

Police visibility and fear of crime: Results of a study in Malatya, Turkey

Sener Uludag, Ph.D.*
Independent Researcher

Osman Dolu, Ph.D.
Independent Researcher

Zakir Gul, Ph.D.
*Associate Professor and Chair of Criminal Justice
State University of New York in Plattsburgh*

Abstract

Despite mixed research findings, increasing police visibility has long been assumed to reduce crime and citizen fear of crime. Surveying 1,175 respondents from Malatya, a midsize city in Turkey, this paper examines the effects of citizens' perceptions of police visibility and success on fear of crime during the daytime and at night. Consistent with some previous research, ordered logistic regression analyses revealed that perceived police visibility had no effect on citizens' fear of crime. However, perceived police success significantly reduced fear of crime at night. Consistent with previous research, females were more likely than males to fear crime during the day, and this effect increased exponentially at night. Previous personal crime victimization was a strong predictor of fear of crime during daytime but not at night, and reading local newspapers increased fear of crime during daytime only, suggesting that victims of personal crimes are more likely to limit their exposure to nighttime contexts. Limitations and implications for future research are discussed.

Keywords: Police Visibility, Fear of Crime, police-citizen contacts, victimization, Turkey

* Direct correspondence to the author(s): seneruludag@yahoo.com, osmandolu@yahoo.com, zgul001@plattsburgh.edu, <http://dx.doi.org/10.36889/IJCJ.2023.005>
Received 28 August 2023; Revised 20 December 2023; Accepted 27 December 2023
INTERNATIONAL JOURNAL OF CRIMINAL JUSTICE, Vol. 5 Issue 2, December 2023, 29-58
© 2023 Korean Institute of Criminology and Justice (KICJ)

Introduction

Causes and consequences of citizen fear of crime have been a subject of interest in criminological research for several decades, and police visibility has often been a variable of interest (Akyuz et al., 2023; Bennett, 1994; Bilach et al., 2022; Box et al., 1988; Brown, 2016; Cho, 2020; Collins, 2016; Cordner, 1986; 2010; Dolu & Uludag, 2010; Eck & Rosenbaum, 1994; Ferraro, 1995; Henig & Maxfield, 1978; Holmberg, 2002; Karakus et al., 2010; Kelling et al., 1974; Kim et al., 2021; Koseoglu, 2021; Moore & Trojanowicz, 1988; Oliver, 1998; Pate et al., 1986; Polat & Gul, 2009; Pfuhl, 1983; Ratcliffe et al., 2011; Salmi et al., 2004; Schnelle et al., 1977; Sipahi, 2021; Skogan, 1986; Trojanowicz, 1983; Warr, 2000; Winkel, 1986). Fear of crime is defined as “...an emotional response of dread and anxiety to crime or symbols that a person associates with crime” (Ferraro, 1995, p. 23) and “...a complex construct that is used to describe a range of both psychological and social reactions to perceived threats of crime and/or victimization.” (Collins, 2016, p. 21) Even though there are many other definitions of fear of crime, there is no consensus on the definition (Borovec et al., 2019; Cordner, 1986; 2010; Kim et al., 2021; Kula, 2015).

Fear of crime is a personal and subjective matter, and it can cause severe psychological, physiological, and sociological problems that may exceed the tangible costs of actual crime incidents (Alfaro-Beracoechea et al., 2018; Dolu et al., 2010; Macassa et al., 2017). Fearful residents might stay indoors during the day or at night or avoid going out altogether. This leads to installing special locks, security alarms, video surveillance, and metal bars, opting for living in gated communities, and even owning guns. Isolation and paranoia, in turn, may harm social cohesion, trust, and the effectiveness of informal social controls (Brooks, 1974; Mesko et al., 2008; Ross & Jang, 2000; Skogan, 1986).

Police visibility has a “...significant symbolic importance to many citizens...” (Pfuhl, 1983, p. 500) and it is defined and discussed in previous studies in the forms of police presence (Pfuhl, 1983), police stations (Boivin & de Melo, 2023), house calls (Winkel, 1986), moving citations (Wilson & Boland, 1978), warning citations (Currey et al., 1983), helicopter patrolling

(Gerell et al., 2020; Schnelle et al., 1978), bike patrolling (Prine et al., 2001), car patrolling (Kelling et al., 1974; Schnelle et al., 1977) or car patrolling activities such as traffic control, parking control, response to a call, response to disturbances, and driving for emergencies (Salmi et al., 2004), and even deployment of an unoccupied police vehicle (Simpson et al., 2023), foot patrolling (Bilach et al., 2022; Kelling et al., 1981; Piza, 2018; Ratcliffe et al., 2011; Trojanowicz, 1983), or other activities such as chatting with citizens, providing information (Salmi et al., 2004), police-community newsletter, -meeting, and -station, citizen contact patrol, recontact victims, and reducing the “signs of crime” efforts (Pate et al., 1986).

Police visibility is assumed to reduce citizens’ fear of crime, as a commonly stated goal of policing is public safety through order maintenance. Lower crime rates and faster response times have been traditional, easily quantifiable measures of police effectiveness; however, more subjective measures that have emerged with community policing include fear reduction and citizen satisfaction with the police (Brooks, 1974; Greene & Taylor, 1988; Trojanowicz, 1983).

The present study aims to examine whether there is a relationship between police visibility—patrolling uniformed police officers and police vehicles—and citizen fear of crime during daytime and at night in the neighborhoods of a midsize city in Turkey. After reviewing the literature, we will explain the methods and share the findings before the discussion and conclusion sections.

Literature Review

Police visibility is defined and conceptualized differently in various studies in the literature, as introduced briefly in the previous section. However, we will review the most relevant ones (i.e., the connection with the fear of crime) that fall within the scope of the current study and the most common police visibility forms, such as foot and car patrolling and their activities, and police-community contacts.

Foot patrol and car patrol as police visibility

Although citizen fear of crime is subjective and, in many cases, not correlated with the actual risk of victimization, police visibility has long been thought to have a positive influence on public perception of safety. This assumption was challenged by the well-cited Kansas City Preventive Patrol Experiment (KCPPE), which was "...possibly the most influential policing experiment" (Hope, 2009, p. 125) and a "...landmark study in policing." (Weisburd et al., 2023, p. 544). Random assignment of either no police presence except responding to calls, normal patrol, or double or triple the amount of regular patrol produced no significant difference in crime rates or citizen fear of crime (Kelling et al., 1974). In a recent study, Weisburd and his colleagues identified and analyzed the original official crime data from the KCPPE and found evidence of crime prevention benefits for preventive patrol but reminded to read the findings with caution (Weisburd et al., 2023, p. 552):

In the case of burglary, our analyses show a statistically significant result in favor of preventive patrol at the 0.05 level. All of the effects in our analysis of proactive versus control conditions are in the direction of deterrence, and many of these achieve statistical significance at the 0.10 level...The impact of the experiment on violent crime comparing the proactive to control conditions was a relative reduction in crime of 17%; for burglary, the estimate of the relative reduction was 13%. For crime overall, the relative reduction in the proactive condition was 7%.

When the Kansas City Response Time Analysis Study of 1977 showed the ineffectiveness of rapid response (Kansas City Police Department, 1977) and was successfully replicated in four other U.S. cities, law enforcement began to question basic assumptions about its time-honored tenets of motorized patrol and rapid response (Spelman & Brown, 1981). More proactive police interventions became popular after the Kansas City experiments (Roberg, 1976).

The Newark Foot Patrol Experiment (Kelling, 1981; Kelling et al., 1981) randomly assigned either car patrol or foot patrol to eight demographically similar areas and found no difference in crime rates but less citizen fear of crime in areas with foot patrol, and an increase in citizen fear of crime in these same areas when foot patrol stopped at the end of the experiment. Experiments in several Dutch cities, such as Hoogeveen and Amsterdam, also revealed that increased police presence through foot patrols and intense contact with citizens led to a decrease in citizens' fear of crime (Winkel, 1986).

The Neighborhood Foot Patrol Program (NFPP), conducted in 14 Flint, Michigan, neighborhoods between January 1979 and January 1982, showed that the citizens felt safer after the foot patrol program, especially when the officers were well-known and highly visible (Trojanowicz, 1983). It is also reported that the program reduced criminal activities and crime rates and that protection for women, children, and the elderly had been increased.

Another study, the Philadelphia Foot Patrol Experiment, conducted during the Summer of 2009, found that foot patrols in violent crime hotspots significantly reduced violent crime levels. After three months of additional randomized foot patrol beats, a reduction of 23% in violent crime was recorded (Ratcliffe et al., 2011). The authors conceptualized the foot patrols as a "certainty-communicating device" as they "...may communicate an increased level of certainty that crimes will be detected, disrupted, and/or punished" (p. 819).

Borovec et al. (2019) conducted a study in Croatia to examine the relationship between police visibility and feeling of safety. They used fear of crime, perception of crime risk and frequency, and perception of incivilities as predictors for the feeling of safety, and found that whereas patrolling the neighborhood on foot patrol more frequently reduced the perception of incivilities and crime risk and frequency, patrolling by car frequently increased them in addition to increasing fear of crime. On the other hand, frequent patrols, regardless of foot or car, have a positive impact on reducing fear of crime and perception of crime risk and frequency when dealing with persons disrupting public order in the neighborhood.

A study conducted in Denmark showed that increased patrolling both on foot and by car also increased fear of crime among citizens. The author concluded that citizens perceived extra police presence as signaling crime-related situations (Holmberg, 2002). Another Scandinavian research suggested that increased police presence in a neighborhood might appear to residents as a symptom of crime rather than a preventive (Salmi et al., 2004). In the same vein, Fernandes (2018) found that police arrests increased the fear of violent crime victimization in Seattle. Further, police arrests of violent crimes increased the fear of crime more when the individuals had a victimization history and were females. She also found that greater physical disorder increases the fear of crime, as well.

Police-citizen contacts as police presence

With the acceptance of community policing in the U.S. in the 1980s, police presence evolved beyond foot patrol and reacting to calls by increasing police-citizen contacts in proactive and creative ways. Two experiments of the same project, one in Houston and the other in Newark, were developed and implemented between 1983 and 1984 (Brown & Wycoff, 1987; Pate & Skogan, 1985; Pate et al., 1986; Wycoff & Skogan, 1985).

The Citizen Contact Patrol experiment in Houston was developed and implemented by young, hand-picked patrol officers who rejected the broken windows thesis that fear of crime arose from social and physical disorder (Wilson & Kelling, 1982). The experiment's designers thought that Houston citizens were suffering *anomie* due to social distance from neighbors, police, and city government, and a corresponding lack of information about neighborhood crime. Interventions were contacting citizens, re-contacting victims, neighborhood newsletters, establishing a neighborhood storefront "cop shop" with outreach programs to the community, and community organizing. Of the five carefully planned and implemented programs, only the citizen contact program and the storefront office program reduced fear of crime; both of these programs, however, had little or no effect on Blacks and renters, who seemed unaware of the programs (Brown & Wycoff, 1987; Pate

et al., 1986; Wycoff & Skogan, 1985).

The Newark Fear Reduction Task Force instituted similar but unique programs in Newark to increase the quantity and quality of police-community contacts and reduce fear of crime (Pate & Skogan, 1985; Pate et al., 1986). Interventions were neighborhood newsletters, the “signs of crime” program, and a coordinated community policing program. Among all, the coordinated community policing program applications significantly impacted the reduction of fear of personal victimization and worry of property crime.

The impact of community policing on citizen fear of crime was assessed in 1998 by the Twelve Cities Survey, which showed that community policing increased satisfaction with the police and citizen crime prevention behaviors, but did not decrease citizen fear of crime (Scheider et al., 2003). Moreover, citizen crime prevention behavior did not affect fear of crime in six cities but increased fear of crime in the other six. The authors speculated that concrete activities aimed at preventing crime may increase concerns about personal victimization (Scheider et al., 2003).

Hinkle and Weisburd (2008) examined the effects of a two-pronged approach of “broken windows” crackdowns on neighborhood disorder, along with police targeting of minor crime “hotspots.” They found that reducing perceived social disorder and observable physical disorder reduced fear of crime. However, citizens living in targeted hotspot areas felt 27% less safe than those in non-targeted areas.

Police visibility, fear of crime and its predictors

Fear of crime and its predictors have been the focus of some studies in the United Kingdom (Bennett, 1994; Box et al., 1988), South Korea (Brown, 2016; Cho, 2020; Kim et al., 2021), Turkey (Akyuz et al., 2023; Karakus et al., 2010; Ozascilar et al., 2019; Polat & Gul, 2009; Sipahi, 2021), and Northern Cyprus (Koseoglu, 2021), as well. In the United Kingdom, data from the British Crime Survey showed that citizens who thought the police were doing a good job were less fearful of crime (Box et al., 1988), but a survey of

four residential areas in Birmingham and London showed that this effect disappeared in multivariate analysis (Bennett, 1994).

Kim et al. (2021) conducted research in South Korea using the Korean Crime Victim Survey (KCVS) data and found that people with direct and vicarious victimization experiences have more fear of crime. Also, the perceived signs of disorder in neighborhoods increased the fear of crime. In another study in South Korea, Cho (2020) found that when police made arrests, violent crime rates went down. Further, residents' fear of crime reduced with the police patrol, whereas it increased in disorderly public places. Therefore, he suggested, "...police visibility and response capability are important in reducing fear of crime among residents" (p. 794). He also found that the level of patrolling and disorder policing is positively associated with the satisfaction of the people with the police.

Polat and Gul (2009) conducted surveys on a large random sample in Erzincan, a city in the eastern region of Turkey with roughly a quarter million people. They examined the association of police visibility and fear of crime. There was an inverse relationship between police visibility and fear of crime, but only 24% of interviewees reported that visible police made them feel safer (Polat & Gul, 2009).

Sex differences in fear of crime. Concerning gender differences and fear of crime, Scheider et al. (2003) and Hinkle and Weisburd (2008) found that social disorder made U.S. women 79% and 154% more fearful than men, respectively, and Bennett (1994) found that British women were 34% more fearful of crime than men. In the first two U.S. studies, police presence aggravated the fear of crime; in the latter British study, confidence in the police had no effect on the fear of crime. Weitzer and Kubrin (2004) found that women were 19% more likely than men to fear crime in both models of their study of media influence. Some studies in South Korea (Brown, 2016; Kim et al., 2021) and Turkey (Karakus et al., 2010; Koseoglu, 2021; Turk et al., 2023) also found that women have more fear of crime than men.

News and fear of crime. Shin and Watson (2022) conducted research in Chicago and found that local news, particularly radio and TV, negatively

impacted residents' fear of crime. Another research done in the U.S. suggested a higher fear of crime for citizens who get their news from local TV (Weitzer & Kubrin, 2004). A study on the media effect on fear of crime conducted in households in California showed that women had consistently significantly higher levels of fear of crime than men (Callanan, 2012). Further, she found that television news and crime-based reality shows had more impact on both perception of neighborhood crime and fear of crime than newspapers or crime dramas. And yet another study found that social media creates the fear of sexual crimes (Turk et al., 2023).

Studies of police visibility and citizen fear of crime have mixed results. Police presence in these studies has varied from mere car patrol to intensive police-citizen contacts associated with community policing to hotspots and other specifically targeted interventions. Vulnerable populations with a higher baseline fear of crime and perhaps less trust in police, such as women, social minorities, and, to some extent, the elderly, may react negatively to a heightened police presence. In some societies, minorities are more likely to be victims of crime, however, so they may find comfort in a substantial police presence (Bennett & Flavin, 1994).

Methods

This section provides information about the data study setting, context, and data collection and analysis, followed by the dependent, independent, and control variables.

Study setting and context. This study adds to policing research in Turkey, a nation of over 85 million people (Turkish Statistical Institute, 2023). Although mainstream criminology has shown increased interest in comparing criminal justice systems in recent years, relatively little Turkish research has been published outside of this country (Shahidullah, 2013; Dammer & Albanese, 2014). Self-reported personal crime victimization during 2005 was 17.9% in Istanbul, versus an average of 21.5% for 33 major world cities, including New York, in which 23.3% of citizens reported being victims of

personal crime (Dammer & Albanese, 2014).

The police in Turkey are highly centralized and organized under a top-down, hierarchical structure as a national police force. About 300,000 sworn officers serve in 81 provincial police departments that are directly attached to the Turkish National Police Headquarters in Ankara (Turkish Statistical Institute, 2023). Provincial police have considerable discretion in doing their job, but all policy comes from headquarters to be implemented in the provinces.

Current research was part of a research initiative funded by the Malatya Police Department to identify the role of police visibility on citizen fear of crime. As a midsize and ancient city, dating back to the earliest agriculture in the Fertile Crescent, Malatya is a typical Turkish city that represents all colors of Anatolian culture and national characteristics. For this reason, the authors of this paper selected Malatya for this research.

Data collection and analysis. A total of 67 questions with Likert scale answers were included in the questionnaire designed to measure the respondent demographics, attitudes and reactions toward crime, satisfaction with and expectations of the police, and perceptions of the effects of media, social, and physical environments. The survey was field-tested on both citizens and criminal justice professionals.

A total of 1,500 individuals aged 16 or over were randomly selected from the community, and 1173 (78.1%) participated in the survey. Teachers from the Malatya Department of Education administered the surveys via face-to-face interviews, and data were collected during four weeks from May to June 2008. Two staff from the Malatya Police Training Center assisted the authors in coding and entering data.

We used ordered logistic regression analysis since the independent and dependent variables were measured with ordinal scales. We checked for model specification errors using the *linktest* function of Stata and found that the goodness of fit was acceptable, and there were no misspecification errors in the analysis. We have also run multicollinearity and heteroskedasticity tests and found no problems.

Dependent variables. There is considerable controversy among social scientists about how to measure and analyze citizens' fear of crime (Scheider et al., 2003; Brown & Wycoff, 1987). Furstenburg (1971) found that research subjects appear more fearful of crime if survey questions are general and posit crime as a public issue, but less fearful if surveyed about crime as a judgment of personal safety. This response bias to vague questions is especially strong for demographic groups with unrealistically high expectations of personal victimization, such as females and, to a certain extent the elderly (LaGrange & Ferraro, 1987), and may be intensified by survey questions containing words with emotional impact such as this example from the General Social Survey: "Is there an area right around here—that is, within a mile—where you would be afraid to walk alone at night?" (LaGrange & Ferraro, p. 378). We used a measure of self-perceived safety consistent with the U.S. National Crime Victimization Survey (Hinkle & Weisburd, 2008) and the British Crime Survey (Bennett, 1994).

Citizen fear of crime during the day and nighttime are the dependent variables in this study (see Table 1). Respondents were asked, "How safe do you feel when you walk alone in your neighborhood during daytime/nighttime?" Respondent choices were (1) *very safe*, (2) *safe*, (3) *somewhat unsafe*, (4) *unsafe*, (5) *very unsafe*. As seen in Table 1, the nighttime fear of crime is greater than the daytime fear of crime.

Table 1. Descriptive Statistics

Variable	Min.	Max.	<i>M</i>	<i>SD</i>
Dependent				
Fear of crime during nighttime	1	5	3.18	1.311
Fear of crime during daytime	1	5	2.28	1.128
Independent				
Police visibility	1	5	2.98	1.440
Police response time	1	5	3.13	1.052
Citizens' perception of police success	1	5	3.36	1.030
Control				
Age	16	79	29.18	12.004
Female	0	1	0.55	0.497
Age x female interaction term	0	75	16.22	16.860
Income	1	5	2.56	1.190

Variable	Min.	Max.	<i>M</i>	<i>SD</i>
Education	1	5	2.91	0.872
Marital status (married)	0	1	0.41	0.492
Property crime victimization	0	1	0.24	0.426
Personal crime victimization	0	1	0.11	0.315
Watching news on national TV	1	5	3.41	1.192
Watching news on local TV	1	5	2.41	1.088
Read news in national newspapers	1	5	2.57	1.256
Read news in local newspapers	1	5	1.95	1.114
Know people in neighborhood	1	5	3.53	1.182
Length of residence in neighborhood	1	5	3.29	1.373
Economic status of neighborhood	1	5	3.04	0.657
Sufficient streetlights	1	5	3.09	1.129

Independent variables. Police visibility was measured by the question, “How frequently do you see a uniformed police officer or a police car in your neighborhood?” Respondent choices were (1) not at all, (2) one or two times in a year, (3) one or two times in a month, (4) one or two times in a week, (5) almost every day. Our research findings show that the police visibility variable has a mean score of 2.98, which means that citizens saw a uniformed police officer or police car once or two times a month.

Citizens’ subjective assessments of police response time and success were measured with similar five-point scales. Inadequate response times can have tragic consequences and generate much worse publicity for police departments, especially in domestic violence cases. As discussed earlier, response time is no longer a variable of interest for many police researchers; however, it was included here because of a lack of research on Turkey. For the question, “Do you agree that the police are responding to calls for service in a reasonable time?” respondents were given five choices: (1) *strongly disagree*, (2) *disagree*, (3) *somewhat agree*, (4) *agree*, (5) *strongly agree*. As reported in Table 1, the mean score of response time is 3.13. In other words, citizens believe that police responses are more or less within reasonable time limits.

Citizen perceptions of police success have been examined in previous research (Brown & Wycoff, 1987; Hinkle & Weisburd, 2008; Scheider et al.,

2003). According to Hunter (1978), whose work underpinned the broken windows theory (Wilson & Kelling, 1982), citizen fear of personal victimization rises when local agencies fail to provide formal social control. Our measure of police success was relative: “How successful do you see the police compared to past years in fighting crimes?” Respondent choices were *(1) far worse than before, (2) worse than before, (3) no difference, (4) better, and (5) far better than before*. Our survey results show that citizens’ perception of police success has a mean score of 3.36, which means there is not much difference compared to the past but a slight inclination for improvement.

Control variables. Since our focus in this paper is on police visibility and related variables, we have considered demographic variables (age, sex, income, education), victimization variables (personal crime victimization, property crime victimization), socioeconomic-environmental variables (economic status of neighborhood, sufficiency of lighting in the streets, length of residence in neighborhood, knowing people in neighborhood), and media variables (watching news from local/national TVs and reading news from local/national newspapers) as control variables.

The mean age of the sample was 29.19, close to the mean age of Turkey’s general population, 28.5, at the time of data collection, according to the 2010 Turkish Census (Turkish Statistical Institute, 2023). Fifty-five percent of the sample was female, slightly more than the percentage of males in the general population, 50.2% at the time of the survey.

Education was measured on a Likert scale: *(1) No schooling, (2) 8 years of mandatory education (elementary & middle school), (3) high school, (4) university degree, (5) postgraduate education*. The mean value (2.91) points to high school education. Monthly income is measured with a Likert scale in Turkish Liras (TL): *(1) Less than 500 TL, (2) between 501-1000 TL, (3) between 1001-1500 TL, (4) between 1501-2000 TL, (5) more than 2000 TL*. The mean value is 2.59 (between 501-1000 TL), which is around the national average monthly income at the time of research.

Personal and property crime victimization variables ask whether the

respondents themselves or anyone in their families were victimized in the last two years. Both variables are binary: (0) *not being victimized*, (1) *being victimized*. 11% of respondents reported that they or one of their family members were victims of personal crimes within two years prior to the survey, whereas 24% of respondents reported property crime victimization within their family during the same period.

All the news variables, namely watching news on national TV, watching news on local TV, reading news from national newspapers, and reading news from local newspapers, are all measured the same way: (1) *less than once a month*, (2) *a couple of times a month*, (3) *a couple of times a week*, (4) *most days of the week*, (5) *every day*. The mean value of these four media consumption variables is around 2 or above.

The question for knowing people in the neighborhood was, “Do you think that people generally know each other in your neighborhood?” (1) *Definitely disagree*, (2) *disagree*, (3) *partly agree*, (4) *agree*, (5) *definitely agree*. The mean value for this question is 3.53, and the median value is 4. This means that respondents agree that people in their neighborhood generally know each other.

For the length of residence in the neighborhood, the respondents were asked how long they had been living in their community, and the answers were (1) *less than 1 year*, (2) *1–5 years*, (3) *5–10 years*, (4) *10–15 years*, (5) *more than 15 years*. The mean (3.29) indicates that participants of this study had been living in their neighborhood for at least 5 to 10 years.

Economic status of the neighborhood is also measured with a Likert scale that is composed of the following options: (1) *very poor neighborhood*, (2) *poor neighborhood*, (3) *neither poor nor rich*, (4) *wealthy neighborhood*, (5) *very wealthy neighborhood*. The mean value is 3, indicating that the respondents' average economic status is neither poor nor wealthy.

Sufficiency of the streetlights is measured as follows: (1) *totally insufficient*, (2) *insufficient*, (3) *somehow sufficient*, (4) *sufficient*, (5) *totally sufficient*. The mean value (3.09) shows that people feel the lighting in the city streets is more or less sufficient.

Results

Ordered logistic regression analysis in Table 2 shows that respondents' perceptions of police visibility, response time, and success had no significant effect on citizens' fear of crime during the daytime. It may seem surprising to some that the age of the respondents had no significant effect on fear of crime. However, LaGrange and Ferraro (1987) have shown that elderly people's emotions may be more in tune with their actual risk of criminal victimization than many criminologists have assumed, especially if research questions are specific and not vague or charged with emotional language. However, gender, income, personal crime victimization, reading national and local newspapers, knowing people in the neighborhood, and living in a wealthier neighborhood were statistically significant. The most substantial aggravating effects on citizen fear of crime in the daytime were being female (3.185 odds ratio, $p = .001$) and previous personal victimization (1.890 odds ratio, $p = .003$). Put differently, females were over three times more likely to fear crime than males, and previous victims of personal crime were almost twice as likely to fear crime as non-victims.

Table 2. Fear of Crime in Daytime

Independent Variable	OR	SE	$p > z $
Police visibility	0.953	0.042	0.280
Police response time	1.034	0.071	0.626
Citizens' perception of police success	0.879	0.063	0.074
Age	1.006	0.008	0.448
Female	3.185*	1.063*	0.001*
Age x female interaction term	0.984	0.010	0.132
Income	0.875*	0.051*	0.025*
Education	1.144	0.098	0.119
Marital status (married)	1.173	0.190	0.326
Property crime victimization	1.135	0.172	0.404
Person crime victimization	1.890*	0.408*	0.003*
Watching news on national TV	0.989	0.056	0.851
Watching news on local TV	0.996	0.064	0.952
Read news from national newspapers	0.867*	0.051*	0.016*
Read news from local newspapers	1.174*	0.079*	0.018*

Independent Variable	OR	SE	$p > z $
Know people in neighborhood	0.786*	0.048*	0.000*
Length of residence in neighborhood	0.960	0.046	0.414
Economic status of neighborhood	0.704*	0.080*	0.002*

Note: $N = 894$. Wald $\chi^2(18) = 74.96$. $p > \chi^2/2 = 0.000$. Pseudo $R^2 = 0.038$. The dependent variable is fear of crime during daytime. To measure this variable, the following question was asked: How safe do you feel when you walk alone in your neighborhood during the daytime? (1) Very safe, (2) Safe, (3) Somewhat safe, (4) Unsafe, (5) Very unsafe. Because the dependent variable was an ordinal-level variable, ordered logistic regression was used.

* $p < .05$.

Respondents living in neighborhoods with high economic status are more likely to fear being victimized when walking alone during the daytime (0.704 odds ratio, $p = .002$). In other words, those who live in wealthier neighborhoods have 0.704 times the odds of feeling unsafe when walking alone during the daytime compared to those who live in less wealthy and poorer neighborhoods.

Interestingly, knowing people in the neighborhood also increases fear of crime during daytime (0.786 odds ratio, $p = .000$). Those who live in communities where people know each other well are 0.786 times the odds of feeling unsafe when they walk alone during daytime compared to others who live in neighborhoods where people do not know each other well.

Even though respondents from Malatya said they were more likely to watch the news on national TV than on local channels and more than read newspapers on local and national levels, it did not have any impact on their fear of crime. Getting news from local TV channels did not significantly affect the respondents' fear of crime, either.

Whereas reading news from a national newspaper increased the fear of crime during daytime (0.867 odds ratio, $p = .016$), it did not have the same impact at nighttime, as shown in Tables 2 and 3. However, getting news from local newspapers positively affected the fear of crime during daytime (1.174 odds ratio, $p = .018$) and nighttime (0.816 odds ratio, $p = .016$). Reading local news is the only news variable that increases fear of crime both daytime and nighttime. These findings are as expected as one might expect that local crime stories would make citizens more fearful than national stories because they

are closer to home.

In changing the focus of fear of crime from day to night (see Table 3), citizen perception of police success becomes significant and reduces citizen fear of crime by a modest amount (.843 odds ratio, $p = .017$). Females are nine times more likely to experience fear of crime during nighttime (9.179 odds ratio, $p = .000$). What is even more striking here is that females' fear of crime seems to be tripled from 3.185 odds ratio during daytime to 9.179 odds ratio during nighttime.

Table 3. Fear of Crime at Night

Independent Variable	OR	SE	$p > z$
Police visibility	1.014	0.045	0.752
Police response time	0.955	0.065	0.505
Citizens' perception of police success	0.843*	0.060*	0.017*
Age	1.008	0.008	0.327
Female	9.179*	3.030*	0.000*
Age x female interaction term	0.975*	0.009*	0.015*
Income	0.889*	0.053*	0.049*
Education	0.901	0.076	0.219
Marital status (married)	0.894	0.145	0.494
Property crime victimization	1.183	0.177	0.261
Person crime victimization	1.280	0.272	0.246
Watching news on national TV	0.984	0.057	0.781
Watching news on local TV	1.101	0.070	0.132
Read news from national newspapers	1.014	0.058	0.804
Read news from local newspapers	0.853*	0.056*	0.016*
Know people in neighborhood	0.960	0.056	0.496
Length of residence in neighborhood	0.927	0.044	0.121
Economic status of neighborhood	0.833	0.094	0.107
Sufficient streetlights	0.864*	0.053*	0.020*

Note: $N = 891$. LR $\chi^2(19) = 199.80$. $p > \chi^2_2 = 0.000$. Pseudo $R^2 = 0.071$. The dependent variable is fear of crime at night. To measure this variable, the following question was asked: How safe do you feel when you walk alone in your neighborhood at night? (1) Very safe, (2) Safe, (3) Somewhat safe, (4) Unsafe, (5) Very unsafe. Because the dependent variable was an ordinal-level variable, ordered logistic regression was used.

* $p < .05$.

The inverse relationship between income and fear of crime is virtually unchanged in going from daytime in Table 2 to nighttime in Table 3. Surprisingly, the robust effect of previous personal victimization on fear of crime during the day disappears in the context of night. Reading local newspapers, however, consistently increases fear of crime during the daytime (1.174 odds ratio, $p = .018$ in Table 2) and at night (.853 odds ratio, $p = .016$). Further, the social solidarity indicator of knowing people in the neighborhood mitigates the fear of crime during the day (.786, $p = .000$ in Table 2) but has no effect at night in Table 3. Similarly, living in a neighborhood of higher economic status reduces fear of crime in the daytime but not at night. Some of these unexpected findings may reflect respondents' conscious decisions to limit their exposure to nighttime environments. We also see that citizen impressions of the adequacy of street lighting reduce fear of crime by a small amount.

The age-sex (female) interaction term does not affect fear of crime during the day in Table 2 but becomes significant at night in Table 3 ($p = .015$). It means that females of older ages are no different than younger females and males of all ages regarding daytime fear of crime. However, females of older ages are more worried about being a victim of crime during the night than younger females and males of all ages. To visually show why the interaction term is significant in the daytime model but not in the nighttime model, we have created the following two figures (see Figure 1 and Figure 2). The x -axis represents the age of the respondents, the y -axis represents their fear of crime at night, and the different lines represent the average fear of crime for both sexes at each age. The interaction plots below are used to determine whether there is a significant interaction effect between sex and age on fear of crime at night. Since the lines are parallel and follow the same trend in the daytime fear of crime model, it suggests that the relationship between age and fear of crime is consistent for both sexes. On the other hand, since the lines deviate significantly from each other in the second graph, it indicates a significant interaction effect in the fear of crime at night.

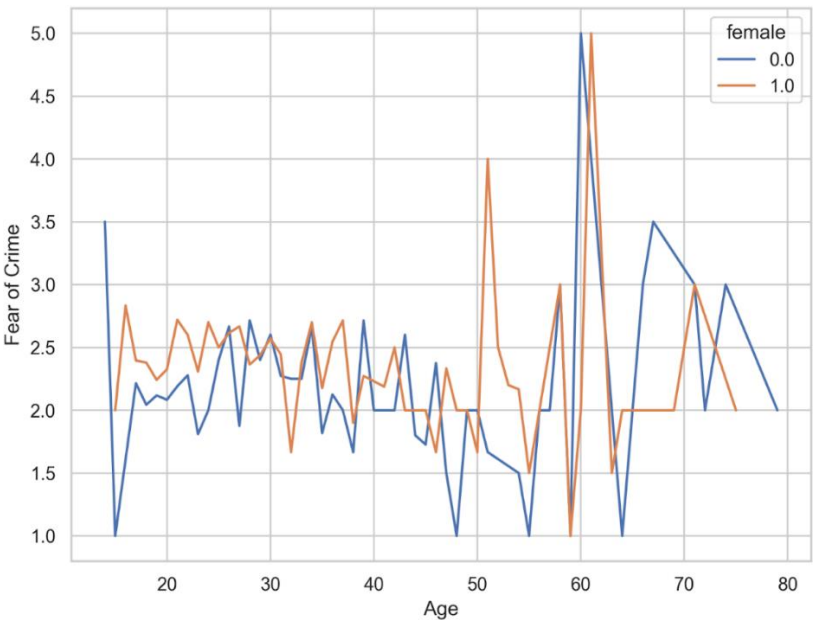


Figure 1. Interaction Plot between Sex and Age on Fear of Crime during Daytime

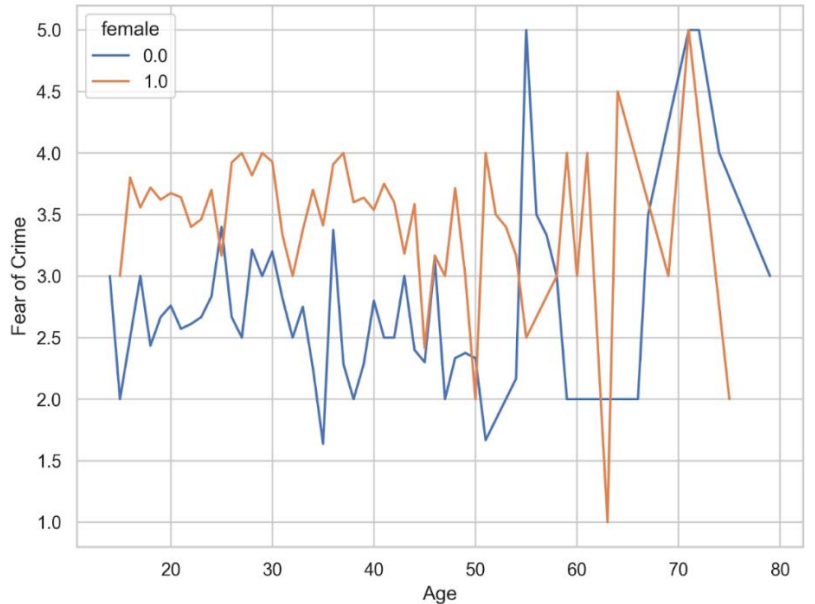


Figure 2. Interaction Plot between Sex and Age on Fear of Crime during Nighttime

Discussion and Conclusion

The current study of police visibility and fear of crime in Malatya, Turkey, attempts to contribute to the global literature on policing and fear of crime. This is the first empirical study of the influence of traditional measures of police visibility and effectiveness on citizens' fear of crime in Turkey and contributes to a small body of research that looks at citizens' fear of crime during the day and at night. Contrary to some previous studies (Borovec et al., 2019; Brown & Wycoff, 1987; Cho, 2020; Kelling et al., 1981; Kim et al., 2021; Pate et al., 1986; Polat & Gul, 2009; Turk et al., 2023), citizens' subjective perceptions of police visibility and response time did not affect fear of crime during either day or at night. It is a common police practice in Turkey to always keep the emergency lights on at night to increase police visibility. As with the color-coded threat levels for terrorist attacks implemented by the Department of Homeland Security in the U.S., citizens may simply ignore overused stimuli or reject their credibility (Grant & Terry, 2012). If police presence increases some citizens' fear of crime, as noted in several studies (Fernandes, 2018; Holmberg, 2002; Salmi et al., 2004; Scheider et al., 2003), then the visual overload produced by police cars' emergency lights is likely to aggravate such apprehension. In addition, more judicious use of emergency lights on police cars may increase the probability that citizens will yield the right-of-way during a real emergency or give a wider berth to officers ticketing moving violations or rendering assistance on the side of the road.

Citizens subjective perceptions of police success reduced fear of crime only at night in this study, so perhaps this variable is more important when one's environment is less predictable. Citizens may be more sensitive to the possibility of criminal victimization and feel more vulnerable at night. In such a context, feeling that the police are doing a good job may increase citizens' comfort (Kim et al., 2021; Weitzer & Kubrin, 2004).

Sufficient street lighting had a modest but significant mitigating effect on fear of crime (see Table 3). Well-maintained streetlights are more likely to positively impact citizens' perception of safety, a finding that has important implications for policing practices and collaboration with local authorities.

Respondents' criminal victimization in the past has a doubling effect on fear of crime during the daytime but it had no effect at night. This finding may reflect a conscious decision of victims of crime to take precautionary measures and restrict their nighttime activities to avoid a similar risk again. In contrast, prior property crime victimization did not affect fear of crime at night or fear of crime in the daytime. Compared to personal crime victimization, property crime victimization may represent a less direct threat to citizens. This finding contrasts the previous research (Brown, 2016) in which victimization of burglary increased the fear of crime. Burglary, while not a violent crime, can significantly impact victims. Since everyone's house is the most trusted, secure, and sacred place in their lives, burglary violates people's sense of safety and privacy. Most definitely, burglary incidents can also lead to significant financial losses. As a result, victims of burglary would likely experience higher levels of fear of crime than other forms of property crime. Victims of burglary may be more likely to worry about being targeted again, while victims of other property crimes may be less worried about being targeted again. This difference may be because burglary is a crime that specifically targets a specific place that is supposed to be the most secure in one's life, while other property crimes may be more random. Additionally, victims of burglary may experience a greater sense of loss of control and vulnerability, as their home or place of business has been violated. This can lead to increased levels of fear and anxiety.

Reading local newspapers increased the fear of crime during the day and at night, whereas reading national newspapers increased it only during the daytime. On the other hand, getting news from local or national TV channels did not significantly affect the respondents' fear of crime. Our findings support previous research with some similarities and differences. For instance, one research done in the U.S. suggested a higher fear of crime for citizens who get their news from local TV (Weitzer & Kubrin, 2004), and another study found that local news on radio and TV rather than newspapers had an impact on fear of crime (Shin & Watson, 2022). Yet, another study found a similar impact with television news and crime-based reality shows rather than newspapers or crime dramas (Callanan, 2012). However, none of them differentiated whether daytime or night mattered.

Knowing one's neighbors decreases fear of crime during the day but not at night, which is consistent with citizens consciously limiting their exposure to crime at night. LaGrange and Ferraro (1987) point out that most people generally, not just women and the elderly, are in their homes during nighttime hours, so the nighttime question becomes more hypothetical.

The most dramatic effect in the entire study is, being female made Malatya respondents over three times more fearful of crime during the day (see Table 2) and over nine times more fearful of crime at night (see Table 3). Comparing gender effects in previous research gives an idea of the magnitude of the above effects. Our findings support the previous studies (Bennett, 1994; Brown, 2016; Hinkle & Weisburd, 2008; Scheider et al., 2003; Turk et al., 2023; Weitzer & Kubrin, 2004) that females have more fear of crime than males. Since the reasons and sources of fear of crime were not the scope of the current study, further studies should explore why females have more fear of crime in Turkey's context.

Even though it is commonly assumed that more police visibility and reduced response time increase feelings of security, this study could not find empirical support for either argument. This suggests that police practices as implemented and their interpretation by citizens may be distinct phenomena. Thus, common policies like increasing police visibility should more often be independently evaluated to determine whether they create expected results.

Limitations

We acknowledge some limitations to our study that have implications for future research. As this study was designed as cross-sectional research conducted in only one city in Turkey, there is a need for further research in other parts of Turkey to test the validity of the findings presented here. Although Malatya was carefully chosen as a typical Turkish city using multiple factors, future research should try to replicate this study in other parts of Turkey and elsewhere. Cross-sectional data may be biased by a highly publicized crime event or a dramatic change in police policy. However, we are not aware of any such contaminating factors, longitudinal research is

certainly desirable. Since the previous studies that sampled fear of crime in daytime versus nighttime (Gallup, 1982; Bennett, 1994) did not use this differential as a unit of analysis, we especially recommend more studies of this variable.

Police visibility and effectiveness in this study were measured by respondents' subjective impressions, not actual police hours worked or specific law enforcement strategies implemented. More objective measures of police visibility and implementation of different strategies in randomly selected neighborhoods may show the assumed inverse relationship between police visibility and fear of crime that was not obtained in the current study. Citizens' perception of police success had a separate effect from police visibility in reducing fear of crime at night, which casts further doubt on the assumption that police visibility alone can reduce fear of crime. Especially in developing nations, police may be seen as ineffective, corrupt, and abusive. Another possible explanation for the insignificance is that citizens' perceptions of police success and visibility are highly correlated. To test the hypothesis, we ran an ordered logistic regression model with resident ratings of police success as the dependent variable. As the public perception of police presence (police visibility) increased, the ratings of police success also increased. The public ratings of police success may mediate the impact of police visibility.

Studies of police visibility and fear of crime seem to ask more questions than they answer. What types of police visibility best benefit the people, reduce fear of crime, make the individuals feel much safer, and how much visibility is enough? Yet, do cultural aspects matter in determining the balance between police visibility and fear of crime?

References

- Alfaro-Beracoechea, L., Puente, A., da Costa, S., Ruvalcaba, N., & Páez, D. (2018). Effects of fear of crime on subjective well-being: A meta-analytic review. *The European Journal of Psychology Applied to Legal Context*, 10(2), 89–96.
- Akyuz, K., Akbas, H., & Onat, I. (2023). Evaluating the impact of Syrian refugees on fear of crime in Turkey. *European Journal of Criminology*, 20(2), 468–485. <https://doi.org/10.1177/14773708211010665>
- Bennett, T. (1994). Confidence in the police as a mediating factor in the fear of crime. *International Review of Victimology*, 3, 179–194.
- Bennett, R. R., & Flavin, J. M. (1994). Determinants of fear of crime: the effects of cultural setting. *Justice Quarterly*, 11, 357–381.
- Bilach, T. J., Roche, S. P., & Wawro, G. J. (2022). The effects of the Summer All Out Foot Patrol Initiative in New York City: A difference-in-differences approach. *Journal of Experimental Criminology*, 18(2), 209–244. <https://doi.org/10.1007/s11292-020-09445-8>
- Boivin, R., & de Melo, S. N. (2023). Do police stations deter crime? *Crime Science*, 12, 1–15. <https://doi.org/10.1186/s40163-023-00193-4>
- Borovec, K., Balgac, I., & Mraovic, I. C. (2019). Police visibility as an influencing factor on citizens' perception of safety. *Varstvoslovje*, 21(2), 135–160.
- Box, S., Hale, C., & Andrews, G. (1988). Explaining fear of crime. *British Journal of Criminology*, 28, 340–356.
- Brown, B. (2016). Fear of crime in South Korea. *International Journal for Crime, Justice and Social Democracy*, 5(4), 116–131. <https://doi.org/10.5204/ijcjsd.v5i4.300>
- Brown, L.P., & Wycoff, M. A. (1987). Policing Houston: Reducing fear and improving service. *Crime and Delinquency*, 33, 71–89.
- Brooks, J. (1974). The fear of crime in the United States. *Crime and Delinquency*, 20, 241–244.
- Callanan, V. J. (2012). Media consumption, perceptions of crime risk and fear of crime: examining race/ethnic differences. *Sociological Perspectives*, 55(1), 93–115. <https://doi.org/10.1525/sop.2012.55.1.93>

- Cho, J. T. (2020). Factors affecting crime, fear of crime and satisfaction with police: focusing on policing and the neighborhood context. *Policing: An International Journal of Police Strategies & Management*, 43(5), 785–798. <https://doi.org/10.1108/PIJPSM-04-2020-0053>
- Collins, R. E. (2016). Addressing the inconsistencies in fear of crime research: A meta-analytic review. *Journal of Criminal Justice*, 47, 21–31. <https://doi.org/10.1016/j.jcrimjus.2016.06.004>
- Cordner, G. W. (1986). Fear of crime and the police: an evaluation of a fear-reduction strategy. *Journal of Police Science and Administration*, 14(3), 223–233.
- Cordner, G. W. (2010). *Reducing fear of crime strategies for police*. U.S., Department of Justice.
- Currey, G. H., Carr, A. F., Schnelle, J. F., & Risley, T. R. (1983). Police research technology: functional relations between juvenile citations and criminal offences. *Journal of Criminal Justice*, 11(1), 15–26. [https://doi.org/10.1016/0047-2352\(83\)90094-6](https://doi.org/10.1016/0047-2352(83)90094-6)
- Dammer, H. R., & Albanese, J. S. (2014). *Comparative criminal justice systems*. Wadsworth Cengage Learning.
- Dolu, O., & Uludag, S. (2010). *Toplum destekli polislik ve suç korkusu [Community policing and fear of crime]*. In Sözer, M. A. (Ed.), *Toplum destekli polislik: Toplum, suç ve polis [Community policing: Society, crime and police]* (pp. 45–62). Ankara: Adalet Yayınevi.
- Dolu, O., Uludag, S., & Dogutas, C. (2010). Fear of crime: Causes, results and security policies. *A.Ü. Siyasal Bilimler Fakültesi Dergisi [A.U. Journal of the Faculty of Political Sciences]*, 65, 57–81.
- Eck, E., & Rosenbaum, D. P. (1994). *The new police order: effectiveness, equality, and efficiency in community policing*. In Rosenbaum, D. P. (Ed.), *The challenge of community policing: Testing the promises* (pp. 3–23). Sage.
- Fernandes, A. (2018). Red lights and handcuffs: The effect of arrests on the fear of crime. *Social Science Quarterly*, 99, 1390–1408.
- Ferraro, K. F. (1995). *Fear of crime: Interpreting victimization risk*. State University of New York Press.
- Furstenburg, F. F., Jr. (1971). Public reaction to crime in the street. *American Scholar*, 40, 601–610.

- Gallup, G. (1982). *The Gallup Report*. No. 206 (November). Gallup Poll.
- Gerell, M., Kardell, J., & Nilvall, K. (2020). The helicopter pilot-swedish hot-area policing from above. *Frontiers in Psychology*, 11, 1–13. <https://doi.org/10.3389/fpsyg.2020.601667>
- Grant, H., & Terry, K. J. (2012). *Law enforcement in the 21st century* (3rd ed.). Pearson.
- Greene, J. R., & Taylor, R. B. (1988). *Community-based policing and foot patrol: Issues of theory and evaluation*. In J. R. Greene & S. D. Mastrofski (Eds.), *Community policing: Rhetoric or reality* (pp. 195–223). Praeger.
- Henig, J., & Maxfield, M. G. (1978). Reducing fear of crime: strategies for intervention. *Victimology*, 3, 297–313.
- Hinkle, J., & Weisburd, D. (2008). The irony of broken windows policing: A micro-place study of the relationship between disorder, focused police crackdowns, and fear of crime. *Journal of Criminal Justice*, 36, 503–512.
- Holmberg, L. (2002). Personalized policing: results from a series of experiments with proximity policing in Denmark. *Policing: An International Journal of Police Strategies & Management*, 25, 32–47.
- Hope, T. (2009). The illusion of control: A response to Professor Sherman. *Criminology and Criminal Justice*, 9, 125–134.
- Hunter, A. (1978). Symbols of incivility: Social disorder and fear of crime in urban neighborhoods [Paper presentation]. Annual Meeting of the American Society of Criminology, Dallas, TX, United States.
- Kansas City Police Department. (1977). *Response time analysis*. National Institute of Law Enforcement and Criminal Justice.
- Karakus, O., McGarrell, E. F., & Basibuyuk, O. (2010). Fear of crime among citizens of Turkey. *Journal of Criminal Justice*, 38, 174–184.
- Kelling, G. L. (1981). *Conclusions: The Newark foot patrol experiment*. Police Foundation.
- Kelling, G. L., Pate, A., Ferrara, A., Utne, M., & Brown, C. E., (1981). *The Newark foot patrol experiment*. Police Foundation.
- Kelling, G. L., Pate, T., Dieckman, D., & Brown, C. E. (1974). *The Kansas City preventive patrol experiment: A technical report*. Police Foundation.

- Kim, S., Han, S., & Maskály, J. (2021). Factors of fear of crime among Korean citizens: The mediating effect of confidence in the police. *International Journal of Law, Crime and Justice*, 66, 1–12. <https://doi.org/10.1016/j.ijlcj.2021.100488>
- Koseoglu, M. (2021). Fear of crime perceptions of university students. *Sociologia (Lisbon, Portugal)*, 96, 41–57. <https://doi.org/10.7458/SPP20219618280>
- Kula, S. (2015). The Effectiveness of CCTV in public places: Fear of crime and perceived safety of citizens. *Bartın Universitesi I.I.B.F. Dergisi [Bartın University I.I.B.F. Magazine]*, 6(12), 15–37.
- LaGrange, R. L., & Ferraro, K. F. (1987). The elderly's fear of crime: A critical examination of the research. *Research on Aging*, 9, 372–391.
- Macassa, G., Winersjo, R., Wijk, K., McGrath, C., & Ahmadi, N. (2017). Fear of crime and its relationship to self-reported health and stress among men. *Journal of Public Health Research*, 6, 169–174.
- Mesko, G., Fallshore, M., Muratbegovic, E., & Fields, C. (2008). Fear of crime in two post-socialist capital cities: Ljubljana, Slovenia and Sarajevo. *Journal of Criminal Justice*, 36, 546–553.
- Moore, M. H., & Trojanowicz, R. C. (1988). *Policing and the fear of crime*. U.S. Department of Justice, National Institute of Justice.
- Oliver, W. M. (1998). *Community-oriented policing: A systematic approach to policing*. Prentice Hall.
- Ozascilar, M., Mawby, R. I., & Ziyalar, N. (2019). Perceptions of risk on vacation among visitors to Istanbul. *Safer Communities*, 18(1), 16–29. <https://doi.org/10.1108/SC-06-2018-0017>
- Pate, A. M., & Skogan, W. G. (1985). *Coordinated community policing: The Newark experience. Technical report*. Washington, DC: Police Foundation
- Pate, A., Wycoff, M. A., Skogan, W., & Sherman, L. W. (1986). *Reducing fear of crime in Houston and Newark: A summary report*. Police Foundation.
- Pfuhl, E. H. (1983). Police strikes and conventional crime, *Criminology*, 21, 489–503.
- Piza, E. L. (2018). The effect of various police enforcement actions on violent

- crime: Evidence from a saturation foot-patrol intervention. *Criminal Justice Policy Review*, 29(6-7), 611–629. <https://doi.org/10.1177/0887403417725370>
- Polat, A., & Gul, S. K. (2009). *Urban insecurity concerns: Erzincan field research*. In V. K. Bilgiç (Ed.), *Various aspects of police decentralization* (pp. 163–183). Seçkin Yayınevi.
- Prine, R. K., Ballard, C., & Robinson, D. M. (2001). Perceptions of community policing in a small town. *American Journal of Criminal Justice*, 25, 211–221.
- Ratcliffe, J. H., Taniguchi, T., Groff, E. R., & Wood, J. D. (2011). The Philadelphia foot patrol experiment: A randomized controlled trial of police patrol effectiveness in violent crime hotspots: Philadelphia foot patrol experiment. *Criminology*, 49(3), 795–831. <https://doi.org/10.1111/j.1745-9125.2011.00240.x>
- Roberg, R. R. (1976). *The changing police role: New dimensions and new issues*. Justice Systems Development.
- Ross, C. E. & Jang, S. J. (2000). Neighborhood disorder, fear and mistrust: The buffering role of social ties with neighbors. *American Journal of Community Psychology*, 28, 401–420.
- Salmi, S., Grönroos, M., & Keskinen E. (2004). The role of police visibility in fear of crime in Finland. *Policing: An International Journal of Police Strategies & Management*, 27, 573–591.
- Scheider, M. C., Rowell, T., & Bezdikian, V. (2003). The impact of citizen perceptions of community policing on fear of crime: Findings from 12 cities. *Police Quarterly*, 6, 363–386.
- Schnelle, J. F., Kirchner, R. E., Casey, J. D., Uselton, P. H., & McNees, M. P. (1977). Patrol evaluation research: a multiple baseline analysis of saturation police patrolling during day and night hours. *Journal of Applied Behavior Analysis*, 10(1), 33–40.
- Schnelle, J. F., Kirchner, R. E., Macrae, J. W., McNees, M. P., Eck, R. H., Snodgrass, S., Casey, J. D., & Uselton, P. H. (1978). Police evaluation research: an experimental and cost-benefit analysis of a helicopter patrol in a high crime area. *Journal of Applied Behavioral Analysis*, 11(1), 11–21. <https://doi.org/10.1901/jaba.1978.11-11>
- Shahidullah, S. M. (2013). *Comparative criminal justice systems*. Jones &

Bartlett.

- Shin, S. Y., & Watson, B. R. (2022). Trial by media?: Media use, fear of crime, and attitudes toward police. *Journalism Practice*, 1–22. <https://doi.org/10.1080/17512786.2022.2055624>
- Simpson, R., Frewing, Q., & Tiwana, S. (2023). A field test of police vehicle presence on speed(ing): Parked, unoccupied, and effective. *Crime and Delinquency*. 1–18. <https://doi.org/10.1177/00111287231207368>
- Sipahi, E. B. (2022). Evaluating Fear of Crime in the City from Ecological Perspective: A Study on Female University Students in Turkey. *ICONARP International Journal of Architecture and Planning*, 10(1), 115–135. <https://doi.org/10.15320/ICONARP.2022.196>
- Skogan, W. (1986). Fear of crime and neighborhood change. *Crime and Justice*, 8, 203–229.
- Spelman, W., & Brown, D. K. (1981). *Calling the police. A replication of the citizen reporting component of the Kansas City response time analysis*. Police Executive Research Forum.
- Trojanowicz, R. C. (1983). An evaluation of a neighborhood foot patrol program. *Journal of Police Science and Administration*, 11(4), 410–419.
- Turk, B., Hamzaoglu, N., Yayak, A., & Senyuva, G. (2023). Fear of crime in the context of gender and ambivalent sexism in Turkey. *International Sociology*, 38(1), 99–117. <https://doi.org/10.1177/02685809221141009>
- Turkish Statistical Institute. (2023). <http://www.turkstat.gov.tr>
- Warr, M. (2000). Fear of crime in the United States: Avenues for research and policy. In D. Duffee (Ed.), *Criminal justice 2000 vol. 4. Measurement and analysis of crime and justice* [ebook]. National Institute of Justice. http://www.ncjrs.gov/criminal_justice2000/vol_4/04i.pdf
- Weisburd, D., Wilson, D. B., Petersen, K., & Telep, C. W. (2023). Does police patrol in large areas prevent crime? Revisiting the Kansas City Preventive Patrol Experiment. *Criminology & Public Policy*, 22(3), 543–560. <https://doi.org/10.1111/1745-9133.12623>
- Weitzer, R., & Kubrin, C. E. (2004). Breaking news: How local TV news and real-world conditions affect fear of crime. *Justice Quarterly*, 21, 497–520.
- Wilson, J. Q., & Boland, B. (1978). The effect of the police on crime. *Law*

and Society. 12(3), 367–390.

Wilson, J. Q. & Kelling, G. (1982, March). Broken windows: The police and neighborhood safety. *Atlantic Monthly*, 29–38.

Winkel, F. W. (1986). Reducing fear of crime through police visibility: A field experiment, *Criminal Justice Policy Review*, 1(4), 381–398.

Wycoff, M. A., & Skogan, W. G. (1985). *Police Community Station - The Houston Field Test - Technical Report*. Police Foundation. <https://www.ncjrs.gov/pdffiles1/Digitization/102406NCJRS.pdf>