

Identification of Factors Influencing the Commission of Burglaries¹

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Abstract

As in many countries, burglary is a very serious crime in Turkey. Scientific methods and techniques are needed to solve complex burglary cases. It can be argued that factors leading to the commission of a crime are important for formulating preventive strategies in the community. In this study, the contributing factors are categorized into three main groups of predictors: opportunity factors (agent), offender factors (host), and environmental factors. Criminal method (technique) and time of burglary are conceived as the opportunity factors. Four personal characteristics of offender factors are age, gender, marital status, and education level. Distance between the home addresses of burglars and target houses and distance between target houses and police stations were examined as two environmental factors. In conclusion, the best way to reduce burglary rate is to focus on offender factors. Dealing with opportunity factors and environmental factors would also contribute to a decreased burglary rate.

Key Words: Burglary, Epid-Criminological Perspective, Opportunity Factors, Offender Factors, Environmental Factors, Crime, Crime Prevention.

INTRODUCTION

Compared to other crimes, especially violent crimes, burglary does not draw the attention of the people and public officials as much. However, its prevalence and economic burden are more than estimated. According to data from the National Crime Victimization Survey (2010), in the USA between 2003 and 2007 there were 3.7 million household burglary cases on average annually. In 27.6% of those events, at least one of the household members was at home and 7.2% of those household members experienced violent victimization (44.3% of those victims were injured by the burglars). Burglars stole \$1000 (cash, or goods equal in monetary value) or more in nearly one of three burglary cases (U.S. Department of Justice, 2010). The Uniform Crime Report (UCR) revealed that 2,199,125 burglaries were recorded in the United States in 2009 and most of them (72.6%) were residential burglaries. In those burglaries, American people lost nearly \$4.6 billion in total and \$2,096 per victim (Federal Bureau of Investigation, 2010a).

Other data retrieved from the British Crime Survey indicated that of the nearly 9.6 million crimes that were committed in England and Wales in 2009, 7% of them were burglary. According to the official police records, 4.3 million crimes were committed in the same area and in the same period and 12% of them were burglary. In 2009, 2.8% of all people in that area were burglary victims and among those burglaries, nearly half of them were resident (dwelling) burglaries. The same study indicated that 15% of the people thought that they were very likely to be a burglary victim in the next year (Flatley, Kershaw, Smith, Chaplin & Moon, 2010).

In recent years, burglary in Turkey has become as critical as elsewhere in the world. The number of burglaries had steadily increased until 2006, when it reached its highest level with 89,234 burglaries.

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After 2006, it began to decrease as it did in all Europe (Eurostat, 2010). The burglary rate per 100,000 people is 154.5 in Turkey, while it is 166.8 in the rest of the western Asian region where Turkey resides. The average rate per 100,000 people is 392.6 for the world (only 55 countries which have burglary records were included), (United Nations Office on Drugs and Crime, 2010). However, it is possible to say that there is a decline in the burglary rate worldwide in general. Titus (1999) explained the drop in the burglary rate in the United States due to the prevalent usage of personal security devices such as alarm systems, the robust economy in the 1990s, and that robbery is preferred by cocaine users instead of burglary.

Official data from the Directorate General of Security in Turkey indicated that 351,949

thefts took place in Turkey in 2006 and 85,964 of those thefts (24.4%) were burglary. Burglaries account for nearly 11% of all crimes which are committed in the same period (Emniyet Genel Mudurlugu, 2007). The number of convicts in prison because of thefts in 2006 was 6,603 in Turkey and 223 of them were in Bursa city (Turkish Statistical Institution, 2010). Burglary is an important crime not only for the city of Bursa but also other cities as well. A scientific study is needed to analyze burglary crime and the results of the study can be useful for various police departments in Turkey.

Factors That Lead to Commit a Burglary

It can be argued that factors that lead to committing a crime are important for burglary, also. In this study, those factors were categorized into three main groups by adapting a disease triangle in Health Science (Schneider, 2011): opportunity factors, offender factors, and environmental factors.

1. Opportunity Factors

Felson argues that —Opportunity is the root cause of crime (2002, pp. 35). Opportunity, in terms of burglary crime, is a concept which is used to determine the attractiveness of any target, the benefits of successful completion of burglary relative to any payoff, and if the target has adequate surveillance or not. Why are some targets more attractive than others? Are those goods worth stealing or not? Do the guardians stay around at the time of burglary? All of those questions are related to opportunity factors that influence the decision making of burglars (Morgan, 2001).

According to Anstey, opportunity factors are important factors motivating burglary offenders. It is claimed that in neighborhoods where social cohesion is weak, burglary and other crime rates would necessarily be more than in other, more stable, neighborhoods. The main reason of this consequence is that thanks to close relationships among inhabitants of a neighborhood, there would be a strict surveillance over the streets (Bursik & Grasmick, 1993), and it would deter strangers from committing a crime since it is easy for them to be identified by residents in such neighborhoods (Bennett, 1989).

Occupancy is also a very important factor for burglary crime. It is obvious that burglarizing a house that has residents inside is more difficult and risky than unoccupied homes (Poyner, 1983). There is a contradiction about the effects of affluence on attractiveness of the target house. While some scholars argue that poorer neighborhoods and houses are more vulnerable than affluent ones (Brantingham & Brantingham, 1981), others claim the opposite (Waller & Okihiro, 1978). Maguire and Bennett claim that poor and affluent neighborhoods are more attractive to the burglars than middle income neighborhoods (Maguire & Bennett, 1982). Based on that information, Anstey (1998) concluded that relative location of the affluent neighborhoods and houses make them more attractive for the burglars in general. It is also claimed that land use factors and types of cityscape are some of the determinants of vulnerability of the houses (Harries, 1980). Buildings nearby main roads are more vulnerable than others (Maguire & Bennett, 1982). Anstey argues that police presence, neighborhood reputation, and community watch programs are other opportunity factors for a burglar (Anstey, 1998).

1.1. Criminal Method (Technique)

Why do burglars focus on some specific targets and are not interested in others? Which characteristics of the targets attract the burglars' attention? One of the answers to the question will be that they choose the easiest and safest available entrance (Fisher, 2004, p. 424) as it is explained through Rational Choice theory. The other answer to that question is the lack of guardianship of the victims in those target houses.

Burglars generally enter houses by forcing the window or door (Mawby, 2006, p. 281). In the United States, burglars predominantly use two techniques to enter their target houses: forcible entry or unlawful entry. Burglars who use the forcible entry method generally enter the houses through either removing or damaging the door. Screen damaging or removing, and handle/lock removing (or tampering) are other common types of forced entry techniques.

Windows are another way for burglars to use a forcible entry method. Pane damage or removal, screen damage or removal, and lock damage are the most prevalent methods for burglars who use forcible entry techniques through windows. Burglars who use the unlawful entry method generally do not need to use a technique to enter the target houses since unlocked doors and windows or open doors and windows give enough opportunity to them.

The other methods for burglars who use unlawful entry techniques are using stolen keys, unknown means through locked door or window, picked lock or window, someone let the offender in, and offender pushed his way inside (U.S. Department of Justice, 2010).

Yang and Schneider studied residential burglary in Gainesville, Florida by using police records. They explored temporal and structural patterns of burglaries in the city with the assistance of location quotient measure. According to the findings of the study, burglars generally choose single swing doors (31.97%) and sliding windows (23.03%) as a point of entry. Burglars less prefer double hung windows (8.06%) and glass sliding doors (6.26%) accordingly (Yang & Schneider, 2005).

According to British Crime Survey results in 1998 and 2000, doors and windows are the most common points of entry to the residential houses. Burglars use doors in all dwellings (detached or semidetached houses, terraced, and flats) more than windows (71/32) to enter the target houses. Burglars who use doors as point of entry generally use three techniques: forced lock, door not locked, and break or cut door panel, respectively. The other less common techniques to enter through doors are false pretences, stolen door key, and pushed past person opening the door. Burglars who use windows as a point of entry use three techniques to enter the target houses: forcing the window lock or catch, breaking or cutting glass, and open windows or ones that open easily when they are pushed (Budd, 2001).

A group of scholars completed a survey in Leicester, United Kingdom, with the participation of 86 burglary offenders who are still under supervision of Leicestershire and Rutland Probation Service. The study aimed at identifying factors that influence decision making of burglars while they were choosing their targets. The most common way to enter the house was through ground floor rear window (53.5%); the second way was through the back door (43%). The least common ways of entry were pretending to be an official (58.1%), using upstairs windows (38.4%), front door (38.4%), and ground floor front window (29.1%), respectively (Palmer, Holmes & Hollin, 2002).

A survey was conducted with residents of Seattle by a group of scholars in order to measure the effects of guardianship (both individual level and neighborhood level guardianships) on the reduction of burglary victimization. Target hardening (the number of safety precautions), home occupancy (the number of days/nights home occupied), informal social control (whether neighbors watch home) and defensible space (the number of property characteristics) were the independent variables of the study. Target hardening is defined as residents' precautions (such as locking the doors, keeping the lights on when they are out of the home, home alarm, or having a dog at home) in order to prevent a

possible burglary. By using multilevel logistic regression analysis, they found that target hardening along with defensible space is the most important precaution to prevent burglary victimization as an individual-level guardianship (Wilcox, Madensen & Tillyer, 2007).

1.2. Time

Past studies indicated that home occupancy is the main factor that influences the decisions of burglars when they would commit a crime. It is directly related with the lifestyles (or routine activities) of households (Moreto, 2010). Considering the time of burglary crime, there is no huge difference between night and daytime rates in the United States when household members are not at home (daytime: 38.05%, nighttime: 43.65%, unknown time of the day: 18.3%). However, burglary crime is generally committed in the nighttime when household members are present at home (daytime: 32.9%, nighttime: 61.3%, unknown time of the day: 5.8%); and in the daytime when household members are not present at home (daytime: 43.2%, nighttime: 26%, unknown time of the day: 30.8%), (U.S. Department of Justice, 2010).

According to the data from FBI records, 445,136 burglaries are committed in the nighttime, 818,167 in the daytime (almost double of nighttime), and 332,706 could not be determined when the burglary is committed (Federal Bureau of Investigation, 2010). Sagovsky and Johnson (2007) found that more than 65% of burglaries take place in the period between 9:00 a.m. and 6:59 p.m. They interpreted the results that most people who work in the daytime make their houses more vulnerable to burglary and other crimes. Temporal patterns of burglary may differ in other countries. As an example, 56% of burglaries take place in the evening and nighttime in Great Britain (Budd, 1999).

A survey conducted in Dar es Salaam, Tanzania, showed that most of the burglaries (48%) took place between midnight and 6:00 a.m. (Robertshaw, Louw & Mtani, 2010). Police records in Australia, which include more than 14,000 burglary cases in two years, showed the same result related to time of the burglary: most of the burglary crimes are committed in the daytime when household members generally are at work (Ratcliffe, 2001). According to police records in the state of Maine, 4,611 burglary crimes were committed in 2007. Police couldn't determine the exact time of 1,209 burglary cases. When taken into consideration only burglary cases whose time of the crime is estimated, 2,217 of the burglaries (65%) were committed in the daytime between 6:00 a.m. and 6:00 p.m. while 1,185 of the burglaries (35%) were committed at night between 6:00 p.m. and 6:00 a.m. (Government of Maine Website, 2007). Police records in Vermont indicate that 64% of the burglary crimes occur at daytime between 8:00 a.m. and 8:00 p.m. while 36% of the burglaries occur in nighttime (State of Vermont Department of Public Safety, 2001).

While there is not huge difference among seasonal variation of burglary in the world as a whole, there are some local contributing factors that influence high rate of burglary in the summer time (Weisel, 2002). A study conducted in Merseyside, a metropolitan county located in North West England with a population with 1,365,900, revealed that calls to police for burglary cases have 35-40% seasonal variation in a three-year period (1988, 1989, and 1990). While the burglary rate was at the highest level during winter season, it was at the lowest level in the summer season. During spring season, the burglary rate was decreasing and in the fall season, it was increasing. As an example, there were 772 calls to police for burglary in a four week period spanning February and March; however, there were only 473 calls in a four week period spanning July and August. There was a 39% drop between the winter and summer season (Farrell & Pease, 1994). Sorensen (2004) found that a proportion of completed burglaries is the highest in winter season with 31.1% and it is lowest in the spring season with 20.8%. In spring and summer seasons, people generally do not shut and lock their doors and in this case, burglars find opportunity to commit crime. However, burglary cases are not as many as in winter and fall seasons since gardeners work in summer and spring seasons and they make informal surveillance of the target houses. In winter and fall, daytime is relatively short and

people use more electricity. If the interior lights are not on, that gives an idea to the burglars that households are not at home. Moreto argued that increased guardianship by children, thanks to closed schools, is another factor that explains why fewer burglaries take place in summer months (Moreto, 2010). Temperature, activities accessible to the public, and the length of days are some other contributing factors that influence variation in burglary (Weisel, 2002).

2. Offender Factors

Offender or host factors are personal characteristics of people which are assumed to contribute to criminality. Some of the offender factors are age, gender, ethnicity, social status, educational level, occupation, and marital status.

Burglary is committed by young males who grew up in the street culture where the unemployment rate is relatively high (Sagepub, 2011). It is also claimed that burglary is a crime committed generally by people who are from relatively low socioeconomic status (Davidson, 1981; Sagepub, 2011). Annual income, crowding, and housing conditions are the most common variables which are used as an indicator of socioeconomic status of the people (Anstey, 1998). Twenty percent of burglars commit seventy five percent of all burglary crimes in a specific area (Salmelainen, 1995, p. 24).

Meierhoefer (1992) has studied the restructuring efforts of a federal sentencing system in the United States in 1980s and the relationship between offense and offender characteristics and the sentence imposed (p. 5). While explaining offender characteristics, she used three variables: age, gender, and drug use. Weatherburn focused on five offender factors while explaining the relationship between economic adversity and crime: family size, family type, age, social mobility, and ethnicity (Weatherburn, 1992, p. 4).

Anstey's approach is very striking while explaining the offender factors of burglary. He argues that age, instability, and socioeconomic status are among the most important factors to motivate a burglary offender. While gender is also a significant factor, he used gender as a control variable in his study (Anstey, 1998). He cited that more than 80% of burglars in Canada were 25 years old and younger by 1994, and they were arrested relatively more than experienced burglars since these young burglars were choosing closer targets and less sophisticated techniques (Maguire & Bennett, 1982). While explaining the instability factor, Anstey distinguished younger offenders and adult offenders. For younger offenders, instability refers to family; and for adult offenders, instability refers to personal attachments (Anstey, 1998). When domestic violence and alcohol and drug use are prevalent among family members (especially parents), young members of the family would tend to commit crimes such as burglary. One parent families are another disadvantage for children as an instability factor in terms of burglary offending (Brown, 1982).

2.1. Age

That age is a contributing factor of criminality has been on the agenda of criminologists for a long time. A study in the State Prison of Southern Michigan in 1943 revealed that younger men tend to commit cruder methods of stealing while older men prefer to commit more skillful crime. Crimes such as auto theft, burglary, robbery, and kidnapping are peculiar to young offenders while other crimes such as embezzlement, fraud, and forgery are peculiar to older men. Fox (1946) found that the mean age for burglary prisoners was 30.5. The average age for Australian burglars is 19.5 and the mode is 16. Half of the burglars in Australia were under 18 years old (Ratcliffe, 2001). Data from the Federal Bureau of Investigation indicated that 63% of arrested burglars were under 25 years of age in 1999 (Federal Bureau of Investigation, 2000). Police records in Maine (USA) in 2002 showed that 38.9% of the arrested burglars were 17 years old and younger; 40.2% were between 18 and 24 years old. Only 4.5% of the burglars were 45 years old and over (Government of Maine Web site, 2002). In Connecticut, the median age of convicted burglars was 21 and the last conviction age was 28 by 2007

(Cox, 2007). Since burglars commit crimes generally on foot and need to run fast in case of necessity, they are generally young people.

2.2. Gender

It is a fact that women and men get involved in criminal activities in different periods of their lives, but there is difference between the involvement rates of genders. Except for prostitution, men always commit more crimes than women, especially when serious crimes are under discussion (Steffensmeier & Allan, 1996).

As an example, males committed four times as many crimes as females in England and Wales in 2002. In serious crimes, the percentage of criminal males is between 85 and 95 in the same area and year (Office for National Statistics, 2004). According to data retrieved from the Federal Bureau of Investigation, 87% of arrested burglars in 1999 were male (Federal Bureau of Investigation, 2000). Males convicted of burglary were nearly ten times more numerous than convicted females according to Uniform Crime Report in the United States in 1990. By 2007 in the State of Connecticut, 4,513 of 4,689 prisoners (96.2%) were male (Cox, 2007).

There were 1,848,906 cases judged at the criminal courts under Turkish Criminal Law and Special Laws and 2,401,348 suspects in those cases were accused of different criminal reasons in Turkey in 2008. Among those suspects, 10.16% (243,996) were female and the rest of them were male (Turkish Statistical Institution, 2010).

Some feminist criminologists argue that the main reason why women get involved in crime is that social life is dominated by men and that this situation leads women to become marginalized (Laidler & Hunt, 2001). This marginalization generally pushes women to commit female-dominated crimes, but even though it is rare, they join into male-dominated crime groups and gangs (Daly, 1989). As an example, Alarid et al., found that women's participation in a burglary gang, which is comprised predominantly of men, is a result of that consideration (1996). In any case, when women join such burglary gangs, they generally undertake secondary roles such as partner and accomplice. Instead of breaking-in the houses or planning the burglary, they generally drive the car or act as lookout while their partners do the jobs (Decker et al., 1993).

An interview with 49 theft offenders revealed that male offenders worked with females temporarily and they usually perceive them as romantic partners (Steffensmeier & Terry, 1986). Drug addiction is correlated with involvement in burglary—for females in particular (Steffensmeier & Allan, 1996).

In their prominent study (interviewing active burglars), Mullins and Wright (2003) found that the initiation of both male and female burglars is nearly the same: they were introduced to crime through family members, older friends, and street associates. However, while male offenders were persuaded by same sex peer groups, female burglars were generally convinced by their boy friend, and even sometimes they were coerced. Many of the female burglars asserted that in their first burglary, they were unaware of any criminal intention until they arrived at the target houses. The main motivation for burglary for both males and females was earning money to compensate the expenditures of drugs, but females added that they needed money to buy jewelry and clothes, also. Female burglars also commit crime to feed their children and satisfy their needs, though males do so only for their needs. The preferences of the male and female offenders for choosing the target are the same: the house should be unoccupied, and there must be valuable things inside. While most of the male burglars have legitimate jobs (such as gardener, television installer, and home remodeler) which help them to determine possible targets before burglarizing, female burglars have not.

Male burglars generally prefer to work alone, although female burglars prefer to work with male burglars. The main reason male burglars work alone is not to entrust themselves to anyone else, and the main reason for female burglars to work with male partners is that they believe that if they are

caught and arrested at the end of the burglary, they may be punished less by stating that they were coerced by male co-offenders to join the burglary gang and commit a crime (Mullins & Wright, 2003).

2.3. Marital Status

Marital status of a person can be a determinant factor for many crimes. It is claimed that the breakup of a family may have traumatic effects for both the parents and children. Divorcing generally leads to job inefficiency, occupational mobility, occupational detachment, and drunkenness for the couples. As an example, among 473 persons convicted of forgery, 118 were single (24.9%), 172 were married (36.3%), and 183 were divorced, widowed, or separated (38.6%) in Los Angeles, California, in 1940 (Lemert, 1953).

Felson and Cohen (1980) claimed that single and divorced adults get involved in criminal activities much more than married couples since they are less likely to be subject to social control. Married couples join formal social organizations much more than unmarried or divorced people. They also have close relationships with their neighbors, so their informal social control mechanisms are stronger than unmarried or divorced people (Tomeh 1973).

Sampson and Laub argue that if a criminal offender finds a good partner and gets married with the right person, he or she can quit criminal activity and desist from old habits. They deem this change as a turning point since marriage is part of a social bond for a person (Sampson and Laub, 1993). Blau and Blau (1982) argue that while there is no evidence to prove a correlation between single-parent families with children and crime, separation and divorce have an important impact on adult criminality. Sampson found that divorce is the most important contributing factor on white adult robbery (Sampson, 1986).

2.4. Education Level

Weiss and Sampliner (1945) found that nearly 24% of adult criminals did not complete high school, more than 70% are high school graduates, and 5% have at least some college. A group of scholars in Turkey found that lack of education is one of the primary reasons of criminality in Turkey (Icli et al., 2010). Burglars are generally poorly educated people in society (Sagepub, 2011). The education level of burglars is parallel to the other offenders in Connecticut, USA. High school attendants and people who have high school diplomas are the prevalent part of the convicted burglars. While 8% of convicted burglars did not attend high school, 11% of convicted burglars either attend or graduated from a university (Cox, 2007).

3. Environmental Factors

Environmental factors are factors that exist in a living area of a person and affect his or her behavior one way or another (Glanz, Lewis, & Rimer, 1997). Environmental factors are generally related to the location of the target houses. There are some characteristics of certain neighborhoods or houses which attract burglars much more than others. Prior studies indicated that burglars decide where to commit burglary first, and then they look for an appropriate target (Wright & Decker, 1994). Neighborhood influence on criminal victimization is also widely studied in criminology. Scholars who study neighborhood influence generally focus on two subjects: ecological tradition characteristics (general characteristics of the residence of a neighborhood or city) and adjacent tradition characteristics (features of residents from adjacent neighborhoods) (Elffers, 2003). It is argued that people who live in a certain neighborhood are influenced by the features and characteristics of their environment (Farrington, Sampson & Wikstrom, 1993; Shaw & McKay, 1972). Since criminals generally reside in socially disorganized neighborhoods, it also increases the risk of being a victim of crime for people who live in those areas (Mawby, 2001). Reiss and Farrington claim that people who have criminal records reside in high burglary risk areas (Reiss & Farrington, 1991).

There are numerous environmental factors that mitigate or aggravate the burglary risk of victims and houses. Houses located in socially disorganized areas and/or socially disadvantaged neighborhoods experience relatively more crimes than better neighborhoods. The main reasons for that high criminality in those areas are low collective efficacy, high level of residential mobility, high level of residential heterogeneity, inadequate personal security measures and less informal surveillance (Capowich, 2003). The surrounding areas of some institutions which are located in socially disorganized and poor neighborhoods such as public housing are deemed as high-risk areas in terms of burglary (Moreto, 2010). Houses which are close to congested areas with generally young people, shopping centers, and sport arenas are more vulnerable than others in terms of burglary (Tilley et al., 1999). Houses which are close to highways (Beavon, Brantingham and Brantingham, 1994), pedestrian paths (Poyner and Webb, 1991), and houses located in suburbs of neighborhoods (Brantingham and Brantingham, 1984) are more vulnerable than others.

Burglars would want to sell stolen goods to the closest shops or they do this activity through fences. Fences are described as a person who regularly buys stolen property for resale and who often has a legitimate business to cover his activities (Sagepub, 2011, p. 13). Burglars who have no contact with fences will get in touch with pawn shops, drug dealers, or acquaintances that have contacts with those shops or fences in the surrounding area of the target houses. So, the surrounding areas of pawn shops are other attractive targets for burglars. Public Transportation stations such as bus stops increase the risk of burglary victimization. Burglars who do not want to use their own vehicles in order to reveal their identities to residents and law enforcement units prefer using public transportation vehicles such as busses and the metro. The only disadvantage in using public transportation is that the carrying of heavy and large goods through public transportation is cumbersome and it attracts public attention (Moreto, 2010).

It is obvious that housing type is another determinant for burglars to choose their targets. Hotels, motels, and rooming houses are the most vulnerable places when occupants are not present. Mobile homes are preferred even if just a bit more by burglars in case a household member is present at home. Although there are no huge differences among vulnerability rates of the number of housing units, group quarter units are a little bit more vulnerable than others in the United States (U.S. Department of Justice, 2010).

Police records were compiled (Johnson, Bernasco, Bowers, et al., 2007) related to some characteristics of burglary crime (date of the crime and grid coordinates of the victims' houses) from ten areas located in five different countries (Australia, Netherlands, New Zealand, United Kingdom, and United States of America). A dwelling found within 200 meters around a burglarized house is at high risk in the following two weeks.

3.1. Distance between Target Houses and Home Addresses of Burglars

The issues relating the effects of distance for journeys to commit crimes are attractive for criminologists since White's initial studies in early 1930s. He argued that crimes against people are more intense than crimes against property in the vicinity of the offenders' homes (White, 1932). While it is widely accepted that offenders generally commit crimes near their own neighborhoods, the variations of the distances are explained by complexity and type of the crimes (Brantingham & Brantingham, 1981). As an example, it was found that juveniles generally commit crimes within a two mile vicinity of their homes and they almost never go further than six miles to commit a crime (Phillips, 1980). Hodgkinson and Tilley found that only 5.7% of burglaries in dwellings and 4.3% of burglaries in other houses occurred beyond 15 minutes away from where the victim lives (Hodgkinson & Tilley, 2007).

The concept of distance decay is derived from physical science and it means that when objects get away from each other, the interest to each other diminishes at the same time (Levine, 2005). When

burglars make their decision, they would choose the closest one to their home address (Brantingham & Brantingham, 1984; Shover, 1991) as this requires minimum effort (Harries, 1999). As people go shopping to closer malls, criminals choose the closer targets with the same reason (Levine, 2005). The major reasons why criminals do not choose further targets are that they do not want to be under risk for a longer duration of time, they are unfamiliar with those areas, the probability to attract attention is relatively high, and opportunities to run away are more difficult (Brantingham & Brantingham, 1981; Ratcliffe, 2001).

A study conducted in Sheffield (England) in 1995 revealed that offenders travel 1.93 miles to commit a crime on average (Wiles & Costello, 2000). Another group of scholars, who studied in the London Borough of Harrow (England), have found the average distance to be 1.16 miles, to commit a violent crime, criminals travel 0.77 miles on average, 1.47 miles for robbery, for vehicle theft 1.48 miles, and for shoplifting 1.68 miles (Chainey, Austin & Holland, 2001).

For vehicle theft and shoplifting, Wiles and Costello (2000), uncovered 2.36 miles and 2.52 miles, respectively. For rape, criminals travel 1.15 miles (Rhodes & Conly, 1981); finally, for sexual assault they would travel .07 miles (Block, Galary & Brice, 2004). Studies relating burglaries yielded similar results. Scholars who study on Washington D.C. in 1974 found 1.62 miles (Rhodes & Conly, 1981); ones who studied in the Australian Capital Territory in 1999 2000 found 3.11 miles; ones who studied in the London Borough of Harrow found 1.21 miles (Chainey, Austin & Holland, 2001); and ones who studied in Sheffield in 1995 found 1.88 miles for travelling in residential areas (Wiles & Costello, 2000). Traveling for burglaries in non-residential areas does not vary too much: 1.83 miles in Sheffield in 1995 (Wiles & Costello, 2000) and 3.11 miles in another study (Ratcliffe, 2001).

The National Crime Victimization Survey in the United States indicated that 27.5% of the offenders are not known, 65.1% of them are not a stranger, and 7.4% of them were unknown by the victims (U.S. Department of Justice, 2010). It means that they did not travel so far away from their home addresses.

A study completed in Leicester revealed that burglars generally choose their targets in their home area (40.6%). Of the respondents (all of them were burglars) who participated in the survey, 83.5% said that they were familiar with the area where they chose. The main reasons for burglars not to go to unfamiliar places were that they knew the area (it is easy to hide in a well known place) and they can choose profitable targets in the close areas (Palmer, Holmes & Hollin, 2002).

3.2. Distance between Target Houses and the Nearest Police Station

A group of scholars studied the possible causes of household burglary in a city (Tianjin) in China by using a multilevel regression modeling method. They categorized all variables under three major determinant factors: neighborhood structural factors, household variables, and neighborhood social control processes. Public control is deemed as an indicator of neighborhood social control processes and the scholars aimed to measure if public control (encountering police force frequently) reduces burglary rates or not. The results of the scientific research indicated that neighborhoods where police are highly visible by residents and others bear low risk in terms of burglary (Zhang, Messner, Liu, 2007).

Segato, who studies bank robberies in Italy, found that banks in Montagnana have been robbed in the last six years and he explains this situation with the proximity of banks to the police station (Segato, 2004). In their prominent study, Akpinar and Usul (2004) found that crimes are committed far from the police stations in Ankara, Turkey. There were 1910 crimes were recorded in two police precincts of Cankaya City in 2003, and only 157 of 1910 took place in the zone which is labeled as near to the police station. Among 1041 burglaries, 92 of them were in the near zone and 949 were in the far zone relative to the police stations.

Based on the scientific studies in the past, Moreto concluded that the increased presence of authorities, the increased likelihood of authorities being present and the increased ability of authorities to respond quickly can be considered mitigating factors resulting in a decrease of risk in an area (Moreto, 2010, p. 3). The presence of a police station in a region reduces or prevents crimes in the surrounding area through two ways. On the one hand, police patrols and personnel continuously commute from and to the police station and that close area to the police station would always be under police surveillance. On the other hand, police response to areas close to the police stations would eventually be shorter, and that would lead to deter people from committing crimes, at least theoretically.

That offenders tend to shy away from police intervention is also possible (Sun, 2000). Rengert studied the possible impact of police stations to the drug sale arrests in close areas. The distance between the blocks in Wilmington, Delaware was nearly 400 feet and he made up fictitious zones around the police stations. Then he found that the further from a fixed point to the police station, the higher probability for an arrest due to drug sales (Rengert, 1999).

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