Communications
- Security records

In addition, a pharmacy's design and layout can greatly affect its security program. For instance the small pharmacies can be controlled easily compared to big sized pharmacies. Similarly, L-type pharmacies in shape will need more camera systems to protect their customers, employees and assets compared to square shaped pharmacies.

Providing appropriate security for a pharmacy is a never ending activity. In a climate of increased crime against patients, employees, pharmacies, and the assets of each, management is continually challenged to develop and support an effective security program. Without continuous awareness at the management level, a pharmacy's security may suffer.

In the development of security guidelines for a pharmacy, all members of the pharmacy should be involved. The guideline should be separated on the employees according to their qualifications. While recognizing the need for protection of the patients, the employees, and the assets of each, management should also consider that; patients and employees may create security problems by stealing assets and services from the pharmacy.

A pharmacy management should consider many factors in evaluating its security requirements and in determining whether a special secu-

rity presence is warranted. A management team's commitment to the concept of security is a vital function within the pharmacy necessary in order to integrate security into the day-to-day operation and administration of the pharmacy.

Since every employee of the pharmacy may act as an integral part of its security program, all employees should be given a thorough security orientation at the time they are hired and should be regularly exposed to an ongoing security education program throughout their term of employment. Training should be comprehensive and should include all aspects of protection of patients, public, employees, and the pharmacy. Depending upon a pharmacy's needs, training may be expanded to include the special concerns of emergency management.

Some Crime Prevention Through Environmental Design (CPTED) considerations for a pharmacy might include:

- Entrances well-lit and designed so as to eliminate areas in which a person might hide.
- Lighting on the exterior side of the pharmacy.
- In general, a layout that will maximize the sense of openness and awareness of persons in the territory.

In small pharmacies where the owner is responsible for the purchasing function there may be less concern about theft. As pharmacies get larger and more people become involved in purchasing, the chances of theft increase. In pharmacies, invoice of the medicine, baby-mother care products and cosmetics should be checked correctly. Sometimes ware houses can make mistakes and send different dose of the wanted product, this should be avoided by the daily checking of the invoice. If there is a mistake in the voice and send products those should be delivered back on the same day in order to avoid confusion.

Also sometimes ware houses send their courier with a missing product. If the pharmacist doesn't notice that on time, she/he loses their right to ask for the missing product and all these cause financial

loss. Moreover the entire invoice should be checked frequently and compared with the inventory in order to avoid financial loss. If purchasing and receiving action is done by employees, these two actions should be given to different employees. If both of these action is done by the same employee there can be an employee theft which cannot be proved.

Protecting funds is one of the loss prevention methods in pharmacy. Pharmacist and employees should keep careful records, and take appropriate actions, control inventories. Main factors in inventory control decision making process are:

- The cost of holding the stock
- The cost of shortage

Inventory control is often coordinated by the pharmacist. Best inventory control is done by computer based inventory programs and usually in it's installation period inventory staff comes from the firm of the inventory program and count pharmacy's stock and record it to the system. Better control is obtained when the inventory staff comes from outside the pharmacy. Because those won't enter fake datas as they don't have any profit in doing this. So by this way a pharmacist can get more realistic stock datas. A number of computer based inventory control programs such as "BYTE", "Farmakom Online" are available and should be considered in pharmacies.

Ideally, only one person should have an access to the cash drawer. In this case it should be pharmacist but in rush hours this may not be possible because pharmacists first responsibility is to take care of their patients. That's why a pharmacist can assign someone else who will be totally responsible from the cash register. All transactions should be immediately recorded upon payment and all the transactions should be done through computer inventory system in order to follow stocks and reduce inside or outside thefts.

Robberies are one of the most common causes of losses in pharmacies. RxPatrol Analysis in United States in 2011 indicates the following numbers (Table 1).<sup>1</sup>

**TABLE 1:** Robberies among criminal cases.

Criminal cases	n
Robberies	1920
Fraud	1851
Forgeries	918
Burglaries	1231
Cargo thefts	115
Employee thefts	26
Shoplifting	56
Other	167

Using camera systems in a pharmacy usually reduces the incidence of robberies. Also having an alarm system which is activated when the pharmacy is closed is a good precaution that should be taken into account.

When the theft reports published in the first six month in USA were examined, 907 cases were determined for controlled substances. These cases accounted for 78% of all burglary events, in other words, every day theft occurred in 11 pharmacies.<sup>4</sup> According to the reports, it happened on night shifts and armed burglaries were remarkably increased. This report showed that the same pharmacy was targeted more than once because the burglar was encouraged by past success to pilfer again.

Safety in pharmacy is important not only for crime economics perspective, but also from pharmacy financial management perspective, too.<sup>5</sup>

Financial losses in pharmacies could be in many different ways like fire, flood, inside or outside robberies. Thus financial loss should be measured and followed. This study focuses on the pharmacists declaration on losses occurred by robberies in the pharmacies. The main aim of the research is to determine pharmacists management attitudes related to the robberies as a kind of financial loss.

## MATERIAL AND METHODS

Face to face survey method was used. Face to face interviews were conducted by the researchers.

List of nightshift for pharmacies prepared in 2010 by Istanbul Pharmacist Chamber (IPC=İEO) is used so as to reach the pharmacists address. Mecidiyeköy which is district of Istanbul was chosen as a research site. In Mecidiyeköy there are 42 pharmacies located in the shopping centers, near the health institutions or neighbourhood, etc.

The survey was designed according to research objectives. Twenty multiple choices and open ended questions related to external and internal theft in the pharmacy were asked. The survey and interviews with pharmacists generally conducted after 3:00 p.m or before 12:00 a.m. Pharmacies were visited four times so as to do the interview with the pharmacists.

The gender, pharmacy location, size of pharmacy, losses, safety measure of pharmacy, etc. were considered to be categorical variables. The categorical variables were shown as frequencies and percentages.

## RESULT AND DISCUSSION

Thirty-six pharmacists accepted to be participants for the research and completed the questionnaires and six pharmacists did not participate. By the participants, 67% were female and 33% were male. Also of the 36 participants 64% declared that they were married. Rest of them (36%) were either widow or divorced.

Pharmacists declared that their pharmacy's location is either a neighbourhood pharmacy or near to a health center or near to a shopping center (mall). 25% declared that their pharmacy as neighbourhood and rest of them as combination of near to health center and near to a mall. This result seems to be obvious for Mecidiyeköy district as it is full of malls and health care centers.

Size of the pharmacy is critical for thefts and it was understood that most of the participants pharmacy (almost 60%) is between 50-100 meter square in size (Figure 1).

In pharmacies, which are less than 35 m<sup>2</sup> half of them have experienced theft. The ones between

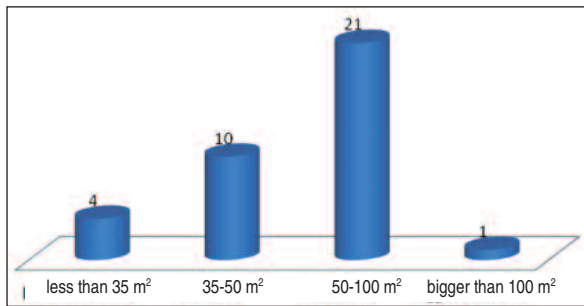


FIGURE 1: The size distribution of pharmacies (as meter squares).

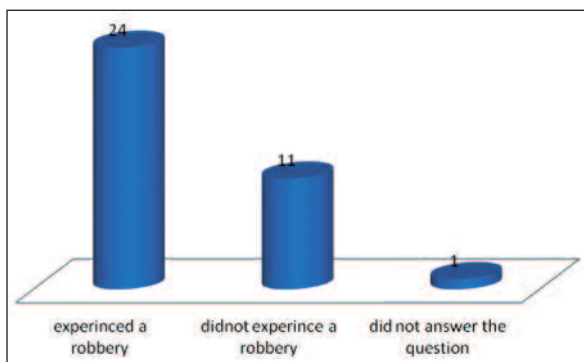


FIGURE 2: Pharmacists experiences of robbery in the pharmacy.

35-50 m<sup>2</sup> and 50-100 m<sup>2</sup>, 70% had experienced theft. It is not statistically analysed but bigger pharmacy shops seemed to be under more risk for thefts.

During the questions about the measurement of the financial losses, twenty-two pharmacists (61.1%) answered that they had come across with at least one robbery (Figure 2).

Twenty-four pharmacists (66.7%) said that they had experienced the theft/shoplifting in their pharmacies and also fourteen of them had experienced the theft once or twice throughout his/her work. Eleven pharmacists (30.6%) answered that had never experienced. Also, one pharmacist (2.8%) did not want to answer that question. Beside these, five pharmacists (13.9%) had experienced the theft during the hours when the pharmacy was closed.

The pharmacists have to follow and monitor profitability of their pharmacies like other businesses. The economical structure of pharmacies be-

come almost dependent to Social Security Institution. The inventory of pharmacies needs better management due to the rise of discount, the profit reduction from drugs and increase of costs. As it is presented in Figure 3 and Figure 4, most of the pharmacists generally control the inventory once a year and cross check with the accountant.

It is good for pharmacists that most of them compares their inventory with accountant's control which also let pharmacists to know more about their stocks and manage it (Figure 4).

The ratio of financial losses to endorsement changed from 0% to 40% among pharmacists who participated in the survey (Table 2). Most of the pharmacists (56%) declared that, their financial loss ratio was about 1%. It is disappointing that 14% of the pharmacists do not think and care about their financial losses. Pharmacists profit may change 20-40% and even 1-5% of loss is important in this sense.

The ratio of internal thefts to endorsement was between 0% and 10% according to the results of the survey. 44% of the pharmacists said they

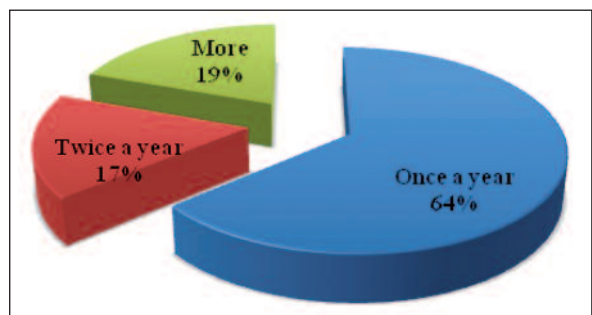


FIGURE 3: Inventory control.

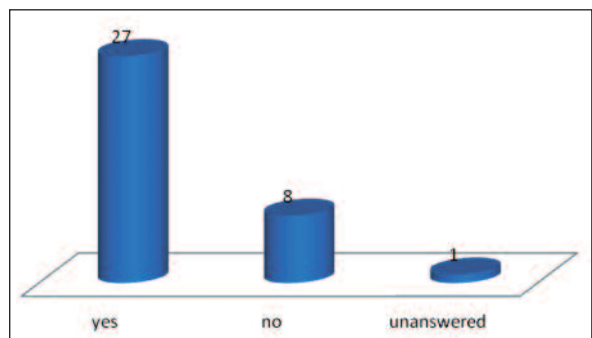


FIGURE 4: The comparison of the inventory control with the accountant.



**TABLE 2:** Estimated financial loss.

My financial loss percentage is	%
0	8
1%	56
2%	5
4%	3
5%	5
15%	6
40%	3
I dont know	14

**TABLE 3:** Estimated internal thefts.

Internal thefts	%
0%	44
1%	31
5%	3
10%	5
More than 10%	14
I dont know	3

have never experienced internal based theft. Besides this result, most of the pharmacists (about 60%) mentioned that they have already experiences of internal thefts somehow (Table 3).

As it is presented in Figure 5 the most stolen things in the pharmacy are reported as cosmetic products (52.8%) followed by money (25.0%) and opioids (5.6%). Five pharmacists declared that they didn't know what the most stolen things were so the question stated as unanswered.

## OBSERVATIONS

The survey had been filled via face to face interviews and researchers had some observations both on security and theft issues and also listened to pharmacists story tellings through out the study. Thus some ethically appropriate and guiding observations were summarized for future researches and studies in this section.

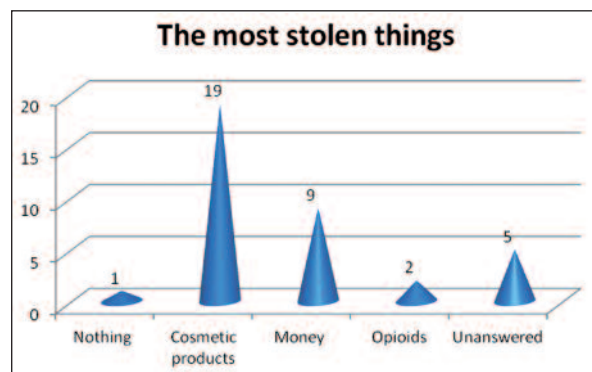
It is understood that, in four pharmacies, the bags of the pharmacists had been stolen. One of the pharmacy was very crowded during the survey

visit and after the survey it is learned that during the interview with the pharmacist, an employee stole some money from the cash register and the employee did not think the camera was on record. It is so ironical that the interview subject is on thefts.

Two pharmacists answered the questions very carefully. Then it is come out that, all of drugs were stolen at one night and after that event, they had decided to buy alarm system in the pharmacy. The young pharmacists were "far away" to the research subject. Conversely old pharmacists were aware of thefts but distanced to inventory control systmes. A pharmacists whose pharmacy was located in a shopping center confessed that her mobile phone had been stolen from the table in the crowded hours. Another pharmacist was very surprised that he had never experienced the theft incident and had not know that this issue was so important until then.

One pharmacist had answered the questions carefully but he only answered, he was not talkative and curious about our survey. He said that he experienced the robbery 5 years ago and he did not catch the thieves. After this event, he had decided to buy CCTV system. One of the pharmacists was so interesting and talkative about our survey. She had always experienced external based theft incidents and she told various events she had experienced.

One participant accepted to participate during second visiting and she was interested in the questionnaire. She said that large amounts of money

**FIGURE 5:** The most stolen thing in a pharmacy.

had stolen from backside of the pharmacy by a well-dressed man while she was giving an injection. Another pharmacist answered the questions carefully in a long time span and she had experienced the robbery during first day of her pharmacy's opening. Therefore, CCTV system had been installed after that event.

One of the participants started to answer the questions but after a while, she said that the robbery issue in the pharmacy was so dishonorable so she only 50% answered the questions in the questionnaire.

## CONCLUSION

The very low number of participants (n=36), the poor response rate and the lack of response to some questions are the main limitations of the study. Thus the analysis with insufficient numbers of participants statistically we cannot show that there is a significant relationship between the size of the pharmacy and the frequency of thefts. However we assume that if the number of participants or survey could be enlarged, we can come across a relationship.

In the present study, it is expected that the number of customers (patients, visitors from pharmaceutical companies, etc.) should be directly proportional to the percentage of the financial losses, that is, if the pharmacy has an intensive customer capacity, financial losses should be expected much more. However, statistically any remarkable results were not obtained from the present study. The pharmacists did not want to answer that question directly which was about the number of customers or they said 'We don't know'. Therefore, comparative results were not obtained.

Furthermore, most of the pharmacists believed that the cause of financial losses in a pharmacy were related to the "missing reimbursements" due to the controls of prescriptions made by Social Security Institution (SSI). Even, a study about financial losses caused by Social Security Institution is recommended. In addition, the participants believed that second cause of financial losses were the "price reduction of medicines" after 2004. The

pharmacists do not have any responsibility for price determination of drugs. Ministry of Health (MoH) is the competent authority about this subject. It declares new prices to Turkish Pharmacists Association (TPA) and then pharmacists begin to sale the medicines with new-determined prices. In last two years, pharmacy businesses have encountered a critical proportion of losses because of price reduction. Also, it is realized that the delayed reimbursement of institutional prescriptions from SSI caused the serious economical problems for pharmacists.

In the survey, there were fifteen pharmacists who had special methods to prevent burglary in pharmacies and seven of them had experienced burglary. As a result, the pharmacies with special security methods had minimum frequency of burglary. However, there are a lot of pharmacies which had experienced the robbery. The cause of this situation may be due to carelessness of the pharmacists, that is, they may not observe and follow the employees and may not watch the camera records. The pharmacies with special security cautions which had not experience any robbery may have well-trained employees about security. Besides the pharmacists may have discipline over employees' actions and security equipments. Further more he/she may follow the camera records.

The study indicated that pharmacists used some computer systems such as Farmakom, Byte, etc. to control the inventory in a short period of time. They believed that these programs avoid the waste of time. So they do not care about this subject and also believed these computer systems provide the strict control of the inventory and prevent the losses against theft.

It is expected that when the period of being a pharmacy owner increases, the experiences about the frequency of theft increases but this is not obvious in our research. The research showed that it may not be directly related to being a senior pharmacist. The frequency of theft may be related to the location of the pharmacy, the number of patients visiting to the pharmacy in a day, etc. For ex-

ample, the domination for security of a pharmacy which is densely populated may be provided with difficulty when compared to other pharmacies which have fewer costumers. Moreover, the reason of this situation may be due to the insufficient number of participants. If the number of participants were more than this survey, more reliable results could be obtained.

Furthermore, the results of the research indicate that the most stolen product in a pharmacy was cosmetic products. The cosmetic products are nonprescriptional and directly related to the costumers' wishes. The workbenchs of these products are generally designed that are separated from drug sales departments and also the showcase of them are aimed to try to lure in costumers. Therefore, the cosmetic products' being more accessible can be the reason their robbery.

Also, this study has found that most of the pharmacists believed that camera and alarm systems were the best security cautions against theft so that a lot of pharmacists would prefer to use these systems to control losses. Thus a lot of pharmacists believe that they can control every issue about employees, patients and pharmacies much easier than before.

Finally, according to the results of this study, it is understood that if the survey can be done in a larger group of pharmacists, more obvious and comparative results could be obtained. Still this survey results do give an idea and emphasize of inside and outside security. Financial loss prevention and setting security are circumstances which pharmacists should manage as a part of pharmacy management. Because these are very critical for the survival of a pharmacy.

## REFERENCES

1. Parten T, Rajarao V, Sakalak S. The Global Economic Crime Survey, Economic Crime in a Down Turn, PriceWaterHouseCoopers Report. USA, UK: PriceWaterHouseCoopers; 2009. p.1-22.
2. Purpura PP. Challenges of the security industry. Security and Loss Prevention An Introduction. 5<sup>th</sup> ed. Oxford: Elsevier Butterworth-Heinemann; 2008. p.40-8.
3. Ellis RC, Stipanuk MD. Security and Loss Prevention Management. 2<sup>nd</sup> ed. Florida: Educational Institute, Printed in United States of America; 1999.p.52-64.
4. Young DW. Security for the community pharmacy. Am J Pharm Sci Support Public Health 1974;146(1):15-21.
5. Erdogan NO, Kaya S. Safety research on community pharmacies in Kocaeli. African J Pharm Pharmacol 2010;4(5):207-13.