

CITIZENS' PERCEPTION OF POLICE SERVICES IN AN OIL BOOMTOWN

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Citizens' Perception of Police Services in an Oil Boomtown

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ABSTRACT

Past research indicates that various factors influence citizens' perception of police services, including citizen characteristics, prior criminal victimization, personal safety, and fear of crime. However, less is known about the influence that these variables have on citizens' perceptions in a community experiencing rapid population growth as a result of increased energy production. Thus, the focus of the current research was to examine how such variables impact citizens' perception of crime control by police officers in a town experiencing rapid changes.

This study also examined the role of residential longevity by testing for perceptual differences among long-time and boom residents. Finally, this research considers the influence of neighborhood social cohesion/trust on citizens' perception of police services. Data for this study was gathered from surveys completed by a random sample of residents living in Williston, North Dakota during the fall of 2015 (N=301).

Overall, results suggest a number of factors related to citizens' characteristics, prior criminal victimization, and personal safety impact residents' perception of police services. Second, long-time residents were more likely than boom residents to agree that the police were doing a good job delivering services to their community. Lastly, neighborhood trust (but not neighborhood reliability) influenced residents' perception of police services. The implications of these findings are discussed.

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DEDICATION

I dedicate this project to my husband, Peter Phan. Thank you for all your unconditional love and support. You are the reason why I even made it this far.

I also dedicate this project to my loving parents, Lexter Huynh and Cindy Tran, along with my siblings Darin, Denise, and Alan. When it comes to family, the whole is definitely greater than the sum of its parts.

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CHAPTER 1: INTRODUCTION

“Dan Kalil still remembers a nightmare he had once as a child. In it, he envisioned looking out over his family’s North Dakota farm and seeing it swarmed with strangers, bustling with unknown activity that filled the farm with a strange light. Kalil says the dream has stuck with him in the decades since. The eerie thing is that it came true.”
(Holeywell, 2011)

Covering parts of North Dakota, Montana, Manitoba, and Saskatchewan, the Bakken shale formation has been considered a remarkable resource for oil production (North Dakota Geological Survey, 2011). Although it was discovered in the 1950s, interest in this shale formation did not pick up until the 1970s where it was recognized that approximately 10 billion barrels of oil could be extracted from this development (Williams, 1974). More recent estimates produced a lower evaluation, although this number remained relatively high (i.e. approximately 7.4 billion barrels of oil) (Maugeri, 2013). Once oil production took off, massive changes to areas surrounding this region became exceptionally noticeable.

Within a relatively short time period, from 2010 to 2014, the state of North Dakota has increased its oil production by 251 percent and made up approximately 12.5 percent of the total oil production in the United States (United States Energy Information Administration, 2016). Associated with this high volume of oil extraction is the creation of jobs within the oil fields, along with various other employment opportunities in the service industry. Employment prospects were linked to rapid population growth as migrants from all over the nation flooded the state in search of work. For example, North Dakota experienced a 12.5 percent growth in its population for the period between 2010 and 2015 (United States Census Bureau, 2015). Prior to

this time, the growth rate was only 4.7 percent for the year 2000 to 2010 (Mackun & Wilson, 2011).

Located in the western region of the state, Williston, North Dakota is situated within the Bakken shale region and is one of a few counties to have experienced rapid population growth (United States Census Bureau, 2016). For instance, the year 2010 had an estimated 14,716 residents living in the area. Contrast this number with 22,051 recorded in 2015. In fact, Williston, along with Dickinson, ND were considered two of the fastest growing micropolitan areas in the United States for the period between 2014 and 2015. Williston led by a population increase of about 9.9 percent while Dickinson experienced a 5.5 percent increase in population for that same period (United States Census Bureau, 2016).

Williston's growth has led to significant changes to its population demographic profile. For instance, due to the rise in employment opportunities, large numbers of young males have flocked to the area causing a disparity in the male to female ratio. Males consisted of 54.49 percent of the total population for 2015 while females accounted for 45.51 percent. This was not the case in 2010 when females represented approximately 49 percent of the population (United States Census Bureau, 2015; Williston Economic Development, 2016). This discrepancy contributed to the sex ratio of the state as a whole such that North Dakota ranked number two on the top 10 U.S. states with more male than female residents for the year 2014 (Cicha, 2015). Further, it has been estimated that for every 100 females, there were 105 male residents, a stark difference from the national average of 97 males for every 100 females (Cicha, 2015).

As for the distribution of race/ethnicity, the percentage of White residents living in Williston was estimated to have dropped from 93.70 percent in 2010 to 86.97 percent in 2015. These statistics indicate the percentage of all races and ethnicities other than white increased by

approximately 6.73 percent, with the population of Hispanics leading at 4.8 percent in 2015. African Americans accounted for 0.3 percent in 2010 but increased to 2.13 percent in 2015. In contrast, the population of Asians decreased from 0.3 percent to 0.2 percent for those same years (United States Census Bureau, 2015). Overall, it has been suggested that the oil boom has increased diversity in Williston relative to where it had been during its pre-boom era (Williston Economic Development, 2016).

The town of Williston has developed significantly since its peak in 2014 (Dalrymple, 2016). The recorded unemployment rate in Williston for the year 2015 was approximately 2.3 percent, an estimate that is less than half the national average of 5.25 percent (United States Department of Labor, 2017). Moreover, the median household income reported for Williston for the year 2015 was \$90,171, compared to the national median household income of \$53,889 (United States Census Bureau, 2015).

Economic growth has been viewed as a positive change to Williston; however, news articles have reported a downside to this contribution. These news reports suggested that the influx of male workers to “man camps” (i.e., spaces dedicated to housing oil workers) was linked to drastic increases in the crime rate, including murder, rape, assault, and drug-related problems (Hargreaves, 2015; Valentine, 2014). Senator, Heidi Heitkamp expressed this sentiment in 2014:

“We are blessed with a growing economy and the country’s lowest unemployment rate, but there was a 20 percent increase in drug crimes in North Dakota last year...a better-coordinated response from the state would be helpful. The lack of roads, housing and law enforcement has stretched this small rural reservation to the max.” (Horwitz, 2014)

Local law enforcement offered similar reports as they struggled to deal with the rising population. Evidence of these struggles appeared in a series of papers regarding law

enforcement's ability to adjust to these rapid social changes. During face-to-face interviews with police officers and sheriff deputies from western North Dakota, Archbold (2015) found that the energy boom had significantly altered the perceived social and physical dynamics of the town. Among them is the view that communities have increasingly become more physically complex with the addition of newly built apartments, heavier traffic flow, and growing businesses. Additionally, the influx of unfamiliar faces has resulted in officers believing that there were growing concerns over personal safety issues among local residents. More than half of the officers reported crime (e.g. drugs and alcohol-related, theft, burglaries, and assaults) to have increased and that migrant workers were responsible for this rise. Overall, these reports suggest local law enforcement officials were aware of the drastic changes associated with the energy boom and that their duties were greatly altered by the rate by which their community was growing.

The oil boom has also impacted police organizations and their method of operation in western North Dakota. Dahle and Archbold (2015) found police officers were concerned about the lack of resources for addressing all the changes accompanying the boom. For example, some officers reported the challenge of attending to the large volume of citizens' calls for service. Although more police officers were hired onto the force as a response to the increased demand, it was still not enough to address the growing needs of the community. Consequently, the sheer amount of work translated into either (a) fewer interactions with local residents or (b) qualitative changes to these interactions. Moreover, one of the study respondents even mentioned the presence of a newly strained relationship between the police and local residents stemming from the lack of officer availability (p. 813). The limited number of officers meant that most had to resort to using more formal approaches during police-citizen encounters rather than the more

informal approaches used prior to the boom. In short, Dahle and Archbold (2015) concluded the oil boom has had a tremendous impact on police organizations and their method of operation.

In a final paper, Archbold, Dahle, and Jordan (2014) demonstrated further how the oil boom impacted the way police officers responded to calls for service. First, officers reported the need to take extra precautionary steps while on duty because of the perceived rise in violence. A large percentage of officers linked this violence to alcohol-related offenses and assaults that occurred in local bars. Second, officers conveyed the problem of becoming less efficient due to the multitude of tasks they were now asked to perform. Next, the changing streets resulting from constant road construction created barriers for officers trying to respond to citizens' calls for help as quickly as possible. Finally, a large percentage of officers (44%) reported having to adjust their behaviors when interacting with citizens. The large amount of calls received meant that officers had to keep most public contacts to a minimum, which could ultimately weaken the relationship between the police and local residents (Archbold et al., 2014).

In sum, the recent oil boom in western North Dakota has significantly impacted law enforcement's ability to address community concerns during times of rapid social changes. The three papers by Archbold and colleagues indicated that police officers struggled to keep up with growing demands (e.g., fewer resources, less efficiency, and greater challenges to mobility). However, knowledge on how the police perceive the boom to have impacted their ability to carry out their duties is incomplete. One major limitation of these papers is the lack of information on the public's perception of police actions. Knowing how citizens perceive the ways in which the police are responding to community concerns are pertinent to understanding how or what the police can do to become more effective during times of rapid social change.

There are at least two major limitations in the literature regarding this topic. To date, research has found a number of variables are associated with perceptions of police services such as citizens' demographics (e.g., age, race, and sex), prior contact with the police, fear of crime, and neighborhood characteristics (Wu, 2014; Brown & Coulter, 1983; Cao, Frank, & Cullen 1996; Sampson & Bartusch, 1998; Weitzer & Tuch, 2005b; Reisig & Park, 2000). Unfortunately, most of these studies were conducted in larger urban areas. There is currently minimal information on how these variables impact citizens' perceptions within oil boomtowns. The inclusion of this contextual examination can help researchers gain a clearer picture of how the police and their ability to address community concerns are viewed by the public across multiple U.S. settings. Put another way, the context of boomtowns can provide researchers with a unique perspective due to the potential for rapid social changes to shape citizens' perceptions in ways that may differ from those living in non-boomtowns.

Second, the literature has mostly focused on perceptions and attitudes toward the police (in general) and less on perceptions of police services. It is necessary to make a distinction between these two measures given the former is a general characterization of the police while the latter is concerned with their abilities to address community concerns. The limited knowledge on perceptions of police services as compared to general perceptions of the police suggests the need for more research in this area.

The purpose of the current study is to examine citizens' perceptions of police services in a small but growing community in western North Dakota. Based on the literature, the following research question will be addressed: How do citizens view police services in a community that experienced rapid population growth? The current paper adds to the paucity of research related to boomtowns and perceptions of crime control by the police using three outcome measures. More

specifically, the current study seeks to determine how residents living in Williston, ND during the oil boom perceive police's ability to (a) control drugs and alcohol-related crimes, (b) maintain order on the streets and sidewalks, and (c) control violent and property crimes. The next chapter will include a review of relevant factors that have been reported to influence citizens' view of police services.

CHAPTER 2: LITERATURE REVIEW

Energy booms typically occur within rural settings. Unfortunately, there is currently a lack of research on perceptions of police services in small communities. Thus, the following literature review will consist of research conducted within both the broader context of urban areas as well as research within rural towns. First, factors that have been considered to influence people's perceptions will be discussed, including the role of individual characteristics and past experiences (direct and indirect). Next, the limited research on citizens' perceptions of police services within rural communities will be examined. A comparison between research findings from both larger and smaller areas can help determine relevant predictors of police services in oil boomtowns. Finally, given the current interest is on potential influences of citizens' viewpoint on police services, a description of social cohesion/trust and its potential role in shaping citizens' perceptions in the wake of an oil boom will be included.

The literature on perceptions of police services is limited when compared to the literature on general perceptions and attitudes toward the police. Therefore, the following literature review will also present research findings on the latter topic where information regarding the former is lacking. In general, research on perceptions of police services demonstrated the public generally holds positive viewpoints (Cheurprakobkit & Bartsch, 1999; Dunham & Alpert, 1988; Huang & Vaughn, 1996; Jefferis, Kaminski, Holmes, & Hanley, 1997; Lasley, 1994; Zamble & Annesley, 1987). However, when these views are broken down into various categories (e.g. individual characteristics, neighborhood context, and prior experiences), variations in citizens' perceptions can be observed.

Citizen Characteristics

Race

Race has been explored extensively in the literature and research has consistently reported racial differences in the perception of police services (Frustenberg & Wellford, 1973). This race effect is consistent with the broader literature on general perceptions of the police. Most notable is the finding that African Americans are significantly less likely than Whites to view the police positively (Brown and Benedict, 2002; Decker, 1981; Levin & Thomas, 1997; Reisig & Parks, 2000; Sampson & Bartusch, 1998; Scaglione & Condon, 1980; Weitzer, 1999; Weitzer & Tuch, 2005a; Wu, 2014). This racial divide was detected in earlier research when scholars became interested in police relations with the community. In an early study, Furstenberg and Wellford (1973) examined citizens' satisfaction with police services in the city of Baltimore by gathering information during phone calls when people called the police requesting help. The authors found that African American callers were significantly less satisfied with the service they received compared to the services received by whites.

The process by which Furstenberg and Wellford (1973) obtained their sample was also important. There were two groups of recruiters – civilians and police officers. Interestingly, police officers (most of whom were white) were much less successful at recruiting African American callers for participation in the interview process. However, African American callers who were interviewed by police officers (as opposed to civilians) were relatively less critical of the police, suggesting a unique relationship between the police and this racial group. This racial difference in ratings of police services was not restricted to adults. Using a juvenile sample to compare variations in white and African American youths' perception of the police and police services, Hurst, Frank, and Browning (2000) found that youths' view of the police were

generally low, and that African Americans were significantly more likely than Whites to report lower ratings of various policing duties (e.g., crime control, drug prevention, and willingness to offer assistance).

Overall, the finding that African Americans hold less favorable views than Whites is well studied; however, lesser known is the perceptual difference among the Hispanic and Asian races. The paucity of research that exists suggests these two groups fall somewhere in between African Americans and Whites. Put another way, Hispanics' and Asians' views of the police tend to be more negative than Whites but more positive than those held by African Americans (Weitzer, 2002; Wu, Sun, & Smith, 2011).

This racial hierarchy has been revealed by several other studies centered on perceptions of police services. Wu (2014) analyzed data gathered from a random sample of Seattle, WA residents and found a complex relationship between race and perceptions of the police. Depending on the outcome of interest, Asians and Hispanics either fell somewhere in between Whites and African Americans or that their views were situated more closely to Whites than African Americans. As an example, when the author focused on perceived policing efforts to solve community problems, Asians and Hispanics were less critical of the police than African Americans but were more critical than Whites. However, when considering other aspects of policing such as fair treatment or bias, the perspectives of Asians and Hispanics were similar to Whites but differed from African Americans. Overall, these findings led Wu (2014) to conclude a racial hierarchy exists, although it may not always be apparent (p. 149) and that the perceptual gap between Whites and African Americans remains the largest and most consistent.

An exception to this race effect is the finding in one study where African Americans held more positive views of the police and police services than did Whites in Detroit, Michigan

(Frank, Brandl, Cullen, & Stichman, 1996). At first glance, this discovery appears to challenge earlier trends that African Americans view the police and police services less favorably. However, this outcome could possibly be explained by the period in which the study was conducted. Beginning in the 1960s to 1980s, the proportion of African Americans grew while the proportion of Whites declined in Detroit's population. By the 1990s, the majority of residents in Detroit were African Americans, making them the majority rather than the minority. Moreover, a relatively large percentage of public officials were African Americans including the police chief and mayor (Rich, 1989). Thus, this reversed racial trend may be explained by the greater representation of African Americans than Whites during the study period.

Age

The literature has frequently shown younger persons are more likely than older individuals to view the police and police services less favorably (Brown & Benedict, 2002; Brunson, 2007; Cao et al., 1996; Hurst et al., 2000; Kusow, Wilson, & Martin, 1997; Lasley, 1994; Schafer, Huebner, & Bynam, 2003; Wu, 2014). Youths are much more likely than adults to report that the police are ineffective at addressing problems within their neighborhood. Also, when services were provided, they were perceived to be lacking in quality and care (Brunson, 2007; Hurst et al., 2000). Wu, Sun, and Triplett (2009) came to these conclusions when they found age consistently predicted citizens' satisfaction with police services across neighborhoods with varying degrees of economic disadvantage.

This age difference may be attributed to the rate of police-contact experienced by youths compared to the rate experienced by adults (Leiber, Nalla, & Farnworth, 1998; Reisig & Correia, 1997). This higher frequency of contact could translate into more opportunities for police mistreatment. Youths are more likely than adults to report being mistreated by the police during

an encounter and this is especially true for African American youths who may already believe the police are racially biased against them (Brunson & Weitzer, 2009). White youths were also significantly less likely than African American youths to point out the police were disrespectful and that racial comments were often used to demean them (Brunson & Weitzer, 2009).

Nevertheless, some studies do not find age to be an important predictor (Davis, 1990; Hindelang, 1974; Scaglione & Condon, 1980). Cao et al. (1996) found the effect of age on confidence in the police (e.g., order maintenance and police responsiveness) disappeared when neighborhood context was taken into consideration, suggesting the variable of age has limited effects.

Sex

The influence of citizens' sex on perceptions of police services is less clear, and studies have mostly focused on general perceptions of the police. These studies either found females were more likely than males to hold favorable views of the police (Cao et al., 1996; Cheurprakobkit, 2000; Schafer et al., 2003), males were more likely than females to possess positive views (Brown & Coulter, 1983; Wu, 2014), or that there were no sex differences between the two (Jesilow, Meyer, & Namazzi, 1995; Larsen, 1968). Regarding perceptions of police services, Schafer et al. (2003) reported females were generally more satisfied with police services than were males. Cao et al. (1996), too, found gender remained a significant predictor of confidence in police abilities to carry out their duties even after various other factors (e.g., fear of crime, prior victimization, and neighborhood context) were taken into consideration. Finally, Benedict, Brown, and Bower (2000) reported females were more likely than males to believe the police were effective at controlling crime in their neighborhoods.

On the other hand, various other studies have found the opposite trend (Benedict et al., 2000; Davis, 1990; Jesilow et al., 1995; Smith & Hawkins, 1973). Wu (2014) found females

were more likely than males to believe the police engaged in racial tactics. Brown and Coulter (1983) also found evidence for males being more satisfied with police treatment than were females, although no explanations were given for this finding. Finally, Sampson and Bartusch (1998) and Kusow et al. (1997) found sex did not matter in regards to satisfaction with police services in their study; that is, sex was not an important predictor of citizens' satisfaction with police and police services.

Additional Variables

Research on education, marital status, and homeownership is less known given these variables have rarely been at the center of research investigation within this topic. Moreover, similar to sex, studies that have included these variables mostly centered on general perceptions of the police rather than perceptions of police services. First, these studies have shown education is negatively related to perceptions of the police. It has been reported that more educated individuals (as opposed to less educated) were more likely to believe the police are biased and that the police are likely to use racial profiling tactics (Wu, 2014). Yet, other studies' findings challenge this view by reporting no effect of education on citizens' perceptions (Bridenball & Jesilow, 2008; Brown & Coulter, 1983; Callanan & Rosenberger, 2011; Cao et al., 1996; Scaglione & Condon, 1980) or that higher educated persons viewed the police more favorably than did less educated individuals (Wentz & Schlimgen, 2012). In a study that did assess perceptions of police services, Wentz and Schlimgen (2012) examined citizens from one Midwestern state and found a positive relationship between education and perceived police responsiveness to community concerns.

Second, research regarding the effects of marital status is much more limited. Past studies on general perceptions of the police have shown single people (e.g., separated or divorced) tend

to hold less favorable views of the police compared to those who were married, although this observed effect was relatively small (Scaglione & Condon, 1980). Finally, the few studies that have examined the impact of homeownership (renters vs. owners) on perceptions of police services showed those who owned their homes were more satisfied with services provided by the police than individuals who did not own their homes (i.e. rent) (Wentz & Schlimgen, 2012).

Summary

In general, research has shown individual characteristics are determinants of citizens' perception of police services. There are, however, variations in the degree of influence among these factors. Comprehensive reviews of the literature have concluded age and race remain prominent predictors (Brown & Benedict, 2002; Decker, 1981), while gender and education proved less important (Brown & Benedict, 2002). Finally, it must be noted the level of influence that individual characteristics have is not as significant as other tested variables such as prior police contact and fear of crime, both of which will be discussed next (Cao et al. 1996; Decker, 1981; Reisig & Park, 2000; Weitzer, 1999).

Experiential Factors

Prior Criminal Victimization

In an early study, Brown and Coulter (1983) considered prior criminal victimization as one of several key predictors of perceived police services. Rather than focusing on just general satisfaction, the authors utilized multiple components of police services, including perceived (a) police response time, (b) police behavior towards citizens, (c) equality in which these two services are carried out, (d) fairness of police protection, and finally (d) level of crime in the neighborhood compared to other neighborhoods. To determine the role of prior victimization, the authors used survey data gathered from a random sample of citizens living in Tuscaloosa,

Alabama. They found that the frequency of victimization was significantly related to all aspects of the outcome measures. More specifically, Brown and Coulter (1983) found the greater the frequency of prior victimization, the lower the satisfaction with police response time, police treatment of people, and fairness of police protection. This finding is consistent with those observed by Wu (2014) who also found victims of property or violent crimes were more likely to hold negative views of the police.

Nevertheless, the impact of prior victimization has not always been supported. Decker's (1981) research on attitudes toward the police showed prior victimization did not result in lowered evaluations of the police. Smith and Hawkins (1973) drew similar conclusions during their analyses of survey data completed by a representative sample of residents from Seattle, Washington. The authors found no direct relationship between having been previously victimized (either property or crimes against persons) and attitudes toward the adequacy of police protection against future crimes. The authors did, however, observe an effect of police interaction following a victimization report. Crime victims who felt the police did not properly handle the situation expressed more negative attitudes compared to victims who felt the police addressed their situation appropriately.

There are a couple of reasons linking police interactions to perceptions of the police. First, it is possible crime victims are more apt to believe the police have failed to adequately provide them with protection against criminal suspects. Thus, they might be more likely to approach a subsequent police encounter negatively. On the other hand, it may be that citizens who were dissatisfied with the ways the police have handled their cases have come to see the police as insensitive to their situations, thereby, lowering citizens perceptions of them.

Police-citizen Contact

Based on the above findings, it is not surprising that research supports the effects of a police-citizen contact on perceptions of police services (Scaglione & Condon, 1980; Griffiths & Winfree, 1982; Brunson, 2007; Smith & Hawkins, 1973; Bridenball & Jesilow, 2008). Evidence for this relationship dates back several decades. Scaglione and Condon (1980) examined citizens' evaluation of police services and found that the most important predictors were prior encounters with the police. While analyzing survey data obtained by a sample of citizens residing in four different neighborhoods within a city, the authors found those who had personal contact with the police within the previous two years expressed lower satisfaction with the delivery of police services than citizens who had not previously interacted with the police.

Focusing on two separate measures, Brandl, Frank, Worden, & Bynum (1994) considered both global and specific attitudes towards police performance. Global attitudes referred to general satisfaction with the police while specific attitudes were linked to specific police encounters. Brandl et al. (1994) used panel data that were part of a larger study gathered from interviews with a random sample of household members from a large Midwestern U.S. city. In general, Brandl et al. (1994) found global and specific attitudes toward police performance influenced each other. General views predicted assessments of citizens' experiences with police contact and such experiences predicted their global attitudes toward the police, although the effect was found to be larger for the former than the latter type of observation.

The robust effect of prior police contact on perceived police services makes it a better predictor than demographic characteristics. Schafer et al. (2003) investigated this topic by incorporating into their analyses multiple predictor variables (e.g., demographic characteristics and neighborhood context) on three different outcome measures of police services – global

perceptions, perceptions of traditional police services, and perception of community-oriented police services. Global measures were based on general attitudes about the quality of police services while traditional measures were associated with police ability to carry out their expected duties (e.g., rapid response to calls for service). Community-related services were based on citizens' responses to questions regarding police involvement within the community (e.g. problem-solving and interactions with community members).

To determine the level of impact that prior contact had on satisfaction with police services, Schafer et al. (2003) analyzed data gathered from telephone interviews with residents from one community. The authors found certain individual characteristics (e.g., race and gender) were associated with all three measures of police services; however, only dissatisfaction with a police encounter remained significant across all statistical models and this was true regardless of whether the contact was voluntarily or involuntarily initiated by the respondent. It is important to point out the link between prior contact and perceptions of police services have not always been consistent (e.g., Zamble & Annesley, 1987). There is evidence to suggest the nature of the police contact (citizen-initiated vs. police-initiated) may be more important for understanding this relationship (Cheurprakobkit, 2000; Decker, 1981; Skogan, 2005; Webb & Marshall, 1995; see also Brown & Benedict, 2002, p. 551) than just the contact itself. Cheurprakobkit (2000) examined attitudes toward the police among a sample of residents from Texas and found police encounters initiated by citizens resulted in higher ratings of police performance. Additionally, Cheurprakobkit (2000) observed positive experiences during a police contact resulted in more favorable views of the police and their performances.

Overall, Schafer et al.'s (2003) results were inconsistent with Cheurprakobkit's first findings but consistent with his second. More specifically, Schafer et al. (2003) did not observe

the nature of contact to have any consistent effects. Instead, the authors found citizens who initiated police contact and who also rated the contact as a positive experience had elevated perceptions of community-related police services.

The effect of positive police interactions is supported in other studies (Murphy, 2009; Scaglione & Condon, 1980; Wells, 2007). Using a stratified random sample of residents from Santa Ana, California, Bridenball and Jesilow (2008) gathered data from both telephone and in-person interviews to determine whether factors related to individual characteristics, prior police contact, or neighborhood crime were related to the residents' view of the police and police performance. In general, Bridenball and Jesilow (2008) found citizens' assessment of the contact dictated the direction of influence regardless of the nature of the police contact. Positive experiences led to more favorable views while negative experiences lowered such views. These findings indicate any negative experiences during police encounters (regardless of its nature) are generally translated into lower ratings of police performance and vice versa. In short, it appears the type of experience outweighs the nature of the police contact.

In addition to direct police contact, vicarious experiences can also play a role in molding citizens' perceptions of police services (Hurst et al., 2000; Rosenbaum, Schuck, Costello, Hawkins, & Ring, 2005; Wentz & Schlimgen, 2012; Wu et al., 2009). Using information gathered from in-depth interviews with African American youths in St. Louis, Missouri, Brunson (2007) came to a few conclusions. First, his sample of youths indicated they have been or have heard of someone coming into contact with the police. Unfortunately, most of these experiences were negative. As a result, the majority of youths expressed the belief that police were unfriendly and often engage in harassing behaviors towards citizens in their neighborhoods. Frustration towards the lack of adequate help from the police was yet another theme. Some reported the

police were slow to respond to citizens' request for help, did not take citizen calls for services seriously, and were ineffective at addressing crime-related issues in their neighborhoods. These findings suggest both direct and vicarious experiences are important.

Finally, while investigating various perceptual influences, Wentz and Schlimgen (2012) found direct contact with the police did not necessarily impact citizens' perceived response by the police to issues raised in their community, whereas perceptions of police encounters did. Together, findings by Brunson (2007) and Wentz and Schlimgen (2012) demonstrate vicarious experiences are just as important (if not more important) as any direct experiences with police encounters.

It is important to note that the impact of a police contact on perceptions of police services is important; unfortunately, this information was not included in the questionnaire used for the current study. The lack of a contact variable is a limitation; however, questions that are included in the questionnaire (e.g. prior crime victimizations) could be indicative of such experiences. It has been estimated that approximately half of victims have reported crimes to the police (Truman & Morgan, 2016). Thus, prior crime victimization experiences might serve as a crude indicator for prior police contacts.

Media Exposure

Although direct experiences occur, the majority of U.S. citizens will have little to no such police contacts (Engel, 2005; Langan, Greenfeld, Smith, Durose, & Levin, 2001). This limited experience may lead to greater reliance on television and newspapers reports of police-related incidents (Dowler, 2002; Dowler & Zawilksi, 2007; Eschholz, Blackwell, Gertz, & Chiricos, 2002). Studies analyzing American crime dramas revealed these airings tend to depict law enforcement officials as highly effective (Marsh, 1991; Saco & Fair, 1988). As an example,

season four of *Law and Order: SVU* presented law enforcement officials as having 100% clearing rates (i.e. criminal cases that resulted in arrest or suspects' death) (Britto, Hughes, Saltzman, & Stroh, 2007). Other television programs such as *COPS* and *America's Most Wanted* also tend to portray law enforcement entities as protagonists whose ultimate goal is to "catch the bad guys." One can imagine how these types of shows can elevate viewers' perceptions of the police and their ability to perform their duties. On the other hand, increased reporting of police misconduct can have the opposite effect. Weitzer (2002) showed publicized incidents of police misconduct generated unfavorable attitudes toward the police and police performances in two major U.S. cities – New York and Los Angeles.

There is evidence indicating media effects vary by viewers' race. Eschholz et al. (2002) collected information from interviews with a random sample of household residents from a southeastern U.S. city. In short, Eschholz et al. (2002) found the effects of crime shows on perceptions of the police was moderated by race. Reality crime shows elevated confidence in the police for Whites but not for African Americans. Instead, watching reality crime shows had little to no influence on African Americans' perception of the police's ability to conduct their work.

Although media can shape citizens' views of police's ability to perform their duties, its level of impact is not as prominent as other predictors. In a comprehensive investigation comparing different kinds of media consumption on perceptions of the police and their services, Callanan and Rosenberger (2011) conducted interviews with a representative adult sample of households from the state of California. The authors examined how consumption of crime dramas, crime-related reality shows, newspaper reports, local and national news, and general television impacted residents' (a) confidence in police's ability to conduct their work, (b) perceived fairness of the police, and (c) perceived police use of excessive force. Callanan and

Rosenberger (2011) also controlled for various other factors, including individual characteristics (e.g., age, race, and gender) and other background variables (e.g., prior crime victimization, fear of crime, perceived neighborhood crime, and prior arrest of self or household members).

Callanan and Rosenberger's (2011) findings were consistent with the overall trends in the literature. First, they found that African Americans expressed lower ratings of the police than Whites. Compared to Whites, African Americans had lower confidence in the police, were more likely to believe the police were biased, and were more likely to view police use of force as a major problem. Similar to African Americans, Latinos viewed police fairness and police use of force as critical issues but they did not differ from Whites in their levels of confidence in the police. Second, the authors found the effects of experiential factors were more robust than any media variables. More specifically, media did not shape the perceptions of those who have previously been a victim of crime or have experienced a prior arrest. Finally, respondents who believed crime was an issue in their neighborhood were more likely to report having lower confidence in the police than those who did not perceive crime to be an issue (Callanan & Rosenberger, 2011).

Lastly, focusing on just confidence in the police, Callanan and Rosenberger (2011) found crime-related reality shows and television news elevated Whites' opinions but had minimal to no effect on African Americans and Latinos. This finding is consistent with those observed by Eschholz et al. (2002) where the level of media impact is moderated by viewers' race. The lack of an observed media effect for African Americans may be explained by their already low ratings of the police, known as the "floor effect." That is, because this group's view of the police is already at its lowest, their perception of the police cannot get any lower (Eschholz et al., 2002; Weitzer & Tuch, 2005b).

Fear of Crime and Personal Safety

Perceived physical and social disorder have shown to play a significant role in citizens' view of the police and police services (Alpert & Dunham, 1988; Dunham & Alpert, 1988; Eschholz et al., 2002; Hinkle & Weisburd, 2008; Kusow et al., 1997; Jesilow et al., 1995; Sampson & Bartusch, 1998; Skogan, Hartnett, Dubois, Comey, & Lovig, 1999). The questionnaire used for the current paper does not ask about disorder; however, included in the current analyses are measures that tap into fear of crime and personal safety, which are closely linked to social and physical disorder (Franklin, Franklin, & Fearn, 2008; LaGrange, Ferraro, & Supancic, 1992; McGarrell, Giacomazzi, & Thurman, 1997; Perkins & Taylor, 1996; Ross & Jang, 2000). Given their close relationship, the following section will present a review of the literature on both factors but with greater emphasis on fear of crime rather than neighborhood conditions.

Citizens who perceive their neighborhoods as crime-ridden and/or feel the need to take extra steps toward protecting themselves may come to believe the police are ineffective or are not adequately responding to issues they view to be particularly problematic. This link between fear of crime and perceptions of police's ability to control crime has received ample empirical support. Using a representative sample of U.S. households, Weitzer and Tuch (2005a) showed respondents who feared for their personal safety and viewed crime to be a serious problem in their neighborhood reported general dissatisfaction with the police.

Using data drawn from a random sample of residents living in Cincinnati, Cao et al. (1996) examined the influence of various perceptual determinants, including individual characteristics, fear of crime, prior victimization, and perceived neighborhood conditions on citizens' confidence in the police. Confidence in the police was measured with items related to

police responsiveness, ability to maintain order, control neighborhood crime, and attend to safety concerns. Findings were in line with those reported by Weitzer and Tuch (2005a). First, race, gender, age, and level of income were significantly related to confidence in the police. Specifically, whites, females, older individuals, and individuals with higher income expressed greater confidence than individuals of all other races except for white, male, younger, and with lower income. Second, fear of crime and prior victimization were also important predictors. However, it is important to note that perceived neighborhood condition (e.g., physical and social disorder) was found to be the most salient predictors of citizens' confidence in the police than all other predictors (Cao et al., 1996).

Additional evidence for the impact of fear of crime comes from a quality of life study. Schafer et al. (2003) included in their analyses a list of items related to perceived quality-of-life (e.g., trash, public drunkenness, loitering), neighborhood culture (e.g., willingness to address neighborhood problems), perceived level of crime, and the actual crime rate. Results revealed a complex relationship among all aspects of the neighborhood and satisfaction with police services. More importantly, assessments of their impact on perceptions of global, traditional, and community-related police services showed perceived neighborhood crime was one of the most important predictors. Global perceptions in this study referred to broad, one-dimensional views of police services while traditional views referred to perceived conventional policing tactics (e.g., police response time). The last type of police service reflected policing approaches that incorporate input from community members to solving neighborhood problems. In short, neighborhood crime was related to the former two types of perceived police services (i.e., global and traditional) but not the latter (i.e. community-related).

Finally, interviews conducted with a sample of residents from Santa Ana, CA provided further support for the link between fear of crime in one's neighborhood and general attitudes toward the police (Bridenball & Jesilow, 2008). Although perceptions of police services were not examined, this study's findings further highlight the importance of perceived neighborhood crime. When asked about conditions of their neighborhood (e.g., safety and disorder), respondents expressing greater concerns over these matters were more likely to criticize the police. Moreover, consistent with prior research (Jacob, 1971; Parker, Onyekwuluje, & Murty; 1995; Schafer et al., 2003), this finding was true regardless of the actual crime rate. In other words, although neighborhood crimes can shape citizens' view of the police, perceived level of criminal offending within their neighborhood appeared to matter more (Bridenball & Jesilow, 2005; Weitzer & Tuch, 2005a).

In general, it may be that citizens who have witnessed social and physical disorder in their neighborhoods associate these problems with inadequate police services, which can ultimately lead to lowered evaluations of the police (Davis, 1990; Reisig & Parks, 2000; Sampson & Bartusch, 1998). As a result, citizens may feel the need to take extra steps to secure their personal safety when venturing out into the streets rather than relying on the police to ease their fears. Unfortunately, these actions can equate to even lower perceptions if any perceived increases in crime are coupled with the continued belief that police are incompetent.

Perception of Police Services in Rural Communities

The literature on perceptions of police services within rural communities is especially relevant to the current paper. Energy production typically occurs within this context. Thus, research findings from small towns are useful for understanding the degree of impact that rapid social change might have on the perceptions of citizens living in these areas.

Unfortunately, because efforts to uncover perceptions of police services have mostly centered on metropolitan areas, there is limited information on perceptions in smaller towns and less populated areas (Borrero, 2001; Sampson & Bartusch, 1998; Weitzer, 2000). This bias toward metropolitan areas is problematic for a couple of reasons. First, urban areas are significantly more populated than nonurban areas (United States Census Bureau, 2015). Given smaller towns might require fewer resources, the services provided by law enforcement officials in rural communities may be qualitatively different than those provided in larger cities. Second, the victimization rate is generally higher for urban residents when compared to rural residents (Duhart, 2000), suggesting information gathered from the former may not necessarily apply to the latter type of setting. Thus, generalization could be an issue. Third, approximately half of the police departments in the United States employ only 10 or fewer sworn police officers (Reaves, 2011). Given their small numbers, it is possible that rural law enforcement agencies utilize policing approaches that are less likely to be seen in more populated cities. Not surprisingly then, only a handful of studies have explored citizen' perceptions of police services within a rural context. Overall, existing research suggest residents from smaller and larger communities have different expectations regarding what the primary goals of law enforcement should be.

One of the earliest studies to show differences in the perceived delivery of service by the police between rural residents and those living in more populated areas appeared in the 1970s. Albrecht and Green (1977) interviewed a sample of citizens from four communities classified as rural, semirural, urban middle class, and urban poor and minority. Albrecht and Green (1977) focused on citizens' attitudes toward a number of political and legal matters within their community, including the police, economic and legal service delivery, political activities, courts and judges, and political alienation (p. 71). Specific to the police, the authors examined citizens'

attitudes toward police performance, police brutality, and citizens' respect for the police. In general, Albrecht and Green (1977) found citizens from rural communities displayed the most favorable attitudes towards the police while their urban sample held the least favorable attitudes.

In another study, Benedict et al. (2000) collected household surveys from a representative sample of residents living in a small town located in the Midwest. The authors were interested in learning the concerns respondents had regarding their safety, order-maintenance issues, and tactics utilized by the police within their communities. It is important to note that this study did not include larger areas for comparison. Nevertheless, their findings provide researchers with knowledge on possible determinants of citizens' perception of police services within small towns. To further their knowledge on perceptual differences among various geographic locations, the authors stratified their sample into groups that corresponded to six different police beats in the area. In doing so, the authors found citizens' viewpoints were based on a number of factors.

First, gender differences were observed in which women expressed higher levels of fear than men. In regards to police effectiveness, women more were likely than men to report the police were performing well to protect their neighborhood from crime. However, such gender differences were not observed for perceptions of police responsiveness. Instead, both men and women reported their local police were attentive to the needs of the community. Moreover, respondents still felt the need for police to increase their efforts toward interacting with residents as well as increasing their visibility within the community in nonthreatening ways (Benedict et al., 2000).

Although Benedict et al. (2000) did not directly examine the impact of personal safety on perceptions of police services, there is evidence to suggest a relationship exist between the two;

that is, feelings of personal safety is link to perceived ability of the police to control crime in small town communities. Nofziger and Williams (2005) conducted telephone surveys with a random sample of residents living in one county consisting of 14 small towns. The authors first analyzed their entire sample of citizens followed by a subgroup of respondents who reported having experienced a police encounter within the previous year.

For their full sample, Nofziger and Williams (2005) found those who perceived less crime in their community expressed greater confidence in their local police's ability to control crimes. Moreover, citizens who reported having confidence in the police indicated lower levels of concern over their personal safety. However, when their analysis was restricted to only those who had previous police encounters, Nofziger and Williams (2005) did not find such a relationship. One possibility for this lack of significance was the limited sample size for this group (Nofziger & Williams, 2005). Since small towns are less populated to begin with, restricting the sample to only the few who had contact may have reduced the sample to a statistically non-comparable size.

Aside from perceived personal safety, the authors also observed confidence in the police was related to various individual characteristics. Younger citizens, males, African Americans, and renters reported having lower confidence compared to older citizens, females, Whites, and homeowners (Nofziger & Williams, 2005). The significance of these variables is consistent with the general trend found in the broader literature on general perceptions of the police (Brown & Benedict, 2002; Decker, 1981; Levin & Thomas, 1997; Reisig & Parks, 2000; Weitzer, 1999; Weitzer & Tuch, 2005a; Wu, 2014). Moreover, when examining only those who had previous police contact, African American citizens' level of confidence was dramatically reduced compared to the level reported by all other races. This outcome is in line with the general trend

that find African Americans harbor the least favorable views of the police than any other racial groups (Decker, 1981; Furstenberg & Wellford, 1973; Reisig & Parks, 2000; Weitzer, 1999; Weitzer & Tuch, 2005a; Wu, 2014). More importantly, this finding suggests this racial group's perceived negative experiences with police contact are not restricted to any one particular geographical setting.

Social Cohesion/trust

To date, the literature has provided researchers with information regarding possible determinants of citizens' perception of police services across urban and rural areas; although knowledge on the latter is much more limited. As mentioned, smaller towns are of greater interest to the current paper given energy booms typically occur within these areas. Energy booms have the potential to alter the social and structural dynamics of small communities (Archbold, 2015; O'Connor, 2015; Ruddell & Ortiz, 2015; Smith & Krannich, 2000). Thus, it is necessary to examine residents' view of law enforcement's ability to respond to community concerns within such contexts. One area that is lacking in the literature is the impact of neighborhood social cohesion/trust.

In small towns impacted by rapid population growth, there may exist a social disconnect between residents who have lived in the area long enough to recognize the norms of the community and residents who have only recently begun to call the place their home (Filteau, 2015; O'Connor, 2015; Ruddell & Ortiz, 2015; Smith & Krannich, 2000). This unfamiliarity or increased anonymity among residents could potentially lead to greater reliance on the police to address community concerns given neighbors cannot rely on each other. Unfortunately, greater reliance might also translate into more critical views of the police. Moreover, these views may become exacerbated in boomtown communities where police resources are especially limited

due to growing demands (Archbold, 2015; Archbold et al., 2014; Dahle & Archbold, 2015). This is especially problematic given most rural police agencies are underfunded relative to their urban counterparts (Weisheit, Wells, & Falcone, 1995). On the other hand, residents who view each other as trustworthy or reliable are less likely to hold police accountable for the lack of crime control (Gau, Corsaro, Stewart, & Brunson, 2012; Nix, Wolfe, Rojek, & Kaminski, 2014). This may be due to neighborhood trust and reliance being elements of social cohesion where residents are more likely to engage in behaviors that will benefit the entire community (Sampson, Raudenbusch, & Earls, 1997). Thus, there is reason to believe residents who are able to trust and rely on one another perceive the delivery of police services differently from those lacking in this respect. The following section will present an overview of social cohesion/trust and the theory that incorporates this concept.

Collective Efficacy

Collective efficacy suggests that residents who are able to work as a cohesive group are better able to control neighborhood crime compared to residents who do not work together (Sampson et al., 1997, p. 1). Collective efficacy was inspired by the theory of social disorganization and its proposed structural determinants of crime. Social disorganization theory proposes that neighborhood characteristics (e.g. racial heterogeneity, residential mobility, and poverty) impact the level of crime and deviance observed in the neighborhood (Shaw & McKay, 1942). For instance, areas with high residential turnovers are said to undergo disruptions to its development resulting in lowered capacity to reduce crime incidents.

Unlike social disorganization theory, theories of informal social control argue that neighborhood characteristics are only indirectly related to crime (Bellair, 1997; Bursik & Grasmick, 1993; Kornhauser, 1978; Kubrin & Weitzer, 2003; Markowitz, Bellair, Liska, & Liu,

2001; Sampson et al., 1997). Consequently, these theories shift the focus away from neighborhood characteristics and more toward activities occurring at the community level such as the degree of interactions among its members (Sampson & Grove, 1989). Neighbors who get along and trust one another are said to enjoy some degree of informal social control. Informal social control refers to residents' ability to monitor and regulate the behaviors of fellow neighbors (Kornhauser, 1978). Accordingly, when informal social control is low, crime becomes more likely to occur due to the lack of neighborhood surveillance. In contrast, where informal social control is high, crime is less likely to occur.

Two intervening theories have been offered that expands on the development of neighborhood informal social control as the intervening variable tying neighborhood characteristics to crime. The first is Bursik and Grasmick's (1993) theory of community control where the focus is on the role of community networks in regulating human behavior. These theorists identified several types of control differing in levels of resident interactions – private control, parochial control, and public control. Private control generally refers to social support through intimate groups such as family and friends while parochial control reflects less intimate relationships among community members (e.g., neighbors). The last type of control stems from the community's connection with external agencies (i.e., agencies located beyond the neighborhood) (Bursik & Grasmick, 1993, p. 278). These elements of control emerge and strengthen overtime as neighbors continue to interact with one another. Sampson et al. (1997) recognized the importance of social networks; however, they argued such factors are insufficient for social control's development. Instead, they proposed a different version of the intervening variable that they called collective efficacy. Collective efficacy refers to the ability of community members to come together and work toward a common goal (e.g. crime control). There are two

components included in collective efficacy: willingness to intervene for the common good and social cohesion/trust (Sampson et al., 1997).

The willingness to intervene refers to the social control aspect of the theory and is considered necessary for preventing deviant acts (Sampson et al., 1997). Such behaviors are said to reduce neighborhood crimes through the process of monitoring and intervening whenever necessary. However, in order for residents to display any willingness to act on behalf of the common good of their neighborhood, they must first feel a sense of trust with their neighbors (Sampson et al., 1997, p. 919). The idea of social cohesion and mutual trust refers to the joint understanding among neighbors in ways that would enhance neighborhood solidarity. Neighbors who can trust and rely on one another are more likely to work towards strengthening informal social control, which could eventually reduce crime and deviance in their area. On the other hand, collective efficacy also posits that residents who are unable to come together and work as a collective group and are reluctant to address rising community concerns, may lower the community's capacity to regulate the behaviors of its members. Consequently, this lack of regulation can result in increased levels of neighborhood violence (Sampson et al., 1997). Thus, Sampson et al. (1997) argue the relationship between neighborhood characteristics and crime is mediated by neighborhood solidarity, an element that requires high levels of trust among its residents.

Overtime, the concept of collective efficacy has received great empirical support. Sampson et al. (1997) first tested their theory using survey data completed by residents living in Chicago, Illinois. The authors predicted collective efficacy would partially mediate the relationship between neighborhood characteristics – residential mobility, immigrant concentration, and concentrated disadvantage – and perceived violent crimes, violent

victimization, and homicide rates. Informal social control was measured with survey items asking respondents the perceived likelihood of their neighbors intervening in various circumstances (e.g., youths on the streets when they should be at school, youths displaying signs of disrespect, and youths engaging in deviance on street corners). Social cohesion and trust items asked respondents about how strongly they agreed with questions about neighborhood solidarity (e.g., shared values, trustworthiness of neighbors, and reliance).

First, Sampson et al. (1997) found collective efficacy was negatively related to perceived neighborhood violence; that is, when collective efficacy was high, the perceived neighborhood violence was low but when collective efficacy was viewed to be relatively low, the perceived violence was high. The same was true for the other two outcome measures of violent victimization and homicide rates. Collective efficacy was observed to mediate much of the effects of concentrated disadvantage and residential mobility on violence. Moreover, to distinguish between the effects of collective efficacy from other social processes, Sampson et al. (1997) included measures of kinship and social ties in their examination and found these other explanations were insufficient when pitted against collective efficacy, the latter of which remained largely significant. Put simply, informal social control and social cohesion were better determinants of the outcome measures than other social processes.

Collective Efficacy and Perceptions of the Police

Although collective efficacy has been used to explain levels of neighborhood crime, the theory has since been used to explain perceptions of the police, although this area of research is limited. The link between collective efficacy and perceptions of the police was observed in a study examining the relationship between procedural justice and perceived collective efficacy on citizens' trust in the police (Nix et al., 2014). Procedural justice in this study was measured with

perceived police biases, respectfulness, and responsiveness while collective efficacy referred to measures of informal social control and social cohesion/trust. For example, a question pertaining to social cohesion asked respondents to indicate how strongly they agreed with the following statement: “people around here are willing to help their neighbors” and “people in this neighborhood can be trusted” (Nix et al., 2014, p. 13).

In an analysis of survey data gathered from a random sample of residents from a midsize U.S. city, Nix et al. (2014) were able to observe a few notable findings. First, the authors found both procedural justice and collective efficacy were related to trust in the police. That is, citizens who viewed the police as fair and equitable were more likely to express greater trust toward the police. Moreover, citizens who perceived high levels of collective efficacy in their community were more likely to report the police as trustworthy. Second, collective efficacy and procedural justice were positively related to one another such that citizens who viewed their community as more collective were also more likely to believe that the police were procedurally fair. Finally, the authors found procedural justice partially mediated the effects of collective efficacy on the outcome measure. Perceived collective efficacy remained statistically significant suggesting the importance of this concept, independent of other influences. In short, these findings underscore the importance of forming quality ties among neighbors in ways that would allow them to work as a cohesive group.

Social Cohesion/trust and Perceptions of Police Services

Although collective efficacy requires both the willingness to intervene and social cohesion, the latter is of greater interest given the context of the current paper. As previously mentioned, in order for community members to work together and monitor the behaviors of its neighbors, there must first be mutual trust and reliance among them. In oil boomtowns where

rapid population growth can disrupt the collective efforts of communities to regulate the behaviors of its members, these two aspects of social cohesion are especially important.

The role of social cohesion alone (i.e. without social control) on perceived neighborhood disorder have received empirical support. Ross and Jang (2000) argued neighborhood connections (e.g., assistance, reliance, and other forms of bonding) could mitigate the harmful effects of perceived neighborhood disorder. Focusing on trust as an outcome measure (or rather, the lack of trust), the authors found this variable was positively related to levels of community connections. More specifically, the stronger the connections, the greater the trust among neighbors but the weaker the connections, the lower their level of trust. Moreover, similar to previous research findings (e.g., Sampson et al., 1997; Bursik & Grasmick, 1993), Ross and Jang's (2000) analysis showed neighborhood integration moderated the relationship between neighborhood characteristics – perceived neighborhood disorder in this case – and their outcome measures.

In relation to the current study, a lack of community cohesion could result in a strained relationship between community members and the police. If residents are unable to build trust with each other, the likelihood of them coming together to keep their community safe will remain relatively low. Consequently, members may feel the need to increase their reliance on the police to combat rising neighborhood problems. Unfortunately, if residents feel their concerns are not adequately addressed, they may come to believe the police are ineffective and incapable of performing their duties (Cao et al., 1996).

Alternatively, it could be that lowered trust among neighbors is embodied under a more general sense of mistrust towards all persons within the community, including local law enforcement (Nix et al., 2014, p. 8). Sampson and Bartusch (1998) found evidence to support the

idea that citizens' cognitive orientation towards law enforcement officials is shaped by their perceived neighborhood context (p. 801). Nevertheless, such context may involve some degree of perceived social cohesion (Gau et al., 2012). In either case, trust remains an important factor shaping citizens' perceptions; thus, suggesting the need to further evaluate variables of neighborhood trust and reliance as indicators of social cohesion on perceptions of police services.

Support for the role of social cohesion molding perceptions of the police was offered in a study examining both macro-level and individual-level predictors of procedural justice and police legitimacy (Gau et al., 2012). Using data from three different sources (e.g., citizen surveys, Uniform Crime Report, and Census data), Gau et al. (2012) found social cohesion remained an important predictor of police legitimacy even after all other variables (e.g., demographics, distributive fairness, procedural justice, neighborhood characteristics) were considered. Taken together, findings from both Nix et al. (2014) and Gau et al. (2012) indicate social cohesion and trust are important predictors of citizens' perceptions of the police. Within the context of the current paper where rapid social changes occurred within the community, this element may play an even bigger role.

Current Study

In sum, past research indicates citizens' perceptions of police services are impacted by a multitude of factors. However, there is currently a lack of information on these influences in a community experiencing rapid population growth resulting from increased oil production. For one, it is possible that the addition of new residents to an established community of long-term residents have resulted in a divergence in perceptions of police services. There is currently a lack of research on the relationship between residential longevity and perceptions of police services in

an oil boomtown; however, research on citizens' fear of crime suggest that fear levels tend to be higher for long-term residents compared to residents who arrived during the boom (Hunter, Krannich, & Smith, 2002). As previously mentioned, fear of crime is an important predictor of perceptions of the police and police services (Cao et al., 1996; Davis, 1990; Eschholz et al., 2002). Thus, there is reason to believe that residential longevity might also play a role in shaping residents' perceptions of police services.

Finally, little is known about the role of social cohesion – a component of collective efficacy – on citizens' perception within such contexts. The current paper adds to the paucity of research related to boomtowns and perceptions of crime control by the police using three outcome measures: perceived ability of the police to control drugs and alcohol-related crimes; perceived ability of the police to maintain order on the streets and sidewalks; and perceived ability of the police to control violent and property crimes. Data for this study were gathered from surveys completed by a random sample of citizens living in Williston, North Dakota during Fall 2015. Based on the literature and the tenets related to social cohesion and trust, the following research questions will be addressed:

1. Are there differences in perceptions of police services among long-time residents and new residents living in Williston, ND?
2. Do residents' demographic characteristics, media consumption, fear of crime, and perceptions of personal safety influence their perception of police services?
3. Does social cohesion and trust of neighbors influence residents' perception of police services?

CHAPTER 3: METHODS

The purpose of the current study is to provide a quantitative look at how residents living in an oil boomtown perceive crime control by local law enforcement. To date, research suggests a number of influences are responsible for shaping citizens' perceptions of police services. However, it is possible that the oil boom has increased the social complexity of the community, thereby, altering the degree of variable impact. Additionally, researchers have previously incorporated the theory of social disorganization and its elements as determinants of citizens' perception of the police (Wentz & Schlimgen, 2012; Brunson & Weitzer, 2009; Wu et al., 2009; Sampson & Bartusch, 1998), although more recent studies have begun to study specific segments of the theory – specifically mechanisms of control (Nix et al., 2014; Gau et al., 2012; also see Kubrin & Weitzer, 2003). The current study follows this trend by including the concept of social cohesion as defined within the theory of collective efficacy in the analyses.

Research Site

Data for this study was drawn from a larger study on residents' perception of the changes to their community following an oil boom. The site of interest for this research is the city of Williston, North Dakota. Williston is located within the Bakken shale region, which spans across parts of North Dakota, Montana, Manitoba, and Saskatchewan (**Figure 1**). Since the rise in oil production, Williston has experienced major increases in its population. From 2000 to 2010, Williston's population had an increase of 17.62 percent and from 2010 to 2015 that percentage increased to 49.84 percent (United States Census Bureau, 2015).

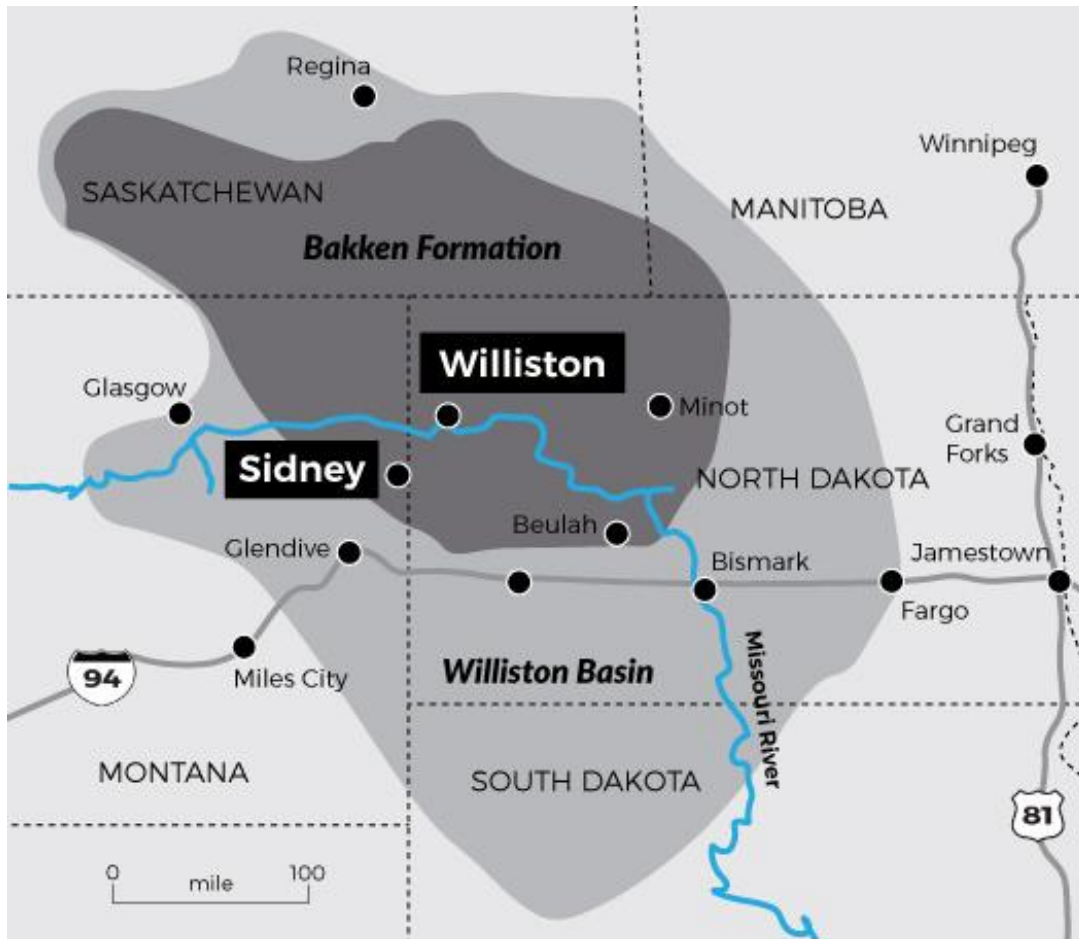


Figure 1. Map of Williston within the Bakken oil shale region (Image source: Montana Business Quarterly, 2017).

The demographic profile of Williston’s population has changed since the oil boom. The median age of residents declined from 38.5 years in 2000 to 35.5 years in 2010 (**Table 1**). In 2015, the median age of residents declined further to 31.7 years. In 2000, 93.7 percent of the population was White, and in 2015, this percentage dropped to 86.97 percent. The change to the gender ratio is also apparent with women representing 52.11 percent of the population in 2000, and decreasing to 48.99 percent in 2010. The percentage of women declined even lower in 2015 when they represented 45.51 percent of the population in Williston. Residents who received at least a high school education were 82.43 percent in 2000, 87.58 percent in 2010, and 90.7 percent in 2015. Moreover, the percentage of residents with at least some college education

increased from 51.37 percent in 2000 to 62.84 percent in 2015. The percentage of housing units occupied by renters slightly increased from 36 percent in 2000 to 38.99 percent in 2015. Finally, the median household income increased from \$29,962 in 2000 to \$56,836 in 2010, and in 2015, the median household income reached \$90,171(United States Census Bureau, 2015).

Table 1

Williston population demographics, 2000, 2010, and 2015

	2000	2010	2015
Median Age (years)	38.5	35.5	31.7
Sex:			
Males	5,992	7,507	12,016
Females	6,520	7,209	10,035
Race/ethnicity:			
Whites	11,723	13,634	19,178
African Americans	21	51	471
All other races	510	592	1,337
Ethnicity (of any race)	154	328	1,065
Education:			
No high school diploma	1,646	1,320	1,318
High school diploma	2,910	3,284	3,966
Some college or associate degree	3,241	3,981	5,822
4 years or more of college	1,572	2,041	3,117
Occupied Housing Units:			
Renter-occupied	1,895	2,325	3,549
Owner-occupied	3,360	3,855	5,553
Median Household Income	\$29,962	\$56,836	\$90,171
Total Population	12,512	14,716	22,051

(United States Census Bureau, 2015)

Data Source

A multi-stage random sampling technique was used to administer door-to-door surveys to households in Williston during the fall of 2015. Using a map, Williston was first separated into four quadrants, then neighborhoods were identified within the quadrants. Surveys were distributed to residents based on randomly chosen city blocks. Each quadrant has its own unique characteristics. The first quadrant (located on the northern part of the city) consisted primarily of industrial and commercial businesses, although there were few areas dedicated to single and multi-family households. Quadrant 2 can be considered the central part of the city, comprising of several types of residential dwellings (e.g., single family homes, multi-family households, and mobile parks). The local airport is also located within this section of the city. On the southeastern region of Williston is quadrant 3. This quadrant is not dominated by any particular type of structure; instead, it contained a mix of industrial, commercial, and residential areas. The last quadrant (Quadrant 4) is located in the southwestern part of town and consists of largely agricultural areas along with several industrial businesses.

Team members approached each household by first introducing themselves and then explained the purpose of the study. Household members had to be at least 18 years of age to complete the survey. Whenever an adult was unavailable, team members would revisit that household at a later time. On occasions, a copy of the survey was left with respondents to be completed at their convenience, and then retrieved by the research team at a later time. A total of 75 surveys were collected from Quadrant 1, 137 from Quadrant 2, 100 from Quadrant 3, and 68 from Quadrant 4. The larger number of surveys obtained from the second and third quadrant correspond to the relatively large number of residential homes located within these two regions. In contrast, Quadrant 1 and 4 comprised of mostly agricultural land or industrial areas.

According to the United States Census Bureau (2015), there were 9,120 households in the year 2015. The research team visited a total of 1,823 households and of that, 1,288 households had residents who either chose not to answer the door or were not home to answer the door. The team had 535 face-to-face interactions with household residents with 155 people refusing to complete the survey. This resulted in a total of 380 completed surveys. Thus, the response rate for face-to-face interactions was 71 percent (380/535). The overall response rate was 20.8 percent (380 completed surveys after knocking on 1,823 households).

Table 2 provides descriptive information of the people who completed the surveys. The average age of survey respondents was 44.51 years old. Females represented 58.73 percent of residents who completed the survey. The majority of survey respondents were White (87.78%), married (60.75%), and homeowners (69.89%). On average, residents in our sample lived in Williston for about 19.16 years. More than half (51.88%) of the residents lived in Williston prior to the oil boom. The majority of residents who completed the survey (81.07%) had at least a high school education. Of those residents, 22.70 percent earned some college credits, 19.08 percent completed two years of college, and 30.59 percent had four or more years of college experience.

Table 2

Resident sample descriptive statistics

	N	Mean	Std. Deviation	Range
Age (years)	373	44.51	17.66	18-96
Sex:	378	.59	.49	0-1
Males	156			
Females	222			
Race/ethnicity:	360	.12	.33	0-1
White	316			
All other races/ethnicity	44			
Marital Status:	373	.61	.49	0-1
Single/divorced/widowed	146			
Married	226			
Education:	375	2.05	1.46	0-4
No high school diploma	71			
High school diploma	84			
Some college	69			
2 years of college	58			
4 years or more of college	93			
Homeownership:	372	.70	.46	0-1
Rent	112			
Own	260			
Residential Longevity	372	19.16	20.83	0-89
Long-time residents	193			
Boom residents	179			

The study sample is similar to the population demographic of Williston, ND regarding the distribution of race/ethnicity, homeownership, and education. For instance, there were significantly more Whites than all other races/ethnicities and more homes were owned than rented. However, the study sample deviates from Williston's population demographic in regards to sex and age. There were more males than females living in Williston for the year 2015,

whereas, the sample in the current study contains more women than men. One possibility for this gender difference is the time of day that the questionnaires were administered. The research team visited households from 9:00am until approximately 8:00 pm. Survey distribution occurred during a period when people are likely to be at work. Moreover, it has been said that the increased employment opportunities in the oil fields have attracted mostly men (Hargreaves, 2015; Valentine, 2014). Thus, it is likely that a larger number of men than women were at their place of employment during the team's visits to households, resulting in more women than men completing the survey. The median age recorded for the population of Williston (31.7 years) was younger than the median age in our study sample of 43 years. Similar to sex, it is possible that young males were at work in the oil fields during the hours of survey distribution.

Measures

Dependent Variables

Previous studies of citizens' perceptions of the police have included questions regarding how well the police manage various types of crime and disorder (Wentz & Schlimgen, 2012; Kusow, et al., 1997; Wu et al., 2009). The current study utilizes three measures of police services. First, two items were combined to form a perceived *order maintenance* variable: "How good a job are the police doing in maintaining order on the streets and sidewalks in your neighborhood?" and "How good a job are the police doing in controlling traffic-related issues in your neighborhood?" Responses ranged from 1=very bad to 4=very good. The Cronbach's alpha reliability coefficient revealed an acceptable degree of internal consistency ($\alpha = .72$).

The second dependent variable measures perceived *crime control* by the police in respondents' neighborhood. This variable was created by combining two survey questions: "How good a job are the police doing in controlling violent crime in your neighborhood?" and "How

good a job are the police doing in controlling property crime in your neighborhood?” Responses ranged from 1=very bad to 4=very good. The Cronbach’s alpha suggests a high degree of internal consistency ($\alpha = .84$).

The third dependent variable measures perceptions of how well the police are able to *address drugs and alcohol-related problems*. The two questions used to create this variable were: “How good a job are the police doing in controlling the sale and use of illegal drugs in your neighborhood?” and “How good a job are the police doing in controlling alcohol-related issues in your neighborhood?” Responses ranged from 1=very bad to 4= very good. The Cronbach’s alpha reliability coefficient for the two items was .75, indicating internal consistency.

To address the research question of whether residents’ demographic characteristics, media consumption, fear of crime, and perceptions of personal safety influences their perception of police services, the following variables will be included in the analyses.

Independent Variables

Citizen characteristics

Previous studies have found that various resident demographic characteristics influence perception of police services (Bridenball & Jesilow, 2008; Brown & Benedict, 2002; Brunson, 2007; Callanan & Rosenberger, 2011; Cheurprakobkit, 2000; Decker, 1981; Frank et al., 1996; Hurst et al., 2000; Levin & Thomas, 1997; Reisig & Parks, 2000; Schafer et al., 2003; Weitzer, 1999; Weitzer & Tuch, 2005a; Wu, 2014). Similarly, this information was gathered from participants for the current study. More specifically, respondents were asked to indicate their age, sex, race/ethnicity, marital status, residential longevity, and whether they rent or own their homes.

Age was coded as a continuous variable measured in years. Studies have revealed that older residents tend to view the police more positively than younger residents (Schafer et al., 2003; Brunson, 2007; Hurst et al., 2000). For all dichotomous variables, those coded as “1” were treated as the reference category. *Sex* was coded “0” for males and “1” for female. For *race/ethnicity*, White residents were coded as “0” while all other races were coded as “1.” Although it is desirable to have more than two racial and ethnic categories, the small number resulting from a lack of diversity within our sample makes it especially challenging to make appropriate comparisons. Similarly, the small numbers associated with the different categories of *marital status* resulted in residents being grouped into two categories where single, widowed, or divorced individuals were included in one category and married individuals were included in the other (single/widowed/divorced=0, married=1).

The literature on education is mixed with some researchers finding no effect (Scaglione & Condon, 1980; Cao et al., 1996) while others observed it to impact people’s perceptions of police services (Wentz & Schlimgen, 2012; Wu, 2014). For the current paper, *education level* was coded into five groups (no high school diploma=0, high school diploma=1, some college=2, two years of college=3, and four or more years of college=4). With regard to *home ownership*, renters were coded “0” while homeowners were coded “1.” Finally, *residential longevity* was separated into two categories – long-time and boom residents. This would help determine if perceptual differences exist between these two groups. Long-time residents refer to those who have been living in Williston prior to the boom (2007 – prior) while boom residents refer to those who arrived during the boom (2008 – 2015) (0=boom residents, 1=long-time residents). Prior research suggests residents’ fear of crime in a boomtown is dependent on whether they have lived in the community prior to or during the boom. These studies indicate that fear levels

tend to be higher for long-time residents compared to boom residents (Hunter et al., 2002). This difference in fear levels could also translate into a divergence in perceptions of police services.

Experiential factors

Studies have shown past experiences can shape citizens' view of the police and police services (Bridenball & Jesilow, 2008; Brown & Coulter, 1983; Brunson, 2007; Scaglione & Condon, 1980; Smith & Hawkins, 1973; Wu, 2014). To determine whether *prior crime victimization* plays a role in the current context, respondents were asked to indicate “yes” (0) or “no” (1) to the following two questions: “Have you, a family member, or a close friend been the victim of a property crime in the past two years?” and “Have you, a family member, or a close friend been the victim of a violent crime in the past two years?”

It is important to note that research has suggested prior experiences with police contact are an important predictor of citizens' attitudes toward the police and police services. Information regarding contact with police was not included in the questionnaire. The lack of a contact variable is a limitation to the current study; however, given that approximately half of victims are said to have reported crimes to the police (Truman & Morgan, 2016), with larger or smaller percentages depending on the type of crime, it can be presumed that a police contact – more specifically a citizen-initiated contact – may have taken place. Thus, prior crime victimization can serve as a crude indicator for prior contact with the police.

The influence of *media exposure* on citizens' perceptions of police services has been included in a handful of studies. There is some evidence to indicate that the amount of media consumption matters (Dowler & Zawilksi, 2007; Eschholz et al., 2002; Weitzer, 2002; Callanan & Rosenberger, 2011) as well as the source of the information (television program vs. newspaper articles). To determine the importance of both the amount and source of information,

respondents were asked the following two questions: “How many times per week do you watch the local news on television?” and “How many times per week do you read the local or regional newspaper?”

Fear of crime and personal safety

There are several studies showing citizens’ *fear of crime* impacts their perception of police services (Cao et al., 1996; Davis, 1990; Eschholz et al., 2002; Weitzer & Tuch, 2005a; Sampson & Bartusch, 1998). To determine the level of fear that citizens have toward crime, respondents were asked, “How fearful are you of becoming a victim of violent crime?” and “How fearful are you of becoming a victim of property crime?” ($\alpha = .78$). Respondents indicated their level of fear on a scale of 1=not at all fearful to 4=very fearful. This general fear of crime measure is important for understanding citizens’ assessment of their surroundings.

Similarly, the level of concern for one’s *personal safety* is also an important predictor of perceptions of police services (Sampson & Bartusch, 1998; Reisig & Parks, 2000; Davis, 1990). On a scale of 1=very unsafe to 4=very safe, respondents were asked the following question: “How safe do you feel walking through your neighborhood during the evening?” This measure of asking respondents about their perception of personal safety after dark is similar to those used in previous studies (Smith, Krannich, & Hunter, 2001; Hunter et al., 2002).

Social cohesion/trust

As a main component of collective efficacy, social cohesion/trust has gained support for its role in shaping citizens’ perception of the police (Gau et al., 2012). The other component – informal social control – will not be examined in the current study. There are two reasons for not including this second component: First, items related to citizens’ willingness to monitor and act on behalf of the common good were not included on the survey. Second, although informal

social control remains a central part of the theory, there is reason to believe social cohesion/trust is especially (if not more) important in the context of an oil boom. The oil boom has the potential to disrupt the social and physical dynamics of the community (Archbold, 2015; O'Connor, 2015; Ruddell & Ortiz, 2015; Smith & Krannich, 2000). Put another way, rapid population growth could lead to disorganization where any efforts of the community to control the behaviors of its members become thwarted. It has been argued that in disorganized neighborhoods, citizens are likely to increase their level of reliance on law enforcement due to the absence of informal law. Furthermore, it has been said that reliance on the police results from limited access to community resources leaving disorganized neighborhoods with nothing but penal law to rely upon (Schaible & Hughes, 2012). Put simply, where there is a lack of informal social control, formal control is most likely to have a larger presence.

Although there are differences (e.g. size, location, and composition), boomtowns are similar to disorganized neighborhoods in many respects. For instance, the rapid influx of new people moving into the area can bring disruption to the flow of neighborhood connections, thereby impeding the ability of community members to effectively communicate with one another for purposes of achieving a common goal. As evidenced by Ross and Jang (2000), neighborhood alliances mitigate the negative effects of perceived social disorder.

Questions related to social cohesion/trust in the current study are similar to those used in previous studies (Gau et al., 2012; Nix et al., 2014; Sampson et al., 1997). For instance, Nix et al. (2014) included items related to trust and reliance, both of which are included in the following paper. To measure their level of *trust*, respondents were asked to indicate on a scale of 1=strongly disagree to 4=strongly agree with the statement: "Most people in this town can be trusted.

The current study also includes multiple measures of reliance on neighbors. Indeed, past researchers have mostly asked about the perceived willingness of neighbors to help others (Sampson et al., 1997; Nix et al., 2014; Kochel, 2012). The current paper extends this line of questioning by including other aspects that can contribute to social cohesion. More specifically, participants in this study were asked questions regarding their willingness to rely on their neighbors. To determine the perceived *reliability* of neighbors, four items were combined, including “I can count on my neighbors to watch my home when I am gone,” “I can count on my neighbors to water my lawn when I am gone,” “I can count on my neighbors to collect my mail when I am gone,” and “I can count on my neighbors to help me in an emergency situation.” Responses to these questions were coded “1” to indicate neighbors can be relied upon or “0” to indicate neighbors are not reliable. The Cronbach’s alpha for the scale revealed a high degree of internal consistency ($\alpha = .82$). In general, including these two variables in the analyses will help determine whether they are important for understanding residents’ perception of police services.

Analytical Strategy

To determine the level of influence that the independent variables have on the three outcome measures, univariate, bivariate, and multivariate analyses were used in this study. First, descriptive statistics including frequencies, percentages, and means provide a general overview of each variable included in the study. Spearman’s correlations were then used to assess the relationship between the continuous predictor variables and the outcome measures. Spearman’s correlation coefficient is often used to measure the strength of a relationship between two variables when the dependent variable is not normally distributed (Field, 2009; Walker & Maddan, 2013).

To address the first research question, Mann-Whitney U tests were used to determine whether there are differences in perceptions of police services among boom residents (i.e., residents who arrived during the boom) and long-time residents. Additionally, this test was used to assess group differences for the remaining categories of the independent variables. The Mann-Whitney U is a nonparametric test often used to compare the means of two groups when the outcome variable is not normally distributed (Field, 2009).

Variables that are highly correlated can influence the outcome of a significance test; thus, prior to any advanced statistical analyses, multicollinearity diagnostics test were performed to determine if any of the predictor variables were highly correlated (Field, 2009; Menard, 1995; Walker & Madden, 2013). Multicollinearity diagnostics were obtained by entering the variables into ordinary least squares (OLS) regression models, a method that has been used in previous research (Gau et al., 2012). Diagnostics tests revealed all tolerance values were greater than 0.25 and all variance inflation factor (VIF) scores were below four. These values indicate that none of the predictor variables were highly correlated; thus, there were no problems with multicollinearity in the current study (Walker & Maddan, 2013).

Due to the ordered nature of the dependent variables, a series of ordinal regression analyses were conducted for the three outcome measures – perceived police ability to address order-maintenance issues, control neighborhood crime (violent and property), and to control drugs and alcohol-related problems (Walker & Madden, 2013).

CHAPTER 4: RESULTS

Descriptive data for the independent and dependent variables are displayed in **Table 3**. On average, Williston residents read the local or regional newspapers approximately three times per week and watched the local news on television four times per week. Less than half of respondents (44%) have been victims of property crime and even fewer respondents have been victims of violent crime (16.5%). Over half (64%) of respondents felt unsafe walking in their neighborhood during the evening hours. Approximately 20.6 percent of respondents reported being fearful or very fearful of becoming victims of violent and property crimes. Regarding elements of collective efficacy, approximately 60 percent of respondents agreed that most people in their town can be trusted and 61.2 percent indicated that they could rely on their neighbors for help.

Overall, most residents perceived police services positively. More specifically, 80.8 percent of respondents indicated that the police are doing a good job in controlling traffic and maintaining order on the streets and sidewalks. Similarly, 85.4 percent reported that the police were doing a good job in combatting property and violent crimes. Finally, roughly 79 percent of respondents agreed that the police were doing a good job in addressing drugs and alcohol-related problems in their neighborhood (**Table 3**).

Table 3

Descriptive statistics

	N	Mean	Std. Deviation	Range
<i>Independent variables</i>				
Media consumption:				
Read local newspaper	373	2.82	2.84	1-10
Watch local news	375	3.96	3.77	1-21
Experiential factors:				
Victim of property crime	372	.44	.49	0-1
No	312			
Yes	162			
Victim of violent crime	374	.16	.37	0-1
No	208			
Yes	164			
Fear of crime and personal safety:				
Fear of crime	376	1.97	.77	1-4
Personal safety	377	2.23	.88	1-4
Collective efficacy (social cohesion/trust):				
Trust	380	2.61	.82	1-4
Reliability	360	.60	.37	0-1
<i>Dependent variables</i>				
Police services:				
Police order maintenance	371	2.92	.65	1-4
Police control violent and property crime	360	3.01	.62	1-4
Police address drugs and alcohol	350	2.90	.67	1-4

Long-time Residents vs. Boom Residents

The first research question is concerned with whether perceptions of police services differ among residents who have been living in Williston prior to the oil boom (before 2008) and those who arrived during the boom (2008 – 2015). Mann-Whitney U tests revealed significant differences in residents' perception for two out of the three services provided by the police (**Table 4**). There was a significant difference in residents' perception of crime control by the police ($U= 13495, p= .025$). The mean rank score for long-time residents ($MR=186.95$) was significantly higher than the mean rank score for boom residents ($MR=164.80$) (**Table 4**). Put differently, those who have been living in Williston prior to the oil boom were significantly more likely to report that the police were doing a good job in controlling violent and property crimes in their neighborhood compared to residents who arrived while the oil boom was underway.

There was also a significant difference between the two groups of residents regarding their perceptions of how well the police were doing in controlling drugs and alcohol-related problems ($U= 12880.00, p= .05$). Long-time residents' perceptions ($MR= 180.50$) were significantly higher than perceptions held by boom residents ($MR= 161.02$). Once again, this finding suggests that long-time residents were more likely than those who arrived during the boom to agree that the police were doing a good job of addressing drugs and alcohol-related problems in their neighborhood. Finally, there were no significant differences between the two groups of residents regarding their perceptions of order-maintenance by the police ($p >.05$).

To further explore these perceptual differences, items used to create each category of police services were separated and examined individually (**Table 4**). This closer examination helps determine if perceptual differences between long-time and boom residents varied across specific types of services delivered by the police. Compared to boom residents, long-time

residents were more likely to agree that the police were doing a good job in controlling property crimes; however, no statistically significant differences were observed for violent crime. This finding suggests perceptual differences in crime control were mainly driven by the perceived ability of police to control property crimes as oppose to violent crimes. Differences in the perceived ability of the police to control the sale and use of illegal drugs or address alcohol-related issues were only marginally significant. Finally, both order maintenance variables (maintaining order on the streets and sidewalks and controlling neighborhood traffic) remained insignificant.

Table 4

Mann-Whitney U tests comparing mean rank scores for long-time vs. boom residents' perceptions of police services

	<u>Long-time Residents</u>		<u>Boom Residents</u>		Z	p
	Mean Rank	Sum of Ranks	Mean Rank	Sum of Rank		
Police order maintenance (2 items, $\alpha = .72$)	186.71	354775.50	176.82	30590.50	-.957	.339
Police maintain order on streets	190.74	36812.50	176.53	30715.50	-1.540	.124
Police control traffic	184.92	35135.50	177.79	30930.50	-.628	.530
Police control violent and property crimes (2 items, $\alpha = .84$)	186.95	34772.00	164.80	27356.00	-2.246	.025*
Police control violent crimes	185.27	34831.00	172.02	29072.00	-1.478	.139
Police control property crimes	187.93	35331.00	169.07	28572.00	-2.011	.044*
Police address drugs and alcohol (2 items, $\alpha = .75$)	180.50	33212.00	161.02	25441.00	-1.963	.050*
Police control sale and use of illegal drugs	182.74	34356.00	165.96	26719.00	-1.725	.084†
Police address alcohol-related issues	183.79	34369.00	167.12	27407.00	-1.849	.064†

* $p < .05$

† denotes $p < .10$

Overall, these results are important considering the actual number of reported crimes in Williston, ND. **Table 5** shows the number of burglarized homes steadily increased from 2008 to 2013. Similar increases can be observed for the number of larceny/theft and motor vehicle theft. Increases in the number of larceny/theft began with 157 in 2008 and increased to 685 in 2013, while increases in motor vehicle theft were 26 and 206 for those same years.

Unlike property crimes, the number of violent crimes does not appear to have a discernable pattern of increase or decrease with the exception of aggravated assault, which steadily increased during the period surrounding the oil boom. The number of robberies increased in 2008 followed by a decrease in 2010 before increasing once again in 2012. The number of forcible rapes also fluctuated from 2007 to 2013 where both increases and decreases can be observed. Nevertheless, it is important to note that the overall number of reported violent crimes remained relatively low, suggesting caution when interpreting its change over a given period of time.

In short, the number of reported crimes in Williston is consistent with the current results on perceived crime control by the police. More specifically, results revealed long-time residents were more likely than boom residents to agree that the police are doing a good job controlling crime – particularly property crimes – in their neighborhood. As can be seen in **Table 5**, there was a clear and steady increase in the number of property crimes but not for violent crimes.

Table 5

The number of violent and property crimes in Williston, ND (2001 – 2013)

Year	<u>Violent Crimes</u>			<u>Property Crimes</u>		
	Aggravated Assault	Robbery	Forcible Rape	Burglary	Larceny/Theft	Motor Vehicle Theft
2001	2	0	7	19	224	41
2002	4	1	8	19	226	29
2003	6	1	12	28	201	53
2004	13	0	3	20	182	27
2005	11	1	3	26	120	42
2006	7	1	6	25	122	25
2007	12	1	4	15	160	27
2008	13	2	14	17	157	27
2009	17	4	15	37	268	26
2010	26	3	11	27	245	31
2011	39	2	16	28	292	75
2012	49	2	12	44	604	116
2013	57	8	13	80	685	206

(Source: Office of Attorney General, Wayne Stenehjem, Attorney General. Crime in North Dakota reports, 2001-2013)

In a relatively small town, it is possible that long-time residents were more familiar with the town and their local law enforcement compared to boom residents. Thus, long-time residents may have had greater confidence in the police and their ability to control crime regardless of the actual number that was reported. The same may also be true for the perceived ability of police to address drugs and alcohol problems in the neighborhood. In contrast, boom residents are relatively less familiar with Williston; thus, it is possible that their views were based on firsthand observations upon arriving to Williston. Given the town's activities were likely at its peak during their arrival, boom residents may have attributed the rising crime figures as the result of inadequate delivery of police services. Put differently, the actual number of crimes may have had less of an influence on long-time residents' views of crime control by the police and the police's ability to address drugs and alcohol problems than boom residents.

Alternatively, this perceptual difference could also be due to the time period when the surveys were administered. Residents completed the surveys at a time when oil production was on the decline due to reductions in crude oil prices (Sankararaman & Medhora, 2015). Consequently, it is possible that oil field workers were beginning to leave Williston in search of employment elsewhere in the United States. As more residents continue to leave the area, long-time residents may have felt that the police were now better able to manage or address neighborhood problems that were often associated with boom residents, especially in the areas of crime control and use of illegal drugs and alcohol.

Mann-Whitney U tests were also performed for the remaining predictor variable to further explore perceptual differences among different groups of residents. Results are presented in **Table 6**. First, differences in perceived order maintenance by the police were observed for victimization of property ($U= 11867, p < .001$) and violent crimes ($U= 6045.50, p < .001$). The mean rank scores for victims of property or violent crimes were significantly lower than the mean rank score for individuals who have not been victimized.

Regarding residents' perceptions of crime control by the police, differences emerged for marital status ($U= 12616.50, p < .05$), homeownership ($U= 9747.00, p < .001$), victims of property crimes ($U= 11034.50, p < .001$), and victims of violent crimes ($U= 4395.50, p < .001$). Mean rank scores were significantly higher for married individuals, homeowners, and those who have not been victimized (property or violent). Differences in the perceived ability of police to address drugs and alcohol problems were observed for race/ethnicity ($U= 5017.00, p < .05$), homeownership ($U= 9399.50, p < .001$), and victims of property ($U= 11540.50, p < .001$) and violent crimes ($U= 5021.50, p < .001$). More specifically, White residents, homeowners, and individuals who have not been victims of property or violent crimes have significantly higher

mean rank scores than all other races (other than White), renters, and victims of crimes (**Table 6**).

Table 6

Mann-Whitney U tests comparing mean rank scores for citizens' characteristics and experiential factors on perceptions of police services

	Police Order Maintenance	Police Control Violent and Property Crimes	Police address Drugs and Alcohol
Sex:	14812.00†	15093.00	13636.00
Males	173.68	176.12	167.53
Females	193.11	181.94	179.31
Race/ethnicity:	5808.00	5590.00	5017.00*
White	179.64	174.87	171.32
All other races/ethnicity	154.50	152.00	140.95
Marital Status:	14321.50	12616.50*	12381.00†
Single/divorced/widowed	172.15	160.92	160.09
Married	188.40	186.54	178.76
Homeownership:	12215.50†	9747.00**	9399.50**
Rent	167.07	145.45	143.65
Own	188.41	189.88	183.34
Victim of property crime:	11867.00**	11034.50**	11540.50**
No	206.11	200.55	189.58
Yes	154.71	149.23	152.44
Victim of violent crime:	6045.50**	4395.50**	5021.50**
No	195.31	194.20	186.50
Yes	130.11	103.76	114.19

U scores are shown following each variable; mean rank scores listed after each category.

* $p < .05$

** $p < .01$

† denotes $p < .10$

Finally, Spearman's correlations were run to determine the strength of the relationship between the continuous predictor variables and the outcome measures (**Table 7**). With the exception of education and age, all predictor variables had statistically significant relationships with each of the three services provided by police. Age was positively related to the perceived ability of police to control crime and address drugs and alcohol problems but was only marginally related to the perceived ability of police to maintain order in their neighborhoods. Nevertheless, even though they are significant, the strengths of these relationships are considered moderate to weak ($r_s < .39$) (Field, 2009; Marshall, 2016).

Table 7

Spearman's correlation coefficient examining the relationship between the continuous predictor variables – media consumption, fear of crime, and personal safety, social cohesion/trust – and perceptions of police services

	Police Order Maintenance	Police Control Violent and Property Crimes	Police address Drugs and Alcohol
Age	.092†	.192*	.165*
Education	.071	.073	.061
Read local newspaper	.105*	.225**	.160**
Watch local news	.139**	.163**	.150**
Fear of crime	-.284**	-.307**	-.265**
Personal safety	-.277**	-.322**	-.315**
Trust	.249**	.337**	.323**
Reliability	.168**	.162**	.167**

* $p < .05$

** $p < .01$

† denotes $p < .10$

Ordinal Regressions – Residents’ Perception of Police Services

The second research question asked whether residents’ demographic characteristics, media consumption, fear of crime, and perceived personal safety influenced residents’ perception of police services. Ordinal regression models were performed individually for each of the three outcome measures. The results are presented in **Table 8**.

Regarding the perceived ability of the police to maintain order in their neighborhoods, the analyses revealed men were less likely than women to agree that the police were doing a good job maintaining order in Williston. This difference is consistent with previous research showing that men are generally more critical of the police than women (Cao et al., 1996; Cheurprakobkit, 2000; Schafer et al., 2003). The analyses also showed residents who have been victims of violent or property crimes within the past two years were less likely to report that the police were doing a good job maintaining order in their neighborhood compared to residents who have not been victimized. More specifically, the odds of agreeing that the police were doing a good job in this area of service were 2.53 times lower for victims of violent crimes and 1.95 times lower for victims of property crimes than individuals who have not been victimized (violent or property). The difference between those who have and have not been victimized could be attributed to crime victims’ belief that the police have not been effective in preventing crimes against them. For instance, Brown and Coulter (1983) and Wu (2014) found property or violent crime victims were less satisfied with police services as well as holding more negative views of the police than those have not been victims of crime.

Finally, respondents who reported feeling very safe or safe walking through their neighborhood during the evening were less likely to agree that the police were doing a good job maintaining order in their neighborhood. This outcome is inconsistent with previous research

that generally shows the opposite to be true; that is, residents who felt unsafe walking through their neighborhood during the evening tend to be more critical of the police and police services (Cao et al., 1996; Davis, 1990; Eschholz et al., 2002; Weitzer & Tuch, 2005a).

One possibility for the current finding may be due to boom residents having a more negative view of police services compared to long-time residents. Cross tabulations (**Table 9**) revealed a slight pattern showing boom residents were more likely than long-time residents to report that the police were doing a bad job maintaining order and controlling drugs and alcohol problems in their neighborhood, although the gap for perceived crime control by the police is relatively less apparent. In a study by Archbold et al. (2014), approximately one third of police personnel from western North Dakota reported new residents were much more disrespectful towards them than long-time residents. In fact, one of their participants recalled an encounter with a new resident who said, “Where I am from the cops don’t care if we do this” (p. 17).

Overall, findings by Archbold et al. (2014) suggested new residents may have brought with them preconceived beliefs about what community concerns police officers typically do and do not attend to. Moreover, these beliefs may be reinforced if boom residents’ previous hometowns were significantly larger than the town of Williston. As mentioned in the literature review, policing approaches are likely to differ across small, medium, and large communities due to variations in population size (Reaves, 2011) and needs of the community (Benedict et al., 2000). Thus, although boom residents may have felt safer moving from a large to a relatively small town like Williston, previously held negative beliefs about law enforcement may have persisted even after leaving their place of origin.

In addition, rapid changes to the community of Williston may have contributed to the negative relationship between personal safety and perceptions of police services. Nofgziger and

Williams (2005) surveyed residents from a small town following the attack on the World Trade Center and found residents' displayed the lowest confidence in their local police's ability to handle major crises. The authors suggested this finding might be indicative of residents' belief that law enforcement from small towns are incapable of handling large scale events even though residents generally reported feeling safe in their community. In regards to the current research, residents who reported feeling safe may still believe that the police are incapable of effectively delivering services in the midst of rapid community changes coupled with the rising number of crimes.

Focusing on the last research question, neither trust nor reliance variables were significant, suggesting these two aspects of collective efficacy did not influence the way residents perceived the level of order maintenance provided by the police. The overall model explained 26 percent of the variance in residents' perceptions.

Similar to the previous model, the regression analyses for the second dependent variable showed prior crime victimizations influenced residents' perceptions of police's ability to control violent and property crimes. More specifically, individuals who have been victims of violent or property crimes were less likely than those who have not been victims to agree that the police were doing a good job controlling crime (violent and property) in their neighborhood. The variable pertaining to personal safety was also significant. Respondents who felt very safe walking through their neighborhood during the evening hours were less likely to perceive the police to be doing a good controlling crimes in their neighborhood.

As for the two collective efficacy variables related to neighborhood social cohesion, trust was an important factor influencing residents' perceptions. Residents who felt that most people in their town could be trusted were more likely to agree that the police were doing a good job

controlling both violent and property crimes in their neighborhood. Put differently, the odds of agreeing that the police were doing a good job in this area of service was 1.42 times higher for residents who trusted their neighbors than residents who did not believe their neighbors could be trusted (**Table 8**). In contrast, being able to rely on neighbors was not statistically significant in this model. Overall, this model explained approximately 36 percent of the variance in residents' perceptions.

Lastly, the regression analyses for residents' perception of how well the police could control drugs and alcohol-related problems in their neighborhood revealed that people who have been victims of violent crimes were less likely to agree that the police were doing a good job compared to residents who have not been victimized within the past two years. In contrast, the variable involving victimization of property crime was not significant. The analyses also revealed individuals who reported feeling very safe walking through their neighborhood during the evening hours were less likely to report that the police were doing a good job in this area of service.

Finally, similar to the previous model, the analyses revealed residents who reported that most people in their town could be trusted were more likely to report that the police were doing a good job controlling drugs and alcohol problems in their neighborhood. In contrast, the variable associated with neighborhood reliance was not statistically significant. Overall, this model explained 27 percent of the variance in residents' perceptions.

Table 8

Ordinal regression models – Citizens' perception of police's ability to maintain order, control violent and property crimes, and address drugs and alcohol-related issues in their neighborhood

	Order Maintenance			Control Violent and Property Crime			Address Drugs and Alcohol-related Issues		
	<i>Estimate (SE)</i>	<i>Wald</i>	<i>OR</i>	<i>Estimate (SE)</i>	<i>Wald</i>	<i>OR</i>	<i>Estimate (SE)</i>	<i>Wald</i>	<i>OR</i>
Residents' demographics:									
Age	-.002 (.009)	.038	.998	.004 (.009)	.188	1.004	.007 (.009)	.539	1.007
Sex	-.639 (.232)*	7.609	.527	-.314 (.246)	1.626	.730	-.296 (.239)	1.525	.743
Race/ethnicity	.093 (.340)	.075	1.097	.026 (.362)	.005	1.026	.104 (.354)	.086	1.109
Marital status	-.067 (.239)	.078	.935	-.336 (.259)	1.682	.714	.050 (.253)	.039	1.051
Homeownership	.053 (.294)	.033	1.054	-.310 (.316)	.963	.733	-.344 (.307)	1.258	.708
Residential longevity	-.147 (.275)	.286	.863	-.163 (.293)	.308	.849	-.171 (.290)	.349	.842
Education	.009 (.081)	.014	1.009	-.116 (.087)	1.767	.890	-.118 (.085)	1.928	.888
Media exposure:									
Newspaper	.020 (.049)	.170	1.020	.082 (.052)	2.987	1.085	-.001 (.050)	.000	.999
Television	.030 (.036)	.689	1.030	-.006 (.039)	.023	.994	.002 (.038)	.003	1.002
Prior crime victimization:									
Violent	-.815 (.318)*	6.579	2.259	-1.683 (.349)**	23.291	5.381	-1.160 (.327)*	12.544	3.189
Property	-.666 (.237)*	7.873	1.946	-.639 (.256)*	6.207	1.894	-.410 (.246)	2.781	1.506
Fear of crime/personal safety:									
Fear of crime	-.310 (.187)†	2.752	.733	-.235 (.201)	1.371	.790	.001 (.196)	.000	1.001
Personal safety	-.407 (.149)*	7.492	.665	-.566 (.162)*	12.194	.567	-.623 (.157)**	15.673	.536
Collective efficacy (social cohesion/trust):									
Trust	.159 (.161)	.972	1.172	.349 (.173)*	3.643	1.417	.403 (.171)*	5.567	1.496
Reliance	.380 (.315)	1.461	1.462	.162 (.341)	.225	1.175	.259 (.331)	.614	1.295
-2 log likelihood	876.126			705.990			797.259		
Chi-square	78.074			120.852			85.993		
Pseudo R ² (Nagelkerke)	.235			.355			.267		

* $p < .05$

** $p < .01$

† denotes $p < .10$

Table 9

Cross tabulations – The joint frequency (and percentages) for residential longevity and perception of police services

Police Services	Bad Job	Neither Good or Bad	Good Job	Total
Police order maintenance:				
Boom residents	29 (16.76%)	23 (13.29%)	121 (69.94%)	173
Long-time residents	15 (7.89%)	35 (18.42%)	140 (73.68%)	190
Police control violent and property crimes:				
Boom residents	19 (11.44%)	25 (15.06%)	122 (73.49%)	166
Long-time residents	16 (8.60%)	13 (6.98%)	157 (84.40%)	186
Police address drugs and alcohol:				
Boom residents	32 (20.25%)	20 (12.65%)	106 (67.08%)	158
Long-time residents	19 (10.32%)	25 (13.58%)	140 (76.08%)	184

CHAPTER 5: DISCUSSION

Within a relatively short time period, Williston, North Dakota experienced rapid population growth due to increased oil production that began in 2008 (United States Energy Information Administration, 2016; United States Census Bureau, 2015). This rapid influx of new residents into the area resulted in significant changes to its population demographic profile. For instance, the large number of young men seeking employment in the oil fields resulted in a disparity in the male to female ratio (Cicha, 2015). Moreover, changes to the distribution of race/ethnicity were also apparent such that the percentage of Whites decreased from 93.70 percent in 2010 to 86.97 percent in 2015 (Williston Economic Development, 2016). Finally, changes to the town's development could also be observed – heavier traffic, more housing units, and new businesses (Archbold, 2015; Archbold et al., 2014). Associated with these changes, however, are growing concerns over issues related to increased crime, order-maintenance, and the use of drugs and alcohol. Given the local police are often tasked with handling such issues, it is important to learn how residents perceived the ability of police to address these concerns, especially in a town that has undergone rapid social and structural changes.

The purpose of this study was to examine residents' perception of police services in an oil boomtown. First, this study examined whether perceptual differences exist among long-time and boom residents regarding police's ability to maintain order, control crime (violent and property), and address drugs and alcohol problems in their neighborhood. Given the likelihood that long-time residents are more familiar with the local police than new residents, it is possible that residential longevity played an important role in shaping residents' perceptions of how well the police are performing during times of rapid social change.

This study also assessed the impact of residents' demographics characteristics, media consumption, fear of crime, and personal safety measures on residents' perception of police services. Research conducted in urban areas has concluded a number of these variables are important predictors of police services (e.g., age, race, gender, prior crime victimization) (Brown & Benedict, 2002; Brown & Coulter, 1983; Cao et al., 1996; Decker, 1981; Reisig & Park, 2000; Weitzer, 1999). However, minimal research has considered the impact that the relationship among community members may have on their perceptions of police performance. The current study contributes to this literature by incorporating aspects of social cohesion/trust as defined by the theory of collective efficacy in the context of an oil boomtown. This theory asserts that neighborhood social cohesion is an essential element for reducing crime in any given neighborhood (Sampson et al., 1997). It is possible that residents who view their neighbors as trustworthy and reliable are more likely to perceive the delivery of police services differently than those lacking in this respect. Thus, variables related to social cohesion – trust and reliance – were included in the analyses.

To address the first research question, the analyses showed long-time residents (those living in Williston prior to 2008) were significantly more likely than boom residents (those who arrived during the boom) to agree that the police were doing a good job delivering services to their community. This outcome was unexpected given previous research generally find long-time residents are more likely than new residents to express greater concerns over their community during times of rapid social change (Gainey, Alper, & Chappell, 2011; O'Connor, 2015; Wright, Muma, & Radebaugh, 2016). For instance, while examining possible commonalities among long-time and new residents in a rapidly growing community within the Rocky Mountain West, Smith and Krannich (2000) found that although long-term residents (defined as those who have

lived in the community for 10 years or more) and newcomers (defined as those living in the community for less than 10 years) had comparable levels of concern over the environment (e.g., water pollution, economic opportunities and development), long-term residents were more likely than newcomers to be concerned with limiting the community's growth (e.g., population, economic, and tourism). Moreover, as noted in the literature review, there is evidence to suggest a link exists between greater community concerns and lowered perceptions of police and police services (Jacob, 1971; Parker et al., 1995; Schafer et al., 2003).

Nevertheless, more positive views held by long-time residents may be due to having witnessed the increased activity since the oil boom began such as increased traffic flow, more housing units, and new businesses. Consequently, this may have resulted in long-time residents having a much different perspective due to their ability to discern whether significant changes have indeed occurred in regards to law enforcement's ability to wrestle community problems. In contrast, new residents could only base their judgment on what they were able to observe since arriving to Williston. Because new residents may have resided in temporary housing units (e.g. "man camps" or apartments rather than actual homes), areas that they settled in may have been viewed as less than ideal. Thus, they may come to view the local police as relatively unresponsive.

An alternative explanation for this perceptual difference is the time period when the surveys were administered, which was during a period when oil production was on a downward trend due declines in crude oil prices (Sankararaman & Medhora, 2015). It is possible that migrants who initially came to Williston for opportunities to work in the oil fields have begun seeking employment elsewhere in the country. Consequently, this outflow may have led long-time residents to perceive any negative influences associated with boom residents to be subsiding

and that the police are now able to effectively address the problems occurring in their neighborhoods. Thus, it is possible the surveys collected for the current research were actually capturing residents' views of police services during a time when conditions appeared as though they were returning to how they were during the pre-boom era.

Among the many demographic characteristics, sex was the only variable that was important. Even so, the influence of this variable was only significant for perceived order maintenance by the police but insignificant for the other two types of services provided by the police. This finding is consistent with the literature showing mixed results for the influence of residents' sex on perceptions of police services (Brown & Coulter, 1983; Benedict et al., 2000; Cao et al., 1996; Jesilow et al., 1995). Based on the current data, it appears that perceptual differences between males and females depended on the type of police service being examined. In this case, males were less likely than females to agree that the police were doing a good job maintaining order in their neighborhood.

Across all three models, prior crime victimization was a major factor influencing residents' perceptions. Individuals who have been victimized were significantly less likely than those who have not been victims of violent or property crime to perceive the police to be doing a good job maintaining order, controlling crime, and addressing the use of drugs and alcohol in their neighborhood. This finding is in accord with research indicating that crime victims were generally more critical of the police and police performances than individuals who had no such experiences with victimization (Brown and Coulter, 1983; Wu, 2014). It is likely that crime victims' negative views stem from the belief that the police have failed to protect them and/or their properties. In contrast, those who have not been victimized may be inclined to believe that the police (thus far) have been an effective force in preventing crimes against them.

An unexpected finding is the negative relationship between personal safety and perceptions of police services. This variable was significant across all three models suggesting the more safe individuals felt walking through their neighborhoods at night, the less likely they were to agree that the police were doing a good job delivering services to their community. As mentioned, this finding is likely due to differences in residents' expectations of the police. Williston, ND is a fairly small community with a population of a little over 22,000 in 2015 (United States Census Bureau, 2015). It is possible that new residents felt generally safer moving to a town they considered relatively small when compared to their place of origin. However, even with a change in the environment, personal beliefs (in this case negative perceptions) about the police formed prior to their move may have changed very little, if at all (Archbold et al., 2014).

Finally, unique to the current study is the inclusion of variables pertaining to the theory of collective efficacy. As one of two major components of this theory, social cohesion can be viewed as an important first step towards increasing neighborhood social control (Sampson et al., 1997). Studies that have examined the role of neighborhood social cohesion/trust and perceptions of the police underscore the importance of forming quality ties among neighbors in ways that would allow them to work as a cohesive group (Gau et al., 2012; Nix et al., 2014; Ross & Jang, 2000). In contrast, the lack of social cohesion could lead to a strained police-citizen relationship. For instance, the lack of trust among neighbors could result in greater reliance on the police due to the belief that local law enforcement is the only avenue for maintaining order in the neighborhoods. Unfortunately, increased reliance on the police could translate into increased opportunities for criticisms of police and police performance. This may especially be the case if residents come to believe that the police are ineffective and/or incompetent in carrying out their

duties (Cao et al., 1996). Evidence for this negative effect come from studies that find a link between holding the police more accountable for neighborhood disorder and lowered perception of police's responsiveness (Decker, 1981; Skogan et al., 1999).

Overall, this study found that neighborhood trust was an important contributor to residents' perceptions of two of the three categories of police services – police's ability to control crime (violent and property) and police's ability to address drugs and alcohol problems in the neighborhood. Neighborhood reliability, however, was insignificant across all models. Nevertheless, these findings suggest that having strong connections with neighbors could help facilitate neighborhood social cohesion and with it a sense of responsibility for problems occurring within the area. In other words, residents are not necessarily holding the police accountable for every issue that emerges in the community; rather, residents may be bearing some of that responsibility amongst themselves. This idea of dispersing responsibility among neighbors is central to the theory of collective efficacy, which highlights the importance of neighborhood solidarity mediating any negative effects on the community (Sampson et al., 1997). Lastly, the lack of significance regarding perceived order maintenance by the police may be due to the kinds of problems that are said to be associated with the oil boom – increased use of drugs and alcohol and increased numbers of property crimes (Hargreaves, 2015; North Dakota Attorney General, 2017; Valentine, 2014).

Limitations

This research is not without limitations. First, this study is cross-sectional capturing residents' perceptions of police services at a particular point in time. Thus, it is unknown if residents' perceptions have changed over the years. It is possible that perceptual differences among long-time and boom residents have fluctuated throughout the period surrounding the oil

boom (before, during, and after the oil boom). For instance, when oil production first began, long-time residents' perception of police services may have rested on their belief of how well the police were adjusting to the initial changes in the community versus police's ability to maintain order as time progressed. Additionally, police agencies are likely to have hired a significant number of new officers in response to the community's growth. Consequently, this unfamiliar police task force could have resulted in "stranger cops" patrolling the streets who long-time residents have had minimal to no contact. In short, it is possible that their level of familiarity with the local police impacted long-time residents' perception of police performance. Although they did not examine perceptions of police services, a prior longitudinal study found rapid economic and population growth impacted residents' overall social well being. However, this impact was not permanent; instead, levels of social well being eventually rebounded to pre-boom levels (Smith et al., 2001).

In regards to the current research, it is possible that any observed changes in residents' perception of police services could have displayed a similar rebound effect. Unfortunately, the current data does not provide any information on changes to residents' perception of police services over different points in time. Nevertheless, findings from the current study are important because it provides insight into residents' perceptions of police services during a time when rapid social and structural changes were most apparent in the community.

Second, results from this study are only generalizable to other small towns experiencing rapid population growth. Regardless, given that there is currently a bias towards researching in larger urban areas, the current study adds to our body of knowledge by shedding light on aspects of smaller areas and whether residents' perception of police services mirrored those found in larger communities. As previously mentioned, this bias towards metropolitan areas is

unwarranted given an estimated half of all police departments in the United States employ only 10 or fewer sworn police officers (Reaves, 2011).

Moreover, it has been suggested that crude oil production in the U.S. will continue to rise in the years to come. For instance, it was estimated that in the year 2019, approximately 500,000 barrels would be produced daily (United States Energy Information Administration, 2018). Thus, there is an increased likelihood that new boomtowns will transpire across the United States within the next few years. The possibility of new boomtowns suggests there are benefits to understanding factors that can impact residents' perception of their community, including the perceived ability of police to address community concerns. Third, the current analyses are based on responses to survey questionnaires. Therefore, this study was unable to capture *how* the oil boom may have contributed to residents' perception of police services. Instead, the current focus was centered on understanding which factors were important for shaping residents' perceptions of police services within the context of an oil boomtown.

Finally, the current study did not test for any reciprocal effects. There are a number of studies indicating that police officers' demeanor can shape citizens' perception of them and vice versa. In turn, this could impact the way that police and citizens behave towards one another (Garner, Maxwell, & Heraux, 2002; Mastrofski, Reisig, & McCluskey, 2002; Worden & Shephard, 1996). Engel (2005) found police officers were more likely to make an arrest when citizens behaved negatively towards them (e.g. aggression) while Weitzer (1999) and Weitzer and Tuch (2005b) found negative behaviors displayed by police officers often resulted in citizens viewing them in a negative light (Weitzer, 1999; Weitzer & Tuch, 2005b). Together, these findings indicate that officers' perception of citizens is a factor that needs further consideration.

In relation to the current study, although boom residents may have held preconceived beliefs about the local police, it may also be the case that police officers in Williston held negative views of new residents. Consequently, the local police may have adjusted their behaviors according to whether they were coming into contact with a new resident (whom they are not familiar with) or a long-time resident (whom they may have had positive connections with). For instance, if a police officer is inclined to believe that new residents will be more disrespectful towards them than long-time residents, this police officer may feel the need to adopt more formal and/or aggressive approaches during an interaction with a new resident. In contrast, this same officer may choose to use more informal approaches when coming into contact with a long-time resident. Unfortunately, policing tactics that are dependent on group memberships of citizens could have undesirable consequences such as increasing the perceptual gap between long-time and new residents.

Future Research

As mentioned, one limitation of this research is the use of cross-sectional data. Future research should consider examining residents' perceptions of police services across multiple time points to detect potential changes in residents' view overtime. This could also help determine whether perceptions of police services have rebounded to its pre-boom levels or whether these perceptual changes are permanent. Moreover, conducting in-depth interviews could help determine *how* residents' perceptions have changed in the midst of rapid population growth.

Collecting information from multiple communities of varying sizes (e.g., small, medium, and large) could allow researchers to make direct comparisons between perceptions of police services in areas that are relatively dissimilar from one another other. Moreover, large areas tend to have greater racial/ethnic diversity compared to smaller communities. A host of studies have

found race to be an important predictor, with the lowest perceptions of the police being held by African Americans and the highest by White residents (Brown & Benedict, 2002; Decker, 1981; Kusow et al., 1997; Levin & Thomas, 1997; Reisig & Parks, 2000; Sampson & Bartusch, 1998; Scaglione & Condon, 1980; Weitzer, 1999; Weitzer & Tuch, 2005a; Wu, 2014). The current analyses did not find race to have any significant effects; however, the lack of significance is likely due to the small number of racial/ethnic minorities living in Williston. Future research could strengthen our knowledge of this area by gathering information from multiple communities and oversampling racial/ethnic minority populations to determine if race matters not just in urban areas but also across multiple U.S. contexts.

Relatedly, it may also be the case that perceptions differ within each community. The town of Williston can be described as having features that vary by quadrants. For instance, the first quadrant (the north side of town) consisted of primarily industrial and commercial business whereas the second quadrant (the central part of the city) comprised of residential dwellings (e.g. single family homes, multi-family homes, and mobile parks). Although the lack of representation from each site made it challenging to perform appropriate statistical comparisons, future research should oversample from less populated areas to determine if residents' perception of police services depended on their location within the city.

Another major limitation to the current research is the lack of a contact variable. Prior studies have shown police-citizen contacts can greatly influence citizens' perception of the police and police services (Scaglione & Condon, 1980; Griffiths & Winfree, 1982; Brunson, 2007; Smith & Hawkins, 1973; Bridenball & Jesilow, 2008). Thus, future research should incorporate these measures to determine its level of influence in rapidly growing communities and whether such perceptions differ from views held by citizens residing in larger cities. Finally, the current study

does not include information regarding officers' perceptions of residents. Future research should consider surveying law enforcement officials along with citizens to determine if there are any reciprocal effects; that is, whether residents' view of the police is influenced by the police's view of residents and vice versa.

Conclusion/Implications

Unlike urban and other rural communities, Williston, ND is unique given the influx of new residents who were attracted to the oil fields for its employment prospects. As mentioned, oftentimes these workers were situated in temporary housing units ("man camps") rather than actual homes located in established neighborhoods. This visual distinction likely contributed to social separations and even isolation of new residents from the rest of the community. One can imagine how this particular feature could negatively impact any attempts towards working as a collective group for the betterment of the community.

Based on the current findings, community leaders should focus on creating activities that fosters trust among all members of the community. In a study examining residents' perception of newcomers in a town experiencing rapid population growth, O'Connor (2015) found young residents made a distinction between "insiders" and "outsiders." Young residents referred to insiders as individuals who were invested in the community while outsiders were not. The lack of reciprocity by outsiders led young residents to associate this particular group of people with problems that developed within their community (e.g., rising cost of living and increased fear of crime and disorder). Unfortunately, such problems could result in a social divide among residents that could continue to expand over time.

In a different study, Brown (2011) examined fear of crime and social capital within a rapidly growing community and found trust and reciprocity were important elements for building

healthy relationships among all community members – both long-term and newcomers. According to Brown (2001), so long as newcomers were perceived as trustworthy individuals, long-term residents were inviting and very receptive of them into the community. The author concluded that higher levels of trust and reciprocity have the potential to lower residents' fear of crime and disorder while strengthening social bonds among all members of the community. In sum, findings from both studies suggest there are major benefits to encouraging residents to become more familiar with one another. As evidenced by these two studies, greater familiarity could result in higher levels of trust. As suggested by the current analyses, neighborhood trust also has the potential to increase residents' perceptions of how well the police were responding to community concerns, which could ultimately bridge the perceptual gap between long-time and new residents, regardless of any previously held beliefs about law enforcement.

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