Motels and crime: The effects of motel closures on crime rates

A thesis submitted in partial fulfillment of the requirements for the degree of Masters of Arts in Criminal Justice

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Abstract

In recent years, police organizations and scholars have begun to study motel crimes and the ways that crimes at such lodgings might be reduced. Although studies have helped police and city officials to manage crime at problem motels, the current literature largely overlooks motel closures and the impact these events can have on crime rates. This study seeks to expand current understandings of the relationship between motel closures and crime rates in the areas which surround them. To investigate this relationship, geographic mapping of crime data is employed along with descriptive and inferential data analyses. Overall, the results suggest that motel closures do not have a significant impact on motel-related crime or crime in general; therefore, any resulting effects from closure may be marginal.
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I would also like to thank various institutions that contributed data to this study. In particular, I would like to thank the Reno Police Department for allowing access to calls for service and census data and the Washoe County Health Department’s Code Enforcement organization for providing a comprehensive list of motels in Washoe County. Without such data, the current study would not have been possible.

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Chapter I

Introduction

Problem Statement

Low-budget motels are interspersed throughout the American landscape. Though these establishments often provide affordable lodging options for temporary residents and travelers, they also have a tendency to foster criminal activity and promote disorder (Schmerler, 2005). A single motel, poorly managed and operated, may result in an elevated number of calls for service (CFS) to local police agencies which must repeatedly send officers to the same location. For instance, police in Fresno, California, noted that prior to police intervention, a single motel was generating an average of twenty CFS per month to local police (FPD, 2001).

Problem motels occasionally close down. Often, this closure is voluntary as owners can grow tired of owning a motel or experience other issues such as financial hardship or crime. Motels can also be forcefully closed down by local and municipal governing bodies through various legal injunctions such as nuisance abatements or eminent domain (Amato et al., 1999). Whether voluntary or forced, motel closures may result in the expulsion of motel guests and, often, their undesirable behaviors. Depending on where former guests choose to go, crime rates in the surrounding areas may be significantly impacted. This situation raises important concerns regarding how beneficial or detrimental motel closures are to a specific area.

The current study will add to the existing literature on motel crime by analyzing how crime behaves after a motel closes down. In particular, this research will analyze six motel sites located in downtown Reno, Nevada, and assess how the closure of each of
these motels affects crime at motels and in their surrounding areas. This analysis will thereby expand on the present literature while presenting researchers, police officials, and policymakers with a better perspective on relationships between motel closures and crime.

**Motel History and Cultural Perspectives**

American motels originally developed with the rise of the automobile industry. As people acquired cars and began to travel, they required places to stay. From this need, entrepreneurs in the 1920s began to build small motor hotels to house travelers thus creating the first motels (Belasco, 1979). Following World War II, the motel business grew in popularity eventually resulting in a thriving industry across America. With this success, corporations began to influence the motel industry. During the 1980s, motel chains and franchises came to dominate the industry, and mom-and-pop motels receded from prominence in American travel (Jakle, Sculle, & Rogers, 1996). Today, motel and hotel chains tend to house travelers, while family-owned motels cater to a lower-budget market filled with temporary non-traveling residents.

With mom-and-pop motels now catering to these more permanent residents, cultural stigma has developed toward such facilities and their occupants. This perspective becomes evident in popular media where motels are commonly portrayed as places where deviant behavior abounds. Literature and films such as Willy Vlautin’s *The Motel Life* and Alfred Hitchcock’s *Psycho* depict motels as places where crime thrives and the rabble of society congregates.

Modern media accounts of motel crime reinforce this negative portrayal. Although such accounts rarely appear on national news, local stations may report motel
crimes or occasions when police sweep through a motel to investigate a crime. For instance, in the summer of 2011, Reno police and other city organizations passed through one Reno motel which resulted in multiple room condemnations, citations, arrests, and the expulsion of over fifty people (O’Malley, 2011; Potter, 2011; Russell, 2011). Since motels rarely garner any positive news coverage, these negative accounts reinforce existing public perspectives on the modern motels. It is in this negative light in which much research on motels has taken place.

**Study Background**

The current study follows ongoing research on motel crime. In particular, it trails past research on motel crime from Chula Vista, California (CVPD, 2012; Eisenberg, Hunter, & Schmerler, 2009; Schmerler, 2005), Oakland, California (Amato et al., 1999; OPD, 2003), and Reno, Nevada (Bailer, 2007; Barnes & Mayes, 2006; Elliot, 2007) which previously focused on studying ways in which motel crime could be reduced. Collectively, this body of research suggests that motel crime is a serious problem which can be managed if police and other municipal organizations work with one another to actively address the issue.

Despite initial research on motel crime, the subject has not received the attention it likely deserves. Much research on crime occurring at lodgings has been directed toward reducing crime at high-cost establishments such as hotels (Ho, Zhao, & Brown, 2009) or other commercial facilities associated with crime such as cafés, bars, and casinos (Johnson et al., 2010; Stitt, Giacopassi, & Nichols, 2000). Moreover, the subject of motel closures has largely remained unstudied even though closure has been recommended as a possible option for dealing with motel crime (Amato et al., 1999).
Since the current study focuses on motel closures and their relationships to crime, this research will not only help to expand knowledge on motel closures, but it may also assist in determining if closure is an effective strategy for dealing with motel crime.

In addition to following previous research on motel crime, this study follows in the footsteps of geographic theories of crime and theories of criminal opportunity. Specifically, the current research relies on past theories regarding hot spots, displacement, and diffusion to explain why crime is occurring at certain locations and not others. Moreover, past theories on rational choice, routine activities theory, crime patterns, and the journey to crime serve as a foundation to explain what happens to possible offenders when they are forced to leave a motel.

**Research Aims**

As previously noted, this study will examine possible relationships between motel closures and crime rates. Particularly, this research aims to study various questions concerning such a relationship. Such questions include:

- How does a motel closure affect crime rates at a motel?
- How does a motel closure affect overall crime rates in nearby areas?
- How does a motel closure affect specific types of crime in nearby areas?

These questions will be studied by comparing how motel crime behaves before and after a motel closes down. Specifically, increases or decreases in crime rates at motels and their surrounding areas will help show how motel closures and crime are related to one another. Whatever the results, much can be learned about motel closures and crime from the current study and added to the existing literature on motels.
Chapter II

Literature Review

Perspectives on Motels

Overview

Though definitions can vary, a *motel* generally refers to a low-cost lodging facility hosting multiple rooms, minimal amenities, and room-adjacent parking areas. The actual terminology used to describe such facilities is important because there are many terms beyond “motel” that are associated with such establishments. For example, motels are also often referred to as inns, motor lodges, motor courts, and 28 day residencies. These facilities are not to be confused with hotels and resorts which usually cost more and emphasize short term stays.

Low-budget motels are intended to provide lodging for two primary groups of people. The first group includes short-term occupants such as travelers and tourists seeking low-budget accommodations. The second group consists of local residents who stay for longer durations, such as the homeless, unemployed, and poor. The members of this second group essentially treat motels as affordable, temporary residences and comprise around 80% of a motel’s standard occupancy (Schmerler, 2005). Since this group represents the majority of the motel population, they are also usually responsible for much of the crime that occurs at low-budget motels.

Crime and Disorder

Motel crime and disorder has become an important issue for law enforcement agencies throughout the United States (e.g., Barnes & Mayes, 2006; FPD, 2001; Willis, 2007). This problem has likely been enhanced by recent economic downturns and
fluctuations. Since motels are tied to economic shifts, motel crime and disorder are possibly affected by these trends.

Despite the apparent importance of studying motel crime, few academics have specifically examined this issue (e.g., Amato et al., 1999; Elliott, 2007). Instead, the majority of information on crime and disorder at motels comes from police initiatives and professional reports (e.g., Barnes & Mayes, 2006; CVPD, 2012; FPD, 2001; Schmerler, 2005; Willis, 2007). In general, these works seek to identify typical problems and describe effective methods to prevent and treat crime and disorder at motels. Understanding these elements is necessary to better comprehend the nature of motel crime.

A great deal of crime, disorder, and other problems can occur at motels. Specifically, the most common types of problems involve prostitution, domestic disturbances, drug dealing and use, theft, fights, and urban decay (Amato et al., 1999; Barnes & Mayes, 2006; OPD, 2003; Schmerler, 2005). Other, more complex forms of crime may spawn from these common motel crimes such as gang activity, drug trafficking, and murder (Willis, 2007). In particular cases, crime occurring at motels can spill over into nearby businesses and encompass an entire local environment (e.g., Barnes & Mayes, 2006; FPD, 2001). Since motel crime may further develop and spread, researchers have examined specific causes of motel crime to better understand it.

Sources of Motel Crime

Key sources of motel crime can be described using four distinct categories. Schmerler (2005) identifies these categories as motel economics, physical design, personnel, and clientele. Motel economics concern issues such as room rates and the
financial status of motels. These factors may contribute to crime in a variety of ways. For example, in one assessment, the Chula Vista Police Department (2012) noted a direct correlation between low room rates and increased motel crime. Other investigations into room rates, calls for service (CFS), and motel economics have found similar results (e.g., Willis, 2007).

The physical layout of the motel is another factor that can directly influence crime. In general, motels are designed so that the management office is apart from the rooms of most occupants. This design may lead to surveillance issues along with other problems. For instance, the described layout frequently allows occupants to enter motel rooms directly from the parking lot without passing through a central lobby where they might easily be monitored by staff (Schmerler, 2005). Failing to have a central lobby through which guests must pass decreases the amount of surveillance that management and staff have on their guests. Moreover, such layouts may undermine police efforts to deal with motel crime by providing a safe haven for criminals. For example, offenders sometimes can easily observe arriving police from their motel rooms (e.g., FPD, 2001) making it difficult to remove drug dealers who may be stationed in a particular motel (e.g., Barnes & Mayes, 2006).

Motel personnel are another aspect that can significantly contribute to crime and disorder at motels. Often, motel staff, managers, and owners may not be properly trained to keep their facilities crime free (Schmerler, 2005). Additionally, they may be unaware of basic public safety and health codes that should be in place at their facilities (Amato et al., 1999). Failure to conform to basic safety standards may significantly affect a motel’s chances of maintaining a low rate of crime. Though some of this unfamiliarity with
regional code can be attributed to the fact that 35% of American motels are owned by immigrant families from India (Dhingra, 2012), this cannot be the only explanation. Motel owners may also require greater education in training and hiring managers and staff because they sometimes not only hire staff who promote crime but actually hire criminal offenders themselves (Barnes & Mayes, 2006; FPD, 2001).

Motel clientele is an additional factor that contributes to crime at motels. The usual low-budget motel clientele consists of a variety of residents such as migrant workers, prostitutes, partiers, parolees, ex-felons, sex offenders and tourists (Barnes & Mayes, 2006; Elliott, 2007; Schmerler, 2005). As previously noted, most motel patrons are local (Schmerler, 2005). Past research has also commented on how motels with higher rates of local residents tend to have higher rates of crime (Schmerler, 2005). This situation can result in enhanced crime at motels.

In all, certain motel characteristics enhance crime at these facilities. These causes and the problems themselves present significant challenges for law enforcement and communities that contain motels. For this reason, various interventions based on situational crime prevention principles have been implemented to mitigate the prevalence of motel crime.

**Police Responses/Interventions**

Over the years, police have employed a number of techniques and interventions to address crime at low-budget motels. Some techniques have shown promise while others have experienced only limited success (Schmerler, 2005). Generally, law enforcement agencies respond to motel crime by using a variety of methods. These enforcement
methods typically include relying on reactive policing, implementing active problems solving measures, or in worst-case scenarios, closing down problem motels.

One common technique that police use to address motel crime involves reactive policing. *Reactive policing* refers to situations in which police simply respond to CFS rather than proactively preventing them. Though this method can have some benefits such as improved officer impartiality and limited police intrusion into public affairs (Moore, Trojanowicz, & Kelling, 1988), it is often not well suited for correcting many problems that can affect a community. This enforcement method may frequently be employed when law enforcement agencies deal with motels because if they are not looking for motel crime specifically, motel crime can easily be overlooked. Typically, police organizations focus on CFS data for some lodgings such as hotels (e.g., Ho et al., 2009), but they may be less likely to identify specific crimes associated with motels. This failure to properly collect and identify crime problems with motels can prevent police from employing proactive and preventative techniques.

Problem solving measures are a second type of enforcement method employed by law enforcement. *Problem oriented policing* or *POP* specifically refers to a policing strategy that promotes proactive problem solving efforts and community engagement (Peak & Glensor, 2008). Various departments have employed problem-oriented interventions as a way to reduce crime at problem motels, and generally, these interventions have shown promise in reducing motel crime (Barnes & Mayes, 2006; CVPD, 2012; FPD, 2001; Willis, 2007). With problem-oriented interventions, departments usually identify key problems unfolding at motel sites and employ a variety of methods to solve identified issues. For example, Barnes and Mayes (2006) describe...
how the Reno Police Department actively addressed motel crime by identifying problems and effectively responding to those issues. Specifically, they reduced motel crime by reorganizing problems and implementing crime prevention through environmental design techniques, management training, abatement fines, and other programs to deal with crime. In all, current literature shows that problem-oriented initiatives can be quite effective at reducing motel crime and disorder if implemented properly.

A third strategy for dealing with motel crime involves simply closing down motels. Although this method is frequently intended as a temporary measure, motel closures can easily become permanent. Usually, this method is reserved for motels that are deemed unfixable, but it can also be employed as a primary response to motel problems. Police and city officials can force the closure of a motel in a variety of ways. These methods include tactics such as nuisance abatements, amortization (termination without compensation), and eminent domain (Amato et al., 1999). Each option involves legally closing a motel so that the property can be upgraded, sold, or used for alternative purposes. However, motel closures may also occur outside of police intervention. For instance, crime may have an impact on a motel’s occupancy rates and force financial hardship on owners thus forcing them to close down.

Of all these options for addressing motel crime noted above, motel closure is the least studied. Past research recommends closure as a possible option for dealing with motel crime (Amato et al., 1999; Schmerler, 2005), but it is unclear how closing a motel actually affects the environment around it. To properly explain possible effects of motel closure, key place-based crime theories should be reviewed.
Theories of Location and Crime

Hot Spots

In general, a *hot spot* usually refers to an area in which a large or disproportionate amount of activity is occurring. As Sherman, Gartin, and Buerger (1989) explain, hot spot analyses are “one of the basic tools of science” that are used in many different academic and commercial fields (p. 28). In the social sciences, this type of analysis stems from early behavioral studies that applied probability theory to the study of spaces (Guerry, 1833; Quetelet, 1842). For modern criminological studies, the term *hot spot* now usually refers to “concentrations or clusters of crimes in space” (Brantingham & Brantingham, 1999, p. 8). Although many definitions of hot spots primarily focus on this dimension of space, some recent studies have begun to shift emphasis by including temporal aspects to the definition. Such temporal definitions assert that hot spots can form on a daily, weekly, monthly, or even seasonal basis rather than a location (Ratcliffe, 2004).

Whether spatial or temporal in nature, hot spots tend to have a significant amount of crime connected to them. For instance, Sherman et al. (1989) noted that in their study on emergency police calls, 3% of the places accounted for 50.4% of calls. Similarly, a more recent hot spot study on city street segments suggested that 1% of 24,000 city street segments were associated with 23% of crime occurring in a studied city (Weisburd, Groff, & Yang, 2013). Studies such as these indicate that crime tends to cluster in certain locations thus establishing the basis for hot spot theory.

Using hot spot theory, past studies suggest that proper identification and analysis may help police to reduce crime in areas where crime clusters. For example, an early
study by Sherman et al. (1989) questioned if concentrations of crime are randomly distributed. Their results indicated that crime distributions are not random and crime in general tends to cluster. In the classic Kansas City Gun Experiment, Sherman, Shaw, and Rogan (1995) expanded this idea by discovering that policing specific hot spot areas can significantly reduce certain gun-related crime in target areas. Subsequent meta-analyses reinforce the notion that hot spot policing strategies can be effective at reducing crime if such strategies are properly implemented (Braga, 2001; Braga, Papachristos, & Hureau, 2012).

Hot spot theory has also spawned various concepts that help elaborate on why crime tends to cluster in specific areas. For example, Brantingham and Brantingham (1995; 1999) refer to the concepts of crime attractors and crime generators. The former includes areas which specifically attract criminal activity (such as a rough bar) while the latter includes areas that attract a large number of criminal targets (such as stadiums). Similarly, other scholars suggest that although certain types of places may be responsible for generating disproportionate amounts of crime, it is actually a subset of these places known as “risky facilities” which actually produce the majority of crimes (Eck, Clarke, & Guerette, 2007, p. 226).

Collectively, hot spot theory holds major implications for researching motel closures. Motels may represent a specific type of hot spot that has been traditionally overlooked. Elliott (2007) describes how motels have a tendency to produce a significant number of CFS and draw disproportionate amounts of police attention. Moreover, Eck et al. (2007) use the example of motels to help describe how risky facilities function. These descriptions align with previous notions of crime attractors (Brantingham &
Brantingham, 1999) and suggest that motel crime cannot be properly discussed without recognizing hot spot theory. Applying such concepts to motel closures may aid in explaining how crime behaves after a motel closes down.

**Displacement**

*Displacement* refers to the idea that crime moves in response to crime reduction efforts (Lersch, 2004). Essentially, this concept can potentially unsettle hot spot policing initiatives because crime might simply be moving in response to a crime reduction attempt. Further complicating the issue, crime can be displaced in a variety of ways. For example, it may be displaced by space, time, method, target, or offense (Repetto, 1976). The multidimensional nature of crime displacement makes it difficult to assess and challenging to measure (Hesseling, 1994). Yet, techniques and tools measuring displacement such as catchment areas (e.g., Weisburd et al., 2006) and displacements quotients are constantly being developed to analyze displacement (e.g., Ratcliffe & Breen, 2011).

Though displacement is a factor that most geographically based studies should consider, research generally shows that displacement often has minimal impact. As Eck (1993) notes, police studies usually encounter little to no displacement effect when such an effect is taken into account. For instance, a major displacement study focusing on drug markets and prostitution in New Jersey neighborhoods found that crime did not move in response to police hot spot initiatives (Weisburd et al., 2006). Meta-analyses of studies measuring displacement further support this notion that its effects are often insignificant in many studies (Bowers et al., 2011; Hesseling, 1994).
Displacement effects in terms of motel interventions also appear to be minimal. For instance, even after accounting for displacement, police interventions at motels in Chula Vista, California, still saw a reduction in CFS at problem motels (Eisenberg et al., 2009). Though displacement often plays a nominal role in explaining how crime behaves, motel closures may suffer a significant risk of displacement because once a motel closes, former residents may simply have nowhere else to go but to another motel.

**Diffusion of Benefits**

Diffusion of benefits presents a competing idea to displacement. This concept asserts that in addition to reducing crime within a targeted area, interventions may also reduce crime outside the targeted zone (Clarke & Weisburd, 1994). In other words, while displacement asserts that crime moves in response to police interventions, the diffusion of benefits concept suggests that crime reductions from an intervention may also spread.

Until recently, relatively few studies accounted for this diffusion of benefits. However, early studies that did account for diffusion of benefits found that diffusion effects could be equally if not more common than displacement effects. For instance, in a study regarding hot spots and drug markets, Weisburd and Green (1995) noted that CFS two blocks outside of a targeted area were receiving diffusion benefits while displacement effects were negligible. Modern studies continue to observe this trend and note small diffusion benefits from police initiatives in place of displacement (e.g., Bowers et al., 2011). As with displacement, new information on diffusion of benefits may help explain movements in crime after a motel closes.
Theories of Opportunity

Rational Choice Theory

Theories and concepts addressing geography help to explain where crime occurs, but such theories only tell part of the story. Theories of opportunity are often also interrelated with geographic theories to explain why offenders commit crimes in certain places. At the heart of most opportunity theories lies rational choice theory.

Rational choice theory is founded on the idea that offenders are rationally thinking individuals who weigh risks, punishments, and gains before committing a crime (Cornish & Clarke, 1986). As with most theories of opportunity, rational theory relates to Bentham’s (1781/2000) concept of hedonistic calculus which states that individuals will likely commit crimes and other forms of deviance if pleasurable benefits outweigh painful consequences. Much of the current literature on rational choice theory goes beyond the scope of this thesis, but information specifically pertaining to situational crime prevention can aid in explaining motel crime.

Cornish and Clarke (1986) advocate the idea that rational choice theory can be used to prevent crime. Essentially, they suggest that crimes are based upon offenders and situations with which they are presented. They note that criminals committing offenses such as shoplifting and burglary select their victims and place based on opportunity, and they further suggest that crime prevention can occur if such opportunities are reduced. Alternatively stated, this theory asserts that certain situations may trigger psychological responses in individuals or ready them to commit criminal acts (Wortley, 1997). If such triggers are identified, it may be possible to reduce environmental factors which activate
those triggers. This broad theory concerning offenders and their choices has inspired other theories such as routine activities theory.

**Routine Activities Theory**

Routine activities theory shares many of the same basic assumptions about criminal behavior that underlie rational choice theory. However, routine activities theory goes further than rational choice theory to outline where and when crimes are most likely to occur. Cohen and Felson (1979) explain that crime is likely to occur in areas where “likely offenders,” “suitable targets,” and the “absence of capable guardians” converge (p. 588). In places containing these three elements, crime may be more likely to occur.

Routine activities theory may also be explained in terms of motel crime. At motels, victims and offenders tend to congregate. In some cases, motel tourists may take the role of the victim; however, it is perhaps more likely that long term residents may be victims as they actually live at motels. Offenders, who live among the victims, may prey upon both groups of individuals. This behavior may prove especially true in circumstances where police and motel security are not readily available. In other words, absences of such capable guardians at motels may easily allow for criminal activity. As this explanation illustrates, routine activities theory can be used to explain crime at many different locations.

**Crime Pattern Theory**

Crime pattern theory is another theory of crime that combines rational choice theory and routine activities theory with various geographic concepts (Lersch, 2004). In other words, crime pattern theory asserts that offenders, victims, and guardians over time and place can be used to describe patterns in crime (Eck & Weisburd, 1995). These
patterns help those analyzing crime to identify likely places and times where crime may occur. Once identified, prevention efforts can be made to intervene before even more crimes take place in a given area.

Various crime prevention tactics and strategies are founded on the idea that crime occurs in patterns in space and time. For example, Wilson and Kelling’s (1982) broken windows theory is based on the idea that crime happens where social ambivalence and disorder exist. Subsequent empirical research further supports this theory. For instance, Skogan (1997) used neighborhood surveys to illustrate an existing relationship between perceived crime problems, fear of crime, and victimization with actual physical and social forms of disorder. Thus, broken windows theory can be used as a type of crime pattern theory to identify and predict where future crimes may occur.

Crime prevention through environmental design or CPTED is also based on crime patterns. CPTED is a crime prevention strategy that attempts to mitigate criminal behavior (Lersch, 2004). Essentially, it, too, relies on the idea that patterns of crime will emerge in certain places and uses this concept to eliminate areas in which crime may occur. Since crime pattern theory plays an influential role in the way that criminal behavior is currently understood, it is essential to understanding theories.

The Journey to Crime

Similar to crime pattern theory, the journey to crime employs many ideas rooted in rational choice theory, routine activities theory, and geography. This theory relies on the idea that criminals follow a certain path in order to commit their crimes. As Rengert (2004) outlines, the journey contains three essential parts.
The first part is the anchor or reference point from which an offender begins his or her journey (Rengert, 2004). In many cases, the anchor point is a criminal’s home, but the anchor can also be a residence or facility that an offender frequents. Part two of the journey consists of the direction that crime is moving (Rengert, 2004). This idea refers to areas where crime is moving. In many cases, crime may head to various crime attractors (Brantingham & Brantingham, 1995). The final component of the journey is the distance to crime (Rengert, 2004). To understand the distance, barriers and geography must be properly understood. For instance, temporal and spatial barriers may limit how far an offender can travel on a daily basis (Ratcliffe, 2006). When all of these elements are understood and assessed, it is possible to determine where a criminal or criminals are likely to journey.

The journey to crime is a useful theory for discussing crime at motels because it infers that criminal targets may be more likely to be found in a certain area. For example, Bernasco (2010) studied robbery and burglary records and observed that offenders tend to commit crimes relatively close to their homes. In terms of the journey to crime, this literature indicates that criminals may be more likely to commit crime in areas surrounding their anchors. Therefore, businesses and residences surrounding motels may be more susceptible to criminal activity.
Chapter III

Present Study

Summary

Previously literature has explored how police interventions affect crime at problem motels. However, as previously noted, this body of literature largely overlooks what happens when motels close. The current study examines six motel closures using longitudinal calls for service (CFS) data to obtain a better understanding of how such closures can affect crime rates at motels and the areas that surround them. To better clarify purpose and procedure, this chapter will describe the site, conceptualize key terms, and present the hypotheses used in the current study.

Site Description

The site used in this study is downtown Reno. Following Las Vegas, Reno is the second largest city in the state of Nevada and the largest city in the northern part of the state with an estimated population of 227,511 (USCB, 2013). Downtown Reno is a subsection of Reno where a number of hotels, businesses, and casinos are heavily concentrated. Although the precise location of downtown Reno is somewhat subjective, it is usually defined by the natural borders of Interstate 80 to the north and the Truckee River to the south. For this study, downtown Reno will be represented by the region depicted in Figure 1.

United States Census Tracts 1.01 and 1.02 overlap with the area targeted for this study and reveal basic characteristics concerning the area. Approximately 5,477 people live across census tracts 1.01 and 1.02 (USCB, 2011a). Within these two tracts, the estimated gender distribution is 60.5% male and 39.5% female (USCB, 2011a).
racial breakdown for these tracts is 69.8% white, 12.3% Asian, and 8.2% black with the remaining percentage composed of other races (USCB, 2011b). Furthermore, 2011 data estimates that the majority of households in these two tracts made less than $25,000 over a 12 month period (USCB, 2011c). When demographic data for downtown Reno is compared to the entire city, noteworthy differences appear. Particularly, the city has a more equal gender distribution with 49.2% women while the median household income of $49,700 is much higher (USBC, 2013). Thus, it appears that there are more males making less money in downtown Reno than the rest of the city.

Downtown Reno was selected for this study because it contains a high concentration of motels coexisting next to one another. As Figure 2 depicts, open motels are littered throughout downtown Reno and such facilities sometimes comprise entire blocks of city space. In fact, out of the 86 open motels in all of Reno during 2012, 43 motels are located in the target region. The number of open motels in downtown Reno is even more substantial when observing motels that have closed in recent years (see Figure 3).

The present site was also chosen due to previous research on the area. Past inquiries point out that the heavy concentration of motels in this region contributes to a substantial amount of crime in the city and suggest that reducing crime in this region helps to free up police from responding to repetitive CFS (Bailer, 2007; Barnes & Mayes, 2006; Elliot, 2007). Since this site has been studied in the past and deemed an important area of study, further inquiries, such as the present study, must continue to explore the nature of crime in this area.
Conceptualization of Terms

Conceptual definitions of motel, motel closure, closure period, pre-closure period, post-closure period, crime problems, motels zones, and comparison zones are necessary to clarify before describing the current study further. Previous literature discusses motels as facilities that provide affordable accommodations for motorists and travelers (e.g., Jakle et al., 1996). Though simple and convenient, this definition is overbroad for the purposes of the current study. Instead, this study focuses on facilities that are self-labeled as motels, inns, motor lodges, motor courts, and other related terms. This method for motel identification was chosen because there is simply no other way to classify a motel as such outside of direct observation. Furthermore, this study explicitly excludes corporate motel chains such as Motel 6 and establishments labeled as “hotels” because these facilities fall outside of the generally accepted category defining a low-budget motel.

Motel closures are defined by the loss of a motel’s business license within a closure period. Under Nevada law, motels are considered businesses that must have a business license to legally operate (NRS § 76.100, 2013). State entities have the power to reject, revoke, and suspend a license if a business fails to comply with state standards or regulations (NRS § 76.130, 2013; NRS § 76.170, 2013). The loss of such credentials officially and symbolically indicates that a motel can no longer conduct business or provide service to occupants. The method by which motels are closed (i.e., intervention, code enforcement, financial closure, etc.) is unspecified as this information is unavailable.
The closure period refers to the month in which a motel loses its business license. Since closing down a business usually happens gradually, studying this time frame may be more appropriate than examining a single closure date. Labeling this monthly period as the closure period helps clarify when a motel is actually closed. Additional terms clarifying time around the closure period are also necessary. In particular, the terms pre-closure period and post-closure period are useful for the current study. The pre-closure period refers to the one year period leading up to the closure period. Conversely, the post-closure period refers to the one year time frame following the closure period. To clarify, if a motel’s closure period was in January 2007, the pre-closure period would be from January 2006 to December 2007, while the post-closure period would be from February 2007 to January 2008.

Crime problems can be defined and measured using a number of different techniques. For the current study, crime problems are measured using CFS from the Reno Police Department. CFS are frequently employed in related motel studies (e.g., Amato et al., 1999; Barnes & Mayes, 2006; CVPD, 2012; FPD, 2001; Schmerler, 2005; Willis, 2007). Moreover, many scholars often recognize CFS as a more reliable form of data than other types of police reporting (e.g., Sherman et al., 1989; Weisburd & Green, 1995). CFS are also an appropriate data source to measure crime problems at motel sites because they include cases that incident and arrest reports may leave out. Since CFS data encompasses many categories of crime, CFS data may be sorted and recoded using different categories such as violent, property, alcohol, alarm, disorder, and narcotics CFS. The current study will employ these categories as they provide multiple measures of crime at motels.
The term motel zone is expansive and can suggest various meanings. In this study, a motel zone will be synonymous with the four contingent block faces encompassing a motel site. These contingent block faces may best be described as the streets, sidewalks, and buildings directly adjoining the block on which a motel site or address is located. Contingent block faces were chosen for study because crime occurring at a single motel may flood out to multiple streets or locations nearby. Contingent block faces will be represented by a buffer zone to collect a wider range of CFS data. Thus, each motel zone is composed of four contingent block faces outlined by a buffer zone. From a top-down perspective, motel zone shapes resemble a cross or addition sign (see Figure 4).

Comparison zones are yet another term that needs to be clarified. In this study, a comparison zone refers to contingent block faces outside of the motel zone with similar characteristics that did not experience a closure. Normally, such an area would be referred to as a control zone, but since the areas used in this study are mostly selected on proximity and other basic characteristics such as the census tract, they cannot be referred to as true controls. Comparison zones can also be observed in Figure 4.

Questions and Hypotheses

As previously noted, the present research seeks to study the effects that motel closures have on crime rates at motels and the areas which surround them. Since previous literature on this subject is minimal, the current study will examine multiple aspects of motel closure and crime. In particular, this study assesses two basic research questions and tests four hypotheses regarding motel closures.
One research question deals with how crime changes at individual motel addresses between the pre-closure and post-closure periods. The significance of this change will not be tested as too few crimes are likely to occur at closed individual motel addresses to compose a suitable sample. A second question addresses how the number of nearby facilities may impact crime problems in the motel and comparison zones. Other facilities such as open motel and casinos may produce additional CFS, and thus, the presence of such places must be noted.

The hypotheses in this study regard how crime behaves in motel zones following closure. In general, research indicates that an intervention, such as those used by police, can reduce the number of CFS a motel generates (e.g., Barnes & Mayes, 2006; CVPD, 2012; FPD, 2001; Willis, 2007). Using this idea, the first hypothesis asserts that areas surrounding motels should receive a significant reduction in total crime following closure. This idea can be better phrased in terms of a null and alternative hypothesis:

- H0: Closing a low-budget motel does not significantly affect crime problems in motel zones.
- H1: Closing a low-budget motel significantly reduces crime problems in motel zones.

Subsequent hypotheses regarding various crime types are also addressed. Current literature on motel crime suggests that typical motel crimes include prostitution, domestic violence, and drug-related crimes (Amato et al., 1999; Barnes & Mayes, 2006; OPD, 2003; Schmerler, 2005). Extending ideas about interventions used in the first hypothesis, subsequent hypotheses should assert that these specific crime types might be reduced in the areas surrounding motels after closure. Therefore, the present study will test a
number of different null and alternative hypotheses. The null and alternative hypotheses for disorder crime states:

- \( H_0 \): Closing a low-budget motel does not affect disorder crime in motel zones.
- \( H_1 \): Closing a low-budget motel significantly reduces disorder crime in motel zones.

A similar set of hypotheses can be used for violent CFS.

- \( H_0 \): Closing a low-budget motel will not affect violent crime in motel zones.
- \( H_1 \): Closing a low-budget motel significantly reduces violent crime in motel zones.

Additionally, a null and alternative hypothesis for narcotics crime can also be explicitly stated:

- \( H_0 \): Closing a low-budget motel will not affect narcotics crime in motel zones.
- \( H_1 \): Closing a low-budget motel significantly reduces narcotics crime in motel zones.

Collectively, these hypotheses assert that various types of crime will be reduced after a motel closes down. Though other types of CFS such as property, alcohol, and alarms will also be examined, previous literature is unclear how such CFS might occur at motels. Since there is incomplete literature to suggest how these types of CFS may behave after closure, no hypotheses for these CFS can easily be crafted.
Chapter IV

Methodology

Data Sources

Three main types of data were used in the current study. First, historical data was acquired which listed the opening and closing dates of all the lodging facilities in Reno since the early 1990s. This data was provided by the Washoe County Health Code Enforcement Division which is tasked with enforcing local codes at hotels and motels throughout Reno, Nevada. Since the initial data contained extraneous information, it had to be reorganized and recoded to make it suitable for analysis. For example, before recoding, some of the listed motels had changed their names. To account for this change, motel names had to be determined by their addresses. Another example of recoding came from the fact that each lodging facility had to be designated as a motel or non-motel based off of the facility’s name. Such reorganization and recoding efforts were initiated to effectively manage the data.

The second type of data source used in this study was geographic data. This geographic data came from a variety of sources and included information such as street coordinates, census tract lines, and motel street addresses. Street data was obtained from an existing GIS shape file of the streets in Reno. Census tract data from the 2010 census was provided by the Reno Police Department. Motel addresses were included with business license information obtained from the Washoe County Health Code Enforcement Division.

Calls for service (CFS) data was the third type of data used. For this study, multiple years of CFS data ranging from January 1, 2005 to December 31, 2010, was
provided by the Reno Police Department. Similar to the motel data, the CFS data had to be reorganized and recoded to meet the demands of the present study. For instance, the data originally included 34 relevant types of CFS which were recoded into various crime type categories (see Table 1 for crime type codebook).

**Sample Selection**

Nonrandom purposive sampling was used to select motels for study. Specifically, motels had to meet four specific criteria to be included in the sample. First, a motel’s address had to be located in the downtown zone. Since low-budget motels in downtown Reno have comparable numbers of rooms, pricing options, and layouts, all downtown motels were eligible for selection while all motels outside this zone were ineligible for selection. Second, a motel had to have surrendered its business license in the year that suits the available CFS data. For example, since six years of CFS data were available, the motel’s closure period had to fall between 2006 and 2009 so that CFS data for the pre-closure and post-closure periods could be used. Third, the closed motel had to be located on different contingent block faces than another motel that closed within a year before or after a motel’s closure period. This criterion helped control for overlapping effects that could alter the impact of a single motel closure. For instance, if three motels in the same motel zone closed down within the period of study, this situation could potentially compound the effects of a single motel closure. Finally, all the motel closure periods could not all occur in the same year as this study sought to look at closure across multiple years of data. Together, these criteria helped select the six different motel sites for study. These six motels included the Americana Inn, Ponderosa Motel, Savoy Motor Lodge, Town View Motor Lodge, Nevada Inn, and Keno Motel #1.
Comparison Zone Selection

Comparison zones were used in this study to help control for citywide effects that may have existed in Reno during the 2005 to 2010 period. Each comparison zone was matched with a corresponding nearby motel zone. CFS data was drawn from a comparison zone based off of the same closure period as its matched motel. For instance, if a motel closed on January 2007, the matched comparison zone’s CFS data would be collected during the pre-closure period (January 2006 to December 2006) and the post-closure period (February 2007 to January 2008).

The comparison zones were matched using three specific criteria. First, they had to rest in roughly the same census as the matched motel zone. Second, their zone could not overlap with any motel zone or control zone already drawn on the map. Third, the comparison zone could not contain a motel closure during any period being looked at in the matched motel zone. Collectively, these criteria helped to create comparison zones which could be used to gauge how much change was occurring at motel sites.

GIS Mapping

Crime mapping involves plotting data points across a geographic shape file so that they can be analyzed spatially. In the present study, data points were mapped using ArcGIS software. This software plotted CFS data using x-coordinates and y-coordinates associated with each call. However, unlike the CFS data, motel addresses did not come with such coordinate pairings so they had to be geocoded using their addresses. Geocoding refers to a process of assigning an x and y coordinate pair to points so that they can be mapped (Lersch, 2004). The motels were geocoded with a 97% match rate.
This value indicated that the vast number of motel addresses were assigned an x and y coordinate pairing and were successfully plotted against the city street shape file.

The actual mapping process began with plotting street coordinates to establish a reference frame. Following this action, an approximated downtown zone was constructed using landmarks and census tract information (Figure 1). Motel addresses and CFS data in the downtown zone were plotted thereafter. Motels, motel zones, and comparison zones were then drawn on a map (Figure 4). The motel zones and comparison zones on the map were used to graphically select CFS over various years which were exported to SPSS for further analysis.

**Analysis**

Descriptive and analytic data analyses were both employed in the present study. Descriptive statistics were used to identify patterns in the CFS data during the pre-closure and post-closure periods. Analytical statistics testing was also used to gauge the significance of these patterns.

To conduct descriptive analyses, pre-closure and post-closure CFS data was taken for every motel address. The number of open motels and casinos within each motel zone and comparison zone was also noted. Additionally, the monthly average numbers of CFS during the pre-closure period and post-closure period were taken for each motel zone and comparison zone. Once data on the motel zones and comparison zones were calculated, the average monthly numbers of CFS during the pre-closure period were compared to the average monthly CFS during the post-closure period by calculating a percent change. Since a percent change measures relative change between old and new values, this statistic gave a general description of changes occurring.
After measuring percent change for each individual motel zone and comparison zone, collective percent changes were also calculated. Simply put, one collective percent change was calculated using all the motel zones while another was calculated for all the comparison zones. The purpose of these collective measures was to gauge how the motel zones and comparison sites might differ from one another during the pre-closure and post-closure periods.

Following a description of the data, tests of significance were carried out. Specifically, t-tests were carried out to see if a motel closure had any impact on CFS in the relevant areas. In short, they tested whether the number of average monthly CFS during the pre-closure period differed significantly from the number of average monthly CFS during the post-closure period. Such tests were employed as an analytic method for this study as they allow for mean comparisons of the same area during two different points in time.

In addition to assessing these differences, subsequent t-tests were used to look for significant differences by crime type (i.e., violent, property, alcohol, alarm, disorder, narcotics). Moreover, additional t-tests were also used to look for significant differences which might exist in the comparison zones. Significant or nonsignificant results from these tests, in conjunction with the previously noted descriptive pattern analyses, were used to evaluate and interpret the extent to which motel closures affect crime in surrounding areas.
Chapter V

Results

Descriptive Analyses

Motel Addresses

Descriptive analyses of specific motel addresses were conducted to discover how crime behaved at motels following closure. Of the six motel addresses studied, four motel addresses experienced a decrease in calls for service (CFS) between the pre-closure and post-closure period. These four motels included the Americana Inn, Ponderosa Motel, Town View Motor Lodge, and Nevada Inn. Meanwhile, the Savoy Motor Lodge experienced a small increase of two CFS between the two periods while Keno Motel #1 saw no change (see Table 2).

During this point in the analysis, additional information on factors that might affect CFS was also collected. Specifically, the location of open motels and casinos within the motel zones and matching comparison zones were taken into account. The results of this additional analysis showed that most motel zones and matched comparison zones had few open motels and casinos (see Table 3). For instance, the Americana Inn’s motel zone and comparison zone contained no open motels or casinos. The exception to this finding was the Savoy Motor Lodge’s comparison zone in which many open motels and casinos were located.

Before discussing results further, it should be noted that the Savoy Motor Lodge was removed from all further analyses due to the large number of casinos and open motels in its comparison zone. To clarify, the Savoy Motor Lodge was included for the purpose of measuring percent change among sites, but it was removed from crime type
analyses and significance testing. This removal helped provide more accurate analytical results.

**Motel Zones**

The descriptive analysis of the six motel zones by area revealed that three motel zones experienced an increase in CFS while three motel zones experienced a decrease in CFS. Motel zones surrounding the Ponderosa Motel, Town View Motor Lodge, and Nevada Inn saw percent change decreases of -0.07, -0.28, and -0.08 respectively. Conversely, the average monthly CFS in the Americana Inn, Savoy Motor Lodge, Keno Motel #1 motel zones experienced percent change increases of 0.12, 0.25, and 0.25 respectively. When the average monthly CFS for all six motel zones was taken into account, the data showed that there was a 0.00 percent change in the average monthly CFS between the pre-closure periods and post-closure periods. This data is further summarized in Table 4.

Descriptive analysis of all motel zones broken down by crime type showed various decreases and increases in average monthly CFS between the pre-closure period and the post-closure period. The average number of monthly CFS for property, alarms, and disorder decreased by -0.34, -0.02, and -1.66 respectively. Conversely, violent, alcohol, and narcotics CFS increased by 0.12, 0.32, and 0.08 respectively. Additional information on the crime type analysis can be viewed in Table 5. Overall, the results indicate that most of the changes in average monthly CFS between the pre-closure and post-closure periods were relatively small.
Comparison Zones

Descriptive pattern analysis of the matched comparison zones also showed increases and decreases in average monthly CFS between the pre-closure and post-closure periods. In particular, the comparison zones for the Ponderosa Motel and Nevada Inn saw percent change decreases of -0.32 and -0.08 respectively while the Americana Inn, Savoy Motor Lodge, Town View Motor Lodge, and Keno Motel #1 comparison zones saw percent change increases of 0.53, 0.25, 0.18, and 0.09 respectively. When the average monthly CFS in the comparison zones between the pre-closure and post-closure periods were taken together, a percent change increase of 0.23 was observed. Other data on the change in average monthly CFS can be found in Table 4.

A descriptive analysis of specific crime types in all comparison zones revealed mostly increases in the monthly average number of CFS between the pre-closure period and post-closure period. Alarm CFS saw a small decrease of -0.08 average monthly CFS while the five remaining crime type categories experienced increases. Violent, property, alcohol, disorder, and narcotics CFS saw average monthly increases of 0.94, 0.42, 0.42, 5.14, and 0.02 respectively. Among all these categories, disorder seemed to show the largest increase in CFS. Table 5 reveals further information on CFS in the comparison zones by crime type.

Tests of Significance

Motel Zones

Using CFS data from the five motel zones, a t-test was run. This t-test tested if there was a significant difference between the CFS at all motel zones during the pre-closure period and post-closure period. The results suggests that there was no significant
difference between CFS at the five motel zones between the pre-closure period and post-closure period (t = 0.362, p > 0.05).

When t-tests were run on the CFS from the five motel zones with considerations for different crime types, similar results were found. Specifically, of the six different crime type categories tested (violent, property, alcohol, alarms, disorder, narcotics) none showed any significant difference in average monthly CFS between the pre-closure period and post-closure period. Complete results for the t-tests in the collective motel zones can be seen in Table 6.

**Comparison Zones**

A t-test on the average monthly CFS for the five matching comparison zones helped show if locations without a motel closure were experiencing similar differences in monthly average CFS. The results indicate that the average monthly CFS in the comparison zones was not significantly different between the pre-closure period and the post-closure period (t=-1.774, p > 0.05). Yet, it should also be noted that even though this test produced a nonsignificant result, the p-value was approaching significance.

T-tests of the different crime types in the control zones revealed the degree to which certain crimes types were changing between the pre-closure period and the post-closure period. In all, none of the six crime types reached significance at p < 0.05. However, disorder calls in the comparison zones were approaching significance (t = -1.878, p > 0.05). Complete information on the t-tests for the comparison zones can also be viewed in Table 6.
Chapter VI

Conclusions

Discussion

In general, the results suggest that simple motel closures do not strongly impact crime rates but rather that they have a relatively nominal effect on crime. Although there are exceptions, most of the results indicate that minimal benefits in crime reduction can be achieved from closing down a motel. Before discussing the implications of such findings, the results should be explained in greater detail.

Results from the descriptive data reveal important information concerning motel closures. For instance, the analysis of individual motel addresses shows that CFS rates at two-thirds of the motels decreased from the pre-closure to post-closure period. Although this result appears substantial, it should be noted that the decrease in CFS at some motels such as the Nevada Inn remains relatively small (see Table 2).

These decreases might be explained by the fact that once a motel closes there may be no one working at the facility to contact police. Furthermore, this result can also be viewed in terms of routine activities theory because there may be no “likely offenders” or “suitable targets” at such facilities especially if the site is completely condemned or demolished (e.g., Cohen & Felson, 1979). In all, this specific result matches past literature on motel closures suggesting that closure may reduce repeat CFS at motels (Amato et al., 1999; Schmerler, 2005).

The descriptive analysis of nearby facilities shows important results illustrating that the number of motels and casinos in each motel and comparison zone matching are comparable. Particularly, this analysis reveals that most of the motel zones and matched
comparison zones had similar numbers of open motels and casinos on their contingent block faces (Table 3). This finding helps add internal validity to the current study by demonstrating that almost all of the studied areas, except for those associated with the Savoy Motor Lodge were comparable in terms of nearby facilities.

Subsequent analyses of the monthly average CFS in the motel zones and comparison zones describe how closure affects CFS in surrounding areas. In particular, the results for total CFS in the motel zones show no change between the pre-closure and post-closure periods (Table 4). Taken alone, this percent change of 0.00% in CFS between the pre-closure and post-closure periods suggests that motel closures are not affecting crime rates in surrounding areas. However, when the analysis for the average CFS per month in the collective motel zones is compared to that of the total CFS in the comparison zones, the results take on new meaning. Specifically, the comparison zones, which did not have any motel closures during the closure periods, experienced a collective increase in average monthly CFS of 23%.

The increase in CFS experienced in the comparison zones suggests that crime throughout downtown Reno may have been increasing during the period of study. Further review of CFS data in downtown Reno reveals that CFS were increasing between 2005 and 2007 and declining between 2007 and 2010. Since two-thirds of the motels closed before 2008, the increase in CFS between 2005 and 2007 may have overshadowed the effects of closure in the present study. In short, it is possible that the effects of closure may actually have been attenuated in an area and time in which crime was rising.

Another interpretation of these results can be viewed in terms of theories of opportunity. Theories such as rational choice theory (Cornish & Clarke, 1986) and the
journey to crime (Rengert, 2004) assert that once a potential offender is dislodged from a motel, he or she will likely choose a location that allows him or her to easily continue criminal behavior. Using Rengert’s (2004) ideas concerning the distance an offender is willing to travel to commit crime, an offender may be limited in how far away from a closed motel he or she is willing to travel. Thus, an offender may simply move to the closest nearby motel and establish a new anchor at this site. In regards to the descriptive CFS data, this interpretation suggests that the reason crime rates are staying the same in the motel zones and increasing in the comparison zones may be because offenders are simply moving to the closest motel. In other words, these results may indicate that some kind of minor displacement effect may be occurring to nearby motels.

When descriptive data on the average monthly CFS in the motel zones and comparison zones are analyzed by crime type, mixed findings appear. In particular, crimes typically associated with motel CFS such as violent and narcotics increased while disorder CFS declined. In the comparison zone, every crime type except for alarm-based CFS saw an increase. The largest of these increases in average CFS came from disorder calls which had an increase of 5.14 CFS between the pre-closure and post-closure periods. Additionally, small increases in violent crimes CFS and narcotics CFS were also noted (see Table 5). Similar to the total CFS data in the comparison zones, this data suggests that CFS in downtown Reno were generally increasing and making the decreases and small increases in CFS noted in the violent crimes, disorder, and narcotics calls more substantial.

Data obtained from the various t-tests on average monthly CFS in the motel zones allows for hypothesis testing to occur. The t-test on total calls can be applied to test the
first hypothesis regarding how closing a low-budget motel affects crime rates in motel zones. As noted in the results section, the t-score of 0.362 and p-value of 0.718 shows insignificance at the p < 0.05 level. Therefore, the null hypothesis stating that closing a low-budget motel has no effect on crime rates in motel zones cannot be rejected.

The remaining hypotheses regarding various types of motel-related crime also show insignificant results. The violent crimes t-test showed a t-score of -0.136 and a p-value 0.892 well above the p < 0.05 level. The disorder and narcotics t-tests also produced insignificant results with disorder having a t-score of 0.544 and a p-value of 0.588 and narcotics having a t-score of -0.488 and p-value of 0.627. Since none of these t-tests showed significance at the p < 0.05 level, the null hypotheses stating that closing a low-budget motel has no significant effect on violent crimes, disorder, and narcotics in motel zones can also not be rejected. Furthermore, it should also be noted that no other crime types including property crimes, alcohol, and alarms showed significant results (Table 6).

Despite the fact that none of the t-tests for the motel zones showed significant results and none of the null hypotheses could be rejected, additional t-tests on the comparison zones CFS show that some major changes were occurring in the comparison zones. To be specific, the t-test using all types of crime in the comparison zone was approaching significance with a t-score of -1.774 and a p-value of 0.079. Moreover, the disorder t-test yielded a t-score of -1.878 and a p-value of 0.063 indicating that the number of disorder CFS in the comparison zones was almost significant. However, no other crime type categories in the comparison zones were approaching significance (Table 6).
When t-testing for the motel zones and comparison zones are taken together, the data can be interpreted in a manner similar to the descriptive findings. Primarily, for this study, it appears as though crime and particularly disorder crime were increasing at near significant levels in the comparison zones. Conversely, CFS in the comparison zones were not undergoing any significant change.

Displacement concepts may help to explain some of the increases in the comparison zones. For instance, it may be possible that offenders from the closed motels in the motel zones were migrating to the comparison zones after closure. In effect, some of the comparison zones may have been acting as “catchment zones” (e.g., Weisburd et al., 2006). Though this is one interpretation, another may simply be that motel closure simply did not have a strong enough effect to impact crime rates in the surrounding areas.

Limitations

A major limitation of the current study is that it addresses the subject of motel closures using solely quantitative data. Though quantitative research is helpful for the purpose of generalization, this study lacks qualitative elements to support the quantitative findings. As Neuman (2006) points out, qualitative data analysis techniques such as analytic comparisons, narrative analyses, and negative case methods research can expand researchers’ views of a subject. In this study, such data would be useful to explain why motels are closing down and help researchers to better understand the places to which former motel residents are moving.

Another notable limitation comes from the motel closure data. Though the loss of a business license is a fairly accurate way to assess closure, it is possible that some motels continue to operate illegally without business licenses. Alternatively, some
motels may close their doors slightly earlier than the date they surrendered their licenses. Furthermore, some motels may only close for a short period of time while they attempt to regain their business licenses. Future studies might consider using a different way to measure motel closure that can better account for such discrepancies.

Sample size is another limitation of this study. Even though downtown Reno has plenty of crime-filled motels for study (e.g., Bailer, 2007; Barnes & Mayes, 2006; Elliot, 2007), relatively few motels matched the strict selection criteria of this study. This limitation may compromise external validity to some extent as a small sample size may reduce the generalizability of the findings (Neuman, 2006).

Furthermore, an additional limitation is that diffusion and displacement are not formally measured in this study. Although various diffusion and displacement studies inspired the hypotheses for the present study, no formal tests of these concepts were used. Instead, such theories were merely used to help interpret the results. Future studies might formally test for diffusion and displacement as seen in other studies (e.g., Bowers et al., 2011; Ratcliffe & Breen, 2011; Weisburd et al., 2006).

Overall, the results of the present study should be considered with these limitations in mind. Future studies concerning motel closures and their effects should note these limitations and use different methods to work beyond them. In other words, this study might be used as a starting point for other studies on motel closure to consider.

Implications

The results hold two implications that should be directly noted. First, since motels closure may not significantly reduce crime in surrounding areas, it can be suggested that such a method should not necessarily be recommended as a crime-fighting
tactic. Although previous scholarship advises motel closure as an option to dealing with problem motels (Amato et al., 1999; Schmerler, 2005), the results of the present study do not necessarily support such advice. Therefore, the results imply that motel closure should not be recommended as a method for dealing with crime unless it is used as a last resort or in a situation where there are not many motels surrounding the motel designated for closure.

The second implication pertains to scholars interested in studying police CFS using geographic and analytical techniques. The current study paints a conflicting portrait of motel closures that is difficult to explain. Therefore, the results imply that future studies examining motels or other facilities may require additional information and perspectives to better interpret results. Particularly, data on management, room rates, and the reason for motel closure might be useful for other studies to help interpret complex results. Furthermore, qualitative data on closed motels such as opinions from former residents and owners may also present a better image of what is happening at closed motels.

Final Thoughts

The current study reveals new information on how motel closures impact crime. Although statistical testing revealed no significant results indicating that motel closures mitigate crime in surrounding areas, descriptive data from the comparison zones suggests that closure may be having some effects on motel-related crimes and crime in general. Thus, motel closures may actually have had some effect on crime, but according to the t-test results, this effect was not significant at the $p < 0.05$ level. Such information is useful for academics and practitioners who are interested in studying motels.
Following the study, motels and crime should continue to be researched in the future as motel crime can cause substantial problems. While previous research has pointed to the importance of studying motel crime (e.g., CVPD, 2012; Elliot, 2007; Schmerler, 2005), more research is still needed. In particular, more motel research should be conducted on the downtown Reno area and similar areas because relatively little is known about areas with such tightly clustered lodging facilities. In all, this study has revealed much about motel closures and crime, but there is still much to study regarding motels and their closure.
References


N.R.S. § 76.100. (2013)

N.R.S. § 76.130. (2013)

N.R.S. § 76.170. (2013)


OPD: Oakland Police Department. (2003). The Oakland airport motel program: Eliminating criminal and nuisance behavior at a motel. *Submission for the*


### Tables

**List of Call Types Recoded to Crime Types**

<table>
<thead>
<tr>
<th>Call Type</th>
<th>Violent</th>
<th>Property</th>
<th>Alcohol</th>
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*Note.* X denotes crime type classification.
Table 2

*Motel Addresses - Calls for Service*

<table>
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<tr>
<th>Motels</th>
<th>Pre-Closure</th>
<th>Post-Closure</th>
<th>Month/Year Closed</th>
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<tr>
<td>Americana Inn</td>
<td>42</td>
<td>14</td>
<td>February/2006</td>
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<td>Ponderosa Motel</td>
<td>22</td>
<td>5</td>
<td>July/2006</td>
</tr>
<tr>
<td>Savoy Motor Lodge</td>
<td>5</td>
<td>7</td>
<td>September/2007</td>
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<td>12</td>
<td>2</td>
<td>September/2007</td>
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<tr>
<td>Nevada Inn</td>
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<td>0</td>
<td>March/2009</td>
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<td>Keno Motel #1</td>
<td>20</td>
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<td>December/2009</td>
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Table 3.

*Nearby Facilities*

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<tr>
<td>Comparison Zone</td>
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<tr>
<td>Comparison Zone</td>
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<tr>
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<td>Motel Zone</td>
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<tr>
<td>Comparison Zone</td>
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<tr>
<td><strong>Nevada Inn</strong></td>
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Table 4.

Average Monthly Calls for Service by Area

<table>
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<th>Area of Study</th>
<th>Pre-Closure</th>
<th>Post-Closure</th>
<th>Percent Change</th>
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Table 5.

*Average Monthly Calls for Service by Crime Type*

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<td>Violent</td>
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<td>6.04</td>
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Table 6.

*T-test Results by Crime Type*

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*Note.* No results show significance at p < 0.05
Figures

Figure 1. General Downtown Reno Region
Figure 2. Open Motels (2012) in Downtown Reno
Figure 3. Closed Motels (2005-2011) in Downtown Reno
Figure 4. Motel Zones and Matching Comparison Zones

Year Closed
American Inn = 2006
Ponderosa Motel = 2006
Savoy Motor Lodge = 2007
Town View Motor Lodge = 2007
Nevada Inn = 2009
Keno Motel #1 = 2009