

SOCIAL CAPITAL IN RURAL AMERICA: A  
CRITICAL EVALUATION OF THE INFLUENCE OF  
SOCIAL NETWORKS ON COMMUNITY RISK  
REDUCTION AND FIREFIGHTER RECRUITMENT IN  
THE OKLAHOMA PANHANDLE

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Title of Study: SOCIAL CAPITAL IN RURAL AMERICA: A CRITICAL EVALUATION OF THE INFLUENCE OF SOCIAL NETWORKS ON COMMUNITY RISK REDUCTION, AND FIREFIGHTER RECRUITMENT IN THE OKLAHOMA PANHANDLE.

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Abstract:

The purpose of this qualitative study was to determine the influence of social networks on recruitment of firefighters and community risk reduction activities in a diverse rural community in the Oklahoma Panhandle. Social capital theory provides the framework for the role of interactions, social trust, and communication in building relationships within groups, between groups, and between community groups and local government organizations. Research indicates that bonding, bridging, and linking social capital can contribute to the effectiveness of risk reduction activities. Community-based programs have highlighted the role of social capital in risk reduction. However, research on the relationship between social capital and fire department initiatives is very limited. This research utilized a single case study to explore the role of social capital in the effectiveness of rural fire department recruitment of firefighters and community risk reduction initiatives. Guymon Oklahoma Hispanic citizens and firefighters were interviewed about interactions with the fire department and firefighters. Interview questions focused on the impact of those interactions on social trust of the department, and how that social trust influenced decisions on risk reduction behaviors. Participants identified four major themes in the interviews: 1) strong bonding social capital is present as a community, 2) strong bridging and linking social capital exist in the community from individuals belonging to multiple social groups and networks, 3) social groups and networks are interconnected from shared membership of Hispanic citizens, and 4) bonding, bridging, and linking social capital are required to educate members of the Hispanic community on community risk reduction issues. The key findings from the study are that 1) social capital creation in a community must be intentional on the part of the fire department, 2) firefighters have opportunities during planned and unplanned interactions to build social trust, communicate the role of the fire department, and create bridging and linking social capital, and 3) children are effective conduits of information to and from the Hispanic community. The findings have implications for how rural fire departments approach engaging immigrant groups and networks in order to create relationships and improve effectiveness of risk reduction and firefighter recruitment initiatives.

*Keywords:* social capital, social networks, community risk reduction, immigrant, health, fire department, firefighter, Hispanic, community groups, fire safety

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## CHAPTER I

### INTRODUCTION

Fire departments across the United States respond to a multitude of events: structural fires, wildland fires, hazardous materials incidents, disasters, and medical emergencies daily. Citizens expect their local fire department to be prepared to respond to any call for help. Historically, the local fire department was primarily focused on response to structural fires (Madsen, et al., 2017). However, the mission of the American fire service began to change with the publication in 1973 of the seminal report titled *American Burning* (National Commission on Fire Prevention and Control, 1973). The federal report identified the value of, and need for, fire prevention efforts including more stringent fire codes and standards, development of trained fire safety educators in fire departments, and a focus on three interventions, the so-called “3 Es” – education, enforcement, and engineering. The report raised awareness of the need for organized fire prevention programs in municipal fire departments. To clarify, in this study the term fire department represents a local fire or rescue department. Fire service will represent the collective municipal fire protection procession in the United States.

Since 1973, many fire departments have embraced a broader mission including hazardous materials response, emergency medical response, specialized rescue, and emergency management. The role of prevention as envisioned in *American Burning* (NCFPC, 1973) has also grown in scope and is now commonly known as community risk reduction (CRR) (Kirtley, 2008). According to the National Fire Protection Association (NFPA) (2020, p. 5), CRR is “a process to identify and prioritize local risks, followed by the integrated and strategic investment of resources to reduce their occurrence and impact.”

CRR programs in the contemporary fire department include health education and injury prevention; preparedness for natural disasters; and all-hazards risk reduction (NFA, 2007; Kirtley, 2008; Madsen, et al., 2017; Walker, 2021).

Fire departments design CRR initiatives to mitigate specific community risks (Kirtley, 2008; Walker, 2021). These risks represent social problems that affect all or some members of the community (Andrews & Brewer, 2010; Dynes, 2006). Examples might include increased fire risk in low-income neighborhoods because of poverty, environmental injuries such as hypothermia to persons who are homeless, and limited access of an immigrant community to smoke alarms due to language barriers.

CRR requires a fire department to understand the culture and the needs of the community served (Dynes, 2006; Walker, 2021; Webb, 2020). Community information can be gathered and understood by engaging the local citizens, building a relationship with members of the community through interactions and social networks, and by gaining the trust of community members (Montes, 2019). Often times, however, fire departments build community relationships, create social networks, and work to gain community trust randomly rather than as a planned, intentional community process.

In 2011, the Federal Emergency Management Agency (FEMA) proposed the next evolution of community-based risk reduction in the report *A Whole Community Approach to Emergency Management Principles: Principles, Themes, and Pathways for Action* (FEMA, 2011). As defined by FEMA (2011, p. 3), “Whole community is a means by which residents, emergency management practitioners, organizational and community leaders, and government officials can collectively understand and assess the needs of their respective communities and determine the best ways to organize and strengthen their assets, capacities, and interests.” By working with the diverse populations and organizations in a community, the goal of the whole community approach is to improve the ability of local residents to prevent, protect against, mitigate, respond to, and recover from any hazard effectively.

Although Whole Community encompasses a broader scope of risk reduction and mitigation, the goal is consistent with community risk reduction as taught by the National Fire Academy (NFA) since 2001. Whole community is built on concepts of social capital, social trust, networks, relationships, etc. It requires the fire department to engage all groups in a community as an intentional, planned process. This includes understanding the risks and vulnerabilities in the community, the desires of those in the community, and the private and public sector assets available for risk reduction (Walker, 2020). The level of engagement required in this philosophy requires strong networks and relationships, i.e., social infrastructure and social capital. The philosophy of community engagement is not necessarily new to the fire service – it is a foundational concept of CRR taught by the NFA (NFA, 2007). However, what is new is intentionally building social networks that create social capital. Experience suggests that fire department chief officers often fail to intentionally build social networks in the community.

Research suggests social capital is beneficial to community risk reduction initiatives (Andrews & Brewer, 2010; Kirtley, 2008). Dynes (2006) creates a connection between social networks and community risk reduction. Social networks, the same networks that create social capital, can be used to develop an individual or group's perception of risk and motivate collective action (Kirtley, 2008). The same social network can be used to communicate the correct information about the appropriate actions for reducing risk. According to Dynes (2006, p. 8), "social networks provide the channels whereby individuals develop a perception of risk and are motivated to take some type of preventative action." In addition, a study of six communities who have implemented FEMA's Whole Community practices shows social networks can positively affect community risk (Sobelson, et al., 2015). In these model communities the CRR programs strengthened social infrastructure and networks by delivering lessons on risk reduction. Every presentation was an opportunity to establish and strengthen relationships, building trust in the local fire department. There was a strong personal connection established between the community's residents and the fire department, creating bridging and linking social capital (Sobelson, et al., 2015).

The practices of community engagement, building social networks, and creating social capital are feasible for most fire departments (Kirtley, 2008). However, there are two challenges for the widespread practice of building social capital. Research focused on the role of social capital in local fire department risk reduction initiatives is lacking. A review of the literature found only one scholarly journal article on the subject which focused on the relationship between social capital and fire department performance (Andrews & Brewer, 2010). Research pertaining to risk reduction or risk mitigation focuses on the relationships between social capital and disaster preparedness and recovery, and on community resilience (Webb, 2020). Past research fails to provide any evidence of best practices in fire department local risk reduction initiatives pertaining to creating social capital (Andrews & Brewer, 2010; Straub, et al., 2020).

In addition, another challenge is the lack of awareness of fire department leaders regarding the role of social networks in creating social capital, and in the application of social capital as part of a community risk reduction initiative (Andrews & Brewer, 2010). Currently, none of the risk reduction courses at the National Fire Academy address anything about social capital even though its parent agency, FEMA, published the Whole Community report (FEMA, 2011). Fire chiefs may not realize the importance of engaging social networks across all groups within the community and creating new social networks where none currently exist. Understanding the nature of social networks and social capital in a rural community with a large Hispanic population will increase understanding of how those social networks and social capital can be utilized to positively impact community risk reduction activities and firefighter recruitment in a community with a large Hispanic population (Andrews & Brewer, 2010, The National Academies Press, 2021).

In a *Washington Post* article, Craig (2018) noted the decline in volunteers in small communities resulting in a staffing crisis for fire departments. Also, that Hispanic firefighters represent only 8% of the career firefighters in the United States, while 18% of the overall population is Hispanic. Since 1999, the Guymon Fire Department has established a strong relationship with the Hispanic community. There

is acceptance of Hispanic firefighters within the department, and the department has established a connection with the Hispanic community. This may be an indication of strong bridging and linking social capital between the fire department and the local Hispanic community, and bonding social capital amongst the members of the department, regardless of race. Investigation of this connection between the fire department and the Hispanic community may provide lessons to other rural fire departments for recruiting volunteer firefighters and conducting community risk reduction activities.

## **AIM AND OBJECTIVES**

The aim of this case study is to:

*determine the influence of social networks on recruitment of firefighters and on fire department community risk reduction activities in a diverse rural community in the Oklahoma Panhandle.*

This aim has six objectives:

1. Qualitatively assess the level of social capital that exists in the Guymon community.
2. Determine the role of social capital in recruitment of Hispanic firefighters.
3. Identify the social networks of current Hispanic firefighters.
4. Assess the role of social capital in communication of risk reduction messages to Hispanic residents.
5. Assess the influence of social capital in Hispanic residents applying risk reduction messages.
6. Identify fire department practices that develop social capital with the Hispanic community.

## **OVERVIEW OF CHAPTERS**

Chapter I – Introduction

Chapter 1 introduces the study and the need for a study of social capital related to community risk reduction and firefighter recruitment. The aim of the study and study objectives are presented.

## Chapter II – Review of Literature

Chapter 2 reviews the current literature relevant to the study. This includes the foundation of social capital and the history of its theoretical development, the role of social capital in community risk reduction, and the impact of social capital in mitigation and recovery. A discussion on gaps in the literature is discussed. The study's three research questions are presented.

## Chapter III – Methodology

Chapter 3 presents the methodology used to answer the research questions and achieve the study aim and objectives. The chapter discusses the research method use, philosophical paradigm, system of logic, research design, data collection and analysis, and the ethical considerations of the study. The chapter answers three important questions about the approach to the study: “What did I do?” “How did I do it?” “Why did I do it?”

## Chapter IV – Findings

Chapter 4 presents and discusses the findings of qualitative research. The codes, categories, and themes developed from participant interviews are discussed. A table is provided to summarize the codes for each of the four themes.

## Chapter V – Discussion and Recommendations

Chapter 5 presents 14 recommendations categorized by themes. The recommendations include both policy and practice recommendations including practices for planned and unplanned interactions, creating social trust, creating social capital, and using social capital to enhance firefighter recruitment and improve the effectiveness of community risk reduction initiatives by the Guymon Fire Department.

A table summarizing the recommendations, themes, and correlation to the research questions is provided.

## Chapter VI – Conclusion

Chapter 6 is the conclusion to the study. Four key findings from the study are discussed and how those key findings contribute to knowledge about the application of social capital in firefighter recruitment and community risk reduction. The limitations of the study are discussed and opportunities for future research are identified. The chapter closes with a quote from a Woolcock and Narayan (2000) journal article describing the importance of continuing to apply social capital to community problems and learning from the experiences.

## **CHAPTER II**

### **REVIEW OF THE LITERATURE**

The first recorded use of the term “social capital” was in 1936 by Mr. Lyda Hannifan, a local school superintendent in West Virginia (Aldrich, 2012). Mr. Hannifan was using the term to describe the importance of relationships within the community. Hannifan recognized that family relationships and relationships with friends created a sort of “capital”. His perspective was influenced by experience living in rural West Virginia, an area of the country far removed from government resources and programs. This isolation created a reliance on the relationship of others within the community. His focus on relationships within a community, and the impact of those relationships, was the foundation for future study.

### **SOCIAL CAPITAL**

A French sociologist, Pierre Bourdieu, brought social capital into the forefront in 1986 with his article *Forms of Capital* (Aldrich, 2012; Siisiainen, 2013; Tzanakis, 2013). Bourdieu was focused on improving the achievement of schoolchildren. He believed that involvement in certain groups and associations created social capital that could be used to exchange for educational opportunities, enriching the human capital in the group. A more detailed explanation of Bourdieu’s perspective on social capital is provided in a following section.

During this same time period American sociologist James Coleman suggested social capital was similar in concept to financial and human capital (Coleman, 1988). Coleman, as did Bourdieu, suggested that the creation of social capital occurred within a specific social unit, i.e.,



the creation of social capital and its related value was contextual to the social unit (Coleman, 1988; Portes, 1998; Tzanakis, 2013). A more detailed explanation of Coleman's perspective on social capital is provided in a following section.

Both Coleman and Bourdieu viewed social capital at the micro level, i.e., the individual or small group (Tzanakis, 2013). Putnam (2000), in his book "Bowling Alone: The Collapse and Revival of American Community", suggests that social capital can be aggregated to the macro level of the state, region, or even an entire country. Putnam viewed social capital through the lens of civic engagement and democracy, a different perspective to Coleman and Bourdieu's use of the concept (Putnam, 1995; Siisiainen, 2003, Tzanakis, 2013). Some scholars suggest that Putnam's work is responsible for the application of the concept to other disciplines such as community development, economic development, disaster preparedness, and community resilience. These concepts of social capital described by Bourdieu, Putnam, and Coleman do not encompass a broad understanding of the concept. These concepts focus on positive outcomes of social capital with little attention to negative outcomes. Also, these concepts bring to the forefront the social outcomes of power and influence while minimizing other valuable benefits or outcomes that may come from social capital (Portes, 1998).

Definitions for social capital vary based on the author and theorist. A definition may focus on the substance of the sources or the effects (outcomes) of the social capital. Definitions may also vary depending on the internal or external nature of the relations (Adler & Kwon, 2002). Internal definitions view social capital as the relations within a collective group (bonding). In this regard, social capital is a product of not only relationships, but also the environment and social structure of the actor (Adler & Kwon, 2002). External definitions view social capital from the perspective of relations external to the collective group (bridging). Putnam (1995), Coleman (1988), and Fukuyama (1995) focus on the internal nature of social capital. Portes (1998) and Bourdieu focus on the external nature of social capital. Woolcock (2000) takes a neutral focus recognizing that social capital has both an internal and external nature.

According to Adler and Kwon (2002), the term “capital” denotes something of value that can be saved and exchanged. Economists question if the term capital is appropriate for a sociological framework. Unlike economic capital, social capital is found in relationships, not in the person. However, social capital has six characteristics consistent with the economics concept of capital. 1) Social capital is a long-lived asset from which a future benefit is expected. 2) Social capital is appropriable and convertible. 3) Social capital can substitute for, or replace, other resources. 4) Social capital requires maintenance to retain its efficacy. 5) Social capital represents a collective good; it is not private property or only available to one person.

A common characterization of social capital is by the extent of relationships: bonding, bridging, and linking (Aldrich & Meyer, 2015; Gannon, 2013; Rivera & Nickels, 2014). Bonding social capital is characterized by strong similarity in demographic characteristics. Bonding social capital facilitates social support and personal assistance. It is also the foundation for fostering a group’s collective action. Bonding capital is strongest in homogenous groups such as families and immigrant communities (Rivera & Nickels, 2014). However, bonding capital can be an obstacle to community collective action (Aldrich & Meyer, 2015; Portes, 2014). The greater the cohesion or identification within the group the less likely the group will allow outside membership or consider the needs of other groups. This exclusion may lead to competition for resources, discrimination, etc. This competition among groups with high bonding social capital occurred in New Orleans following Hurricane Katrina (Rivera & Nickels, 2014).

Bridging social capital is relationships that span social or geographic groups. These relationships are more diverse than bonding relationships. Bridging social capital often occurs in organizations and networks spanning the community. Bridging relationships strengthens collectivity between groups and associations (Gannon, 2013).

Linking social capital connects regular citizens or neighborhood groups/networks with people or groups of power in the community. Research indicates that by creating linking social capital,

especially with underrepresented groups, local government increases disaster resilience and improves access to government resources. Similarly, linking social capital is valuable for affecting public policy, especially in local government (Aldrich, 2010).

According to Noy (2013), Aldrich and other scholars avoid explaining the potential negative aspects of social capital. Social capital is based on a group or network gaining the ability to access resources and influence policymaking. In other words, the collective gains power to accomplish their agenda. Since marginalized groups lack political influence prior to an event, and that same barrier or distinction is carried forward, groups most vulnerable are most likely to lose resources, or be victim of the agenda of more powerful groups, during recovery (Gannon, 2013; Noy, 2013).

## **Bourdieu**

The first systematic analysis of social capital was by Pierre Bourdieu. He defines social capital as real or potential resources linked to a network or relationships and mutual acquaintances (Portes, 1998). He does not differentiate into bonding, bridging, or linking. He proposed that these networks or relationships are not naturally occurring; they must be constructed through investment in relations. According to Bourdieu, there are two elements of social capital: 1) social relationships that provide access to resources, and 2) the actual amount and quality of those resources. He does not specify the resources available; rather, he believes that many things could be a resource.

Bourdieu views social capital as potential resources available to an actor through their network (Tzanakis, 2013). It is the aggregate of potential resources available because of the network. He proposed it is related to the size of the network and the volume of past-accumulated capital. Bourdieu proposed social capital could be accumulated like financial capital. The motivation for social capital is the actor's gain or social profit. The available social capital is contingent upon the actor's social position within the social space, i.e., not all social spaces are equal in social capital available to the actor (Siisiainen, 2003). Consequently, social capital is unequally distributed within a social space.

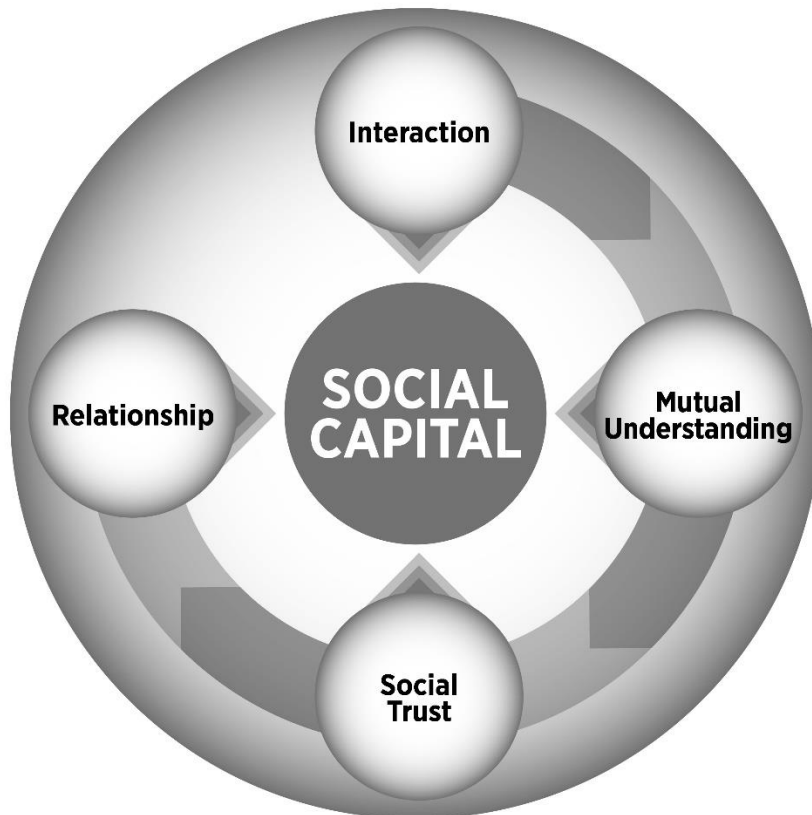
Bourdieu suggests that while membership in or association with specific groups in the social space are beneficial, membership alone does not create social capital. Symbolic capital is required to operationalize social capital (Siisiainen, 2003). Associations take on a symbolic character when members have mutual recognition of that association, i.e., the members recognize themselves as a group or association in a more formal character. Symbolic capital has norms and values and identifies which type of capital creates a legitimacy within the association. Symbolic capital may serve an ideological function for the association. Symbolic capital occurs when the group is perceived as having influence, authority, or power. The power of the group is what creates value in membership. Consequently, Bourdieu did not perceive social capital occurring beyond the individual within the social space; social capital is not applicable to collective action in a larger social space such as a community (Tzanakis, 2013).

Bourdieu is criticized for proposing that economic gain is the motivator for social capital. This eliminates the altruistic nature of human interactions, especially at the community level. Social standing, especially income and social status, affects Bourdieu's view of social capital. This creates social inequality in the ability of any given individual to accumulate and use social capital. Bourdieu never recognized this negative characteristic of his concept of social capital (Portes, 1998, 2014; Portes & Landolt, 2000; Tzanakis, 2013).

Bourdieu's view of social capital as a collective phenomenon is critical in the intentional development of social capital in a neighborhood or community as part of a community risk reduction initiative. Every relationship, every interaction, contributes to the individual's social capital within that community. This means that every interaction, relationship, or network created by a chief fire officer has a collective effect (see Figure 1).

**Figure 1**

*Creation of Social Capital*



**Coleman**

Coleman’s view of social capital is similar to Bourdieu in that social capital is created within a social structure and that the actor applies social capital for self-interests (1988). The actor is embedded within the social space, and the relationships within the space create social capital (Coleman, 1988). The actor, to achieve a desired outcome, uses the social capital in a transactional exchange. The actor uses social capital when the desired outcome would not otherwise be available.

Unlike Bourdieu, Coleman proposes social capital is available at the individual and the community level (Tzanakis, 2013). Social capital at the community level is provided through networks

established by the government. Another essential difference between the two is that Coleman proposes that social capital is available for the common good as a choice of the actor. However, Coleman fails to recognize the social inequality associated with social capital.

Coleman introduces the concept of “closure”, the existence of sufficient ties amongst members to guarantee observance of norms (Portes, 1998). For example, in a gang there is closure in that if you violate the norms there is a sanction. Coleman (1998) refers to this as thick trust.

Coleman (1988) also introduces the elements of trust and reciprocity as part of social capital. According to Coleman, an actor does a favor for someone else. This act constitutes a “credit slip”, redeemable by the actor at some future date. This introduces a temporal element into the relationship. The actor trusts the “credit” will be indeed repaid by the person. In this model, an act creates reciprocity, but trust creates the expectation the act will be returned in the future. Coleman ignores the impact of human motivation, social forces, and the norms in the social space on reciprocity and trust. Coleman (1988) recognizes that social capital is different from human and physical capital in that it does not have a tangible value. The value of social capital is in a potential form – it is only observed when a transaction occurs. Coleman suggests that social capital only exists when the transaction occurs.

## **Putnam**

Putnam’s concept of social capital refers to networks and trust that facilitate collective action and cooperation for mutual benefit. In addition, Putnam proposes that social capital can go beyond the community level to the national or regional level. This scope of social capital is unique to Putnam. Coleman and Putnam agree on the link between strong family structure and social capital. Putnam uses the aggregate of forms of social capital as a predictor of civic engagement and economic prosperity. Putnam, as did Coleman, chooses to disregard the impact of conflict and social inequalities on social capital.

In Putnam's concept of social capital, voluntary associations produce horizontal linkages within the group or community, and from those linkages trust is established. This mutual trust is between citizens. As vertical linkages develop between citizens, associations, and government, trust develops and linking social capital is created. Trust is essential in Putnam's view of social capital (Siisiainen, 2003).

Putnam proposes the output of social capital is the advancement of democratic processes rather than social advancement or community resilience (Putnam, 1995, 2000; Tzanakis, 2013). Putnam uses the aggregate of forms of social capital as a predictor of civic engagement and economic prosperity. The output of social capital is the advancement of democratic processes rather than social advancement. Social capital creates cooperation between citizens, between citizens and government, and increases citizen participation in government. In that respect, his concept of social capital is tied to engaged citizenry in creating an effective democracy. Like Bourdieu and Coleman, he does not relate social capital to risk mitigation. The connection to risk mitigation is established by other scholars (Aldrich, 2015; Andrews & Brewer, 2010; Dynes 2002, 2005, 2006; FEMA, 2011; LaLone, 2012; Ritchie & Gill, 2007; Rivera & Nickels, 2014; Sanyal & Routray, 2016).

Putnam avoids the impact of conflict and politics on social capital in an association or community (Siisiainen, 2003). By avoiding the issues of conflict and politics, Putnam creates a utopic view of social capital. Disasters and emergencies are events filled with conflict and political controversy, especially large disasters. Conflicts occur when the government does not meet the expectations of those affected by the event. Social capital works within this conflict and, if strong prior to the event, may reduce conflict and focus energy on recovery and response. However, trust created by social capital must exist before the event – social capital built on networks and relationships.

Putnam (1995) proposes that a higher level of social trust exists in groups or networks with educated members. This may be accurate for linking and bridging social capital; however, bonding

social capital does exist in marginalized groups. In marginalized groups, there is less bridging and linking social capital and thus less access to resources and ability to influence public policy.

Putnam, Bourdieu, and Coleman, all minimize or ignore the role of individual human agency within network structures (Tzanakis, 2013). Conflict within a social group may result in low-level trust, which then diminishes reciprocity between actors. This reduces the likelihood of collective action for the common good, a desired output of social capital. Other factors such as the history of the group, individual experiences and values, access to resources, etc. all impact networks, relationships, and trust. In short, the human experience and socio/cultural/economic factors within the social space is the context whereby social capital is created and utilized.

## **SOCIAL CAPITAL AND COMMUNITY RISK REDUCTION**

There is evidence that risk reduction initiatives may benefit from the presence of social capital in the community (Aldrich, 2012; Aldrich & Meyer, 2015; Dynes, 2002, 2005, 2006; Montes, 2019; Sanyal & Routray, 2016). Most of the evidence is from work on resilience, disaster recovery, and disaster preparedness. Six case studies related to the Federal Emergency Management Agency's *Whole Community* initiative indicate that social capital is beneficial to pre-event risk mitigation initiatives at the neighborhood and community level (Sobelson et al., 2015).

The National Fire Protection Association (NFPA) is a well-known advocate for community risk reduction (CRR). A leading fire protection reference world-wide is the *Fire Protection Handbook*. The concept of CRR was explained in chapter 19 of the 20<sup>th</sup> edition. While social capital was not directly mentioned, many of the concepts such as building social capital and social networks, the importance of intentionality, and engaging the community were explained. Kirtley (2008) explains that one of the major components of CRR is engagement of the community. A priority of community engagement is to reach groups that are negatively impacted by risk. The goal of community engagement is to gain the trust of residents of the community, trust that creates credibility and the willingness of the residents to



act on risk issues. Accomplishing this goal requires the fire department to become active in community organizations, participate in community organizations, and personnel engaging with residents in their respective response areas. These are the same activities which lead to creating awareness about the fire department, creating social trust, and building relationships (Ritchie & Gill, 2007; Rogers & Jarema, 2015).

Recommendations for building this trust include making an intentional decision to build relationships with residents of the community, seeking out interactions with residents from other cultures, learn about the customs of other cultures in the community, and being an advocate or ally for the needs of groups at risk (Kirtley, 2008). These actions create social ties and networks with residents facilitating the communication of information on risk issues, facilitating collective action on community risk issues, and identifying needs of the various groups in the community (Rivera & Nickels, 2014; Rogers & Jarema, 2015; Sobelson, et al., 2015).

## **CRITIQUES OF SOCIAL CAPITAL**

Researchers have identified numerous critiques of social capital. While not always present with social capital, they must be considered when attempting to build social capital in the community. In bonding social capital amongst a group, a strong relationship exists. The stronger the trust amongst the members, the stronger the bonding social capital (Coleman, 1998). However, that same trust and personal connection may result in the exclusion of others entering the group, especially if they lack any personal or family connection to others in the group (Portes, 2014; Rostila, 2010). This exclusion is most common in homogenous, exclusive groups that share values and norms of behavior (Rivera & Nickels, 2014). Craig (2018) describes a situation where a Hispanic volunteer firefighter is chided by his Hispanic friends and brother for interacting with white firefighters.

Another critique is that bonding and bridging social capital may result in excess claims on group members (Portes, 2014; Portes & Landolt, 2000; Rostila, 2010). In this situation, belonging to a

group or social network may require certain commitments or behaviors. For example, membership in a local Rotary Club may require members to participate in a certain number of monthly meetings and frequent activities. This may negatively impact the individual's time with their family. In time, this may result in the individual leaving the social network or group.

Rogers & Jarema (2015) explain that reciprocity of trust is a component of social capital. They claim that reciprocal trust between individuals must be present before either will invest in building a relationship. If trust is not established, a relationship will not be present that is necessary for collective action. If reciprocity does not occur, then social capital cannot be developed. This can be the situation with linking social capital where resources are available to be shared by an organization of authority with other groups and social networks, but trust cannot be established. This was the case in New Orleans between the residents of the Versailles neighborhood and the city government following Hurricane Katrina (Rivera & Nickels, 2014).

Social capital is difficult to operationalize and measure. Grootaert & Van Bastelar (2002), researchers from the World Bank consider social capital as a phenomenon since it is possible to observe its consequences. However, its causal factors cannot be identified consistently nor with certainty. This is consistent with Coleman's (1988) perspective that social capital is not tangible. In addition, Coleman (1988) suggested that social capital exists only when a transaction occurs between the actor and recipient. This delineates social capital from economic and human capital, both of which tangibly exist without any transaction occurring (Coleman, 1988; Portes & Landolt, 2000).

Social capital occurs within the context of a specific social unit so its framework is seldom consistent from one group to another (Lin, 2008). This makes measuring social capital unique to each context and any measurement of social capital must be specific to that case. This was evident following Hurricane Katrina in the various communities within New Orleans and different rates of recovery (Rivera & Nickels, 2014).

## **GAP IN LITERATURE**

The empirical research on the impact of social capital during disaster recovery is lacking. There is research from the field of sociology on social bonding and group dynamics. Much of disaster-related research (Aldrich, 2012, 2015; Dynes, 2006; Rivera & Nickels, 2014; Tierney, 2014) is based on observation and post-disaster interviews. A weakness of that research is the failure to clearly establish a causal relationship between social capital and disaster resilience (Rogers & Jarema, 2015; Rostila, 2010). In addition, Aldrich and other social capital advocates have not examined the influence of other social capital-related variables on disaster recovery outcomes. A study by Andrews and Brewer (2010) focused on the relationship between social capital and fire service performance. The authors noted that literature on social capital and community risk reduction is lacking, especially its role with formation of public policy. Finally, only one journal article was identified that directly studied the impact of social capital on disaster resilience in rural communities (Straub, et al., 2020).

## **RESEARCH QUESTIONS**

The goal of this study is to contribute to the literature on the role of social capital in risk reduction and firefighter recruitment in rural communities. Guymon Oklahoma, the largest community in the Oklahoma Panhandle, was selected due to its unique demographics, 57% of the population is Hispanic (US Census Bureau, *Quick Facts*, 2023). In addition, there is evidence that social capital is present in the community, especially with the local fire department. A recent Washington Post article (Craig, 2018) about the Guymon Fire Department's community activities and hiring of Hispanic firefighters described antecedent elements of social capital (Aldrich & Meyer, 2015; Rostila, 2010). This evidence warrants a study of social capital in Guymon Oklahoma.

This study will answer three research questions.

RQ1: What is the nature of social capital in this diverse rural community?

RQ2: How does social capital influence community risk reduction activities?

RQ3: How does social capital influence firefighter recruitment?

## **CHAPTER III**

### **METHODOLOGY**

This study utilized a qualitative, holistic, single case study approach that was informed by social constructivism (Bloomberg & Volpe, 2012; Creswell, 2013; Creswell & Creswell, 2017; Merriam & Tisdell, 2016). The purpose of this chapter is to describe the methods and procedures used in the study including the philosophical paradigm, data collection, interview method of analysis, and the ethical considerations.

#### **PHILOSOPHICAL PARADIGM**

According to Creswell (2013, p. 16), a philosophy is the “use of abstract ideas and beliefs that inform our research.” A researcher’s philosophy sets the path forward for any research or study including the methods to be used and the role of the researcher. A researcher’s philosophy defines the paradigm or worldview that will guide the conduct of the research (Creswell & Creswell, 2017). This paradigm helps formulate the problem and research questions, determine the methods used to obtain and analyze data, and, in the case of qualitative research, identify the philosophical assumptions (Bloomberg & Volpe, 2012; Creswell, 2013; Creswell & Creswell, 2017).

The paradigms for a qualitative study are different than a quantitative study. Qualitative research seeks to explore and understand how an individual interprets their world and experiences. Qualitative research collects data in the participant’s world, and then uses inductive logic to analyze the data and determine meaning. Quantitative research tests objective theories by

analyzing the relationships between variables. Generally, the logic of analysis is deductive. Qualitative research is from a naturalistic perspective whereas quantitative research is positivistic, seeking cause and effect to explain phenomenon. Qualitative research is generally contextual to a specific bounded location (Lin, 2001), quantitative seeks generalizability in findings (Creswell & Creswell, 2017).

There are four philosophical assumptions that are the foundation of qualitative research (Bloomberg & Volpe, 2012; Creswell, 2013; Given, 2008). The ontological assumption focuses on the nature of reality. In qualitative research the ontological assumption is there are multiple realities. Any given experience can be viewed differently by everyone involved. For example, in this study participants are asked about their view of the community. Each participant provided a different view of that reality. There was no single reality about the community and its character.

The epistemological assumption focuses on determining what is knowledge. The qualitative researcher engages and interacts with the participant in their world and uses subjective evidence gathered to understand the participant. For example, in this study interview responses provided subjective evidence on how each participant view or defined trust in their relationship with the fire department.

The axiological assumption focuses on the role of values in the life of the individual. The researcher seeks to understand the values of the participants, and also attempts to understand their own values regarding the phenomenon and how those values may create bias in perception (Creswell, 2013; Merriam & Tisdell, 2016). For example, the researcher in this study was the fire chief in the community for over six years. He has specific values regarding the importance of engaging underserved groups and views the actions of the fire department through the lens of those values.

The methodological assumption focuses on the process of qualitative research including methods, procedures, and philosophical frameworks. Qualitative methodology is based on inductive logic. According to Creswell (2013, p. 45), utilizing inductive logic the qualitative researcher “builds their patterns, categories, and themes from the “bottom up,” by organizing the data inductively into increasingly more abstract units of information.” Similarly, Patton (2015) states that inductive analysis brings out multiple dimensions of meaning from each individual’s reality. For example, in this study the researcher through repeated analysis of the data identified relevant code words, sorted those code words into categories, developed several themes, and from those themes developed key assumptions.

A qualitative inquiry framework incorporates these four philosophical assumptions of qualitative research into a core paradigm (Bloomberg & Volpe, 2012; Creswell, 2013; Patton, 2015). In this study, the core paradigm is social constructivism. Social constructivism views the human experience as unique and much different than the physical world (Patton, 2015). Social constructivism is a worldview or core paradigm where each person seeks meaning of their world. Through experiences, values, social interactions, interpersonal relationships, and beliefs the individual creates their reality. The qualitative researcher using a paradigm of social constructivism seeks out the participant’s view of their world and the phenomenon being studied. Open ended questions are used to stimulate meaningful discussions and interactions. Researchers recognize their own beliefs will impact the meaning developed from the discussions. An interpretive framework for social constructivism is presented in Table 1.

**Table 1**

*Interpretive Framework for Social Constructivism*

<b>Interpretive Framework</b>	<b>Ontological Beliefs</b>	<b>Epistemological Beliefs</b>	<b>Axiological Beliefs</b>	<b>Methodological Beliefs</b>
Social Constructivism	Multiple realities are constructed through our lived experiences and interaction with others.	Reality is co-constructed between the researcher and researched and shaped by individual experiences.	Individual values are honored and are negotiated among individuals.	More of a literary style used. Use of an inductive method of emergent ideas (through consensus) obtained through methods such as interviewing, observing, and analysis of texts.

*Note.* Adapted from Creswell (2013), p. 36.

**CASE STUDY**

A case study in qualitative research is “an intensive description and analysis of bounded social phenomenon, be this a social unit or a system such as a program, an institution, or a process (Bloomberg & Volpe, 2012, p. 31).” It provides a rich, deep understanding of the phenomenon (Patton, 2015). The researcher investigates a real-life bounded case. The case may be bounded by time, location, people, or event. The researcher has no control over the variables being studied and the data gathered is unstructured. There are four reasons for using a case study in qualitative research, 1) the researcher desires to answer the “how” and “why” questions about the case, 2) the researcher is unable to manipulate the variables in the case, 3) the context of the case is critical to the research questions, and 4) the boundaries between the context and phenomenon are not clear (Baxter & Jack, 2008, Yin, 2003).

Epistemologically, the qualitative case study is a social constructivism paradigm (Baxter & Jack, 2008; Bloomberg & Volpe, 2012; Creswell, 2013; Yin, 2018). Meaning is created by the



researcher's interaction with the people, processes, or phenomenon bounded by the case. The case study is inductive with analysis beginning with small parts of the data building to key assumptions. There is criticism of qualitative case studies for the fact that inductive analysis allows the researcher to make the data say whatever they want (Lewis-Beck, 2003). However, the single case study is appropriate for unique cases such as this with only one measure being studied (Yin, 2018).

The first step using this method is to clearly define the case to be studied (Yin, 2018). This includes determining what phenomenon is to be studied. The researcher must provide a thorough description of the case and clearly define the boundaries of the case (Creswell, 2013). The bounded case will tell a story of the units being measured and may provide a rich and deep understanding of the people and the phenomenon (Patton, 2015). In qualitative research, the case study is based on a social constructivism paradigm. Meaning is, therefore, created by the researcher's interaction with the people, processes, or phenomenon bounded by the case.

A single case study is appropriate when the case being studied is unusual and there is only a single unit of analysis (Yin, 2018). A case is unusual when it deviates from everyday occurrence or common practice. A Type I single case study is holistic with only one unit of analysis. Also, a Type I single case study is appropriate when the case is directly related to the research questions and the intent of the study (Patton, 2015). A criticism about the Type I single case study is that generalizability is limited. However, in a qualitative study generalizability is not a primary concern (Bloomberg & Volpe, 2012).

The research method chosen for this study was a Type I holistic single case study as the city of Guymon is a unique, unusual case; it is a rural community with Hispanics as the majority of the population. Another unique element is the fire department's relationship with the Hispanic

community as described by (Craig, 2018). The uniqueness of the case defines this as an intrinsic study as the single unit of measurement is the Hispanic participants in the study (Yin, 2018).

The case was bounded by time, the present, by the people, Hispanic residents who spoke fluent English, and residents of Guymon. The case presented an opportunity to qualitatively study the presence of social capital in the community and its influence on firefighter recruitment and the effectiveness of community risk reduction initiatives. There is no expectation of generalizability of the study findings; the findings will only represent the reality of the participants and researcher at a point in time of the study.

## **DATA COLLECTION**

Interviews of participants is an accepted data collection for single case studies (Creswell, 2013; Creswell & Creswell, 2017; Rubin & Rubin, 2011). Interviews provide a one-on-one exchange with a participant. The researcher can participate in the discussion and observe the body language of the participant. Participants are willing to share their perspectives, feelings, values, and experiences – their reality – about the phenomenon, but the researcher remains in control of the questions being asked. In this case study, the phenomenon is the bonding, bridging, and linking social capital that exists in Guymon.

The study, once designed and approved by the Institutional Review Board (IRB), must be marketed to potential participants who are within the boundaries of the case and who are able to provide perspectives relevant to the research questions. A purposeful sample is appropriate as it allows the researcher to solicit participants that are within the boundaries of the case. Because the participants must fit within the boundaries of the case, the sample is homogenous (Maxwell, 2021). For this study, any participant must be a resident of Guymon, Hispanic, and fluent in spoken English. In addition, their experiences should allow them to contribute to the research questions.

## **SELECTION PARTICIPANT**

Participants were selected based on meeting three criteria: they had to be Hispanic, be fluent in spoken English, and be a resident of Guymon Oklahoma. This created a homogenous sample (Etikan & Alkassim, 2016). There were no other criteria used such as age or gender. There were two groups interviewed, civilians with no affiliation with the fire department, and career or volunteer firefighters from the Guymon Fire Department. For firefighters there was no criteria for time served in the department. These criteria were within the boundaries of the case and all participants were able to share experiences and perspectives related to the research questions.

Purposeful sampling was used for participant selection. Initially, a list of 21 names were provided to the researcher by the executive director of Main Street Guymon, a local non-profit community organization working to restore commerce to the downtown area of the community. Those on the list were associated in some manner with Main Street Guymon and met the criteria for the study. In addition, the executive director believed all those identified would be willing to be interviewed. Those on the list were not given any notification before the initial contact by the researcher. A list with names, email addresses, and phone numbers was provided.

There was no predetermined sample size required for the study. There is no consensus on the minimum number of participants or interviews for a qualitative case study (Creswell & Creswell, 2017). In this study each participant participated in only one interview, there were no follow-up interviews. Creswell (2013) recommends 5 to 25 interviews. The saturation approach was chosen for this study (Etikan & Alkassim, 2016; Guest, et al., 2006). Creswell and Creswell (2018) recommend the number of interviews are those required to reach saturation of data. Saturation in qualitative research occurs when no new data is provided in interviews (Creswell &

Creswell, 2017; Given, 2008; Guest, et al., 2006). In this study saturation was achieved with 19 interviews.

Initial contact with those on the list provided by Main Street Guymon was by email. The body of the email was a letter from the researcher to the potential participant. The letter was composed on Oklahoma State University (OSU) Engineering Extension letterhead. The organizational letterhead was used to convey credibility of the study and reduce the perception the email was spam. The marketing letter provided brief information about the researcher, the topic of the research, how the findings would be used, the nature of the interview, the confidentiality of the study, and the \$25 incentive for participation and completion of an interview.

The initial email resulted in responses from eight participants who were all willing to be interviewed. When a response was received the participant was contacted by phone and the researcher discussed the purpose of the study, the role of the participant, and how the interview would be conducted. If the individual agreed to participate, an adult consent form previously approved by the OSU Institutional Review Board (IRB) was sent using Adobe e-signature to allow electronic signatures and return email. Also, during that first phone discussion a date and time for the interview was identified and an interview was scheduled. All dates of notification, personal information of the participant, and information on the \$25 gift card issued to participants were recorded on an Excel spreadsheet. The spreadsheet was stored on the OSU One Drive cloud storage program under my username and password.

If a response was not received after two weeks of the initial email a follow-up email was sent. The content of the email was identical except a sentence was added explaining this was the second attempt to contact them. If a response was not received after the second email no further attempt to contact the individual was made. However, a record of both attempts, including the

date the email was sent, was recorded on the Excel spreadsheet. No participant was contacted by telephone unless an email or phone response was received.

Question 13 in each interview asked the participant if they could recommend any other Hispanic resident to participate in the study, a process known as snowballing (Bloomberg & Volpe, 2012; Guest, et al., 2006; Creswell, 2013) The incentive of the gift card was not dependent on the recommendation of any other participants. The remaining 11 participants were identified through this follow-up process. After receiving a recommendation, the same procedure was followed, an email was sent. If there was a response the person was contacted by phone and an interview was scheduled. If there was no response after two weeks, a second email was sent. There were three individuals who, after discussing the study on the phone, chose to not participate in the study. The individual was not asked the reason for their decision.

The final sample was 19 participants. There were 13 civilians and 6 firefighters (see Table 2). Of the 19 participants, there were nine women and 10 males (see Table 3). Forty-seven percent of the participants were women and 53% male.

**Table 2**

*Sample Population by Group*

<b>Group</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>% of Total</b>
Firefighter	4	2	6	32%
Civilian	6	7	13	68%
Total	10	9	19	100%

**Table 3**

*Sample Population by Gender*

<b>Gender</b>	<b>Civilian</b>	<b>Firefighter</b>	<b>Total</b>	<b>% of Total</b>
Female	7	2	9	47%
Male	6	4	10	53%
Total	13	6	19	100%

**INTERVIEW METHOD**

The interview is the source of the data for the study; therefore it is critical that it encourages active, open discussion between the participant and the researcher (Yin, 2018). This study adopted a responsive interviewing model described by Rubin and Rubin (2011). The responsive interview is intended to develop the meaning of the phenomenon for both the researcher and the participant. In this study the phenomenon is the presence and influence of social capital and social networks in Guymon. For the responsive interview, the researcher takes the time to build trust and create an informal relationship with the participant. This trust is necessary for deep conversations that lead to meaning, especially with Hispanics who may fear government interaction in their lives. By building trust, those participants will readily share their experiences, values, emotions, and perspectives (Yin, 2018). The researcher approaches the interview with a friendly tone and demeanor, so the participant is at ease.

During the 19 interviews the researcher took several minutes at the beginning of the interview to have simple conversation about the person's life in Guymon including their profession, how long they had lived in Guymon, and what they liked about Guymon. This discussion was not recorded, and no notes were taken. Through this discussion most participants were at ease when the formal interview began.

The semi-structured interview approach was selected for the study based on the intent of the study. The semi-structured interview focuses on a specific topic or phenomenon. The

questions are developed in advance of the interviews. Deviation from the scripted interview questions is allowed with the use of probes and follow-up questions (Creswell & Creswell, 2017). During a semi-structured interview, the researcher maintains control of the discussion. During the development of the study consideration was given to the specific research questions. This semi-structured approach was considered including the need for open-ended questions, ensuring the questions directly related to the research questions, and ensuring the intent of each question was easily discernible. All questions related to the intent of the study and the research questions, as well as the phenomenon being studied, i.e., the influence of social capital and trust on firefighter recruitment and community risk reduction initiatives. The research questions are listed below.

1. Why did you become a firefighter? (Firefighter only)
2. Please describe the community here in Guymon. (All)
3. What social networks and groups do you belong to? (All)
4. What does the phrase “social capital” mean to you? (All)
5. What social networks and groups exist within the Hispanic community? (All)
6. How has the fire department interacted with these social networks and groups?  
(All)
7. What fire, injury, and/or health risks does the Hispanic community face? (All)
8. What actions or steps have you taken to reduce those risks to you or your family?  
(All)
9. How did the fire department interaction with your social network or groups influence your decision to take action to reduce those risks? (All)

10. How did this fire department interaction impact your trust in the fire department?  
(All)
11. How did the fire department interaction with your social networks and groups influence your decision to become a firefighter? (Firefighter only)
12. Is there anything you would like to add? (All)
13. Is there anyone else in the Hispanic community that you would recommend that I speak with? If so, may I have their contact information? (All)

There were 13 questions. Civilians were asked 11 questions; firefighters were asked all 13 questions. Questions 1 and 11 pertained to the reasons a participant became a fire fighter. Of the 13 questions, six related to social capital, social networks, or interactions and three questions related to community risk reduction. Question 13 was asked to facilitating snowballing for additional participants (Guest, et al., 2006; Creswell & Creswell, 2017). Question 2 asked the participant to describe the community of Guymon.

An interview guide was developed for ensuring consistency with the interviews and to lead the research through the questions. The guide contained administrative information including the participant's identifier. Possible probes and follow-up questions were provided, instructions to be read to the participant, and a notes area for each question where the researcher could record interview comments and observations. The researcher completed the questions while the file was opened during the interview.

An hour was scheduled for each interview. If the consent form had not been received 24 hours before the scheduled interview, the participant was called and reminded to submit the signed consent form. If the consent form was not received by the beginning of the interview, the



interview was cancelled and rescheduled. All consent forms were saved in a secure electronic folder as they were received back from the participant as a PDF.

Approximately 10 minutes prior to the scheduled interview time Zoom or Teams meetings were opened, and the researcher verified the participant had clear audio and video reception. There were frequent issues with creating an acceptable connection. At the beginning of the interview the researcher read the introduction and confirmed the participant was willing to participate. Once confirmation of consent was given, the audio recording and transcription of the interview began. There were no technical challenges noteworthy during the interviews. Once the interview was concluded the connection was closed, the interview guide was saved in a secure OneDrive file under the participant's identifier code. No names were used in the storage of any participant electronic files.

The average duration of all interviews was 28 minutes 7 seconds. The average duration of civilian interviews was 26 minutes 14 seconds. The average duration of firefighter interviews was 19 minutes 1 second. The average duration of female interviews was 31 minutes 28 seconds. The average duration of male interviews was 27 minutes 58 seconds.

Following the conclusion of the interviews, the researcher hired an assistant to review the transcripts. The review included verifying the accuracy of each transcription by reviewing the audio recording. The analysis method included in vivo coding (Saldana, 2016) which requires the language of the participant be unaltered and all spoken words from the interview are retained. However, during the review process all irrelevant conversations were removed. For example, vocalized pauses by the researcher and unrelated conversation between the researcher and participant were deleted. An updated transcript was saved in a secure electronic file. A second edit was conducted and all speech by the researcher was stripped from the transcript. This was necessary to ensure accuracy when using computer-assisted qualitative data analysis software

(CAQDAS) to analyze frequency of words during coding. Any words of the researcher must not be included in the frequency and analysis. All audiotapes were unaltered during this process. The researcher performed a review of the final version of the transcript to the original, unedited version, to ensure all relevant data remained. All versions were saved in a secure electronic file. Any printed materials were locked in the researcher's office filing cabinet.

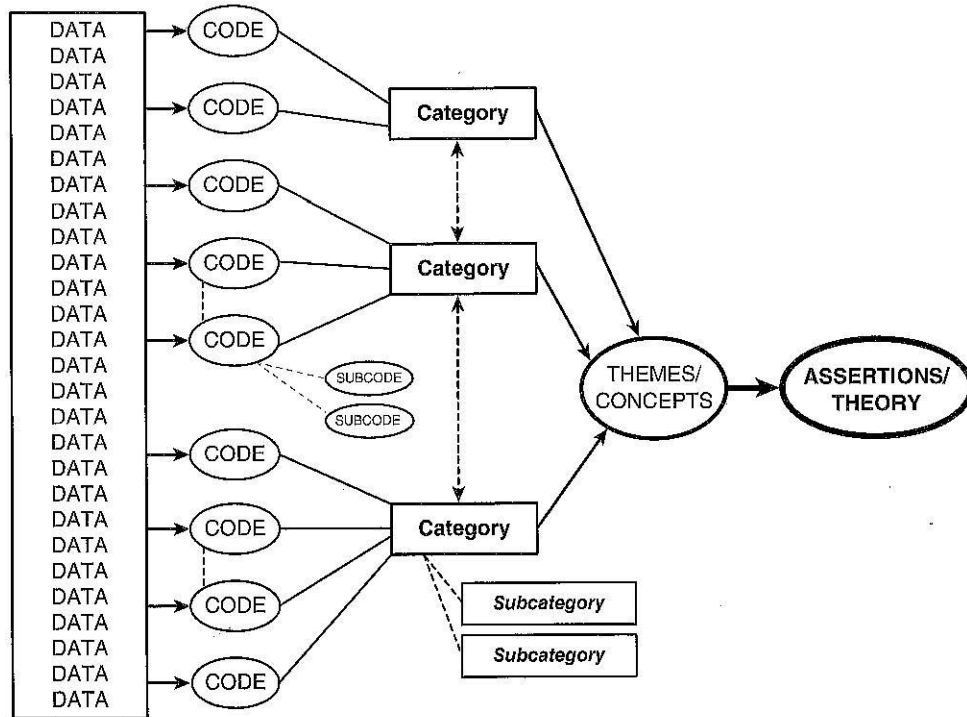
## **ANALYSIS METHOD**

The goal of analysis in qualitative research is to develop key assertions or assumptions about the meaning of the data (Birks & Francis, 2008). This is consistent with the larger purpose of qualitative research which is to establish meaning (Birks & Francis, 2008; Creswell, 2013). Qualitative research analysis requires the researcher to engage the data over and over, seeking deeper meaning through repeated analysis of the data (Linneberg & Korsgaard, 2019). This interplay between the researcher and data creates a heightened understanding of the meaning and experience of the participants.

Analysis in qualitative research is an inductive, systematic, and circular process (Creswell, 2013; Saldana, 2016). The researcher begins by reviewing the data provided by the participant over and over, the circular aspect of the analysis process. This refining process contributes to the researcher discovering meaning in the text and creates intimacy between the researcher and the data (Saldana, 2014). The researcher begins to identify small parts from the text that may have meaning and relate to the study. These words or short phrases are codes. Each code word is a symbolic attribute of an idea or meaning expressed by the participant (Elliott, 2018; Saldana, 2016). Codes with similar meaning are gathered into categories. The researcher continues to review the data and consider the relationships between the codes and categories. The outcome of this ongoing analysis is the creation of themes. From the themes the researcher finally develops key assertions developed from the corpus (see Figure 2).

**Figure 2**

*Coding Process*



*Note.* Adapted from Saldana (2016), p. 14.

The coding process in Figure 2 follows a three-part schema: open coding, axial coding, and selective coding (Saldana, 2016; Williams & Moser, 2018). This schema is often used for data analysis in grounded theory but is also used for other qualitative research methods including case studies (Saldana, 2016). Open coding is the first level of analysis. From open coding the researcher begins to identify broad patterns in the data. As mentioned earlier, open coding requires the researcher to read and reread the texts from the interviews and the researcher’s notes. As patterns begin to form the codes are indexed in categories. The codes in a category share some meaning. For example, a category in this study was titled “planned interactions” and

contained codes such as Fiesta, library, school events, and parades. Each code represented a planned interaction between firefighters and the public.

As further meaning is discovered or becomes evident to the researcher, the analysis process progresses to axial coding. During axial coding, the researcher reviews each code and category, rethinking connections, relationships, and patterns (Guest, et al., 2008, Saldana, 2016). Categories that were identified in open coding may be revised or combined into other categories as meaning and understanding of the data grows. The outcome from axial coding is the refined codes and categories found in the relevant data. Williams and Moser (2019) recommend a codebook of 30-40 codes by the end of axial coding.

The next progression of analysis is selective coding. During selective coding the meaning expressed and discovered during open and axial coding is reduced into themes (Creswell, 2013; Saldana, 2016; Williams & Moser, 2019). Saldana (2014) describes a theme as a single phrase that summarizes the meaning of the data. Williams and Moser (2019) predict five to seven themes at the end of the selective coding process.

The last progression in the analysis process is development of key assertions or key findings (Saldana, 2016). These key findings summarize the meaning derived from the data that has an implication to theory, practice, or policy in the context of the study. Also, the meaning of the data related to the research questions. The goal is not generalizability, but to express the relevant meaning derived from the data and the analysis process to the case being studied.

During the analysis process the researcher records their thoughts, ideas, and experiences in thematic memos (Birks & Francis, 2008; Saldana, 2016). The process of memoing stimulates and records the reactions of the researcher to the data. Memos serve four purposes for the researcher: 1) mapping research activities from the beginning through analysis, 2) extracting meaning from the data, 3) maintaining the momentum of the analysis, and 4) opening

communication between the data and the researcher (Birks & Francis, 2008). The openness of the researcher when preparing memos is critical for reflection on the process and the data. There are no prescribed formats for memos, rather, the researcher should create a format and approach that is best suited for their needs (see Table 4).

**Table 4**

*Example of Memo and Notes*

Memo	Notes
<p>Most of the participants are younger. I'm surprised. Many are just getting started in their professions. I'm not reaching the older Hispanics in the community. They also seem to have been raised here and not an immigrant as an adult. A couple were, but most grew up in the US. I really wanted more of a cross-section of the Hispanic community, especially the ages. I think some of the responses would be different had the person been older and grew up outside the US. I don't know if this will invalidate my data or not.</p>	<p>This is a limitation in the research. Older, 1<sup>st</sup> gen immigrants experiences are not recorded in the research.</p> <p>The point was made about most of those interviewed were 2<sup>nd</sup> and 3<sup>rd</sup> generation immigrants</p>
<p>There is a strong sense that Guymon is unique in that it is a tight-knit community. There is a feeling there is one Guymon, one community. At least two of the participants who grew up in Guymon say the community is different, but it has always been open to other cultures. One states that growing up in the 70s he was a minority but didn't realize it because of how he was treated. Guymon may have always been integrated in terms of acceptance, although the % of minorities, generally Hispanic, was small. A1 stated that Guymon was still home, even after being gone for many years, but that it was a different home.</p>	<p>Guymon is a close-knit community – one community even with all the different cultures.</p>

The researcher followed the systematic analysis process described previously and began open coding. The first review of the transcripts included highlighting relevant words and phrases. Notes were made in the margins but no memoing occurred at that time. This process was repeated. New words and phrases relevant to the study were identified. Intimacy with the data was being developed.

The second review process focused on adding the researcher’s response to the data. Each interview was analyzed with the researcher creating thematic memos in response to insights being developed (Birks & Francis, 2008; Rogers, 2018). A form was created in Word that allowed the researcher to record the participant’s identifier and an area for comments. Relevant or insightful quotes from participants were recorded in a Word form similar to that used for thematic memos (see Table 5). The participant’s wording was not changed in the quote. Throughout this process the researcher frequently reviewed the three research questions of the study to ensure the memos and quotes connected in some way to the questions. This process was repeated two more times allowing one or two days between sessions. The researcher frequently discussed with Dr. Rodney Eksteen and Dr. Bob England, professional colleagues of the researcher, the insights and meanings being developed. Dr. Eksteen is also a retired fire officer with extensive experience in community risk reduction and building social capital with underserved populations in Africa. These conversations would not be considered triangulation, but the feedback continually caused the research to consider his perspectives about the meaning of the data.

**Table 5**

*Example of Form Used to Record Quotes from Participants*

Ref	Quotes
A1	<p>Is there a type of capital that is created when a government interacts with the community?</p> <p><i>There is a trust that comes from that, unity. A sense of community.</i></p>

WordSTAT was evaluated for use but rejected as it did not meet the needs of the research tasks as manual coding was preferred to perform coding of the data. The transcript files, with all researcher text removed, were entered into the software. The researcher was unable to use

WordSTAT for any of the coding of the data. The only usable product was the frequency of terms in the data. The frequency list of words was used to continue the manual coding.

The third review of the data included another review of each transcript, updating quotes, reviewing and creating additional memos, and for the first-time listing codes in the codebook of the study. The codes were recorded in a notebook. Each transcript was read a second time and revisions made to the codes, quotes, and memos. It became more apparent what text in the transcripts were irrelevant to the meaning of the data and that text was deleted. Few revisions were made to memos or quotes. Several codes were added. There was no attempt to group the codes into categories, although patterns were beginning to emerge. There were 80 codes by the end of the third review.

The final step in open coding was another review of the transcripts and consideration of the codes. Initial patterns in the codes were apparent and codes were indexed into 15 categories. This was repeated and 15 categories emerged. However, three categories appeared to have weak association with the codes or did not appear to be relevant to the research questions. In addition, many of the codes did not have a strong association with any category, nor were they relevant to the research questions. The three categories and 24 codes were deleted (Elliott, 2018; Saldana, 2014). Twelve categories with 62 codes were identified as a result of open coding.

Axial coding of the data began with one more reading of the transcripts with a review of the memos and quotes associated with each transcript. New meaning and insight were recorded in the memos because of the process of reducing the codes and categories. The codes and categories were reviewed, and additional revisions were made, primarily revising the titles of the categories. Six codes were deleted as they appeared to be similar in meaning to other codes and were repetitious. The axial coding resulted in minimal changes due to the amount of work invested

during open coding. Also, the discussions with Eksteen and committee chair Dr. Haley Murphy provided valuable feedback on the codes and titles of the categories.

Selective coding resulted in four themes. This was a difficult process that resulted in changing some of the categories. Several of the categories developed during axial coding were more indicative of a theme. These categories were retitled and the verbiage used to create the themes. The four themes accurately summarized the meaning of the data and connected strongly to the research questions (see Table 6). The themes became the key assertions. A total of 15 recommendations were developed from the data and associated with a theme.

**Table 6**

*Example of Codes and Categories for Theme 1*

Code	Category	Theme
Trust		
Unity		
Connection	Acceptance of Others	
Respect		
Open-minded		
Diverse		
Multi-cultural		
Different Perspectives	Diversity	Theme 1: Strong bonding social capital is present as a community.
Spanish Language		
Cultures		
Melting Pot		
Helpful		
Friendly		
Family	Community Character	
Tight Knit		
Support		
Welcoming		
Caring		



## **RELIABILITY, VALIDITY, AND GENERALIZABILITY**

The field of qualitative research lacks consensus on how to measure traditional quantitative concepts such as reliability and validity (Creswell & Creswell, 2017; Maxell, 1992; Maxwell, 2012). There are methods that measure the same elements of legitimacy as the traditional quantitative concepts.

Saldana (2014) recommends an audit of quality control of the analysis process to verify credibility and trustworthiness of the process and findings. He refers to this audit as verification. Credibility is established by a complete review of the literature relevant to the study. A thorough literature review on social capital related to the fire service, social capital theory and measurement, social networks, and analysis of qualitative research was completed prior to the design of the study. The literature review meets the requirement for credibility established by Saldana (2014). The second part of verification is to establish trustworthiness of the methods and procedures used in the study. In this chapter the researcher was transparent about the methods and procedures used in conducting the research and in analysis of the data including challenges encountered. In addition, the limitations of the research are discussed in Chapter 6. This transparency contributes to the trustworthiness of the case study research and analysis (Saldana, 2014).

Bloomberg and Volpe (2012) recommend a similar approach using the qualitative concepts of credibility and dependability instead of validity and reliability. Credibility refers to how well the researcher's perceptions and meaning match the perceptions of the participants, i.e., has the researcher accurately reported the perspectives of the participants in the findings of the study. Evidence that demonstrates credibility includes identification of any researcher bias, thorough and repeated review and analysis of the data, and use of peer debriefing to examine memos, notes, and findings. In this study the researcher identified bias from having previously

lived in Guymon and worked in the fire department. The data was reviewed numerous times, beginning with the interview process through development of key findings. Finally, the researcher frequently discussed the research process with peers including sharing of memos, quotes, and text of the dissertation. No information was shared with peers that might compromise the anonymity of the participants.

“Dependability refers to whether one can track the processes and procedures used to collect and interpret the data (Bloomberg & Volpe, 2012, p. 113).” Dependability is demonstrated with thorough explanations of how data was collected during the study and the process for analysis. The data collection and analysis process for this study was thoroughly detailed previously in this chapter.

Maxwell (1992, 2021) addresses the concept of generalizability. In quantitative research generalizability is the extent to which conclusions from one study can be applied to another group or population. The aim of a qualitative holistic single case study is not to identify how the findings can apply to other communities; rather, the aim is to understand the phenomenon being studied in that bounded case. In this study the aim was to understand the role and influence of social capital in Guymon Oklahoma. The case was specifically bounded by time (now), place (Guymon), and people (Hispanic residents fluent in English). The findings are only generalizable to this case. However, the findings and recommendations may be beneficial to other communities, but it is up to the reader to determine transferability of findings and recommendations (Bloomberg & Volpe, 2012; Maxwell, 1992, 2012). The findings, such as the value of interacting with the public, are consistent with best practices previously identified in the community risk reduction literature (Kirtley, 2008).

## **ETHICAL CONSIDERATIONS AND IRB**

This qualitative single case study was approved by the Oklahoma State University (OSU) Institutional Review Board (IRB). The IRB was provided with information on the population being studied, how the participants will be solicited, the methodology of the study, inducement offered for participation, and all steps to be taken to protect the rights and safety of the participants.

The following steps were taken to ensure the confidentiality and safety of each participant, and to meet the requirements of the OSU IRB:

- All electronic files, including all participant information, were secured in the OSU OneDrive cloud storage under a single username and password (Creswell & Creswell, 2017).
- All printed files were stored in a locked file cabinet with a single key controlled by the researcher (Creswell & Creswell, 2017).
- A unique alphanumeric identifier was assigned to each participant to ensure anonymity on transcripts (Creswell & Creswell, 2017).
- All contact was only with the individual participant, no group emails or mailings were used (Creswell & Creswell, 2017).
- All individuals recommended by participants, or Main Street Guymon, were contacted regardless of gender (Bloomberg & Volpe, 2012).
- Virtual interviews were conducted in a private office with only the researcher present.
- Every interview occurred only after a signed adult consent form approved by the IRB was received from the participant (Bloomberg & Volpe, 2012; Creswell & Creswell, 2017; Merriam & Tisdell, 2016)

- Prior to every interview the participant was informed of the details of the interview and the use for the information and provided an opportunity to withdraw from the study (Creswell & Creswell, 2017).
- All electronic and printed materials not required to be maintained on file were destroyed.

## **CHAPTER IV**

### **FINDINGS**

The findings are developed from interviews of 19 Hispanic residents of Guymon Oklahoma. The participants represented a purposeful sample from two groups of residents: civilians with no experience with Guymon Fire Department and residents who currently serve as a firefighter or emergency medical technician (EMT) with the fire department. All participants were Hispanic and a resident of Guymon. Participants were also required to be conversational in English so that the conversations could be transcribed in English, and for clarity of meaning of both answers and responses. The sample size of 19 did provide saturation of data (Guest, et al., 2016). All participation in the interviews was voluntary. There was some variance in answers to the questions, however data provided in the interviews was consistent amongst participants. In addition, the answers provided were relevant to this study and the research questions (Patton, 2014).

Both groups answered 11 questions with firefighters answering two additional questions regarding their reason for becoming a firefighter and the impact of interactions with the fire department in their decision to join the department. All questions were related to some element of social capital. There were both career and volunteer firefighters interviewed. As voluntarily noted by the participants, they were a variety of ages and diverse in employment. The quantity of information shared varied greatly with both groups.

Quotes from participants are provided, organized by themes and categories. All quotes are in the language of the participant without grammatical correction. According to Saldana (2014), when using *In Vivo* coding, the response of the participant is communicated as spoken so meaning is related in their words, not the researcher's (Maxwell, 2021).

## **CODING**

Coding of the transcripts combined manual coding and the use of computer-assisted qualitative data analysis software (CAQDAS). Data was initially analyzed manually by reviewing each transcript, highlighting key words, and creating a Word document with those key words. Analytical memos and extracted relevant quotes were prepared when each transcript was read. This followed the process recommended by Saldana (2014) for novice researchers. This analysis process was continued through three readings of the transcripts utilizing open, axial, and selective coding (Linneberg & Korsgaard, 2019; Williams & Moser, 2019). In subsequent readings revisions were made to analytical memos, quotes, and codes. At the conclusion of this analysis there were 96 codes.

An analysis of the data was then done using CAQDAS (WordSTAT). This included a frequency analysis using a modified word dictionary to include all code words identified in the manual analysis process. In addition, quotes of any words were identified and saved. The additional relevant code words identified through the electronic analysis were minimal. Following the analysis utilizing the software the lists of code words were edited and combined into one list of code words. The quotes were also edited and combined into one list. At the end of the manual and electronic analysis process there were 62 codes, 12 categories, and four major themes.

## **THEMES**

### **Theme 1 – Strong bonding social capital is present as a community**

According to Villalong-Olives and Kawachi (2015) there are two views of social capital: social capital as an individual characteristic and social capital as a collective, a group phenomenon. As a group phenomenon, social capital is based on trusted relationships, norms, and reciprocity within the group or social network. While bonding social capital is generally considered to exist within a smaller homogenous group or social network, bonding social capital may also exist when the bounded, homogenous social network is a community (FEMA, 2011; Woolcock, et al., 2000) (see Table 7).

**Table 7**

*Theme 1 and Theme 1 categories*

Category	Theme
Acceptance of Others	Theme 1: Strong bonding social capital is present as a community.
Diversity	
Community Character	

#### ***Acceptance of Others***

The most frequent response when asked to describe Guymon was a sense of unity, of all citizens being a family who worked together to help others. There was no distinction among races or cultures, the feeling was for the community as a whole. In this regard, the social network or group was bounded by the city limits and what was shared was belonging to the community called Guymon.

Newton (2001) states that trust, as a component of social capital, is an expression of how a group evaluates the world around them. Participants presented a community where there is trust amongst residents. The trusting relationship is an essential element of bonding social capital (Siisiainen, 2003; Villalong-Olives & Kawachi, 2015). The trust exists between the cultures and has created a unity in the community according to a participant who grew up in Guymon during the 1970s.

*“There is a trust that comes from that, unity.”*

There is a strong sense that Guymon is unique in that it is a tight knit community that appreciates diversity. At least two participants who grew up in Guymon stated the community is different, but it has always been open to other cultures. Guymon was always integrated although before the arrival of Seaboard Foods the number of Hispanic residents was much smaller.

*“I grew up here. I was a minority and did not know it. We were very much the minority back then. I left in 1979 and came back in 2017. It is completely different now. Seaboard brought much of the diversity. It is home, but a much different home.”*

This perception of Guymon as a single community was not limited to the civilian participants. Firefighters viewed the community with the same fundamental perspective. The term family and close-knit were common words used to describe the community. The perception that the community is a family is consistent with Woolcock et al. (2000) perspective of communitarian social capital.

*“I would like to say that the community is very close knit. It's almost what I would consider like a family.”*

Participants expressed the desire to connect with all cultures in the community. The goal being to connect with the existing community, to make a difference. This was expressed by a



participant who works for the local telephone cooperative and is a life-long resident of Guymon regarding belonging to a community organization. According to FEMA (2011), this connection within the community helps foster whole community risk reduction.

*“I was not part of it, but I did attend some of the meetings, because our goal has always been-How do we connect?”*

A common theme with the firefighters and the participants who are in business locally is that an essential element in gaining acceptance of new cultures and new residents from other countries is treating them with respect and dignity. When respect is offered respect is returned and contributes to bridging and linking social capital (Rostial, 2010). This same perspective was communicated throughout all four themes.

*“So, I need to appreciate and respect, and if you don't give respect you're not going to be any respect.”*

A participant who works for the local electrical cooperative expressed the importance of gaining the trust of others in the community and how that trust results in acceptance and involvement in the community. The high degree of involvement of the Hispanic community in local organizations and activities appears to validate that perspective.

*“Well, you've gained the trust of your people, your community. They want to be a part of the coop and they want to be the members and they like that you're out there in their community, they like the involvement.”*

It appears residents are open minded towards other cultures, including the Hispanic community. Guymon is a melting pot with 32 languages spoken by students in high school. Being open-minded would be necessary for accepting so many cultures into the community. A participant expressed how being open minded allows current residents to engage others.

*“I would say that, like the majority of the people in our community are open minded and so like intrigued by other cultures that there’s no like, you look different. You sound different, or you don’t speak my language and I don’t want to get to know you. Here it’s like, the more people I run into they’re like the more they want to know about you and your culture. So, I think that’s one of the biggest differences, there’s not so much of oh don’t go near that person or don’t talk to that person I’ve never felt discriminated from my part.”*

### ***Diversity***

Guymon has numerous cultures with immigrants from a variety of countries. The population of Guymon is 57% Hispanic according to the last census (U.S. Census Bureau, 2023). Overall, 71% of the population is non-white. One participant who is a long-time resident of Guymon stated that the community is unique because of this large multi-cultural population, including the Hispanic population.

*“Guymon, from my perspective is unique in that it has grown exponentially, both in just numbers, but the diversity of the people that we have here is amazing. “*

A life-long resident of Guymon expressed the rapid change in the diversity of the community. However, they also mentioned that the community is integrated. This again affirms the perception that Guymon is a close-knit community.

*“I would say diverse, extremely diverse. It is a very integrated community. We have White, Hispanics, just you name it, we got it.”*

This change in cultural diversity has happened quickly due to the opening of Seaboard Foods in 1994. A participant expressed how quickly the change has occurred, and the presence of

numerous cultures. This is an observation shared by the participants who are long-time residents of Guymon.

*“It has turned into a mega multicultural community in twenty-five years.”*

The large Hispanic immigrant population also brings the influence of the Spanish language spoken throughout the community. The Spanish language is an important part of the Hispanic culture in Guymon. One participant noted that it is spoken so frequently that it has become, in their opinion, the primary language of the community.

*“Of course, we have other ethnic groups here. Spanish is the primary language these days.”*

Another participant noted that the use of Spanish is so pervasive that Guymon reminds him of Mexico.

*“I feel like I'm in Mexico because it's Spanish speaking everywhere.”*

Participants expressed that Guymon greets and accepts other cultures. One participant who was raised in Guymon expressed that some residents did not immediately embrace the arrival of other cultures. However, she believes that those people have come around to understand the importance of those cultures being in Guymon to support the economy, and how that acceptance is essential – not an option of the community.

*“But I think those people have finally come around, and if we don't embrace all these cultures, what are we going to gain? We must.”*

### ***Community Character***

All participants expressed the belief that Guymon was a helpful, friendly, accepting community. There were no negative characterizations of the community. This perception, while

consistent amongst the Hispanic residents interviewed, may not be representative of the entire population. The participants were mostly 2<sup>nd</sup> and 3<sup>rd</sup> generation Hispanic Americans, active in local business, and still working. Recent and 1<sup>st</sup> generation Hispanics were not included in the study. The perceptions about the community of this older generation, and the new immigrant, were not included in the responses. This sense of community is representative of what Woolcock and Narayn (2000) refer to as communitarian social capital. This character is indicative of a high level of bonding social capital in the community as a single, collective group.

Several participants noted that the community is friendly. People are welcome and are readily engaged. One participant expressed that with friendliness came a sense of safety.

*“And I just think everybody is friendly and it's a great community, it's a safe community.”*

One participant related the character of Guymon to that of family. It is close knit and families help each other.

*“I would like to say that the community is very close knit. It's almost what I would consider like a family.”*

Another participant related this sense of family to engaging and welcoming neighbors into the community.

*“I would like to know who my neighbor is. And I think that's what our community has in the positive part. So, I think that's what brings, I think our community members together are so welcoming and open minded and not afraid to talk to their neighbor.”*

There is support for each other, regardless of the culture. There is also a sense of support for the overall community and a willingness to invest in the community. This is an indicator of an internal focus of the community's bonding social capital (Adler & Kwon, 2002).

*“They are often asked for help for families or for children to get them, those needs that they need, as far as clothing, hygiene, care, financial, wise, whatever they need. So, I think that's what really brings us all together, because we are always there for each other, even if we don't know them, we're willing to help. So, I think that's what makes our community so great.”*

A participant expressed the overall character of Guymon, a diverse melting pot with residents trying to better the community, where residents take care of each other when a need occurs. This connection and trust amongst residents is indicative of social trust—social trust that is created through regular, honest, and cooperative behavior (Rivera & Nickels, 2014). Social trust is necessary for bonding and bridging social capital, and residents provided evidence this exists in Guymon.

*“We're a huge melting pot, but we all are just trying to better the community. I feel like, like you can break down, and they're going to help you. I feel like not many places have that, especially bigger places. If something happens to me, I'm going to make it home that night. They didn't have to do that. But that's just the kind of community that we have here, and that's one of the reasons why I did not mind moving back here after college. But yeah, a huge melting pot that just is trying to, just do the best for each other out here, taking care of each other.”*

**Theme 2 – Strong bridging and linking social capital exist in the community from an individual belonging to multiple social groups and networks.**

According to Portes (1998), social capital is linked to networks or relationships with mutual acquaintances, relationships that are intentional and a result of investment in the relationship. These relationships are not accidental; to build trust in a relationship there must be an investment into the relationship. Therefore, the more interaction that occurs between two individuals or groups, the more likely social capital will develop. If the individuals have relationships from multiple interactions, the social trust will be greater than if the relationship was based solely on one interaction. In Guymon, participants shared experiences of belonging to multiple community, professional, and social networks and groups where interactions were frequent, and relationships strengthened. The categories for Theme 2 are listed in Table 8.

**Table 8**

*Theme 2 and Theme 2 categories*

Category	Theme
Planned Interactions	Theme 2: Strong bridging and linking social capital exist in the community from an individual belonging to multiple social groups and networks.
Unplanned Interactions	
Relationship Building	

***Planned Interactions***

Planned interactions may strengthen social capital by selecting and building relationships with other social networks and groups. A measure of social capital is the level of formal membership and interaction in community organizations (Engbers et al., 2016). Membership in community organizations and social groups is generally intentional with interactions planned based on meeting schedules and activities (FEMA, 2011).

One planned interaction that created bridging capital with the Hispanic community was a firefighter class for high school seniors that was taught at the fire department. Most of the students in the class were Hispanic.

*“That’s one of the good deals, and going back into the schools, they started a new program where they have like a class. They’re doing a class just for seniors, they try to recruit some of the people from the government to stay in the area. So, they have a class firefighting class. So, I think that’s awesome because I wish I had that whenever I was in school, I would have done it 100%.”*

Another type of planned interaction are community events such as Fiesta Days. These events may target a specific segment of the community such as the Hispanic community. These planned interactions allow the fire department or community organization to plan messages and strategies for using the event to strengthen relationships.

*“It’s just there’s times that they do when they get a lot of the Hispanics, like Fiesta night in September, like Independence Day, stuff like that.”*

Other planned events are recurring and sponsored by a community organization or the City of Guymon. The library has a summer reading program that attracts children from diverse groups in the community. As with community events, this interaction allows the fire department to prepare messages and strategies for interacting with the children and establishing trust and relationships.

*“Also, in my experience with my kids, they usually attend like the public library summer reading program, and they come out to do some interaction with the kids.”*

There are limitations to planned interactions such as limitations of working residents to attend. This includes getting children to the event. One participant explained that some immigrants are unable to be at planned events such as English language class due to work obligations. This requires alternative scheduling by those providing the interaction.

*“And for them to do that and it's to better their career, it is so hard to get them to say hey, after work you need to go to the Public Library and take the single English class from 5 to 7 three days a week.”*

Some planned events such as community parades bring a diverse audience. Interactions are possible, but due to the nature of the event it may not be possible to effectively build new relationships.

*“I think they do great in Pioneer Days, which is a parade, maybe do a little activity like that where they're around or something like that.”*

It is, however, still productive to be at the event as it builds awareness of the fire department in the community. Awareness helps to create understanding of the role of the fire department, and other government agencies. It also builds the reputation of being available to assist when needed.

*“When you are at events, regardless of whether it's a school event, or Pioneer Days. I think people do see that we're in their space.”*

Another planned event that is frequently used by fire departments to deliver community risk reduction education are school presentations. Participants noted that the fire department is frequently at the school, and those interactions with the children build trust and initiate relationships with the firefighters (Sobelson et al., 2015).



*“We try to be a part of school, and I mean, they see us at the school events because we do standbys, and we do the fire prevention.”*

### ***Unplanned Interactions***

Unplanned interactions often occur when residents meet in public, and time is spent building a relationship. The unplanned interaction may be when firefighters are in the community conducting business such as testing hydrants or doing code inspections. Or it may be families meeting at a restaurant or participating together in a sporting event. Even though the interaction is not planned, the interaction contributes to trust and to strengthening existing, or building new, relationships.

One of the firefighter participants views unplanned interactions are a way to support the community, and to raise awareness that there are Hispanic firefighters.

*“And I'm very happy that we are out in the community as Hispanics, and we support our community and we're invested in our community.”*

A community venue may initiate unplanned interactions. A participant noted that the park is a meeting place that creates settings conducive to interactions. There are also planned interactions at the park, however, the participant was referring to informal interactions and meetings. When referring to informal interactions in the park, one participant said he also believes the park is a venue or experience that brings the community together.

*“I think it's just having the city try to put something on to involve everyone. That's when people get more comfortable with everybody in the community and they enjoy going out and coming to the park, going, and walking in the park as well. I think the park is the biggest drive to bring the community together.”*

A participant explained that informal, unplanned interactions between firefighters and Hispanic residents new to Guymon can build trust and understanding (FEMA, 2011; Sobelson et al., 2015). In this case, she owned a restaurant and observed how these interactions with the staff resulted in understanding.

*“So, maybe I’ll just give this instance, but working at the restaurant, for example. The guys would come in and it was something easy. They just had a meal. But the wait staff that was there, a majority of Hispanic, maybe I should bring that up before, but there was this, this very, I guess, marked line of how they treated them and what they would tell him, or what would come up it was. You could tell they were on their guard, if you will. All it took was a couple of times of them coming in interacting and that kinda has melted away, so just seeing them out in public that way made a very big difference now.”*

Sport activities in Guymon were frequently mentioned by participants as a place where relationships are established and social networks created. These social networks, whether intentional or voluntary associations between individuals, facilitate communication, understanding between groups, and facilitate collective action (Ritchie & Gill, 2007). A participant noted that there are frequent sporting events in Guymon with large participation from the community.

*“There’s a lot of soccer leagues out here, adult soccer leagues and co-ed leagues, volleyball, stuff like that.”*

Several participants described unplanned interactions with firefighters and their families at community events, businesses, and restaurants. This builds an understanding that firefighters are also part of the community at a family level.

*“I see them with their kids and attending the things in groups.”*

## ***Relationship Building***

Building relationships is a requirement in creating social capital in the community (Rivera & Nickels, 2014). The relationship can be between individuals, social groups and networks, or organizations. These relationships may occur by chance but should be the result of intentional action (FEMA, 2011; Portes, 1998).

Participants generally recognized that building relationships between cultures takes time and requires investment in the process. This is consistent with Portes' (1998) assertion that building relationships should be intentional and require an investment in the relationship.

*“Just different relationships forming between different cultures, if you will. But I mean, I think it's a process.”*

The process of relationship requires communication between individuals, social networks and groups, and organizations. Communication helps mutual understanding of values, expectations, and needs. Rivera and Nickels (2014) recognize that communication and interaction are critical elements of building relationships and creating social capital.

*“I think interaction is a huge part, if not all of it, because how are you going to be aware of what other people needs or not with the charity you are doing. If you're not involved in that group or you have no communication with that other group at all.”*

A participant, a former deputy sheriff, described the efforts of the undersheriff, and his dad who retired from the City of Guymon, to make connections with the Hispanic community. These connections created relationships that have improved public safety and the trust of the Hispanic community in the sheriff department.

*“He and his dad build strong connections with the Hispanic community.”*

Participants spoke of the impact to the relationship with the Hispanic community from interactions with the firefighters. They noted that firefighters were always willing to talk to residents, especially the children. They were also willing to assist community groups with activities and events. This willingness to engage and support community activities established relationships with new Hispanic immigrants.

*“I’ve had interactions with other firefighters and they’re all always so willing to talk about whatever and help any community group, especially the kids.”*

A firefighter participant shared that he and the other Hispanic firefighters are proud to be out in the community. He sees that as an indication to the public that Hispanic firefighters support the community, and they are invested in the community.

*“And I’m very happy that we are out in the community as Hispanics, and we support our community and we’re invested in our community.”*

A participant whose parents came to Guymon from Mexico explained that it was rare that government officials, including firefighters, would reach out and interact with Hispanic immigrants. There was no effort to build relationships and consequently there was no trust in the government. This has changed with the fire department intentionally building relationships with all cultures in the community.

*“Well, if I were to use myself as a reference, my parents, for example, didn’t have knowledge of what it took out here. They had to overcome language barriers. Again, the trust in government was very, very different for them. So, reaching out to those to any sort of that position was beyond something that they could imagine.”*

Informal socialization may lead to building relationships and creating new social networks (Oh, et al., 2017). As mentioned previously, sporting events are a draw to residents of Guymon. A participant who is responsible for community planning at Seaboard Foods mentioned that the soccer league is a source of socializing for members of the Hispanic community.

*“I would say soccer and because I mean, we've done soccer so much in the past, we haven't done in the last like 2-3 years because of COVID, but when we were part of our soccer group, I mean, it was like every culture that mainly Hispanic people would just go and they'd go just to watch and participate and socialize.”*

A long-term resident and volunteer EMT also noted that a lack of socialization prevents mutual understanding between cultures. Social interactions foster mutual understanding which may lead to developing relationships and subsequently trust between individuals and groups.

*“Well, I think, to say, “You know I'm not racist” but I don't socialize with all the different cultures. Then how do you know you're not racist? How do you know? How do you know if you don't engage, if you don't share life, experiences, and just time with someone?”*

With the immigrant community, relationship building can be enhanced by using terms from their language instead of English terms. A firefighter related the story of the fire department adding the Spanish word *bomberos* (firefighter) to uniform shirts and other department logos. This allowed Hispanic immigrants who did not read English to recognize that firefighters were there to help, and they were not law enforcement. This provided opportunities for building trust and relationships.

*“So, when they changed our emblem, it was too big to put the Bomberos on it. So, they went with a smaller and we have enough Hispanics in the community that speak Spanish. that we usually have at least one Hispanic any shift, so*

*somebody can speak Spanish to that person. But back in the day when they added that there wasn't any emblem, nothing to identify them as firefighters Everybody thought they were cops, so now that you have somebody that speak Spanish, they can say, Hey, we're with the fire department. We're here in peace pretty much."*

**Theme 3 – Social groups and networks are interconnected from share membership of Hispanic citizens.**

Guymon is a rural community with numerous active social and community organizations and networks. One of those organizations is Main Street Guymon. The executive director provided the initial contact list for the purposeful sampling. In discussing the purpose of this study she noted that many of those on the list are active in one or more other community groups, which might be an advantage of identifying other individuals for possible interviews. By belonging to multiple organizations and social networks, it is possible to create relationships with a larger group than only belonging to one social network or organization (see Table). This interconnection increases the influence of that individual, and creates social capital, especially bridging social capital (Portes, 1998).

**Table 9**

*Theme 3 and Theme 3 categories*

Category	Theme
Religious Network	
Sports Social Network	Theme 3: Social groups and networks are interconnected from shared membership of Hispanic citizens.
Community Social Network	
Work Social Network	

***Religious Social Network***

Several of the participants explained there is a strong, active Hispanic faith community in Guymon. There are numerous Hispanic congregations of various denominations, not just Catholic. Before this study I perceived the only Hispanic faith community was associated with the Catholic church. Murphy and Pudlo (2017) noted the variation in congregational structure and culture in the different denominations. That variation may also exist between white and Hispanic congregations of the same denomination.

*“I can't think of one besides the churches we have, we have so many Hispanic churches. At one point I drove around to just count them, because I was helping with a project with our own church, and I think there are like eighteen of them.”*

Another participant noted the impact of religious groups on socialization in the Hispanic community. The participants did not identify any specific congregation or denomination, but viewed the larger faith community to which Hispanics belong.

*“Any kind of socialization that happens here is cultural or religious.”*

Another participant noted that within any congregation there are several social networks.

*“So, at church in general, church alone has different groups.”*

Several participants did mention the local Catholic church, St. Peter's, and explained there are many events for Hispanics that occur at the church. They sometimes get involved when time allows.

*“So, I am currently part of the Saint Peters Catholic community, the church. I obviously would try to attend every week and then all the events that they hold there, sometimes get involved in them.”*

Another participant from St. Peter's mentioned that she is involved in a woman's bible study group, and there are other committees for the church's activities in the community.

*“We have a women's Bible study group, and there's youth group, which I help with and just different little committees for their events outside in the community.”*

Faith communities generally are respected in the community. There is possibly a higher level of trust in the church as an organization. This trust can be beneficial during emergencies and with risk reduction initiatives (Rivera & Nickels, 2014). Ngin (2020) asserts that churches have a crucial role for immigrant communities during a crisis, and that building trust and social capital in the community strengthens the ability to help the immigrant community. A participant noted that churches in Guymon appear to be well respected and have the ability to impact the community. This is social capital.

*“I mean, every church has the respect so it's just they have a big impact on the town.”*

### ***Sports Social Network***

Guymon has numerous sports organizations including the soccer league and Kids Inc. Kids Inc. sponsors different sports throughout the year. Similarly, the soccer league operates year around, even in the winter months. The participants in the soccer league are primarily Hispanic, both recent immigrants and 2<sup>nd</sup> and 3<sup>rd</sup> generation men and women. There are many social networks and groups built around community sports. These are both formal and informal social networks. For example, there is a regional soccer league in which Guymon has several teams. There are also scheduled pick-up games at the soccer complex.

According to Dynes (2006), these types of social networks are important routes for communicating with immigrant communities. A participant supports this assertion explaining that the soccer network involves White and Black immigrants.



*“I belong to that Soccer League network. We have a lot of Hispanics, we also have some Africans, and even some White people play soccer with us, too.”*

A participant noted there are other sports as well, for both men and women.

*“There's a lot of soccer leagues out here, adult soccer leagues and co-ed leagues, volleyball, stuff like that.”*

A participant explained that the involvement of her children in Kid's Inc. sport requires her time after work, and there she visits other parents who are there with their children. She stated she seems to be in the same group every game.

*“We do a lot of kid's sports. “*

Another parent participant shared they are actively involved in sports activities by volunteering with Kids Inc. soccer.

*“We are volunteers in Kids Inc soccer.”*

### ***Community Social Network***

There are numerous community organizations and social networks in Guymon. Participants reported being involved in the Rotary Club, Main Street Guymon, and the Chamber of Commerce among others. These same participants reported belonging to multiple community organizations. Each organization has at least one social network, sometime multiple social networks. For example, the Chamber of Commerce has an associated group called the Chamber Ambassadors. You must be a member of the Chamber of Commerce to belong, however, the Chamber Ambassadors are self-governing.

Membership in community organizations was more frequent among the civilian participants, generally through their employment. Only two firefighters were active in

community organizations. Firefighters were aware of the community organizations but chose not to belong.

*“Through work I attend Chamber meetings.”*

A participant explained that it is beneficial to engage the community organizations and social networks with information about the fire department, especially to reach young Hispanics with a potential interest in the fire department as a career.

*“I think it's tremendous value to for someone to go out and speak to like a Halo (Hispanic American Leadership Organization) group or the Halo community for the college or anything like that.”*

Main Street Guymon is a non-profit organization with a mission of promoting the business growth of downtown businesses. A participant noted her service on the board of Main Street Guymon.

*“I served on the Main Street Board for three years.”*

A participant who is the current president of the Rotary Club explained that Hispanics are very active in community organizations. He also mentioned that those involved are young Hispanics.

*“We have a lot of Hispanics in the Rotary Club. We have a lot of young Hispanics in the Rotary Club. They are very active with Main Street Guymon. There is one on the City Council.”*

One participant explained that 2<sup>nd</sup> generation Hispanics in Guymon are actively involved in the community, their community. She further explained that rather than create Hispanic-

specific community organizations, the younger Hispanics choose to be involved in the community groups which already exist.

*“I consider myself a second generation Hispanic. I would say my parents, probably first generation, came to the United States with no English. I actually graduated school, attended college some. There isn’t a specific, just Hispanic group or activity per se, but it’s more of US Hispanics in the second, third generation getting involved in what’s available. So even like the school board, it’s not necessarily for Hispanics only or Hispanic geared organization or group but it’s more of us getting involved. We have a couple of school board members that are Hispanic, so they’re representing our community in that way. Same thing with the City Council. We have a Hispanic or a couple. And we have a male and female, both in the school board and council. It’s not necessarily just having let’s, per say, a Hispanic Advisory Council or a Hispanic Chamber or something specific for Hispanics, but it’s more of us now getting involved in anything, whether its workforce graduating from college, teaching, we have a lot of young Hispanic teachers, nurses.”*

### **Work Social Network**

There are three large employers in Guymon: Seaboard Foods, Walmart, and Guymon Public Schools. The work force at Seaboard Foods is significantly Hispanic and other immigrants.

*“Guymon, it’s like a small community. I wasn’t born here, and I worked at Seaboard, where I did work with people from all over the place, from Guatemala, Cuba.”*

Its work force is the most diverse in Guymon. The work force at the school district and Walmart both represent significant social networks. All these employees have other social networks, but each share a common social network through employment. One participant was an employee at both Walmart and the school district and recognized she belonged to two different social networks as a result.

*“Okay, so right now, I have two jobs. I work at school and then in the afternoon I go work at Walmart, so I have two social networks, my colleagues, the teachers I work with at the school.”*

In that sense, the work force at Seaboard Foods is the largest single social network of the Hispanic community in Guymon. A participant explained the scope of Seaboard Farm’s employment of Hispanics. When asked the best way to reach the Hispanic community in Guymon she said to access the social network at Seaboard Foods.

*“I think the Hispanic community, if you were just to come down here and say, I’m going to do a research project at this place at this time, you would probably have to offer something for them to go because, as far as social networking I think the best place to get any answers would probably be at Seaboard Foods, because that’s where most of our Hispanic community is.”*

Another participant who works at Seaboard Foods explained that many of the Hispanics who work there are long-time residents of Guymon who also have businesses and have raised their families in Guymon. The longer these individuals and families live in Guymon, the more likely they will belong to more and more social networks.

*“Whenever Seaboard opened their doors over 20 years ago, a lot of those families have stayed. And so, they have grown, their children have graduated school, they’ve started their own families. And a lot of them even started their*

*own businesses or are in the workforce. And that's how Hispanics became the majority now.”*

**Theme 4 – Bonding, bridging, and linking social capital are required to educate members of the Hispanic community on community risk issues.**

Rivera and Nickels (2014) state that social capital in a community increases resilience to disasters and enables more effective recovery. While their research focused on the recovery of the Vietnamese community in New Orleans following Hurricane Katrina, social capital applies to local risks of less magnitude. FEMA (2011) has identified social capital as an essential element needed in whole community risk reduction (see Table 10)

**Table 10**

*Theme 4 and Theme 4 categories*

Category	Theme
Risk Reduction Interactions	Theme 4: Bonding, bridging, and linking social capital are required to educate members of the Hispanic community on community risk issues.
Risk Reduction Issues	

Each level of social capital may contribute to the reduction of risk in a community. Bonding and bridging social capital involve horizontal relationships. Bonding social capital is generally within a homogenous group, although as noted previously Putnam (1995) believes bonding social capital may apply to relationship between residents of a community. Bridging capital exists between two groups or social networks. Linking social capital is a relationship with a group of recognized authority, generally government.

## ***Fire Prevention Week***

Fire Prevention Week (FPW) is an annual event sponsored by the National Fire Protection Association (NFPA). Each year there is a different focus on a fire risk issue. Most fire departments, including the Guymon Fire Department, use the event as an opportunity to go to schools and present fire safety classes to the students in elementary schools. This interaction increases awareness of fire risk and the role of the fire department in the community. It also introduces firefighters to students. A participant recalled the impact of the firefighters coming to school during FPW.

*“Whenever I was in class in grade school, I mean it would be awesome seeing a fire truck drive by or seeing or knowing exactly when Fire Prevention Week was going to be. Not only would our teacher, be like, hey, the fire department's coming, but she also put books out, that kind of stuff. And that's when you got all excited.”*

A firefighter participant shared that when children come through drills involving the smoke trailer, and they perform the proper actions, it demonstrates the effectiveness of the FPW interactions.

*“It really shows that they put in practice what we teach them when we go out, our fire prevention week to the kids.”*

One of the most beneficial of the school presentations with children of immigrant parents is the ability to communicate risk reduction messages to those parents and caregivers. The children can translate the messages into their native language. A parent explained the fire department is effective in reaching parents through the children at school.

*“But a lot of times it's those kids who get to experience that at school, and then they go home and tell Mom about what we need or where we how we can escape where we're going to meet. Because a lot of these parents don't think about those things. So, I think they're doing a great job of uh being involved in trying to educate our kids for sure.”*

Another parent, who is also a teacher at an elementary school, affirmed the impact of the demonstrations at the school. She also noted that the children communicate the information to their parents.

*“There you go. They even took him into our school and gave us a demonstration of what safety and stuff do when there is a fire or smoke and stuff like that. So, I think most of it is going to come from their children teaching their parents at home when needs to be done.”*

The school activities by the fire department also have an impact on how the community trusts the fire department. One participant noted the impact they had on them when they brought the smoke trailer to her school.

*“I completely trust them because they're always trying to see how they can improve what they do as a. What one thing I can think of is the Smoke House trailer.”*

The interactions with the firefighters do contribute to changing risk behavior. A participant shared that everything she learned was by firefighters visiting the school.

*“OK, I think everything that I ever picked up was from them visiting the school. I do remember seeing videos at school, so I'm not sure if that was the fire department themselves, about what could happen about how fire spread. The*

*difference of having your door locked, for example, to your room, that kind of stuck with me.”*

The visit of the Hispanic firefighters is impactful on the relationship with the children, especially the Hispanic youth. For many, this is the first time they’ve seen or met a Hispanic firefighter – someone who looks like them. This trust is the basis for future relationships, builds social trust and contributes to social capital (Andrews & Brewer, 2010; Montes, 2019). A participant related the impact on him from the visits of firefighters to the school.

*“It made me acknowledge that I knew people there, because, you know you just saw it as an organization, but they took the time personally to come and tell you, talk to you, show you the gear, show you the stuff, and you knew people there. You personally knew an individual there, and it like exponentially increased my trust in the fire department. I knew I could call like if something happened. I could call.”*

Another participant shared the impact of interaction with firefighters when they were children.

*“I think it has an impact of trust because they build that relationship. They communicated with us as kids to let us know that they’re there if there ever is an accident, that they’re only a phone call away. But I think the major issue with the Hispanic community is that they constantly are thinking that by calling the fire department you’re going to get this huge bill from them.”*

### ***Risk Reduction Issues***

A benefit of strong bridging social capital is being able to communicate with immigrant communities about their needs, especially the risk issues of concern (Andrews & Brewer, 2010;



Mayer, 2019). Before there is communication and engagement on risk issues there must be trust with the individuals and the Hispanic community. With the immigrant community, their perceived risk issues may not be the same as the general community, especially if they are new to this country and unfamiliar with health care and public safety systems. FEMA (2011) recognizes the impact of immigration to community risk, including residential fire risk, and that new solutions, including the utilization of social capital, are required to reduce the risk.

### ***Smoke Alarms***

Smoke alarms, also commonly referred to as smoke detectors, are the most critical fire safety device in any home. Yet, for most immigrants, awareness of what a smoke alarm is, why it is important, and how to obtain a device is unknown. A participant who works with the Hispanic immigrant community accurately described the problem.

*“I think they need a lot of information. So, I have a lot of contacts that don't know anything about, I would say common sense fire knowledge. And even when I go and I was like, hey, so when you turn on your furnace during the winter, make sure the pilot is on kind of thing, do you have a CO2 detector? Do you have a smoke detector and a lot of them are like, I don't even know what that is.”*

A firefighter participant explained the fire department is aware of this challenge and is reaching out to the Hispanic immigrant community.

*“And a lot of Hispanic households that don't have smoke detectors either. We translate what we say to the public, and we try to get the word out that we install fire detectors, smoke detectors for free. So, we try to mitigate the whole, not having a smoke detector with that. So, we reach out to the community and tell them, let them know that we have that available for them.”*

## ***Fire Risk***

The lack of understanding of fire risk contributes to the risk from fire in the home of the immigrant. A firefighter participant emphasized that there is a risk from the lack of understanding of community risk in the homes of Hispanic immigrants.

*“I think the Hispanic community risk the whole safety of their homes. I think that's a big one. I don't feel as if we are as educated as far as smoke alarms or fire hazards, or I don't know being present when flammable things are around or throwing away flammable items. I think that's a big one in our community.”*

Another participant shared her concern for her parents because she doesn't know if their home meets fire codes or even has smoke alarms.

*“Fire risk, and I'm talking because of my own parents. I don't know if they always have their homes up to code or alarms. No education in that respect.”*

## ***Health***

Immigrants, of any culture, are not going to be familiar with the health care system in Guymon. This may result in them not accessing health care when it is needed simply because they are unaware of what is available and how to access it. In addition, they will also bring their cultural remedies with them. These home remedies may or may not be effective.

A firefighter participant shared a tragic story of how a neighbor perished because her family members did not know how to call for help.

*“I live right next to this man. We interacted with them quite a bit with their kids, mostly because their kids will always be outside playing and stuff. It was about eleven o'clock at night, that the dad of the kids knocked on my door and asked for*

*help. So, I asked him what's going on. And he told me his wife had passed away. I said, where is she? He spoke. She's in my living room. He hadn't been there. He was at work, and the kids were in there with their mom, and her mom was having an emergency. The kids didn't know how to recognize that. So, they locked themselves in their room, and she passed away in the living room. They didn't think to call 911. They didn't know what to do, mostly because they were afraid that their parents were going to be deported. That was the thing that I try to explain to him. You're not in any trouble. if you have an emergency of any kind, come get me! And that was just the saddest deal to me because he they had five kids together. That's one of the things, people are afraid to ask for help around here because they think they're going to get deported.”*

Another firefighter participant, who also works part-time in the emergency room at Guymon’s hospital shared the challenge of getting Hispanic immigrants to seek medical help.

*“I can't put an exact number. Hispanic people are very weary of the doctor. They don't like going to the doctor. We'll tell them like, hey, you know we recommend that you go see a doctor. See your general physician. They're like OK well, you know I'll go in a week. I'll go in a month. I'm just like no, I mean we recommend you try to set up an appointment for tomorrow and they just like no you know we I'll just go next month I'll go this day and it depends on the people too. I mean I I've seen it in every in every community that certain people that say I'll be fine. They put it off and it was something that was so easy that they would go to the doctor.”*

The same participant noted the challenge of treating patients who have been depending on home remedies. As mentioned previously, the Guymon Fire Department is the pre-hospital

responder agency in Guymon. Consequently, they are often the first to treat these Hispanic immigrants that are having a medical emergency.

*“And that's something and a different aspect where we really need to be like, “hey, it's best if you go visit the doctor instead of letting this slide”, because most of the time when I was working at the hospital, we get a bunch of patients, complaining of this illness or this pain. So that's one thing we need to really focus on, put the home remedies to the side, and get a diagnosis.”*

Table 11 summarizes all the codes by themes.

**Table 11**

*Codes associated with each theme*

Theme 1	Theme 2	Theme 3	Theme 4
Trust	Out in the Community	Bible Study Group	Fire Prevention Week
Unity	Park	Catholic Church	Firehouse
Connection	Restaurant	Church	School
Respect	Soccer	Religious	Smoke Trailer
Open-minded	Social Events	Hispanic Church	Smoke Detectors
Diverse	Attending	Sports	Fire Risk
Multi-cultural	Building Relationships	Soccer League	Health
Different Perspective	Communication	Soccer Tournament	
Spanish Language	Connection	Soccer	
Cultures	Interactions	Chamber of Commerce	
Melting Pot	Parents	Chamber Ambassador	
Helpful	Socialize	HALO	
Friendly	Identify	Kids Inc.	
Family		Main Street Guymon	
Tight Knit		Rotary	
Support		Walmart	
Welcoming		School	
Caring		Seaboard	

## **SUMMARY OF FINDINGS**

Guymon is a caring, open-minded community for residents of different cultures. There is a community character of caring for others, being ready to provide support, and of working together to make the community better. There is a sense of trust and unity as part of that community character that contributes. The community is a melting pot, yet tight knit and welcoming to all cultures.

The Hispanic residents are actively involved in the community, especially the 2<sup>nd</sup> and 3<sup>rd</sup> generation residents. The younger Hispanics believe in getting involved in community and social organizations, and as a result have developed extensive social networks in the community. This has created strong bridging social capital between those organizations and groups. In addition, interaction with and participation in the local government has created strong linking social capital. Hispanic members sit on city council and the school board. The current president of the Rotary Club is a life-long Hispanic resident of Guymon.

There are community risk issues in the community. However, the Guymon Fire Department is engaging the community to develop trust and relationships to be able to reach all the immigrant communities. A focus on school programs has built trust with the children, many who have grown-up and become firefighters. There are also challenges with health issues that are going to require accessing additional social networks. These initiatives will require utilizing the community's bonding, bridging, and linking social capital.

## CHAPTER V

### DISCUSSION AND RECOMMENDATIONS

This chapter discusses the impact of the findings on practice and policy related to social capital in the community, its influence on firefighter recruitment, and on fire department community risk reduction activities in a rural Oklahoma Panhandle community. There are 16 recommendations derived from the findings. The recommendations are organized by the four themes identified from the data. Each recommendation is identified as policy, practice, or both. The goal of the recommendation is to improve the fire service's effectiveness at creating social capital with social networks and groups in the community. This social capital will improve the effectiveness of firefighter recruiting efforts in the Hispanic community and improve effectiveness of risk reduction activities.

#### DISCUSSION

**Theme 1: Strong bonding social capital is present as a community** The presence of social capital in a community contributes to the success of risk reduction activities. Participants in the study described antecedents to social capital such as active participation in social and community organizations and communication between social networks (Aldrich, 2010; Lin, 2008; Ritchie & Gill, 2007). Outcome from the presence of social capital were also noted by participants including exchange of resources amongst social networks and increased communication between the fire department and immigrant residents through relationships with children (Aldrich, 2010; Woolcock & Narayan, 2000). Recommendations related to theme 1 are presented here.

**1. Utilize the social networks of current firefighters to recruit new department members from all cultures present in the community. (Practice)**

The Hispanic firefighters have social networks with other Hispanics in the community. These social networks are either associated with sports activities or with a faith community. There is bonding social capital associated with the social networks including a high level of social trust. Within this network are opportunities to discuss the fire department and its role in the community, and opportunities for employment. One participant shared that before visiting with a friend who is a firefighter he assumed the department was segregated and Hispanics were not welcome. By interacting with current firefighters, awareness is increased about the opportunities for Hispanics in the department (Craig, 2018). Also, those interested have an opportunity to tour a station and observe life as a firefighter. This is an effective strategy for reaching Hispanic men and women who may have an interest in becoming a firefighter.

**2. Train firefighters to establish positive relationships with residents of all cultures during planned and unplanned interactions. (Practice & Policy)**

Interactions with residents are the first step in creating any type of social capital. Interactions increase mutual awareness, help create trust, and build a foundation for relationships (Glanville & Bienenstock, 2009). If a firefighter understands the concept of social capital, including the critical role of interactions, they are better prepared to use interactions as opportunities to build social capital. However, none of the firefighter participants in the study understood the definition of social capital or how it is created. They were having positive, beneficial interactions with residents, but without a specific intent to create trust and build social capital. Training firefighters about social capital, the skills of creating and utilizing interactions to build mutual awareness, Once trained on creating and strengthening social capital, firefighters can intentionally use interactions with residents and groups to foster social networks and social capital with the fire department. (Aldrich, 2010).

**3. *Engage Hispanic groups in the community who have had minimal interaction with the fire department or firefighters.***

Recent immigrants avoid interactions with formal institutions and networks. This may be due to fear of law enforcement and possible deportation. These residents do have social networks in the community; however, due to fears of law enforcement and avoidance of government institutions, the networks are hidden in the overall community. These residents may not understand how to access health care, notify the fire department during an emergency, or understand the role of the fire department. The fire department should use bridging social capital with faith leaders to identify these social networks and assist with engaging the immigrants with information on risk reduction, the role of the department, and how to access health care (Ngin, et al., 2020).

**4. *Adopt a department practice of customer service for all members of the community.***

***(Practice)***

Participants commented that confidence in the fire department responding to emergencies and requests for assistance strengthened trust in the department. The practice of responding promptly to requests for assistance will foster trust. This practice is customer service with the resident being the customer of the services of the fire department. This must be a prompt response to all residents equally regardless of race, gender, ethnicity, or income. Elements of this customer service practice are a focus on resolving the problem of the customer, considering the perspective of the customer, and creating a positive perception of the fire department because of the interaction.

**Theme 2: Strong bridging and linking social capital exist in the community from an individual belonging to multiple social groups and networks.**



The civilian participants were all active in the community, with most belonging to two or more community organizations, some to social network at their faith congregation, and others participating on government committees and boards. This frequency of membership creates a spiderweb amongst the social networks indicative of bridging and linking social capital. This also creates a cohesive macro-level network in the community for sharing of resources through reciprocity (Rostila, 2010). By participating in this macro-level network, the fire department has access to resources including information about the needs of the various groups in the community.

***5. Intentionally create planned, positive interactions with all Hispanic groups in the community. (Practice)***

Social capital can be developed intentionally through interactions with individuals and with social networks (LaLone, 2012; Portes & Landolt, 2000). These intentional interactions with Hispanic groups develop social trust leading to relationships and bridging and linking social capital. Through this social capital the fire department can communicate information on risk reduction, resources available from local government, and can support the needs of groups including participating in local events such as Fiesta and Pioneer Days (Dynes, 2006).

***6. Participate in community events so that firefighters interact with Hispanic residents. (Practice)***

Participants shared that informal interaction with firefighters during community events fosters awareness of the role of the fire department and begins creating trust with Hispanic residents (Craig, 2018). These community events include parades and festivals. Hispanic residents learn there are Hispanic firefighters serving the community. An advantage of participating in community events is more residents are exposed to the fire department than with single presentations to business or community groups.

**7. Utilize bridging and linking social capital when developing department programs impacting the Hispanic community. (Practice & Policy)**

Risk reduction programs must consider the specific needs of the target audience, the most effective messaging, and how to reach and engage the social network (Dynes, 2006; Kirtley, 2008). Bridging social capital allows the fire department to engage Hispanic social networks to discuss needs, risk concerns, strategies for effective communication, and the resources needed which can be provided by the fire department. For example, the fire department can identify homes that need smoke alarms installed. The engagement also contributes to social trust as the fire departments tangibly demonstrates a concern for the residents and their issues.

**8. Fire department leaders actively participate in professional, social, and community groups to build strong bridging and linking social capital. (Practice & Policy)**

A role of the executive fire officer and other leaders in a local fire department is to be knowledgeable about the community served (Kirtley, 2008). This includes knowledge of the culture groups, the needs of each group, and the leaders in each group. This includes building relationships of social trust. Community and government leaders are involved in community groups and organizations. By participating in these groups and organizations the executive fire officer and other fire department leaders have access to community leaders and the opportunity to establish relationships.

**Theme 3: Social groups and networks are interconnected from shared membership of Hispanic citizens.**

The population of Guymon is 57% Hispanic (US Census Bureau, 2023). The composition of community and social organizations likely reflects a similar composition. One of the study participants was the president of the local Rotary Club. Participants included a member of the school board, a member of the City Council, and board members of the Guymon Chamber

of Commerce and Main Street Guymon. These participants were members of multiple community groups and social networks in their faith congregation.

***9. Build bridging social capital with faith communities serving the Hispanic communities. (Practice)***

There are 18 churches in Guymon serving the Hispanic community including Catholic and Protestant congregations. These faith communities provide an opportunity to reach social networks in the Hispanic community, especially recent immigrants (Ngin, et al., 2020). This requires fire department leadership intentionally creating social trust and relationships with minister and church leaders (Rivera & Nickels, 2014). Ministers, when trust is established, can identify members who may require smoke alarms, who have chronic illness, or who may benefit from a risk reduction presentation in Spanish.

***10. Provide opportunities for all firefighters, regardless of rank or position, to participate in community and professional social networks in the community. (Practice)***

Fire executives have a responsibility to participate in community organizations. Even in a rural community it is not possible for the fire department leaders to belong to every community organization or social network. Allowing firefighters to join and participate in community organizations, neighborhood social networks, and other local social networks provides opportunities to create social capital and to provide risk reduction presentations to those organizations and social networks (Kirtley, 2008).

***11. Identify Hispanic social networks and groups in the community. (Practice)***

Aldrich states that local government's first step in increasing social capital is to build trust with the various groups and networks in the community (Aldrich, 2010). This requires fire department leaders to know what social networks and groups exist (Kirtley, 2022; Kirtley &

Weller, 2008). The faith community can assist with identifying social networks associated with their congregations. Querying firefighters and other Hispanic residents available to the fire department can help identify the social networks and groups. Participation in community and social organizations will contribute to the listing of networks and groups.

**Theme 4: Bonding, bridging, and linking social capital are required to educate members of the Hispanic community on community risk issues.**

Strong bonding, bridging, and linking social capital allows the fire department to establish communication with social networks in the Hispanic community (Gannon, 2013). This improves the effectiveness of community risk reduction educational and awareness campaigns. This enables the fire department to identify residents who require assistance such as mounting smoke alarms and provisions for medical care during emergencies.

***12. Utilize faith and work social networks to reach new and first-generation immigrants who are outside other community networks or who may not trust government agencies.***

***(Practice)***

Participants reported the high level of participation of immigrants in the faith community. Participants also noted that the largest concentration of Hispanics in Guymon is at Seaboard Foods. Both of these social networks can be used to reach immigrant residents and others who may not engage formal institutions due to fear or lack of trust (Ngin, et al., 2020).

***13. Create bridging social capital with schoolteachers and administrators. (Practice)***

All participants mentioned the impact fire safety presentations have on children. The participants who grew up in Guymon were specific in the school visits that impacted them. Two participants who are teachers shared the impact of the children taking risk reduction information home to their parents and caregivers, many who did not speak English. The children, speaking

Spanish, taught their families about risk reduction, the role of the fire department, and how to notify the department in case help was needed. The ability to deliver presentations in the schools begins with establishing social capital with schoolteachers and school administrators (Gamache, et al., 2007; Kirtley & Weller, 2008; Kirtley, 2022).

***14. Whenever possible, engage Hispanic school children with information about risk reduction and the role of the fire department. (Practice)***

Reaching children with risk reduction information is an essential part of any community risk reduction initiative (Kirtley, 2008, 2022; National Commission on Fire Prevention and Control, 1973). All participants in the study described the impact of fire department presentations during their school years. Those lessons were remembered and resulted in changed behaviors. The presentations and activities must be developmentally and behaviorally appropriate (Kirtley, 2022).

***15. Utilize school children of Hispanic immigrant families to communicate information about risk reduction and accessing emergency assistance. (Practice)***

A firefighter participant related a tragic experience involving an immigrant family who lived next door. The mother of two children had a medical emergency during the day and the children were afraid to notify any government agency. The mother passed away due to a lack of medical care. Those school age children could have communicated to their parents that it was safe to call the fire department for medical emergencies. Hispanic immigrants come from a different culture where accessing emergency care is a different process and may not involve a fire department (Craig, 2018). For example, in many rural areas of Mexico and Central American countries there is no organized fire department or emergency medical service. Also, the communities in these areas lack a formal, standardized method such as 9-1-1 for notifying government agencies of an emergency. A summary of the recommendations by theme and

correlated to research questions is provided in Appendix E. Each recommendation is correlated to one or more research questions.

## **SUMMARY OF RECOMMENDATIONS**

The best practices for reaching immigrant Hispanic residents with community risk reduction messages are limited in the literature. There is a language barrier and cultural issues. For example, several participants noted that immigrant families are not aware of access to emergency services, medical care, etc. Research is needed on messaging behaviors and strategies for reaching the immigrant residents with the messages. This research should engage the United States Fire Administration and the National Fire Protection Association.

Fire chiefs may have limited understanding of social networks and social capital, and the importance of the two to the achieving the mission of the department. Research is needed on the level of current understanding by fire chiefs about social networks and social capital. Increasing the use of social capital throughout the fire service depends on department leaders understanding the concepts and having awareness of best practices.

This study focused on how social capital may improve the recruitment of firefighters. The components of social networks and affiliation within these networks deserve further study. In Guymon there was a bonding social network already established to which Hispanic volunteers belonged. Further study is required on creating those social networks within an immigrant community, and then how the local fire department accesses that social network. Finally, further research is required on building social capital in other cultures and underserved populations. Guymon was a unique community in that the Hispanic population was the largest ethnic group in the community. Would building social capital with an ethnic population that is a minority in a community require different strategies and practices? What would be required to build social capital if no members of the local fire department were part of the social networks in the minority

ethnic population? These scenarios deserve further research as they are the most common situation in America's communities.

## **CHAPTER VI**

### **CONCLUSION**

Guymon is the largest community in the Oklahoma Panhandle (see Figure 3). Guymon was a community with a long history and pioneer heritage (Craig, 2018). In 1995 Seaboard Foods opened one of the world's largest pork processing facilities in Guymon processing 20,000 hogs a day. With the large immigrant workforce that was required by the Seaboard plant, the population and character of Guymon changed. In 1990 Guymon's population was 7,803 and the population was 8% Hispanic and 92% White (US Census Bureau, 1990). The demographics fit most rural farming communities throughout the High Plains. By 2000 the population had grown to 10,472 with 38% Hispanic and 62% White residents (US Census Bureau, 2000). In 2020, the whole demographic of Guymon had changed with a population of nearly 13,000, 57% of the residents Hispanic, 28% white, and a new wave of immigrants from Africa and Asia accounting for 15% of the population (US Census Bureau, 2023). Yet, with all these changes one thing didn't change – the character of Guymon being a close-knit community where residents cared for each other, diversity is welcomed, and unity is strong. In the opinion of study participants, Guymon is a unique, special community in which they have great pride.

The Guymon Fire Department is equally unique as a small, rural combination fire department. Over 50% of the firefighters are Hispanic. The fire department is respected by the people of the community. The firefighters are active at community events, frequently deliver risk reduction presentations at local schools, and sponsor a firefighting course at Guymon High



School. The uniqueness of both this diverse rural community and its fire department, and familiarity and history of the researcher with the community, provide an ideal opportunity to qualitatively study how social capital is created by a fire department, and how that social capital is utilized to recruit firefighters and improve the effectiveness of risk reduction initiatives.

### **Figure 3**

*Location of Guymon Oklahoma*



The aim of this study was to determine the influence of social networks on recruitment of firefighters and on community risk reduction activities in a diverse rural community in the Oklahoma Panhandle. There were six objectives of the study: 1) qualitatively assess the level of social capital that exists in the Guymon community, 2) determine the role of social capital in recruitment of Hispanic firefighters, 3) identify the social networks of current Hispanic firefighters, 4) assess the role of social capital in communication of risk reduction messages to Hispanic residents, 5) assess the influence of social capital in Hispanic residents applying risk reduction messages, and 6) identify fire department practices that develop social capital with the Hispanic community.

The research method chosen for the study was a qualitative, Type 1, single case qualitative study (Yin, 2018). A total of 19 Guymon residents were interviewed, 13 civilians and

6 firefighters. All participants were Hispanic, and most were long-term residents of the community. The interviews focused on social capital in the overall community, social capital between the fire department and the community, interactions with firefighters, and the community risk reduction initiatives of the fire department. Three research questions were answered by the study.

Research Question 1: What is the nature of social capital in this diverse rural community?

Research Question 2: How does social capital influence community risk reduction initiatives?

Research Question 3: How does social capital influence firefighter recruitment?

## **KEY FINDINGS**

### **Social capital creation with the community must be intentional.**

The interactions between firefighters and residents of the community were often unplanned. They occurred during activities in the community while on duty, were at community events, or while off-duty participating in leisure activities. Even though unplanned, these interactions contributed to building social trust as explained by a participant who observed the impact on service staff in her restaurant. If the fire chief and other fire department leaders intentionally plan for interactions, and prepare firefighters to build social trust, the strength of bridging and linking social capital will increase. New social networks may also be created providing new communication with the groups in the community including recent Hispanic immigrants. However, this planned, intentional creation of social capital requires the fire chief and fire department leaders to understand the various cultures in the community, their needs, values, and concerns. This will ensure the interactions respect different cultural values, communication styles, and norms of behavior.

**Firefighters have opportunities during planned and unplanned interactions to build social trust, communicate the role of the fire department, and create bridging and linking social capital.**

Firefighters are frequently out in the community with opportunities for unplanned interactions with the public. There are also planned interactions such as school risk reduction presentations and presentations at meetings of community organizations such as the Rotary Club. In addition, fire department leaders frequently attend meetings of community and professional groups as both members and guest speakers. Each interaction is an opportunity to tell the department's story such as the role of the organization, services provided, and the diversity of the staff. This information builds mutual understanding and contributes to social trust, an antecedent to social capital. The study participants shared examples of how these interactions positively changed perceptions of the department and provided risk reduction information. To maximize these opportunities, firefighters must be educated about social capital and its value to the mission of the fire department. In addition, firefighters must be trained in communication techniques so that interactions are positive and contribute to social trust.

Existing bonding social capital in social networks of current firefighters can be used effectively for recruiting firefighters from the Hispanic community. The firefighter participants described strong bonding social capital in their informal social networks. In these networks there is thick social trust. Each firefighter in the study explained their initial interest in joining the fire department was not the result of a formal recruitment program, rather, each knew a current Hispanic firefighter in their social network. Through that person they learned about the role of the department, the satisfaction of serving the community, the close knit comradery of the members, and the excitement of emergency operations. The interaction with the current firefighter was instrumental in their decision to pursue a career in the fire service. These were informal social networks, frequently associated with community soccer teams. The interaction

with Hispanic firefighters demonstrated the Guymon Fire Department values diversity and opportunities for other Hispanic men and women exist.

**Children are effective conduits of information to and from the Hispanic community.**

The Guymon Fire Department frequently delivers community risk reduction presentations and activities at local elementary schools. Participants explained that growing up these interactions with firefighters created social trust and that trust remained with the individual as they grew into adulthood (Gamache, et al., 2007; Kirtley, 2022; Kirtley, 2008). One participant shared how an interaction in 2<sup>nd</sup> grade resulted in a desire to become a firefighter. These lessons not only benefit the children, but also the child's families. The children take the lessons home and communicate it to their parents and other family members. If the parents are not fluent in English, or are new to this country, the child can communicate the lesson in the native language of the family. In addition, the children may communicate to firefighters any concerns or needs related to risks in the home such as a lack of smoke alarms. Without the connection through children, the fire department may not have access to those families. Childrens' programs at faith congregations may provide the same opportunity to connect with immigrant families.

**CONTRIBUTION TO KNOWLEDGE**

There is an extensive literature focusing on the concept of social capital. This literature includes studies on social capital related to disaster recovery and resilience. However, there are very few journal articles on social capital and local fire departments, and none on social capital and rural fire departments. This study identified that bonding social capital present in the social networks of Hispanic residents can be used to attract men and women in those networks to careers in the fire service (labor market reference). The presence of thick social trust and identification with current Hispanic firefighters contribute to the attraction of network members. This use of bonding social capital and affiliation with social networks may be valuable in

attracting new firefighters from other ethnic groups and underserved populations in rural areas. This model may also be used for attracting new employees for other public safety professions such as law enforcement and emergency medical services. More study is required to determine if this model may also be applicable in metropolitan areas for the same purpose.

Planned and unplanned informal interactions can be effective at increasing awareness of the role of the fire department, how to access emergency assistance, and the contributions of Hispanic firefighters to the community. Marketing campaigns may increase awareness of fire department services and programs of the general population, but the person-to-person interactions increase mutual understanding with residents and increase social trust. These are antecedents to bridging and linking social capital. These are difficult to create through impersonal marketing ads and materials.

Fire department leaders do not have to leave creation of social capital to chance. Interactions that effectively build social trust with residents can be planned intentionally. This requires firefighters to be educated about social capital and understand how to communicate during these interactions. Once created, social capital can improve recruiting efforts, provide opportunities to build relationships with isolated groups such as new immigrants, identify ways to contribute to the needs of the community, and raise credibility of the department within the community.

For many years the fire service has known that engaging any group in the community can build trust. However, this research shows that trust can be used to build relationships, and then those relationships are beneficial for community risk reduction initiatives in underserved and high-risk populations. There is potential application to risk reduction planning by being able to better understand the risks present in a population, understand cultural behavior, and develop more effective risk reduction strategies in cooperation with members of the target population.

Finally, local government provides services other than public safety that are critical for immigrant populations. This study identified challenges of providing medical care to immigrants due to cultural differences and a lack of understanding of how services operate. Building social capital may also be a strategy for improving public health services, educational programs for adults such as English language classes, and access to libraries and other community service facilities.

## **LIMITATIONS**

The purposeful sample initially were names of Hispanic residents actively involved in the Main Street Guymon organization, five full-time firefighters, and a volunteer fire department emergency medical technician. All the residents were raised in the United States, most in Guymon. Several did come to the United States as young children but completed all their schooling in American schools. All were employed in Guymon and actively engaged in community groups and social networks. None of the study participants were recent immigrants, nor from an older segment of the population. Consequently, the purposeful sample was a limited segment of the Hispanic population in Guymon.

The study was intentionally focused on the community of Guymon Oklahoma and the local fire department. The findings are not transferable to other communities. Lin (2001) identifies that local characteristics of social capital are bounded to a time and place and may not transfer other communities.

The faith congregations are prominent in the Hispanic community in Guymon. Most participants commented on the scope of faith congregations in Guymon with the presence of 18 Hispanic churches. There were no faith ministers in the sample. The ministers could have provided further insight about the creation and application of social capital in the Hispanic community, especially Hispanic residents that are reclusive due to fear of law enforcement.

Finally, the purpose of the study focused on the Hispanic community in Guymon. In 2020, 15% of the population were immigrants from Africa, Asia, and the Pacific Islands. None of the participants were from these groups. Members of these groups may have a different perspective about the character of Guymon, a different perception of the fire department, and may not be involved in community and social groups.

## **FUTURE RESEARCH**

The best practices for reaching immigrant Hispanic residents with community risk reduction messages are limited in the literature. There is a language barrier and cultural issues. For example, several participants noted that immigrant families are not aware of access to emergency services, medical care, etc. Research is needed on messaging behaviors and strategies for reaching the immigrant residents with the messages. This research should engage the United States Fire Administration and the National Fire Protection Association.

Fire chiefs may have limited understanding of social networks and social capital, and the importance of the two to achieving the mission of the department. Research is needed on the level of current understanding by fire chiefs about social networks and social capital. Increasing the use of social capital throughout the fire service depends on department leaders understanding the concepts and having awareness of best practices.

This study focused on how social capital may improve the recruitment of firefighters. The components of social networks and affiliation within these networks deserve further study. In Guymon there was a bonding social network already established to which Hispanic volunteers belonged. Further study is required on creating those social networks within an immigrant community, and then how the local fire department accesses that social network.

Finally, further research is required on building social capital in other cultures and underserved populations. Guymon was a unique community in that the Hispanic population was

the largest ethnic group in the community. Would building social capital with a different ethnic population that is a minority in a community require different strategies and practices? What would be required to build social capital if no members of the local fire department were part of the social networks in the minority ethnic population? These scenarios deserve further research as they are the most common situation in America's communities.

## **CLOSING**

The creation and application of social capital provides opportunities for fire departments to participate in the community and reach all groups. Every fire department has the ability and opportunity to interact with residents, develop mutual understanding, build social trust, create relationships, and participate in social networks – all the antecedents of social capital. While there is minimal research currently available on fire departments and social capital, fire service leaders should move forward with creating and utilizing social capital, using successes and challenges as learning events, and communicating the lessons and best practices to other fire service leaders and researchers.

*“In many respects the research on social capital is still in its early stages, but practitioners and policymakers cannot wait for researchers to know all there is to know before acting. Instead, all those involved should adopt a stance of learning by doing. This implies more rigorous evaluations of project and policy impact on social capital, more work on unbundling the mechanisms through which social capital works and understanding the determinants of social capital itself. It also implies that practical lessons emerging from development projects can themselves be used to inform social capital theory (Woolcock & Narayan, 2000, p. 243).”*



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## **APPENDICES**

### **Appendix A**

#### **Interview Questions**

1. Why did you become a firefighter? (Firefighter only)
2. Please describe the community here in Guymon. (All)
3. What social networks and groups do you belong to? (All)
4. What does the phrase “social capital” mean to you? (All)
5. What social networks and groups exist within the Hispanic community? (All)
6. How has the fire department interacted with these social networks and groups? (All)
7. What fire, injury, and/or health risks does the Hispanic community face? (All)
8. What actions or steps have you taken to reduce those risks to you or your family? (All)
9. How did the fire department interaction with your social networks or groups influence your decision to take action to reduce those risks? (All)
10. How did this fire department interaction impact your trust in the fire department? (All)
11. How did the fire department interaction with your social networks and groups influence your decision to become a firefighter? (Firefighter only)
12. Is there anything you would like to add? (All)
13. Is there anyone else in the Hispanic community that you would recommend that I speak with? If so, may I have their contact information? (All)

## Appendix B

### Adult Consent Form – Page 1



Division of Engineering Technology

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#### ADULT CONSENT FORM

**Social Capital in Rural America: A Critical Evaluation of the Influence of Social Networks on Community Risk Reduction, and Firefighter Recruitment in the Oklahoma Panhandle**

##### Background Information

You are invited to be in a research study of how fire department interaction with social networks and groups impact the recruitment of firefighters, and on the participation of community members in risk reduction actions in an Oklahoma Panhandle community. Please read this form and ask any questions you may have before agreeing to be in the study. Your participation in this study is voluntary. There is no penalty for refusal to participate, and you are free to withdraw your consent and participation in this project at any time. You can skip any questions that make you uncomfortable and can stop the interview/survey at any time. The research study is restricted to adult English-speaking members of the Hispanic community in Guymon Oklahoma.

This study is being conducted by Ed Kirtley, Division of Engineering Technology, Oklahoma State University. The study is under the direction of Dr. Tony McAleavy, Fire and Emergency Management Administration program, Oklahoma State University.

##### Procedures

In this study you will participate in one (1) interview. I will be conducting the interview. The interview will be over Zoom, an on-line meeting program. The interview will last approximately one (1) hour. I will ask 13 questions. There are no correct or incorrect answers. I desire to understand what social networks and groups you belong to and the impact of any interactions you've had with the fire department or firefighters. I may ask additional questions to clarify your answers. Your participation is completely voluntary. You may withdraw from the interview at any time. I will ask your permission to record the interview so that I can ensure your answers and our discussion are transcribed accurately. All your responses remain confidential.

At the end of the analysis phase of the research, I will remove your name from all transcripts to eliminate any association between you and your answers/comments. In addition, I will destroy all video recordings of our meeting. You will receive a written report outlining the research project including research methodology, findings and conclusions.

##### Compensation

Upon completion of the interview, you will receive a \$25 Wal Mart gift card as compensation for your participation.

##### Risks

There are no known risks associated with this project which are greater than those ordinarily encountered in daily life.

## Appendix B

### Adult Consent Form – Page 2

#### **Confidentiality**

Your participation in this study is strictly voluntary and greatly appreciated. The responses you provide will remain anonymous. This means your name will be collected initially. Your information will be assigned a code number. This code number will be associated with your answers during the study. The list connecting your name to this code will be kept in a locked file. All electronic data, recordings, etc. from your interview will be stored on a secure cloud server at the University. All written information will be stored in a secure cabinet in my office at 214A ATRC. Only my academic advisor and I will have access to these records. Your name will not be used in any study findings, publication, report, presentation or academic dissertation. When the study is completed and the data analyzed, your personal information will be destroyed no later than July 1, 2023.

#### **Contacts and Questions**

The Institutional Review Board (IRB) for the protection of human research participants at Oklahoma State University has reviewed and approved this study. If you have questions about the research study itself, please contact me, the principal investigator at (405) 308-7099, or [ed.kirtley@okstate.edu](mailto:ed.kirtley@okstate.edu), or Dr. Haley Murphy at (405) 744-9371. If you have questions about your rights as a research volunteer or would simply like to speak with someone other than the research team about concerns regarding this study, please contact the IRB at (405) 744-3377 or [irb@okstate.edu](mailto:irb@okstate.edu). All reports or correspondence will be kept confidential.

#### **Statement of Consent**

I have read the above information. I have had the opportunity to ask questions and have my questions answered. I verify that I am a member of the Hispanic community in Guymon Oklahoma.

I give consent to participate in the study.

Yes       No

I give consent to be videotaped during this study:

Yes       No

Signature of Participant: \_\_\_\_\_ Date: \_\_\_\_\_

Signature of Investigator: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix C

### Interview Guide – Page 1

#### Interview Guide

*Social Capital in Rural America: A Critical Evaluation of the Influence of Social Networks on Community Risk Reduction, and Firefighter Recruitment in the Oklahoma Panhandle*

Date of Interview:

Interview: Ed Kirtley

Contact Information: [ed.kirtley@okstate.edu](mailto:ed.kirtley@okstate.edu)

Participant (Interviewee):

Contact Information:

Confidential Identifier:

Gender:

Time Interview Began:

Time Interview Ended:

#### Introduction

- Introduction
- Thank you
- Purpose of research
- Informed consent form and signature
- Any questions
- Ask to start recording

#### Transition and Probes

- Tell me more about . . . ?
- Please clarify that . . . ?
- How did you feel about that . . . ?
- What was the impact of that on your perception of the fire department?
- How did that impact your trust of the fire department?
- Please be more specific about . . . ?
- This is a good opportunity to move on to discussing . . . ?

## Appendix C

### Interview Guide – Page 2

#### **Introduction to Interview**

Thank you again for taking time to participate in this interview. I will be asking you questions about your social networks and about your interactions with the fire department. There are no right or wrong answers: please share anything that comes to mind. If you need me to clarify a question, please ask. I will be taking notes periodically. Do you have any questions before we begin? May I begin recording our conversation?

<b>Interview Question</b>	<b>Notes on Response</b>
1. Why did you become a firefighter?	
2. Please describe the community here in Guymon?	
3. What social networks and groups do you belong to?	
4. What does the phrase "social capital" mean to you?	
5. What social networks and groups exist within the Hispanic community?	

## Appendix C

### Interview Guide – Page 3

<b>Interview Question</b>	<b>Notes on Response</b>
6. How has the fire department interacted with these social networks and groups?	
7. What fire, injury, and /or health risks does the Hispanic community face?	
8. What actions or steps have you taken to reduce those risks to you or your family?	
9. How did the fire department interaction with your social networks or groups influence your decision to take action to reduce those risks?	
10. How did this – fire department interaction – impact your trust in the fire department?	
11. How did the fire department interaction with your social networks and groups influence your decisions to become a firefighter?	

## Appendix C

### Interview Guide – Page 4

Interview Question	Notes on Response
12. Is there anything else you would like to add?	
13. Is there anyone else in the Hispanic community that you would recommend that I speak with? If so, may I have their contact information?	

#### **Closing**

Thank you for taking time to participate in this interview. I will send you a transcribed record of your interview for your review. If you find anything in it of concern please contact me. Also, I will email your \$25 Wal-Mart gift card later today. Please let me know that you received it. Thank you again for your participation.



## Appendix D

### Theme 1 Development

Theme 1		
Code	Category	Theme
Trust		
Unity		
Connection	Acceptance of Others	
Respect		
Open-minded		
Diverse		
Multi-cultural		
Different Perspectives	Diversity	Theme 1: Strong bonding social capital is present as a community.
Spanish Language Cultures		
Melting Pot		
Helpful		
Friendly		
Family		
Tight Knit	Community Character	
Support		
Welcoming		
Caring		

## Appendix E

### Theme 2 Development

Theme 2		
Code	Category	Theme
Firefighting Class Fiesta Library School Event Parades Pioneer Days	Planned Interactions	
Out in the Community Park Restaurant Soccer Special Events Attending	Unplanned Interactions	Theme 2: Strong bridging and linking social capital exist in the community from an individual belonging to multiple social groups and networks.
Building Relationships Communication Connection Interactions Parents Socialize Identify	Relationship Building	

**Appendix F**

**Theme 3 Development**

Theme 3		
Code	Category	Theme
Firefighting Class Fiesta Library School Event Parades Pioneer Days	Religious Social Network	
Out in the Community Park Restaurant Soccer Special Events Attending	Sports Social Network	Theme 2: Social groups and networks are interconnected from shared membership of Hispanic citizens.
Building Relationships Communication Connection Interactions Parents Socialize Identify	Community Social Network	
Walmart School Seaboard	Work Social Network	

## Appendix G

### Theme 4 Development

Theme 4		
Code	Category	Theme
Fire Prevention Week Firehouse School Smoke Trailer	Risk Reduction Interactions	Theme 4: Bonding, bridging, and linking social capital are required to educate members of the Hispanic community on community risk reduction issues.
Smoke Detectors Fire Risk Health	Risk Reduction Issues	

## Appendix H

### Recommendations by Theme

No.	Recommendation	Theme	RQ
1	Utilize the social networks of current firefighters to recruit new department members from all cultures present in the community.	1	1,3
2	Train firefighters to establish positive relationships with residents of all cultures during planned and unplanned interactions.	1	2, 3
3	Engage Hispanic groups in the community who have had minimal interaction with the fire department or firefighters.	1	1,3
4	Adopt a department practice of customer service for all members of the community.	1	2,3
5	Intentionally create planned, positive interactions with all Hispanic groups in the community.	2	1,3
6	Participate in community events so that firefighters interact with Hispanic residents.	2	2,3
7	Utilize bridging and linking social capital when developing department programs impacting the Hispanic community.	2	1,3
8	Fire department leaders actively participate in professional, social, and community groups to build strong bridging and linking social capital.	2	1
9	Build bridging social capital with faith communities serving the Hispanic community.	3	2
10	Provide opportunities for all firefighters, regardless of rank or position, to participate in community and professional social networks in the community.	3	2,3
11	Identify Hispanic social networks and groups in the community.	3	1, 2, 3
12	Utilize faith and work social networks to reach new and first-generation immigrants who are outside other community networks or who may not trust government agencies.	4	1,3
13	Create bridging social capital with schoolteachers and administrators.	4	2
14	Whenever possible, engage Hispanic school children with information about risk reduction and the role of the fire department.	4	2
15	Utilize school children of Hispanic immigrant families to communicate information about risk reduction and accessing emergency assistance.	4	2

## VITA

Charles Edward Kirtley

Candidate for the Degree of

Doctor of Philosophy

Dissertation: SOCIAL CAPITAL IN RURAL AMERICA: A CRITICAL EVALUATION OF THE INFLUENCE OF SOCIAL NETWORKS ON COMMUNITY RISK REDUCTION AND FIREFIGHTER RECRUITMENT IN THE OKLAHOMA PANHANDLE

Major Field: Fire and Emergency Management Administration

Biographical:

Education:

Completed the requirements for the Doctor of Philosophy in Fire and Emergency Management Administration at Oklahoma State University, Stillwater, Oklahoma in May, 2023.

Completed the requirements for the Master of Arts in Education at Chapman University, Orange, California in 1991.

Completed the requirements for the Bachelor of Science in Technical Management at Denver Technical College, Colorado Springs, Colorado in 1988.

Experience: Assistant dean of the College of Engineering, Architecture, and Technology at Oklahoma State University from 2013 to present. Director of Oklahoma State University Fire Service Training from 2010 to 2013. Chief of Guymon Oklahoma Fire Department from 1998 to 2006.

Professional Memberships: American Legion. International Association of Fire Chiefs. American Society of Engineering Education. Oklahoma Fire Chief Association. National Fire Protection Association.