



NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

THESIS

**THE CHALLENGES ASSOCIATED WITH PROVIDING
EFFICIENT AND EFFECTIVE FIRE SERVICES TO LARGE
ARAB-AMERICAN POPULATIONS AND THE RESOURCES
REQUIRED TO MEET THEM**

by

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September 2018

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AND THE RESOURCES REQUIRED TO MEET THEM**

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ABSTRACT

Challenges to effective service can be encountered when a predominantly white, Christian, Euro-ethnic, and male fire service encounters unfamiliar minority populations. While studies have been conducted to determine challenges that firefighters face in servicing certain minority groups, no studies have been published related to the challenges encountered when servicing a predominantly Arab-American minority population.

This thesis collected data from a sample of firefighters employed by the City of Dearborn, home to the largest percentage of Arab-Americans outside of the Middle East. Firefighters were asked to identify not only the challenges encountered, but also the resources that would aid them in providing more effective service. The research concluded that Dearborn firefighters did encounter challenges when servicing Arab-American minority groups, which included language barriers and the lack of education on the role of the fire service within the community. Resources identified to improve service efficiency and effectiveness included increased collaboration with Arab-American community and religious leaders, educational programs, and the recruitment of bilingual staff.

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EXECUTIVE SUMMARY

This study examined the perceptions of firefighters employed by the City of Dearborn Fire Department regarding the challenges associated with providing service to a large Arab-American population. As a predominantly white, male, Euro-ethnic, and Christian fire department, it was expected that challenges existed in part due to the differences in culture and backgrounds of Dearborn's firefighters and the Arab-American population. Once the challenges were identified, the study examined the potential resources, which if provided to firefighters, could lead to a more effective and efficient fire service.

The firefighters of the City of Dearborn Fire Department were identified as a potential sample because they service the highest percentage of the total population of Arab-Americans within the United States. Very few other cities have large Arab-American populations within the United States. While other cities within the United States, such as New York City, may have a larger total population of Arab-Americans, the City of Dearborn has Arab-Americans as the largest percentage of its total population.¹

The study built upon the information obtained through the 2010 Fire 20/20 Multicultural Fire Department Study conducted nationally to determine the various challenges encountered by firefighters in the field when servicing a variety of different minority groups.² Although the study included 17 different minority groups, it did not identify Arab-Americans as a separate minority. The Fire 20/20 study included data regarding Muslim populations, but this category could have included a number of different ethnicities and not specifically Arab-Americans.

A survey was created that asked firefighters to rate their experience with a list of potential challenges as identified in the 2010 Fire 20/20 study. The survey further requested firefighters identify potential resources that would help alleviate those challenges.

¹ Nabeel Abraham and Andrew Shryock, ed., *Arab Detroit: From Margin to Mainstream* (Detroit, MI: Wayne State University Press, 2000).

² Lou Piotrowski, "National Multicultural Community Fire Prevention Study," Fire 20/20, 2012, <https://www.scribd.com/document/357794169/National-Multicultural-Community-Fire-Prevention-Study>.

Following the approval to conduct the survey by the Naval Postgraduate School Internal Review Board Review Board, anonymous surveys were distributed to 145 Dearborn firefighters stationed at one of Dearborn's five fire stations. A total of 74 surveys were completed and returned.

Upon return of the surveys, the data collected showed that firefighters identified three major challenges when servicing a large Arab-American population. Those challenges included language barriers, the misuse of 9-1-1 services, and a lack of community understanding about the role of the fire service. The results were consistent with the experiences of other fire departments throughout the nation that provide service to large minority groups; however, some differences were seen. These differences included a higher percentage of respondents who perceived a misuse of 9-1-1 services, as well as a lack of community knowledge about the role of the fire service.

Fire department services are often performed during emergencies or life and death situations. Fire departments that service communities with large minority populations can face challenges that may hinder effective and efficient services during an emergency. Although Dearborn has continued to attempt to recruit more Arab-Americans into the department, the overall number remains low. Given the current challenges with an underrepresented Arab-American minority in the department, it was important to study what existing challenges Dearborn firefighters faced while providing service to the Arab-American population of Dearborn.

This study's findings revealed that Dearborn firefighter respondents experienced challenges when providing service to the Arab-American population in Dearborn. These findings are not unlike reports from other fire departments who service minority populations throughout the United States as reported in the 2010 Fire 20/20 study. Recommendations include increased collaboration between Arab-American community and religious leaders to help educate residents on the appropriate use of 9-1-1 services and the role of the fire service. The creation of a "citizens' fire academy" was also recommended that should focus on bringing Arab-Americans into the fire stations to undergo training evolutions with Dearborn firefighters to gain a better understanding of the role of the fire department. Finally, the hiring of additional bilingual civilian staff or

contracting translating services was recommended in an effort to improve challenges related to language barriers.

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I. INTRODUCTION

The City of Dearborn, Michigan hosts one of the largest Arab-American populations outside the Middle East. Researchers estimate that Arab-Americans in Dearborn number about 40,000 people or about 40 percent of Dearborn's population. In 2004, the city promoted Nazih Hazime, the first Arab-American fire chief in the history of the Dearborn Fire Department. Despite efforts to recruit more Arab-Americans, the total number of Arab-Americans in the fire department is only five out of a total of 146 sworn personnel. The Dearborn Fire Department also employs a full-time Arab-American executive assistant who works out of the fire chief's office.

Although the inclusion of Arab-Americans into the Dearborn Fire Department has been slow, the fire department is committed to increasing the number of Arab-Americans within its ranks. Still, the operational impacts and challenges of providing service to large Arab-American populations by fire departments with only a small percentage of Arab-American firefighters has never been examined. While various studies have been conducted on other ethnic minority groups, as well as women in the fire service, no literature has been found related to operational challenges of a small Arab-American fire department workforce in a community with a large Arab-American population.

Perceptions of recruitment efforts of minority groups in the fire service have varied from those who believe diversity causes adversity and hurts team cohesiveness to those who feel diversity brings strength and success through collective intelligence.¹ The profile of the American fire service has changed in recent years. Data from the American fire service indicates higher rates of women, ethnic minorities, and college educated groups within its ranks, although the fire service continues to be identified as the least diverse occupation.² While recruitment of additional Arab-American firefighters should continue,

¹ Stephen Mastrofski, "Police Organization and Management Issues for the Next Decade" (paper presented at the National Institute of Justice Policing Research Workshop: Planning for the Future, Washington, DC, November 28–29, 2006), <https://www.ncjrs.gov/pdffiles1/nij/grants/218584.pdf>.

² "Labor Force Statistics from the Current Population Survey," U.S. Department of Labor, 2011, <https://bls.gov/cps/aa2011/cpsaat11.htm>.

it is also important that fire administrators understand the existing challenges faced by crews in the field to remediate them.

A. RESEARCH QUESTIONS

Two main research questions are examined to understand the challenges faced by firefighters who serve a large Arab-American population, as well as the resources that can assist them in the delivery of an effective service.

- Which challenges or issues do firefighters encounter when providing services to a large Arab-American population?
- Which resources if provided would assist firefighters in providing quality fire services to large populations of Arab-Americans?

B. BACKGROUND OF PROBLEM

This thesis addresses the problem of the absence of research on the influence of demographics related to the delivery of fire and emergency services to communities that host a large Arab-American population. Although studies, such as the “Fire 20/20 National Multicultural Community Fire Prevention Study,” have begun to explore the general challenges of serving minority groups, no specific study has been conducted concerning the operational challenges of servicing an Arab-American population.³ Fire administrators in communities, such as the City of Dearborn, Michigan, are forced to make policy decisions without the knowledge of what challenges are currently present within a community that hosts a significant Arab-American population.

The City of Dearborn is currently home to a total population of 98,153 people.⁴ It is difficult, however, to determine the exact number of Arab-Americans in Dearborn based on the United States Census numbers, as Arab-Americans are not separated out as a

³ Lou Piotrowski, “National Multicultural Community Fire Prevention Study,” Fire 20/20, 2012, <https://www.scribd.com/document/357794169/National-Multicultural-Community-Fire-Prevention-Study>, 1-48.

⁴ U.S. Census Bureau, *Recent Population Trends for the U.S. Island Areas: 2000 to 2010*, Report No. P23-213 (Washington, DC: U.S. Government Printing Office, 2015).

minority group. Arab-Americans are included with whites in the United States Census Bureau's data.⁵ Contemporary researchers of Arab-Americans residing in the City of Dearborn estimate the actual population of Arab-Americans to be between 30,000 and 50,000 citizens.⁶ The City of Dearborn hosts the largest percentage of Arab-Americans within the total population of any U.S. community, and only trails the City of New York, New York in terms of the number of Arab-American residents.⁷ With such a large percentage (30 percent to 50 percent) of the total population, the City of Dearborn firefighters often come into contact with Arab-Americans when responding to fires, rescue incidents, and emergency medical incidents. Dearborn firefighters also interact with the Arab-American population when providing public education at various events throughout the year.

Despite efforts by the American fire service in recent years to recruit more minorities into fire department careers, only marginal improvement has been made. The American fire service today is still a predominantly white, male, and Euro-ethnic profession. The Dearborn Fire Department is no different and is currently comprised of a mostly white, male, and Euro-ethnic firefighting force, with a small number of minority and women firefighters. The Dearborn Fire Department has for many years attempted to represent its resident population better through the recruitment and hiring of qualified Arab-American candidates; however, the number of Arab-American applicants have remained low despite these efforts. The recruitment of Arab-Americans has also been a challenge for similar careers with the Dearborn Police Department, as well as in both the police and fire departments of the neighboring City of Dearborn Heights, Michigan.

As with the majority of fire departments throughout the nation, challenges arise when differences exist in culture between the citizens and the firefighters who protect them. Language barriers can cause significant challenges for firefighters at the scene of

⁵ Nabeel Abraham and Andrew Shryock, ed., *Arab Detroit: From Margin to Mainstream* (Detroit, MI: Wayne State University Press, 2000), 64–65.

⁶ Abraham and Shryock, 64–65.

⁷ Abraham and Shryock, 64–65.

emergencies. Various differences in cultural practices and different understandings of gender roles can lead to challenges on scene when not properly understood.

The City of Dearborn appointed its first Arab-American fire chief to lead the department in 2004. Fire Chief Nazih Hazime served as fire chief from 2004 to 2010 and made substantial efforts to recruit more Arab-Americans into the fire department. Despite efforts by Chief Hazime and his successors in the fire chief's office, the Dearborn Fire Department continues to have low numbers of Arab-American applicants.

As a result of the difficulties related to having only a small number of Arab-Americans in the Dearborn Fire Department, this study is undertaken in an attempt to understand the existing challenges when a mostly white, male, and Euro-ethnic fire department provides service to a large Arab-American population. In the case of Dearborn, the Arab-American population is predominantly Muslim and from the countries of Lebanon, Iraq, Yemen, Syria, and Palestine.⁸

C. LITERATURE REVIEW

The literature review synthesizes relevant material on the integration of minority cultures into the fire service. Literature is reviewed from many sources including journal articles, theses and dissertations, reports, and books written about issues surrounding minority integration in the United States and the relationships of minority groups and the fire service.

1. Sociological and Intergroup Relations Theories

Three types of theories have examined the interactions between minority groups and the dominant culture. These theories are sociological, minority integration, and social class. The sociological theories are further subdivided into three types, as is the minority integration theories. Three major sociological theories have been established regarding how minority groups interact with the dominant culture. While some of these theories contrast with each other, others have substantial similarities.

⁸ Abraham and Shryock, 75–80.

2. Social Systems (Functional) Theory

The first sociological theory is the functional theory or social systems theory. Social systems paradigm theorists believe that the concept of society is comprised of various components, much like the human body.⁹ Each particular sect or group is the equivalent to an organ of the body that produces a healthy human life.¹⁰ This theory has been supported by traditional researchers, including Durkheim and Radcliff-Brown, as well as modern researchers, such as Parillo, who reported that society strives for harmonious, cooperative, and stable environments.¹¹ Difficulties ensue in society when one or more of the systems becomes dysfunctional and acts in a way that is in opposition to the mainstream.¹² The social systems paradigm suggests that any substantial change by a particular group requires an adjustment by other groups within the social network.¹³

3. Conflict Theory

Another widely accepted sociological theory is conflict theory. Conflict theory in opposition to the social systems theory indicates that society functions in a way that individual minority groups must undertake a struggle to improve their success.¹⁴ Conflict theorists are often influenced by the teachings of Karl Marx. In 1848, he theorized that the higher class of society was exploiting the lower class for their personal gain.¹⁵ Marx believed that much of society's problems resulted from the struggles between the classes. He further espoused that putting all citizens on an even playing field could solve society's

⁹ Vincent Parillo, *Understanding Race and Ethnic Relations*, 2nd ed. (Boston: Pearson, 2005), 7–15.

¹⁰ Parillo, 7–15.

¹¹ Emile Durkheim, *Sociology and Philosophy* (New York: Free Press, 1953); Alfred Radcliffe-Brown, *Structure and Function of Primitive Societies* (New York: Free Press, 1952); Parillo, 7–15.

¹² Parillo, 7–15.

¹³ Parillo, 7–15.

¹⁴ Randall Collins, *Conflict Sociology* (New York: Academic Press, 1975); Milton Gluckman, *Politics, Law and Ritual in Tribal Societies* (Chicago: Aldine, 1965); Karl Marx and Friedrich Engels, *The Communist Manifesto*, rev. ed. (1848; repr., New York: Norton Publishing, 1988); John Rex, *Key Problems of Sociological Theory* (London: Routledge, 1961).

¹⁵ Marx and Engels.

problems.¹⁶ Other conflict theorists contended that Marx did not properly recognize the importance of race relations within the social system.¹⁷

4. The Interactionist Theory

The interactionist theory examines the patterns of social life and smaller interactions between members of society, rather than the larger aspects of social institutions and their harmony or conflict.¹⁸ Shared symbols and the definitions people use when relating with other members of society provides the focus for understanding how individuals create and perceive situations they experience.¹⁹ Symbolic interaction theories assume that minority groups are generally responsive rather than passive.²⁰ Individuals themselves create a story against which to compare their interactions with others. In a continuing social situation, participants' interactions create a shared history resulting in reciprocal typifications.²¹ Eventually, routines emerge based on shared expectations. Participants see this socially constructed world as legitimate by virtue of its objective existence.²² Better communication and intercultural awareness may improve majority-minority interactions patterns.²³

5. Minority Integration Theories

How minority groups integrate or assimilate into the dominant culture is the subject of debate among social scientists. Three different major minority integration theories have

¹⁶ Marx and Engels.

¹⁷ Parillo, *Understanding Race and Ethnic Relations*, 39–48.

¹⁸ Parillo, 39–48.

¹⁹ Alejandro Portes and Dag MacLeod, "What Shall I Call Myself? Hispanic Identity Formation in the Second Generation," *Ethnic and Racial Studies* 19, no. 3 (July 1996): 523–47, <https://www.tandfonline.com/doi/abs/10.1080/01419870.1996.9993923>.

²⁰ Nazli Kibria, "The Construction of Asian American: Reflections on Intermarriage and Ethnic Identity among Second Generation Chinese and Korean Americans," *Ethnic and Racial Studies* 20, no. 3 (July 1997): 523–44, doi: 10.1080/01419870.1997.9993973.

²¹ Parillo, *Understanding Race and Ethnic Relations*, 39–48.

²² Parillo, 39–48.

²³ Parillo, 39–48.

emerged in the literature review. These theories include the assimilation theory, the amalgamation theory, and the accommodation or pluralistic theory.

a. *The Assimilation Theory*

The assimilation theory describes the functioning of groups within a social, ethnic, religious, or ethnic group who do not have any clear cultural, social, or personal differences from the people of the majority group.²⁴ In assimilation theory, the minority group often sheds its entire cultural belief systems when it contradicts the mainstream cultural ideals.²⁵ While minority groups continue to be recognized as “minorities,” they are more widely accepted due to their acceptance of the dominant culture.²⁶ Gordon states that the assimilation process is one of multiple phases that include the adoption of the dominant culture, widespread intermarriage into the dominant culture, and the inclusion of minorities into the dominant social structure.²⁷ Gordon asserts that “once structural assimilation has occurred, either simultaneously with or subsequent to social acculturation, all other types of social assimilation will naturally follow”. Other sociologists disagree with Gordon’s assertion and claim that cultural assimilation does not always result from structural assimilation.²⁸ Studies have shown that within the United States, no significant social assimilation has occurred for any racial, religious or ethnic groups other than those related to western European dominated groups.²⁹

Wirth asserts that situational variables are an important part of the minority group assimilation.³⁰ Wirth distinguishes among pluralism, assimilation, secession, and militancy as successive orientations by minority groups in response to the dominant group’s

²⁴ Parillo, 39–41.

²⁵ Parillo, 39–41.

²⁶ Parillo, 39–41.

²⁷ Milton Gordon, *Assimilation in American Life* (New York, Oxford: University Press, 1964).

²⁸ William L. Yancey, Eugene Ericksen, and Richard Juliani, “Emergent Ethnicity: A Review and Reformulation,” *American Sociological Review* 41 (1976): 391–403, doi: 10.2307/2094249.

²⁹ Yancey, Ericksen, and Juliani, 391–403.

³⁰ José Itzigsohn, “Immigration and the Boundaries of Citizenship,” *The International Migration Review* 34, no. 4 (Winter 2000): 1126–54, doi: 10.2307/2675977.

prejudice and discrimination.³¹ Wirth suggests that as groups begin to acquire certain amounts of power, they generally attempt to gain social tolerance for their group's differences and then become absorbed by the dominant culture. Groups prevented from assimilating eventually withdraw from the mainstream culture, and if conflict occurs, they will seek more extreme remedies. Assimilation can be either the goal of the minority group or the majority group; however, sometimes assimilation is not desired by either group.³² Gordon discusses the complexity of the assimilation process; Wirth, conversely, suggests that the dynamics of the situation play a role in the evolution of dominant-minority relationships throughout the assimilation processes.³³

b. The Amalgamation Theory

The amalgamation theory suggests that diverse people meld their biological, social, and cultural variances to create a new culture. This process often is described within the United States as the “melting pot” theory.³⁴ Advocates for the amalgamation theory, such as de Crevecoeur, believe that new breeds of Americans are born out of cultural melding. The amalgamation theory has not been without its critics. The amalgamation theory has been criticized due to its development during colonial times in the United States when most immigrants were of European lineage. Parillo suggests that although the amalgamation theory has been romanticized throughout the United States, in reality, a true “melting pot” does not exist.³⁵ The “English language only” is one such example of how non-European immigrants are not as easily “melted” into American society.³⁶ While certain minority cultural offerings have been readily adopted by mainstream America, these have typically been the choice of the majority culture to adopt rather than a blending of cultures.³⁷ Fairchild suggests that the absorption of various cultural components or groups produces

³¹ Itzigsohn, 1126–54.

³² Parillo, 41–45.

³³ Gordon, *Assimilation in American Life*.

³⁴ Parillo, *Understanding Race and Ethnic Relations*, 41–45

³⁵ Parillo, 41–45.

³⁶ Parillo, 41–45.

³⁷ Henry Fairchild, *Immigration* (New York: McMillan, 1925).

assimilation and not amalgamation.³⁸ Fairchild equates this process to how an organism consumes food, is somewhat affected or nourished by the food, yet the food is assimilated as it becomes part of the integral organism, retaining none of its original characteristics.³⁹ According to Fairchild, the dominant culture of the United States has remained basically unchanged, although strengthened by the influx of minority groups.⁴⁰ Gordon states that only in the institution of religion has minority groups essentially melded with the dominant cultures.⁴¹ Although America started off as a predominantly Protestant nation, inter-faith marriages have become commonplace among three major religious groups: Protestants, Catholics, and Jews.⁴² Muslims were not part of that study. Herberg supports this analysis and argues that ethnic differences are disappearing as religious groupings became the primary focus of identity and interaction.⁴³

c. *The Accommodation Theory*

The widespread rejection of the amalgamation theory, coupled with ethnic consciousness, spawned a third minority integration theory called the accommodation theory. Accommodation theorists make the argument that minority groups can maintain their own distinct subcultures even with continued interaction within the greater society while maintaining relative equality within the larger society.⁴⁴ Kallen, an early accommodation theorist, rejects the assimilation and amalgamation theories. Kallen states that many minority groups, in fact, maintain their own language, cultural traits, and heritage, in a democracy that allows for individually protected rights. Kallen believes that

³⁸ Fairchild.

³⁹ Fairchild.

⁴⁰ Fairchild.

⁴¹ Gordon, *Assimilation in American Life*.

⁴² Philip Martin and Elizabeth Midgley, "Immigration: Shaping and Reshaping America," *Population Bulletin* 61, no. 4 (June 2006): 21, <http://www.prb.org/Publications/Reports/2006/ImmigrationShapingandReshapingAmerica.aspx>.

⁴³ Leon Bovier, *Peaceful Invasions: Immigration and Changing America* (Landham, MD: University Press of America, 1992).

⁴⁴ Parillo, *Understanding Race and Ethnic Relations*, 45–47.

cultural pluralism can represent the basis of a democratic nation.⁴⁵ Gordon suggests that cultural pluralism is a fact of life in democratic societies, such as the United States, before even being theorized.⁴⁶ Oftentimes, minority groups lose their visibility when they integrate into a larger social culture; however, they can still identify and take pride in their heritage, all the while maintaining ties with their ethnic group outside of the majority.⁴⁷

6. Social Class Status

Integration of minorities into mainstream America often depends on the transformation of cultural traits, as well as a development of social structures.⁴⁸ Social class status is an important part of minority group integration because it helps to formulate an individual's perception of society. Social stratification can lead to difficulties in the integration of minorities into a larger majority culture. Warner and Lunt suggest that people in the United States often confuse social differences with cultural ones. Warner and Lunt find that the amount of time spent within or adjacent to the dominant culture has a profound positive effect on an individual's social class status.⁴⁹ Minority groups heavily immersed within the majority culture often are considered to have achieved elevated social ranking.⁵⁰

Refusal to assimilate can lead to significant difficulties in improving class status.⁵¹ In contrast, other theorists argue that the influence of culture is more important than social issues. Steinberg believes that immigrants able to perform a skill beneficial to the dominant group will be more acceptable than an illiterate minority immigrant.⁵² Dahrendorf believes that the often lower economic status of many minority populations creates an atmosphere

⁴⁵ Horace Kallen, *Cultural Pluralism and the American Idea* (Philadelphia: University of Philadelphia Press, 1956).

⁴⁶ Michael Mandel and Christopher Farrell, "The Immigrants," *Business Weekly* (July 1992): 114–22.

⁴⁷ Parillo, *Understanding Race and Ethnic Relations*, 53–60.

⁴⁸ Parillo, 53–60.

⁴⁹ Parillo, 53–60.

⁵⁰ W. Lloyd Warner and Paul S. Lunt, *The Social Life of the Modern Community* (New Haven: Yale University Press, 1941).

⁵¹ Parillo, *Understanding Race and Ethnic Relations*, 53–60.

⁵² Stephen Steinberg, *The Ethnic Myth: Race, Ethnicity and Class in America* (New York: Atheneum, 1981).

in which they are more likely to resort to negative actions, such as crime and violence, to improve their social status.⁵³

Sowell conversely believes that culture plays more of a role in minority integration into the majority culture. According to Sowell, culture is an important factor in the social movement of a minority group.⁵⁴ Minority groups with cultures that are compatible with the dominant culture are likely to integrate easily.⁵⁵ Other researchers reject the arguments that culture and social class play a major role in minority integration. Gordon states that four main factors, ethnicity, social class, residence and regionalism, determine the amount of time required for a minority culture to integrate.⁵⁶

Park developed an assimilation cycle that he believed all minority groups must progress through to make a successful assimilation into the majority population. The three stages of assimilation identified in Park's theory include: contact between groups, adjustments to competing differences, and finally, full assimilation into the majority population.⁵⁷ Criticism of Park is focused on his lack of supporting evidence of this cycle.⁵⁸ Lipset argues that any instance in which a minority group has not assimilated into the majority culture has gone through an incomplete cycle.⁵⁹ Park's theory, as interpreted by Lipset, cannot account for groups that have fully assimilated.⁶⁰

D. LIMITATIONS, DELIMITATIONS, AND SCOPE OF STUDY

The purpose of this study is to collect data from the fire service professionals in the City of Dearborn that is host to the largest percentage of Arab-Americans in the United

⁵³ Ralf Dahrendorf, *Class and Class Conflict in Industrial Society* (Palo Alto, CA: Stanford University Press, 1959).

⁵⁴ Thomas Sowell, *Ethnic America* (New York: Basic Books, 1974).

⁵⁵ Parillo, *Understanding Race and Ethnic Relations*, 53–60.

⁵⁶ Gordon, *Assimilation in American Life*.

⁵⁷ Robert Park, *Race and Culture* (Glencoe, IL: Free Press, 1950).

⁵⁸ Parillo, *Understanding Race and Ethnic Relations*, 53–60.

⁵⁹ Seymour Lipset, "Changing Social Status and Prejudice: The Race Theories of a Pioneering American Sociologist," *Commentary* 9 (1950): 479.

⁶⁰ Lipset, 479.

States. The study seeks to obtain perceptions of firefighters on challenges associated with issues and needs of firefighters when providing service to Arab-American communities, as well as provide information on resources that may improve effectiveness in providing service to Arab-American communities.

1. Limitations of the Research

This study focuses on firefighters within the City of Dearborn, Michigan. Focusing on firefighters employed by the Dearborn Fire Department may not be representative of the experiences of other fire departments or firefighters throughout the United States. At this time, the Dearborn Fire Department is predominantly staffed with Euro-ethnic, white, Christian males. Although the national fire service recognizes that white males make up an overwhelming majority of firefighters within the United States, fire departments that have a larger percentage of minority firefighters, women or non-Christians, may have varied perceptions of challenges when servicing a large Arab-American population.⁶¹

It is also important to recognize the uniqueness of Dearborn's Arab-American population that may differ from other communities across the United States. The City of Dearborn's Arab-American population generally migrated to the United States following World War II. This population also typically emigrated from Middle Eastern countries that often were involved in civil wars, sectarian violence, or citizens were forced to flee from persecution. Since the City of Dearborn's Arab-American population is predominantly Muslim, and has typically emigrated from the countries of Iraq, Lebanon, Syria, Yemen, and Palestine, firefighters who service Arab-American populations different from Dearborn's may have different experiences.⁶²

2. Delimitations

This study is limited to firefighters employed by the City of Dearborn Fire Department. The sample population may not be representative of other firefighters in other fire departments across the United States. This study is limited to challenges experienced

⁶¹ Piotrowski, "National Multicultural Community Fire Prevention," 1–4.

⁶² Nabeel and Andrew, *Arab Detroit*, 74–80.

by City of Dearborn firefighters, and the results may not be applicable to other fire departments. By limiting the study to a single fire department, it is possible to ascertain the challenges and resources required for firefighters. Studying this single fire department can thus return accurate outcomes for the City of Dearborn fire officials to consider.

3. Scope

This study applies to firefighters employed by the Dearborn Fire Department at the time of survey distribution. The Dearborn Fire Department's jurisdiction consists of the cities of Dearborn and Melvindale, which are located in the Detroit metropolitan area in Wayne County. The cities of Dearborn and Melvindale are located in southeastern Michigan.

E. SIGNIFICANCE OF THE STUDY

This study is important, as it may help the Dearborn Fire Department understand the challenges Dearborn firefighters face when attempting to provide safe, effective, and efficient fire services to the City of Dearborn's Arab-American population. Dearborn Fire Department administrators can benefit from an understanding of the challenges faced by firefighters to make decisions about appropriate resource allocation aimed at improving services. The Arab-American population may benefit from this study provided that effective resources can be found to counter challenges identified by firefighters. A reduction in challenges faced by firefighters in the field can lead to better service for the Arab-American community of the City of Dearborn.

F. CHAPTER OVERVIEW

Chapter II examines the research methodology utilized in this study. Included in Chapter II are descriptions of the research design, the setting of the study, participants, data collection procedures and Internal Review Board (IRB) protection of participants. Chapter II also describes the survey utilized by participants and the relevance of the questions.

Chapter III provides the results of the data analysis. Chapter III includes a summary of the results as extrapolated from the returned surveys. Chapter III then proceeds to discuss the major findings of the study divided into two separate categories to describe the

challenges identified by firefighters serving a large Arab-American population, as well as the resources identified by firefighters that can aid efficiency when serving a large Arab-American population.

Chapter IV provides the conclusions and recommendations of this study. The chapter begins with a short summary of the study, and then provides recommendations for actions by both fire service administrators, as well as researchers of minority relations and public safety. A section devoted to the conclusion of the study completes Chapter IV.

II. RESEARCH METHODOLOGY

The City of Dearborn hosts the largest percentage of the total population of Arab-Americans outside of the Middle East and is known for its Arab-American sub-culture, which thus makes it an ideal setting for this study. To analyze the influence of the presence of a large Arab-Americans population on the fire service, a non-experimental descriptive research design was used. The research was conducted at the City of Dearborn's five fire stations. An anonymous paper and pencil survey was developed to collect information to help identify challenges that firefighters encounter when servicing a large Arab-American population. A secondary objective was to determine the resources required to improve efficiencies in service delivery. Each participant who completed this survey was asked the same questions, with participants able to complete the survey at their convenience. Although other data collection methods were considered, such as face-to-face semi-structured interviews, it was decided that an anonymous survey would allow for more feedback from a larger sample size and would ensure the confidentiality of the participants.

The goal of the research design was to analyze the data to develop themes into policy recommendations for the Dearborn Fire Department at a strategic level. Through a comprehensive understanding of the challenges firefighters identified related to servicing a large Arab-American population, the researcher seeks to provide recommendations that can be utilized for the development of policy leading to improvements in fire service delivery to communities that host large Arab-American populations.

A. SETTING FOR STUDY

The study was conducted in the City of Dearborn, a mid-sized inner-ring suburb adjacent to Detroit, Michigan and located in Wayne County. The City of Dearborn is best known for being the hometown of automaker pioneer Henry Ford. The Ford Motor Company continues to call Dearborn home and maintains its world headquarters, North American headquarters, research and design facility, and a large-scale assembly plant in Dearborn. Dearborn is also well known in southeastern Michigan for its quality city services, as well as its well-developed parks and recreation facilities. The City of Dearborn

is home to two post-secondary educational institutions (e.g., Henry Ford College and the University of Michigan Dearborn). Dearborn is also home to two hospitals (Henry Ford Fairlane Hospital and Beaumont Dearborn Hospital) that are part of the two largest healthcare organizations in the state of Michigan. Beaumont Dearborn is a recognized tertiary care hospital and a level 2 trauma center according to the American College of Surgeons. According to the 2010 United States Census Report, which is the most recent census, the City of Dearborn encompasses a jurisdiction of 24.4 square miles. The Rouge River runs through the City of Dearborn from the northwest to the southeast and allows the transport of raw materials into the AK Steel Mill and the Ford Rouge Plant, which is ultimately used in automotive production. In addition to its jurisdictional boundaries, the City of Dearborn also owns a few hundred acres of land in the City of Milford, Michigan named Camp Dearborn and Mystic Creek Golf Course. Revenue generated from the campground and golf course contributes to the City of Dearborn's overall budget.⁶³

According to the 2010 United States Census Report, the City of Dearborn is home to 98,153 residents. The population of Dearborn is expected to grow over the next few years as a result of a two billion dollar investment by the Ford Motor Company. According to the 2010 United States Census, Dearborn hosts approximately 34,686 housing units.⁶⁴

The City of Dearborn currently has an 84.7 percent white population that includes Arab-Americans according to the 2010 United States Census Report.⁶⁵ With Arab-Americans included in the white majority, Dearborn can be viewed as a primarily "white" community. If Arab-Americans were considered a minority group, then Dearborn could be viewed as an approximate 60 percent white and 40 percent Arab-American community. Dearborn is well known for its substantial Arab-American population. The City of Dearborn hosts the largest proportion of Arab-Americans among cities of similar size throughout the United States.⁶⁶ Many experts dispute the actual size of the Arab-American

⁶³ U.S. Census Bureau, *Recent Population Trends for the U.S. Island Areas*.

⁶⁴ U.S. Census Bureau.

⁶⁵ U.S. Census Bureau.

⁶⁶ U.S. Census Bureau.

population within Dearborn, due in part to Arab-American inclusion as “whites” in the United States Census.⁶⁷ Making a determination of just how many Arab-Americans call Dearborn home is difficult, with various researchers estimating the number at somewhere between 30,000 to 50,000.⁶⁸

The establishment of the Arab-American population is rooted in the history of Dearborn and the Ford Motor Company. The initial immigration of Arab-Americans began in the early 20th century. They came to Dearborn to seek employment at the Ford Motor Company steel mill and assembly plant. While the initial Arab-American immigrants were primarily from Lebanon, Dearborn today hosts significant populations of Arab-Americans who have migrated from countries, such as Yemen, Iraq, Syria, Jordan, and Palestine. The majority of Dearborn’s Arab-American population is Muslim, although small populations of Christian and Druze Arab-Americans live within the city. Dearborn is home to many churches and mosques including two of the largest mosques in North America. Both Sunni and Shia mosques can be found in Dearborn along with churches of various Christian denominations. The majority of Dearborn’s Arab-Americans reside on the city’s east- and south-end although Arab-American populations have continued to increase in the west-end of Dearborn in recent years. Dearborn’s diverse demographics led to the Dearborn Fire Department’s firefighters being chosen to be examined for this study.

B. PARTICIPANTS

The participants in this study were sworn firefighters in the City of Dearborn. A total of 145 firefighters are employed full-time and stationed at one of the five fire stations in Dearborn and Melvindale. Of the 145 potential participants, 74 completed and returned their surveys. The mean age of the participants was 37.24 (SD = 8.61) years, with a range from 24 to 55 years. Forty firefighters did not respond to this question, possibly because they did not want to be identified. The participants were asked to indicate the number of years of experience they had with the department. The mean number of years was 9.76 (SD = 6.97), with a range from one to 21 years. Forty-one participants did not respond to this

⁶⁷ Abraham and Shryock, 74–80.

⁶⁸ Abraham and Shryock, 74–80.

question. The participants were asked to indicate the areas to which they were assigned. Their responses are summarized in Table 1.

Table 1. Assignment

Assignment	N	Percent
Ambulance	24	53.3
Fire engine	13	28.9
Ladder truck	4	8.9
40-hour staff	3	6.7
Other	1	2.2
Total	45	100.0

The greatest number of participants (n = 24, 53.3 percent) reported they worked on ambulances, with 13 (28.9 percent) indicating they were assigned to the fire engine. Twenty-nine participants did not provide a response to this question. The high number of non-respondents for these questions was due to the concerns about being identified.

The participants were asked if they spoke a language other than English. Their responses indicated that three (4.1 percent) spoke Spanish and two (2.7 percent) spoke Arabic. One (1.4 percent) indicated speaking another language, but did not identify that language.

C. DATA COLLECTION PROCEDURES

The study sought to build on the information obtained through the 2014 Fire 20/20 Multicultural Fire Department Study conducted nationally to determine various challenges encountered by firefighters in the field when servicing a variety of different minority groups. Upon discussion with Piotrowski, the author of the Fire 20/20 study, the researcher was provided with written approval to use the same questions to identify what challenges firefighters in Dearborn face when providing services to a large Arab-American minority

population. The survey also sought to identify which resources, if provided by the fire department, would aid firefighters in the performance of their duties.

The survey was divided into three sections. The first section focused on collecting data regarding challenges firefighters face while serving a large Arab-American population. In this section, firefighters were asked to rate eight potential challenges to effective service on a scale of one to four. The questions and scale are listed in Table 2.

Table 2. Survey Questions Related to Service Challenges

1	2	3	4			
Not at all important	Somewhat important	Important	Very Important			
Please indicate how important each of the following issues are for your fire department.			1	2	3	4
1. Language barriers						
2. Community's lack of knowledge about basic life safety and prevention						
3. Community's lack of knowledge about fire department services						
4. Fire department not understanding cultural practices and how this impacts service delivery						
5. Fire department's lack of proactive relationships with the community						
6. Community's fear of people in uniform						
7. Community's misuse of 9-1-1						
8. Community's distrust of the fire department						

Adapted from: Lou Piotrowski, "National Multicultural Community Fire Prevention Study," Fire 20/20, 2012, <https://www.scribd.com/document/357794169/National-Multicultural-Community-Fire-Prevention-Study>.

The second section of the survey collected data on what resources firefighters need to improve efficiency and effectiveness of service to Arab-American populations. In this

section, firefighters were asked to rate 11 potential resources that could aid firefighters in providing a more effective service. These questions were also rated on a on a scale of one to four. The second sections questions and scale are listed in Table 3.

Table 3. Survey Questions Related to Resources Required

1	2	3	4
Not at all important	Somewhat important	Important	Very Important
Please indicate how important each the following resources are in establishing more effective community risk-reduction programs			
9. Multilingual skills			
10. Greater ethnic diversity in the fire department			
11. Greater community knowledge about fire prevention			
12. Knowledge about multicultural communities			
13. Additional resources to develop and implement programs			
14. Materials in other languages			
15. Greater community knowledge of fire department services			
16. Higher priority given to prevention in my department			
17. Evaluation tools to measure impact			
18. Model programs from other departments			
19. Proactive relationships with multicultural and high risk community leaders			

Adapted from: Lou Piotrowski, "National Multicultural Community Fire Prevention Study," Fire 20/20, 2012, <https://www.scribd.com/document/357794169/National-Multicultural-Community-Fire-Prevention-Study>.

The third section of the survey was a short demographic survey to obtain information on the participants' professional characteristics. The participants were cautioned not to place any identifying information on the surveys (e.g., name, badge

number, etc.) to help maintain anonymity. These questions were prepared to identify any trends that might be unique to sub-sections of Arab-American populations based on countries of origin. The questions from section three are listed in Table 4.

Table 4. Demographic Questions

Please answer the following questions as they relate to you. There are no right or wrong answers and all information will be confidential.	
Age	Years on the fire department
_____	_____
What is your typical assignment? (check one)	
☐ Ambulance	
☐ Fire engine	
☐ Ladder truck	
☐ 40-hour staff	
☐ Other (specify) _____	
What languages do you speak?	
☐ English	
☐ Spanish	
☐ Arabic	
☐ Other (specify) _____	
To which fire station are you assigned?	

Surveys were distributed to the 145 sworn firefighters of the Dearborn Fire Department.

After receiving approval from the IRB, the researcher developed survey packets for distribution to each fire fighter. The packets included a research information letter to the participants that provided them with all elements of an informed consent form without the requirement of a signature. The research information letter informed participants that their participation was completely voluntary, and they were under no obligation to complete the

survey, as well as provided assurances of the anonymity of their responses. The telephone number of the researcher, as well as appropriate contact numbers for the Center for Homeland Defense and Security at the Naval Postgraduate School (NPS) was included on the information sheet. In addition to the research information letter, the packet also included a copy of the survey along with a blank envelope for confidential return of the survey via a locked deposit box that was placed in each of the Dearborn Fire Department's five fire stations. Participants were not required to provide a return address or any other identifiable information on this envelope.

Participants were asked to return the survey within one week from the distribution of the survey packets. Once returned, the surveys were stored in a locked file box in the researcher's home. The data files were then saved to a password-protected USB drive that was used to analyze the data. After approval and confirmation of the thesis, the USB drive will be stored in the locked file box for a period of five years. At the end of that period, the surveys will be shredded and the USB drive will be destroyed to protect the anonymity of the participants.

D. IRB PROTECTION OF PARTICIPANTS

According to the NPS' Human Research Protection Program Office, the NPS IRB has jurisdiction over all research involving human subjects.⁶⁹ "The NPS IRB is authorized to review, recommend approval to the NPS President, require modifications in, or withhold approval or suspend approval of research involving human subjects. No human subject research in any form (including recruitment, consent, or data collection) can occur without the proper review and approval of the NPS IRB and NPS President".⁷⁰

Due to the intended use of a data collection survey and to ensure the protection of participants in the study, the researcher participated in the NPS IRB process. A copy of the survey was provided to the IRB board along with a written request for its usage. The written request provided the IRB review board with the plan for survey dissemination and

⁶⁹ "Human Research Protection Program Office & Institutional Review Board (IRB)," Naval Postgraduate School, accessed July 7, 2018, <https://my.nps.edu/web/research/irb-home>.

⁷⁰ "Human Research Protection Program Office & Institutional Review Board (IRB)."

collection. This thesis IRB review request was submitted electronically and approved by the NPS review board on July 7, 2018 (NPS.2018.0059-IR-EP7-A).

A research information and informed consent form was developed and included in an envelope with the survey packet. The use of the research information and informed consent form provided participants with an expectation of what their voluntary participation would require of them. The research information and consent form also included telephone numbers and email addresses of the researcher and NPS. By returning of their surveys, the participants affirmed their willingness to participate in the research, without having to provide names or other identifiable information. As the survey packets contained no identifiable information, they were not coded for any follow up with non-responders. These procedures ensured the protection of participant information and allowed anonymity.

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III. RESULTS OF DATA ANALYSIS

This section presents the results of the data analysis. The survey used in this study obtained perceptions of firefighters on challenges associated with issues and needs of firefighters when providing service to Arab-American communities, as well as provided information on resources that could improve effectiveness in providing service to Arab-American communities.

A. SUMMARY OF RESULTS

The firefighters were asked to rate eight items regarding their perceptions of challenges in providing services to an Arab-American community using a 4-point scale ranging from 1 for not at all important to 4 for very important. Means and standard deviations were obtained for each item. Table 5 presents the results of these analyses.

Table 5. Challenges when Working with an Arab-American Community

Challenges	N	M	SD
1. Language barriers	74	2.85	.95
2. Community's lack of knowledge about basic life safety and prevention	74	3.05	.89
3. Community's lack of knowledge about fire department services	74	3.09	.94
4. Fire department not understanding cultural practices and how this impacts service delivery	74	2.16	1.01
5. Fire department's lack of proactive relationships with the community	69	2.20	1.01
6. Community's fear of people in uniform	70	2.16	1.09
7. Community's misuse of 9-1-1	73	3.38	.97
8. Community's distrust of the fire department	70	2.24	1.11

The firefighters considered language barriers to be an important challenge ($M = 2.85$, $SD = .95$) when providing services to an Arab-American community. They also considered the community's lack of knowledge about basic life safety and prevention ($M = 3.05$, $SD = .89$) and their lack of knowledge about fire department services ($M = 3.09$, $SD = .94$) as important. The community's misuse of 9-1-1 was considered to be an important challenge to the firefighters ($M = 3.38$, $SD = .97$). The remaining challenges were considered to be somewhat important to the firefighters.

The participants were asked to indicate their perceptions of specific types of resources that could be useful in establishing more effective community risk-reduction programs. The firefighters rated each item using a 4-point Likert scale ranging from not at all important to very important. Means and standard deviations were used to summarize their responses. Table 6 presents results of these analyses.

Table 6. Perceptions of Importance of Resources

Challenges		N	M	SD
9.	Multilingual skills	74	2.27	.98
10.	Greater ethnic diversity in the fire department	71	1.75	.94
11.	Greater community knowledge about fire prevention	74	2.84	.97
12.	Knowledge about multicultural communities	74	2.42	.89
13.	Additional resources to develop and implement programs	74	2.19	.88
14.	Materials in other languages	73	2.04	.84
15.	Greater community knowledge of fire department services	74	3.09	.88
16.	Higher priority given to prevention in my department	70	2.26	.91
17.	Evaluation tools to measure impact	69	2.04	.90
18.	Model programs from other departments	69	1.94	.84
19.	Proactive relationships with multicultural and high-risk community leaders	70	2.31	.93

The perceptions of the firefighters indicated that greater community knowledge of fire department services was an important resource ($M = 3.09$, $SD = .88$). The second most important resource would be greater community knowledge about fire prevention ($M = 2.84$, $SD = .97$). Firefighters perceived that greater ethnic diversity in the fire department was the least needed resource ($M = 1.75$, $SD = .94$), followed by model programs from other departments ($M = 1.94$, $SD = .84$). The remaining resources were considered somewhat important by the firefighters.

B. ANALYSIS OF MAJOR FINDINGS

Survey data was collected and analyzed to answer the research question, which challenges and issues do firefighters encounter in providing services to a large Arab-American population? In answering this research question, this study also sought to

determine the needs or resources identified by firefighters who could assist in improving the effectiveness of fire and emergency service delivery to Arab-American populations.

1. Challenges and Issues

The respondents of the survey identified three major challenges to providing effective and efficient services to their Arab-American population. The perception of the respondents indicate that they believed the community's misuse of 9-1-1 services, the community's lack of knowledge about fire department services, and language barriers as their three most significant challenges.

a. Language Barriers

One hundred percent or 74 Dearborn Fire Department respondents indicated some level of challenge related to language barriers with the Arab-American population. Language barriers are common amongst career fire departments with less than 400 members who serve various minority groups. The Fire 20/20 study indicated that 74 percent of career firefighters in departments with less than 400 members also cited language barriers as a challenge. When compared to other fire departments that provide service within the state of Michigan, 71 percent of the firefighters throughout the state also reported language barrier challenges.

The results of this study indicate that firefighters who service Arab-American minority groups perceive language barriers to be a significant challenge amongst Dearborn's Arab-American population. While the percentage of respondents who reported language barriers as a challenge in the Arab-American population Dearborn (100 percent) is higher than both the national percentage of respondents (77.5 percent) and Michigan percentage of respondents (71 percent), this challenge appears consistent amongst all minority groups and not unique to Arab-American populations or to Dearborn. Although language barriers are consistently reported by firefighters who service other minority populations, further study is need to determine why Dearborn's Arab-American population appears to have higher rates of language barrier challenges when compared with other minority groups.

b. Community Lack of Knowledge about Fire Department Services

One hundred percent of Dearborn firefighter respondents (74) indicated that they perceive a lack of knowledge about fire department services amongst the Arab-American population they serve. In comparison to the Fire 20/20 study, 45 percent of firefighters in career departments throughout the nation perceive that their minority populations have a lack of knowledge about fire department services. Only 35 percent of the Michigan firefighter respondents in the Fire 20/20 study indicated perceptions of a lack of knowledge about fire department services within their minority populations.

Dearborn's firefighters report service challenges related to a lack of knowledge about fire department services on a much higher percentage than both the comparable national and state of Michigan fire departments that service large minority populations.

c. Community's Misuse of 9-1-1 Services

Ninety-nine percent of Dearborn firefighter respondents indicated that they faced challenges related to the misuse of 9-1-1 services by the Arab-American population. In comparison, only 18 percent of national respondents perceived the misuse of 9-1-1 as a significant challenge amongst various minority groups. Only 11 percent of other firefighters within the state of Michigan reported the misuse of 9-1-1 services as a significant challenge amongst the minority populations they serve.

Dearborn's firefighters reported the misuse of 9-1-1 services as a significant problem amongst the Arab-American population. This result is inconsistent with the findings of Fire 20/20 study. Most firefighters who service minority populations both at the national and state level do not report the misuse of 9-1-1 services as a significant challenge anywhere near the rates of Dearborn firefighters.

2. Perceptions of the Importance of Resources

The respondents of the survey identified two significant resources that would aid in providing effective and efficient services to their Arab-American population. The perception of the respondents indicates that they believed greater community knowledge

of fire department services and greater community knowledge of ways to prevent fires would be beneficial.

a. Greater Community Knowledge of Fire Department Services

One-hundred percent of the Dearborn fire department's 74 respondents indicated that they believed a program focused on educating the Arab-American population would allow for the delivery of more effective and efficient fire services. In comparison, nationally 40 percent of surveyed firefighter respondents (612) in career departments of less than 400 firefighters indicated programs aimed at educating minority groups about fire department services would be beneficial. Twenty-nine percent of other Michigan firefighter respondents (28) in the Fire 20/20 study indicated programs aimed at educating minority groups about fire department services would be beneficial.

Dearborn firefighters believe at a much higher rate than their counterparts at both the state and national level that programs aimed at educating the Arab-American population about fire department services would be beneficial.

b. Greater Community Knowledge of Fire Prevention

One-hundred percent of the Dearborn firefighters believed that great community knowledge of fire prevention would be beneficial in the delivery of effective and efficient services to the Arab-American population. In comparison, nationally 53 percent of surveyed firefighter respondents (612) in career departments of less than 400 firefighters indicated programs aimed at fire prevention improvements services would be beneficial. Forty-six percent (46 percent) of other Michigan firefighter respondents (28) in the Fire 20/20 study indicated programs aimed at improving fire prevention would be beneficial.

Dearborn firefighters believe at a much higher rate than their counterparts at both the state and national level that programs aimed improving fire prevention within the Arab-American community would be beneficial.

IV. CONCLUSIONS

Fire department services are often performed during emergencies or life and death situations. Fire departments that service communities with large minority populations face challenges that may hinder effective and efficient services during an emergency. Previous studies, such as the Fire 20/20 Multicultural Health, and Safety Research Project and the Fire 20/20 National Multicultural Community Fire Prevention Study, have proven that unique challenges exist for firefighters who service large minority populations. While previous studies have examined various minority cultures, none previously examined the impact an Arab-American minority population has on the delivery of fire services. Data collected from the City of Dearborn firefighters provided a glimpse into challenges faced by firefighters who service large Arab-American populations and the resources that if provided could lead to better service.

Given the current challenges of underrepresentation of minority groups within fire departments nationwide, it is important to study what challenges exist for firefighters who serve large minority populations. The information obtained in this study can be utilized in other communities that host a large Arab-American population, as well as other minority populations.

Policy development related to providing effective and efficient service is the obvious next step for the fire service. While various studies have provided a glimpse into the challenges faced by firefighters servicing large minority populations, the fire service has been slow to adopt policies to combat these challenges. While budgets and recruitment efforts are almost universal obstacles within the fire service, the continued improvement of services to minority populations must be fully integrated into the mission of the American fire service.

This study has identified certain policies to combat these challenges, such as improving relations with minority community leaders, reaching out to religious institutions, the incorporation of bilingual staff, improvements in community education focused on traits of the minority population, and increased exposure to the fire service,

such as through ride-alongs or citizens academies. With the continued forecasted growth of minority populations within the United States, it is imperative that fire administrators develop and implement policies that will provide their firefighters with the resources required to bridge cultural or other demographic gaps with minority populations.

The results of this study can be utilized by fire administrators in an effort to improve upon their ability to prepare for, prevent, and respond to minority populations, and more specifically, Arab-American populations within their communities. A fire department that provides a more effective and efficient service to its minority populations will be more successful in mitigating emergencies, which will also lead to improved outcomes of both life and property. The American fire service must continue to research and understand the challenges to efficient and effective service when interacting with a large minority population.

APPENDIX. SURVEY

1	2	3	4
Not at all important	Somewhat important	Important	Very Important
Please indicate how important each of the following issues are for your fire department.			
	1	2	3
1. Language barriers			
2. Community's lack of knowledge about basic life safety and prevention			
3. Community's lack of knowledge about fire department services			
4. Fire department not understanding cultural practices and how this impacts service delivery			
5. Fire department's lack of proactive relationships with the community			
6. Community's fear of people in uniform			
7. Community's misuse of 9-1-1			
8. Community's distrust of the fire department			

1	2	3	4
Not at all important	Somewhat important	Important	Very Important
Please indicate how important each the following resources are in establishing more effective community risk-reduction programs			
	1	2	3
9. Multilingual skills			
10. Greater ethnic diversity in the fire department			
11. Greater community knowledge about fire prevention			
12. Knowledge about multicultural communities			
13. Additional resources to develop and implement programs			
14. Materials in other languages			
15. Greater community knowledge of fire department services			
16. Higher priority given to prevention in my department			

17. Evaluation tools to measure impact				
18. Model programs from other departments				
19. Proactive relationships with multicultural and high risk community leaders				

Please answer the following questions as they relate to you. There are no right or wrong answers and all information will be confidential.

Age

Years on the fire department

What is your typical assignment? (check one)

- ☐ Ambulance
- ☐ Fire engine
- ☐ Ladder truck
- ☐ 40-hour staff
- ☐ Other (specify) _____

What languages do you speak?

- ☐ English
- ☐ Spanish
- ☐ Arabic
- ☐ Other (specify) _____

To which fire station are you assigned?

Adapted from: Lou Piotrowski, "National Multicultural Community Fire Prevention Study," Fire 20/20, 2012, <https://www.scribd.com/document/357794169/National-Multicultural-Community-Fire-Prevention-Study>.

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