

Why's Everybody Always Pickin' on me? A New Look at Police/Minority Contact

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Abstract: Presently there are two explanations for disproportionate minority/police contact: racism and a belief that minorities commit most crimes and there is a need to focus on those communities. This article examines a third possibility that focuses on policing as a social service and minority use of social services in our society. The research examines policing as a social service and compares minority use of other social services with their use of police services. The research also looks at pulling of police into neighborhoods by measuring calls-for-service in various communities; it examines police resource allocation which, as the research indicates, is significantly based on these calls-for-service; and compares minority use of police services with minority utilization of other social services. The research supports the premise that disproportionate minority contact by police is a social phenomenon that is similar to minority over-utilization of other social services.

Keywords: Racial profiling, disproportionate minority/police contact, police, resource allocation, social services, racism.

INTRODUCTION

In the criminal justice system, minorities are disproportionately represented as victims, suspects, and defendants at every level (Chiricos, Welch, & Gertz, 2004). The police, it has been noted, have especially disproportionate contact with them (Crutchfield, Skinner, Haggerty, McGlynn, & Catalano, 2012). Prosecutors also have disproportionate contact with minorities, presumably, as a function of the disproportionality in police activity (Piquero, 2008). Prisons, jails, probation, and parole reflect this trend as well. Disproportionate minority contact with the entire criminal justice system begins with the first link in the criminal justice chain—the police officer (Padgett, 2002).

In addressing the issue of disproportionate minority contact with the police, this article examines the position that social scientific inquiry to date may have assumed that such contact is symptomatic of one problem, whereas it may be symptomatic of a different one. If this is so, this misdirection has led to administrative, legislative, and judicial confusion resulting in myriad problems.

PUTTING THE ISSUE IN PERSPECTIVE

Law enforcement has a unique place in our culture. Like every country, U.S. law enforcement agencies are

tasked with preventing as well as reducing crime and the fear of crime (Peak & Glensor, 2004). There are two distinct enforcement philosophies within law enforcement (Inayatullah, 2013). The first is to answer calls for service and marshal all of the resources available to respond to calls for service. This includes placing officers in patrol areas based on reported criminal activity. The second is to be aware of factors in society that either lead to or are a result of criminal activity and seek solutions before waiting for citizen complaints. The former philosophy is known as reactive policing and the latter is referred to as proactive policing.

This historical distinction between reactive and proactive policing, however, may be too quick. It well may be the case, for example, that law enforcement agencies reactively assign officers to areas where demand is highest. Once there, though, officers acting proactively are bound to interact disproportionately with those around them. Thus, "reactive vs. proactive" policing inquiries may miss more nuanced contact rates.

A Very Brief History

Law enforcement is a social service (Bjerregaard & Lord, 2004; Chapman & Scheider, 2002; Schafer, Huebner, & Bynum, 2003; Wells, Horney, & Maguire, 2005) that has evolved significantly over the course of several distinct eras. Miller and Hess (2004) explain that in the 1920s a change to professionalism was underway from the traditional model of policing. Largely in response to corruption, law enforcement leaders recognized that stronger bureaucratic control and a

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disconnection from the public was necessary. The professional era was characterized by a dissociation between the police and the community they served. Police officers were taken off of foot patrol and put into police cars, expected to answer calls to which they were dispatched, handle them in an efficient manner, and return to the car to await further calls. Unfortunately, this detachment can easily lead to disenfranchisement.

Contemporarily, no matter what the problem, community members realize that a dispatcher will always answer an emergency number and that action or a reasonable suggestion will be forthcoming. In fulfilling this function, the police most closely approximate other social services that are available to the public. They serve a community with a specific service that is not available in the private sector.¹ Although policing involves many activities that are not directly service-oriented (e.g., many direct enforcement activities), it is worth noting that this article takes the social service aspect of policing as a primary focus.

What Drives Police Contacts With Community Members?

According to Van Maanen (1978), police officers generally deal with two kinds of people—predators and victims. This resulted in the police view of people in the community as either criminals who prey on society, or victims, who are preyed upon. Neighborhoods exhibiting the most calls for service are viewed by the police as having the most criminals.

Law enforcement agencies concentrate their efforts in these communities and, consequentially, come into contact with more people from these areas. The concentrated efforts result from two separate but connected processes (Ramsey, 1999). First, police administrators try to place the resources where they will be most effective, and second, if most calls come from a particular area, then a concentration of resources in that area is prudent.

This article proposes to address the issue of disproportionate minority contact with the police from this standpoint of resource allocation. Whether the

problem is called “racial profiling” or “driving while black/brown” the underlying issue is disproportionate contact by the police with minority populations (Harris, 1999; Lamberth, 1996; Lichtblau, 2001).

This effort takes a community-centered perspective on policing and refers to reactive policing as “pulling” police services and proactive policing as “pushing” police services. The wording clearly connotes enforcement from a community perspective. Where there are calls for assistance, the community “pulls” the police into the problem that is the source of the call for help. “Pushing” occurs where services are pushed into a community in response to an agency’s perception of a problem.

In his groundbreaking work, Glodstein (1977) stated that the primary function of law enforcement has historically involved pulling of services. Law enforcement is a social service available 24 hours a day, 7 days a week, and 52 weeks a year. If a problem occurs and no other solution is available, the public can always dial 9-1-1. Although 9-1-1 is also the number for fire and Emergency Medical Services (EMS), calls to those latter services are related particularly to fire or physical health issues. By contrast, people call the police for a wide variety of non-law enforcement reasons. Research has shown that police officers typically spend 26% to 35% of their on-duty time engaged in enforcement-related activities and much of the remainder of their time on “social worker” issues (Brooks, Piquero, & Cronin, 1994; Smith, Novak, & Frank, 2001).

When a call for assistance is relayed to a dispatcher, a police officer is normally sent to assist (Peak and Glensor, 2004). Unlike many social services, no restrictions on income, social status, or citizenship exist. In fact, there are no requirements in order for a person in need to call the police for response. Because policing represents a social service, the appropriate question is not, “Is there a disproportionate number of minority calls for police assistance?” but rather “Are the disproportionalities in calls for police assistance that lead to allocation of police resources what we would expect in light of disproportionate minority involvement in other social services?”

THE ISSUE TO BE ADDRESSED

An argument can be made that social services were created primarily to serve society’s disadvantaged (Wilkinson, 1996). Because minorities are overrepresented among those in America who are disadvan-

¹Although private security firms exist, they are not a widely available social service, and the cost is prohibitive for most. Private security firms reinforce the point that law enforcement is a social service that disproportionately serves the poor and minorities who are overrepresented in the lower socio-economic status. Wealthy people rarely use the police because, generally, they can afford sensitized fences, security alarms, and private security patrol. It is the poor who need the police and utilize their service.

taged (Wilson, 1987), it should not be surprising that they are overrepresented in utilizing social services.

In their seminal work, Wilson and Kelling (1982) point out that law enforcement is a social service that, increasingly, is the last and best hope for people struggling in disadvantaged neighborhoods. Many have no way out of communities that are rife with crime and criminals. Empty buildings are opportune locations for drug use, prostitution, underage drinking, and other activities that are generally signs of trouble. Neighborhood deterioration also reduces the sense of ownership and stakeholder status that exist in more stable communities.

The methodology employed in this study examines two services available to everyone, namely, police and fire services, the latter including emergency medical services and compares a community's use of those services to that community's utilization of public assistance. These agencies are available 24 hours a day every day of the year. Much like the police department, fire and EMS agencies also provide services irrespective of status and respond whenever they are called.

Analytical Framework

There are two major lines of thinking revolving around the issue of racial profiling (Taslitz, 2003) explored herein, both of which will be discussed in greater detail below. They are mentioned here briefly to lay out the overall approach taken in this project. One of these points of view assumes responsibility for disproportionate minority contact lies on the criminal justice system side of the equation and reasons that there is an institutional bias in the criminal justice system that accounts for disproportionate minority involvement in the system (Wilson, Dunham, & Alpert, 2004). The other point of view places blame on minorities themselves and assumes disproportionate minority involvement in crime is the reason for disproportionate minority contact with the system in general and the police in particular (e.g., MacDonald, 2001).

This article expands the inquiry by exploring whether disproportionate minority contact with the police might be, at least in part, the result of disproportionate police service need by minority group members. This research considers the possibility that a cause of disproportionate minority contact may be the result of requests for services that "pull" police into

minority communities. The perspective is premised on the notion that the police come into contact with people wherever the police are, and where the police are, in turn, is determined by where the police are regularly called. In other words, the police are having disproportionate minority contact because they are disproportionately in minority neighborhoods and they are disproportionately in minority neighborhoods because they are disproportionately called there.

Theories of Disproportionate Minority Contact

Taslitz (2003) makes an interesting observation, noting that a heated discussion is underway between two schools of thought regarding minority overrepresentation in the criminal justice system. One school views the overrepresentation as a result of racial bias in law enforcement. The other school argues that minorities² commit more crimes than whites which accounts for their overrepresentation in the criminal justice system. These two competing views are discussed below.

Disproportionate Focus on Minorities

There is a common thread that runs through the research on law enforcement racism and prejudice. In general, authors (Banks, 2001; Eitle, D'Alessio, & Stolzenberg, 2002; Harris, 2002; Kane, 2003; Petrocelli, Piquero, & Smith, 2003; Wilson, *et al.*, 2004) call upon critical or conflict theories to explain their observations and support their conclusions about them. According to these theories, the entire social system is corrupt, and law enforcement is either an enforcement tool of the powerful majority (Eitle *et al.* 2002; Kane, 2003; Petrocelli *et al.*, 2003) or a product of society's racism and prejudice in general (Banks, 2001; Harris, 2002; and Wilson *et al.*, 2004).

Where authors employ critical or conflict theories to explain disproportionate minority contact, they often assume that perceived threat drives suppression of one class by a white ruling class (the "powerful elite"). Eitel *et al.* (2002) tested a political threat hypothesis, an economic threat hypothesis, and a threat of black crime hypothesis to explain disproportionate minority contact with the police. Although they did not find support for political or economic threat, they did find support for the

²In general, studies of minority contacts have focused on African Americans and Hispanics as the two groups of interest. Asians and Native Americans either constitute too small of a group to include in many studies or they do not have disproportionate contact based on their percentage in the population. For the purpose of this study, unless specifically stated to the contrary, minorities are black and Hispanic members of the population.

black crime hypothesis. This finding indicates that a victim's race plays a significant part in whether a crime is thoroughly investigated and the severity of a sentence given to a convicted offender. Black on black crimes (whether or not the victim knew the assailant) receive little investigation and lower sentences than black on white crime. The general conclusion is that the victim's race is an important factor in investigation intensity and sentencing severity.

Disproportionate Minority Involvement in Crime

Many researchers believe that the reasons for disproportionate minority contact with the police lie on the offender side of the equation, rather than the law enforcement side. These researchers are generally suspicious about what data are compared against. MacDonald (2001) examined the use of drug courier profiling and noted that race is a part of the profile. Minorities are stopped at a disproportionate rate in comparison to whites but the hit rate (i.e., the rate at which drugs are found in the vehicle) is statistically similar across races. This indicates that the profile works at the same rate for all racial groups. Because there is limited literature on which races are the poorest drivers, the higher stop rate of minorities is suspect because the only comparison is with their representation in the general population, not within the population of poor drivers (but see, e.g., MacDonald, 2001 on the over-representation of racial minorities in reported traffic accidents).

Buerger and Farrell (2002), MacDonald (2001), and Schafer, Carter, & Katz-Bannister (2004) agree that, in order to make judgments of racial profiling, there must be relevant data. Some research indicates a reason to believe that minorities commit crimes at a disproportionate rate to their representation in the community and other research demonstrates that the police have a pattern and practice of exercising their authority in a racist or biased manner. Is it possible that there are other explanations for disproportionate minority contact with the police?

A New Approach--Disproportionate Service Utilization

According to MacDonald (2001), "[t]he ultimate question in the profiling controversy is whether the disproportionate involvement of blacks and Hispanics with law enforcement reflects police racism or the consequences of disproportionate minority crime" (p.1). This article examines a third possibility. Previously,

reference was made to the disproportionate "pulling" of police services into minority neighborhoods by community members. This pulling of services is contrasted with the "pushing" of police activity into minority neighborhoods by agencies (e.g., the police department or city) or people (e.g., the powerful elite, for conflict theorists) from outside of that community. The theories of racial profiling presented thus far focus exclusively on pushing services. Whether calls for service that pull officers into neighborhoods differ in proportion as a function of race and, if so, whether the pattern parallels that of other services used will be examined.

Policing as a Social Service

Miller and Hess (2004) provides a concise history that underscores why organized policing moved toward a community-policing model. In the late 1800s and early 1900s, the police in Boston, New York, and elsewhere along the eastern seaboard customarily provided housing in the cell blocks for newly arrived immigrants and staffed soup kitchens to feed them. As corruption and the political spoils system caused a reaction that produced calls for a more professional police officer detached from the community, law enforcement briefly moved away from its roots. A rejuvenation of the understanding by law enforcement and the community that there is a symbiosis that requires each to assist the other paved the way for police to protect neighborhoods like they did historically.

The commitment that the police make to their communities is often emblazoned on the side of marked patrol cars, "To Protect and Serve." Unfortunately, law enforcement officers sometimes forget the second half of that promise. With the advent of community policing principles, law enforcement is becoming reawakened to its meaning. Cordner (2000) notes that police authority ultimately is derived from the community obligation to obey agreed-upon rules. The law, and by extension, those who enforce it, serve the public's interests. Again, police perform a social service.

In the process of performing a social service, law enforcement officers are also making neighborhoods safer. By assuring neighborhoods that streetlights will quickly be fixed, abandoned buildings will be condemned, and junk and trash in the streets will not be tolerated, the police are addressing community concerns that relate little, if at all, to criminal violations;

they are helping improve the quality of people's lives by addressing myriad problems that undermine that quality. Although many officers may object to being characterized as "social workers," the array of services provided broadens constantly (Bjerregard & Lord, 2004; Schafer, Huebner, & Bynum, 2003; Wells, Horney, & Maguire 2005). Indeed, these studies have shown that as little as 20 percent of patrol officers' time is spent in actual law enforcement.

Disproportionate Utilization of Social Services by Minorities

The utilization of (other) social services is not evenly divided across society. This monograph now turns to the disproportionate minority rates for other public-sector services such as special education and various public assistance programs, such as Food Stamps, Women, Infants, and Children (WIC) programming; Temporary Assistance to Needy Families (TANF) funds; and others.

Special education service utilization is theoretically available to all school-age children and referrals for those services are more likely to be made by school personnel than by families. Therefore, special education services also provide a useful analog to police service utilization

Serna, Forness, and Nielson (1998) and Valles (1998) used a qualitative evaluation of disproportionate minority representation in special education. Both studies take the disproportionate participation rates for minorities as a given and discuss how bilingual classes and social competence, resiliency, and self-determined skill instruction can be used to assist special education students.

The U.S. Department of Agriculture monitors food stamp benefits in a manner that include the recipients' demographics. The Department's report (U.S. Department of Agriculture, 2003) for the 2002 fiscal year indicates that whites constitute 41.6%; blacks, 34.9%; Hispanics, 18.2%; Asians, 2.8%; and Native Americans, 1.6% of the population of people using food stamps. In the 2000 general population census, whites made up 69.1%, followed by Hispanics, 12.5%; blacks, 12.3%; Asians, 4.2%; and Native American, 1.8%. A glance at the data permits the observation that blacks (34.9% v. 12.3%) and Hispanics (18.2% v. 12.5%) are overrepresented on food stamp rolls, whereas whites (41.6% v. 69.1%) and Asians (2.8% v. 4.2%) are underrepresented, and Native Americans (1.6% v. 1.8%) are proportionately represented.

The WIC program is a special supplemental nutrition program that is provided to needy families usually in conjunction with other social service benefits. The program's executive summary, developed by Kresge (2003), examines patterns and monetary restrictions that are placed on participants. The racial characteristics of WIC participants in 2002 were whites, 35.9%; Hispanics, 38.1%; blacks, 20.2%; and other, 5.9%. If "other" includes Asians and Native Americans, then they are proportionately represented, whites are underrepresented, and blacks and Hispanics are overrepresented.

The TANF is a cash assistance program for needy families. Because of the difficulty in obtaining national figures on TANF demographics, a report from the Texas Department of Human Services (Schexnayder, *et al.*, 2002) regarding TANF distribution within Texas is used. Thus, it is necessary to use the demographics of the population of concern. Texas has a population of 53.1% white, 11.6% Black, 32% Hispanic, and 3.3% other (U.S. Department of Commerce, 2001). Of the applications filed for TANF support in Texas in 1999, whites made up 24.9% of the approved caseload, followed by 29.6% blacks, 44.7% Hispanics, and 0.9% other were 0.9%. This indicates that whites (53.1% v. 24.9%) and other (3.3% v. 0.9%) were underrepresented, and blacks (11.6% v. 29.6%) and Hispanics (32% v. 44.7%) were overrepresented.

Each of the previously-described social services involves an over-utilization by minorities. This phenomenon is a robust one that is simply accepted as fact, even if there may be little acceptance of any particular explanation. In light of these findings and a host of others that show minorities do not access services in the same way or at the same rates as their non-minority counterparts, the question arises, "Why expect that minority utilization of police services to be different from their use of other social services?"

Data for Comparison

The data for this project are taken from the Houston fire, EMS, and police departments for the year 2002. This was the most recent, complete data available at the commencement of the study. Census tract data was purchased from the United States Census Bureau.

Pursuant to the terms of a joint agreement between the Houston Police Department and Sam Houston State University, Dr. Larry Hoover, the liaison between the department and the university, requested data

directly from the police department. The Houston Police Department sent their data in an Access database indicating where the calls for service originated and the address and beat number of those particular calls. Knowing where the calls for service originated and using census tract data to determine the racial composition of that area, it was possible to determine service utilization rates by race density.

Leipnik³ completed an analysis of police officer density for the Houston Police Department's police districts. That analysis and the data underlying it form the basis of comparisons of police staffing patterns as a function of concentrations of calls for service. Because the latter data are aggregated according to patrol district, as opposed to census tracts, direct comparison with the other measures used in this study is not possible. Instead, these data are used simply to assess whether, as assumed by the conceptual framework of this study, the police disproportionately are (i.e., have been assigned) where they are called.

To assist in the research, the Texas Research Institute for Environmental Studies (TRIES) was contacted. As TRIES observes, maps, and records population trends, this institute proved invaluable in merging data from various sources and geocoding that data.

Data were obtained from the public information officer for the city of Houston containing Houston's fire and EMS calls for service during 2002. The database contained addresses of calls for service that allowed a comparison of a community's service utilization of Fire and EMS to be made with that community's service utilization of the police department.

The data were provided in a format conducive to input into both Arcview Geographic Information System (ARCGIS 9.0)⁴ and other available statistical software packages. All statistical analyses were performed through the Statistical Package for Social Sciences (SPSS) which is then used to create graphs and charts. All geographic tables and figures were made using ARCGIS.

Data from the 2000 census contain two pieces of information that are especially useful to this research.

On a census tract level,⁵ the software purchased from the census bureau contained information on all of the questions asked in the long form of the census. The census survey asks, among other things, whether anyone in the household is receiving any form of public assistance and the answer to that question was used to determine the neighborhood density of public assistance use. The racial demographics of each census tract are also included in the census data.

The underlying research hypothesis is that people who use one type of social service are more likely to use others that are available. Although this phenomenon probably relates to social and psychological factors, a full exploration of these is beyond the scope of this research. The purpose of this project is to demonstrate whether there is a correlation between use of public assistance as a proxy for social service use more broadly and calls for service to fire, EMS, and police departments.

To determine whether there is a correlation between public assistance and calls for service, the 2000 census data and 2002 calls for service to the city of Houston's fire, EMS, and police departments are compared. First, all information is geocoded into census tracts. To accomplish this, TRIES located and placed 794 census tracts for the city of Houston in ARCGIS. Then the calls for service to the fire and the police departments were overlaid on a map of Houston containing the census data.

HYPOTHESES

The purpose of this study is to determine whether: (a) minorities disproportionately utilize police services, and (b) if such a pattern exists, is consistent with the over-utilization of fire services and social services. Because fire and emergency medical services are parallel to police services in their availability, the rates at which minorities access them will be compared to minority calls for police service. Keeping these factors in mind, this research seeks to explore whether: (a) census tracts containing persons who use other social services are significantly more likely to call the police for assistance than citizens who do not use other social services, (b) minorities are overrepresented in the census tracts with the highest utilization of other social services and police services, and (3) minorities are

³Leipnik conducted the GIS analysis for Hoover (2003) which included a police density breakdown for police districts in Houston for January through September of 2002.

⁴The Geographic Information System employed by Sam Houston State University's Geography Department and TRIES.

⁵Census tracts usually have populations between 2,500 and 4,000. In Houston, there are 794 census tracts that range from fewer than 30 people to more than 10,000.

overrepresented in the census tracts with the highest utilization rates of fire and EMS services.

The first and second questions seek to determine if minority calls for service to the police are similar to minority use of other social services. There may be various explanations for the disproportionate use of social services by minorities. Most place the need for a social service on the minority groups rather than the service. In other words, most minorities who use social services do so because they need the service. The police, however, are viewed as initiating the disproportionate contact. If the problem is that police services are being pushed onto an unwilling community, then it should stand to reason that the pattern for rates of police calls for service would be substantially different than the pattern of utilization rates of public assistance that are pulled into communities by residents.

If minorities use police services at the same rate as other social services and they are statistically similar to the rate at which they call for fire service, it is not unreasonable to conclude that police are in minority communities because they are called for assistance and the community members want them to be available.

Statistical Analysis

There are two distinct analyses that must be undertaken in order to test the hypotheses and these depend on knowing the percentage of minorities in each census tract as well as the total percentage of minorities citywide. First, the number of calls for police service will be compared to the utilization rates of other social services per census tract. The latter will be measured by the response to the census survey.

Second, fire, EMS, and police service rates as a function of minority density of census tracts are compared. If no statistically significant difference exists among utilization rates of these services and the use of public assistance, one can conclude that at least some of the disproportionate minority contact with the police is due to similar factors that result in disproportionate minority contact with other social services.

Variables

Four variables—calls for service to the police, calls for service to fire department, calls for service to EMS (EMS), and use of public assistance (SS)—are evaluated. The calls for service are taken directly from the databases provided by the various departments in the City of Houston. The use of public assistance is taken from the census form that asks if any member of the household is using public assistance.

The four variables are evaluated on the basis of their distribution relative to the demographic composition of the census tracts. The census tracts were separated by percentage of minority residents, with the combined number of black and Hispanic residents determining the minority populations. Some tracts had as low as a 1% minority population whereas others were as high as 98%.

In Table 1, minority densities are separated into 0-10%, 11-20%, up to 91-100%. This separation provides 10 rows of differentiation for the four variable columns. The researcher requested that TRIES also combine the variables based on income level to permit a comparison and percentage of minority population; however, the data source would not allow this breakdown.

Table 1: Data Overview on Minority Density as it Relates to Rates of Utilization

MinorityDensity	Police	TopPolice	MinPolice	Fire	TopFire	MinFire	EMS	TopEMS	MinEMS	SS	TopSS	MinSS
0--10	3198	13917	2	491	1742	0	472	1050	0	19	101	0
11--20	4409	15667	1	984	9193	0	908	4955	0	31	120	0
21--30	4536	105385	1	451	3308	0	659	2421	0	27	126	0
31--40	4581	21097	1	634	2910	0	959	5121	0	55	168	0
41--50	2973	9392	1	337	1216	0	511	1933	0	60	209	0
51--60	4942	23719	3	634	2842	0	1084	5599	0	89	230	0
61--70	4613	15454	12	648	1668	0	1025	2753	0	146	392	0
71--80	4850	9156	106	717	1420	4	1175	2321	8	137	304	0
81--90	6977	15840	178	1013	1543	39	1808	3233	61	246	513	0
91--100	6139	10357	1914	1183	1646	305	1897	2823	446	245	724	0

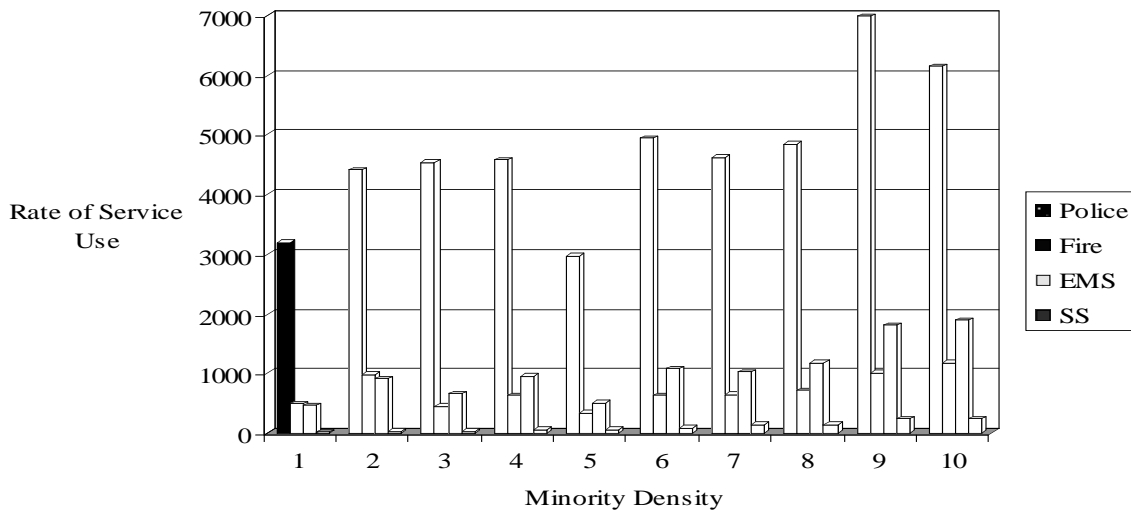


Figure 1: Graphic Representations of Variables.

Behind each variable’s column are two columns that relate to that variable. Behind the column for “Police” are “TopPolice” and “MinPolice.” These columns indicate the highest and lowest rates found in a census tract that is within the minority density grouping and the lowest rate found in the density grouping. Within the row designated 21-30% density, there was a census tract with a highest rate of 105,358 and a census tract with a lowest rate of 2. As is apparent from viewing Table 1, some tracts had a rate of 0. There were no indications of calls for service or use of public assistance in any of the census tracts in some of the minority density rows, thus, these yielded a rate of 0.

Calculating Rates

Because census tracts varied in population size, the use of rates was determined to be an effective method of comparing tracts. Following an example of the *Uniform Crime Reports (UCR)*, a rate was calculated for each variable in each census tract. As noted earlier, there are 794 census tracts in Houston ranging in population from 1 to 25, 635. Although census tracts generally have populations ranging from 4,000 to 5,000, 20% of Houston’s had a population of 10,000 or greater.

The Federal Bureau of Investigation (FBI) calculates the crime rate reported in the *UCR* for each jurisdiction. The method of calculation is to take the number of reported crimes divided by the population of the jurisdiction furnishing the reports and then multiply by 100,000. This provides a crime rate and allows cities of varied sizes to compare crime in both their jurisdiction and others. This concept is used in establishing a rate for each of the variables.

For purposes of comparison in the present research, a similar method of calculating rates is used. By taking calls for service to police, fire, and EMS and the number of households reporting use of public assistance in each census tract, dividing it by the population of that census tract and multiplying times 10,000⁶, a rate emerges that is both a whole number and will allow comparison among census tracts. When the equation is complete, the rate numbers are rounded and only whole numbers are used.

Creation of Figures and Tables

To provide an immediate glimpse of the data, Figure 1 was created using SPSS software. The bar graph indicates an apparent trend in the increase of each variable moving from lesser density to greater density of minority residents.

As shown in Figure 2, a linear graph was created from the data table which shows clear pattern of use among all of the variables as they relate to minority population density. The lines for each variable all have a positive slope and seem to covary together. This demonstrates that a correlation among the variables is likely. With the line graph indicating an apparent correlation, the data were analyzed using SPSS.

Two statistical analyses were conducted. Just as the line graph indicates, the correlations among the variables were significant. Table 2 shows a very strong correlation among all of the variables. For police and

⁶10,000 is used rather than 100,000 because some rates became seven-digit figures and proved unwieldy. The present system for creating the rates proved effective.

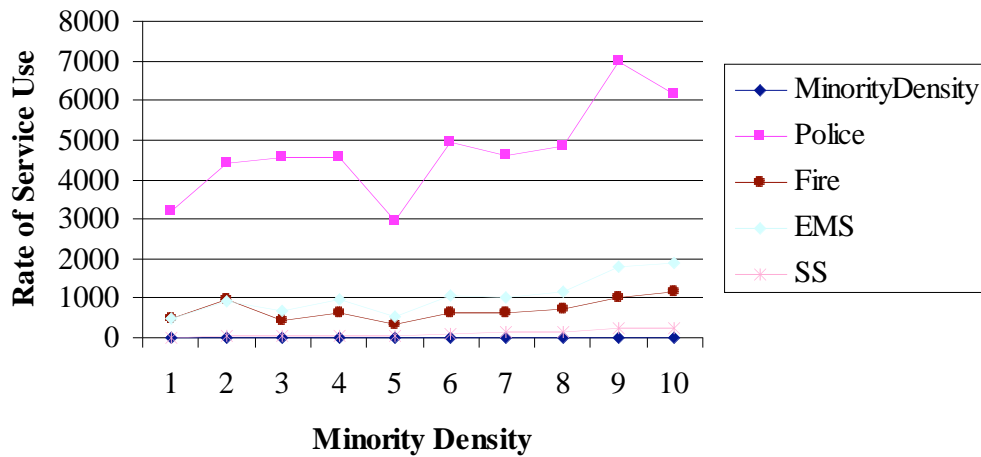


Figure 2: Linear Representation of Variables.

Table 2: Correlation of Variables

Variables	Police	Fire	EMS	SS
Police		.795**	.943**	.838**
Fire			.869**	.706*
EMS				.930**
SS				

**Correlation is significant at the 0.01 level (2-tailed).
 *Correlation is significant at the 0.05 level (2-tailed).

public assistance, the correlation coefficient of .838 (p=.002) is high.

All of the correlations are significant at the p<. 01 level except the correlation between fire and public assistance. However, the correlation coefficient of .706 for fire and public assistance is significant at the .023 level which does satisfy the p<.05 criterion.

Because the relationship between minority utilization of police service and public assistance is at the heart of the research, a regression model of those variables was created. The model indicates that a relationship exists and it is positive and significant.

Table 3 reports a regression model that regresses the police service utilization variable onto the public assistance variable. The model seeks to determine whether one could predict calls for service to police in a

census tract if that person is aware of the rates of use of public assistance.

The ability of one variable to account for movement in the other variable is expressed by R². The initial computation of R is the first step in providing a basis for determining a level of significance in the predictive ability of one variable, use of public assistance, to predict the positive or negative movement of the other variable, calls for service to police. An adjusted R² is determined by squaring R and providing an adjustment of predictive ability based on movement by the variables. Babbie (2010) considers a correlation higher than 0.6 to be very strong and higher than .7 to be excellent. In the present analysis, an R² of .702 and an adjusted R² of .665 indicates very strong predictive ability. In proportional terms, two-thirds of the movement in calls for service to police in the model can

Table 3: Regression Model (Police as the Dependent Variable and Public Assistance as the Independent Variable)

Variables	B	SE B	Beta	T	Sig
Constant	3494.392	356.456		9.803	.001
SS*	11.634	2.678	.838	4.345	.002

R² = .702, adjusted R² = .665.

Table 4: Regression Model (Fire as the DV and Public Assistance as the IV)

Variables	B	SE B	Beta	T	Sig
Constant	473.635	105.559		4.487	.002
SS ⁷	2.233	.793	.706	2.816	.023

⁷R² = .489, adjusted R² = .435.

Table 5: Regression Model (EMS as the DV and Public Assistance as the IV)

Variables	B	SE B	Beta	T	Sig
Constant	493.802	97.766		5.051	.001
SS ⁷	5.270	.734	.930	7.176	.001

⁷R² = .866, adjusted R² = .849.

be accounted for by use of public assistance. In social science this figure is remarkably high (Hagan, 2000).

The regression model allows the linear exploration of the relationships among variables. Whereas R² indicates the level of predictive ability of one variable to another, the regression formula calculates the direction and amount of change.

When public assistance changes one unit⁷, the calls for service to police will increase 11.634. The model demonstrates a correlation between the calls for service to police and use of public assistance that is positive. They vary together in the same direction.

With the high correlation among the four variables and the regression model demonstrating a strong, significant correlation between police service utilization rates and public assistance utilization rates, it is reasonable to predict that a regression model using calls for service to fire and calls for service to EMS as the dependent variables and public assistance as the independent variable should yield similar results.

As predicted, the model in Table 4 indicates that public assistance is a predictor of calls for fire service. Although it does not appear to be as strong a predictor as it was for police calls for service, it accounts for more than 40% of the variance in calls for service from the fire department and is significant.

Table 5 presents the data from an analysis with EMS service calls as the dependent variable and indicates that the independent variable of public

assistance explains more than 80% of the variance in calls for EMS. Both tables are consistent with the anticipated predictive value of public assistance to utilization of other social services.

A correlation between police density and calls for service in Houston's police beats was conducted to determine if there was a significant relationship. Using Leipnik's calculation of police density and drawing on data from the original raw data of calls for service obtained from the Houston Police Department a Pearson's Correlation analysis was conducted using SPSS software. As expected, there is a strong correlation between calls for service to the police and density of police in a particular district.

FINDINGS

The tables, figures, and statistical evaluations all indicate that there are strong correlations among calls for service to police, calls for service to fire, calls for service to EMS, and use of public assistance. There is also a strong correlation between calls for service and police density in a beat.

As predicted, the analyses presented in Tables 4 and 5 converge with the analyses presented in Table 3. The relationship of other social services, in this case calls for service to fire and calls for service to EMS follows the same pattern as the calls for service to police. It appears that use of public assistance is an indicator of use of other social services and the predictive value is high and significant.

Figure 2 visually represents the data in support of the fourth hypothesis. The line graph provides an indication that all of the social services are correlated. Pearson's r, evaluated in Table 2, provides strong

⁷Units are expressed in rate of calls for service and rate of utilization of public assistance.

Table 6: Correlation between Police Density and Calls For Service

Variables	Calls for Service	Police Density
Calls for Service		.826*
Police Density		

*Correlation is significant at the .001 level (2-tailed test of significance).

statistical support for the visual evidence. The regression model in Table 3 indicates that two-thirds of the movement in calls for service to police is explained by use of public assistance and the relationship is positive. The visual evidence of the graphs is supported by the statistical analysis. The use of public assistance is an excellent predictor of minority utilization in the remaining three social services (police, fire, and EMS).

Table 3 shows a positive slope that is supported by the regression model which indicates a high predictive value between the use of public assistance and calls for service to police. This model yields a positive slope with a high level of significance.

At the beginning of this research, there was a review of the literature that indicated two thoughts regarding racial profiling. The first was that the police are racist and are the enforcement arm of the economic and political elite. The second line of thought portrayed minorities as committing most of society's crimes, and the police as simply responding to differential criminality levels.

This research brought out a third possibility in explaining the disproportionate minority contact with the police. Census data provided demographic information for each census tract in the City of Houston, and an overlay of calls for service and other service variables allowed for direct comparison of several variables across census tracts. Consistent with contemporary views of policing as a social service, the data analysis revealed that police service utilization rates vary systematically with utilization rates of other services.

The data analysis confirmed that communities with a higher percentage of minorities tend to call the police, fire, and EMS for assistance at a greater rate than communities with a lower percentage of minorities. This research suggests that some substantial proportion of disproportionate minority contact with the police is a function of the police disproportionately being "pulled" into minority communities in much the same manner that minorities disproportionately consume other social

services. This view stands in sharp contrast to those suggesting the police are being foisted on an unwilling citizenry. As indicated in Table 6, police are assigned to patrol districts, at least in large part, based on the number of calls for service made by the residents of the district. As the number of calls for service increase, the number of officers assigned (as represented by officer density) also increases.

As indicated above, police departments allocate resources based on calls for service, which means more police officers are assigned to minority neighborhoods because of their utilization of police services. By extension, the police will make a disproportionate amount of minority contact because those neighborhoods pull the resources of the police departments and need police as a social service at a comparable rate to other social services. The research supports the premise that disproportionate minority contact by police is a social phenomenon that is similar to minority over-utilization of other social services.

Limitations

Caution should be exercised in attempting to generalize these findings in time and place. The data relate to one city in one state for one year. Importantly, the data also pertain only to one type of law enforcement agency, namely, a municipal police department.

Although the variables pertaining to calls for service are seemingly solid insofar as they fairly accurately reflect the phenomenon, the public assistance variable may be less useful. The categorical nature of the variable combined with its self-report nature render it less than optimal. Knowing more specifically what types of public assistance and in what amounts would be useful. Moreover, information about accessing specific other social services (i.e., involving social workers, mental health professionals, and the like) may be beneficial.

There is a wealth of research that indicates any research related to race will have some relationship to social and economic status (Branton and Jones, 2005;

Marks and Choi, 2002; McCall and Parker, 2005). As indicated above, the census data purchased did not contain the income levels of the people who lived in the census tracts. Social and economic status may prove to be an intervening variable that must be addressed before concrete results can be made. For purposes of this research, it is enough to note that few authors have been able to separate race from social and economic status and the two may be so intertwined that such a distinction may be pointless.

This research may help to harmonize the cacophony of arguments and diverse opinions related to such concepts as racial profiling, minority use of public assistance, police departments' resource allocation, and management issues related to disproportionate minority police contact. Further research is needed. The present research represents part of a journey—not the end of the road.

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