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MOTHERS AGAINST DRUNK DRIVING AND 
DRUNK-DRIVING LAWS, DRIVING-UNDER-THE-INFLUENCE 
ARRESTS AND ALCOHOL-RELATED TRAFFIC FATALITIES 

DISSERTATION 

Presented in Partial Fulfillment of the Requirements for the 
Degree Doctor of Philosophy in the 
Graduate School of The Ohio State University 

By 

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The Ohio State University 

2002 

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ABSTRACT

This study represents a social movement analysis. It is a study of the public policy outcomes of one crime victims' movement organization, Mothers Against Drunk Driving (MADD). A study of the effects of Mothers Against Drunk Driving has been neglected by the social work profession. This dissertation attempts to address this deficit by empirically examining how variation in size, length of presence, characteristics of state office executive directors, and state office collaborative activities are associated with the achievement of three MADD goals. The study answers three research questions:

1) Is there a significant association between MADD organizational characteristics/MADD state office collaboration activities and drunk-driving legislation controlling for environmental characteristics?  
2) Is there a significant association between MADD organizational characteristics/MADD state office collaboration activities and driving-under-the-influence arrests controlling for environmental characteristics?  
3) Is there a significant association between MADD organizational characteristics/MADD state office collaboration activities and alcohol-related traffic fatalities controlling for environmental characteristics?
The theoretical framework for the study is McCarthy and Zald's Resource Mobilization Theory. The study combines primary and secondary data to examine state level outcomes. A questionnaire sent to MADDs' 50 state office executive directors, which resulted in an overall response rate of 80 percent. Secondary state level data on income, alcohol sales tax, total drivers in force, drunk driving legislation, driving-under-the-influence arrests, and alcohol-related traffic fatalities were obtained from a variety of national data sets.

State-level analyses of the impact of MADD and state environmental control variables were conducted. Results from the multiple linear regression analysis suggest an association between two MADD organizational variables: 1) states in which MADD chapters have been around longer have a fewer number of alcohol-related traffic fatalities, and 2) greater collaboration activities with private corporations is reported in states where the Open Container law has been in existence for more years. No evidence was found suggesting that the size of MADD, or characteristics of MADD state office executive directors influenced drunk driving laws, driving-under-the-influence arrests, or alcohol-related traffic fatalities.

The results suggest that Mothers Against Drunk Driving can impact public policies outcomes.
To those victims whose lives have been affected by drunk driving
ACKNOWLEDGMENTS

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Most importantly, to my husband Bud, thank you for your support.
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FIELDS OF STUDY

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CHAPTER 1
INTRODUCTION

Statement of the Problem

The problem of violence is not new (Rencken, 1991). Traumatic events are a reality within American society (Freedy et al., 1994). As suggested by Koss and Harvey (1991) and Rosenberg and Fenley (1991), crime poses a significant threat to the nation's health. Motor vehicle crash injuries are a problem in the United States, with alcohol-related crashes being a substantial portion of this problem. Drinking alcohol may cause harm to individual drinkers, their families, and others in society. Although there may be long-term risks to personal health, the risk that excessive alcohol consumption causes to others on the road is immediate. Alcohol-related motor vehicle accidents impose substantial costs on various segments of society. These external threats provide the rationale for public intervention.

Impaired driving, also referred to as driving-under-the-influence is the most frequently committed violent crime in the United States (United States Department of

- one million people are injured in alcohol-related crashes (an automobile accident whereby drivers operate a motor vehicle while under the influence of alcohol) annually; every 33 minutes someone is killed in an alcohol-related auto crash
- 39 percent of the fatal crashes involve alcohol use
- for 1999 the total traffic fatalities were 41,611; the total alcohol-related traffic fatalities were 15,786
- in single-vehicle fatal crashes occurring on weekend nights in 1998, 72.3 percent of the fatally injured drivers 25 years old or older were intoxicated, as compared with 57.7 percent of drivers under the age of 25
- in 1998, 29 percent of all fatal crashes during the week were alcohol-related, compared to 52 percent on weekends
- it is estimated that 2.6 million drunk-driving crashes each year victimize 4 million innocent people who are injured or have their vehicles damaged
- male drivers involved in fatal crashes were nearly twice as likely to have been intoxicated (21.8%) than were females (11.2%)
- men are four times more likely than women to drive after drinking

The National Highway Traffic Safety Administration (2002) reports the following statistics relative to driving-under-the-influence arrests and convictions:
• 1.4 million people were arrested in the United States for driving under the influence in 1997, which is more than all other reported criminal offenses except larceny and theft
• in 1997 an estimated 513,200 offenders were on probation or incarcerated within jails or prisons for driving while intoxicated by alcohol
• in 1997 persons ages 21 to 24 accounted for the largest number of driving-under-the-influence arrests per 100,000 drivers
• despite a two-percent decline in the national crime rate, the number of arrests for driving under the influence increased from 1.2 million in 1993 to 1.4 million in 1994; this is an arrest rate of one for every 127 licensed drivers in the United States
• in 1998, one out of nine intoxicated drivers in fatal crashes has had a prior driving-under-the-influence conviction within the past three years

Alcohol-related crashes are also costly to society. The following economic statistics are described by the National Highway Traffic Safety Administration (2002):

• alcohol-related crashes cost society $45 billion, yet this estimate does not include pain, suffering, and lost quality of life
• medical costs for 1993 traffic crash injuries were approximately $22 billion and the alcohol-related portion is estimated to have been $7 billion
• the cost for each injured survivor of an alcohol-related crash averages $67,000
• over 25 percent of the first-year medical costs for persons hospitalized as a result of a crash are paid by tax dollars, about two-thirds through Medicaid and one-third through Medicare
• alcohol-related crashes cost society $.95 per drink or $1.90 per ounce of alcohol consumed; this figure includes drinks consumed at home
• drunk-driving crashes costs innocent victims $26,000; comparable crime costs per victim are assault ($19,000), robbery ($13,000), and motor vehicle theft ($4,000); the drunk-driving crash is the only one of these crimes that is often not a felony for the first offense

The victims of alcohol-related traffic accidents and fatalities may be men or women, adults or children; they may be a parent, friend, spouse, or co-victim (Bard & Sangrey, 1986). With criminal and violent interactions, all members of society too become victims (Casarez-Levison, 1992). Furthermore, Herman (1999) notes that most crimes have multiple victims and the victims rarely emerge unscathed either physically, emotionally, or both by the experience. The accumulated evidence consistently shows that the aftermath of crime produces adverse psychological effects within victims (Atkeson, Calhoun, Resick & Ellis, 1982; Frieze, Hymer & Greenberg, 1987; Kahn, 1984; Kilpatrick et al., 1985; Burman et al., 1988). Numerous studies show acute, short-term, intermediate, and long-term effects on violent crime postvictimization recovery (Viano, 1977; Kilpatrick, Veronen & Resick, 1979; Ellis 1983; Kidd & Chayet 1984; Burt & Katz 1985; Kilpatrick et al., 1985; Frieze, Hymer & Greenberg, 1987; Brown,

Research also shows that being a crime victim generates strong often unexpected feelings and emotions (Viano, 1977). Furthermore, Viano (1977) contends that negative feelings common to all victims include fear, anger, guilt, and helplessness. As noted by Barkus (1978), feelings of guilt and shame are common among crime victims. As suggested by Kidd and Chayet (1984), crime victims commonly come to see themselves as helpless, vulnerable, and impotent. Victims have suffered a loss that leaves emotional and physical scars, most of all because of its unexpected nature (Viano, 1977). Victims typically report feeling as if they no longer possess a very basic sense of safety, predictability, and control over their lives (Viano, 1977).

Several mental health outcomes have been documented among victims following violent crimes, including Post-traumatic Stress Disorder, substance abuse, thoughts of suicide, and increased use of mental health services (Kilpatrick et al., 1985; Resnick et al., 1993).

Crime victims attempt to cope by taking a range of actions. Frieze and associates (1987) classified these actions as those taken alone (e.g., seeking retribution or restitution, and using self-protective measures) and those taken with assistance from others (e.g., friends, family, neighbors, health professionals, mental health professionals, clergy, and the criminal justice system). There is no evidence suggesting that one approach is more effective than the other.

Over the past 30 years, progress has been made toward recognizing and responding to the varied needs of crime victims. Today, all 50 states and the District of
Columbia have created crime victims' compensation agencies to reimburse victims of certain kinds of crimes (Herman, 1999). Also, over this same thirty-year period, the social services, health care, and private sector responses to crime victims have improved (Herman, 1999).

Purpose of the Study

The purpose of this dissertation is to study the public policy outcomes of social movements through an analysis of one particular social movement organization, Mothers Against Drunk Driving. Social movements sometimes fail, sometimes make marginal differences to public policies, and sometimes produce substantial social change. Social movement scholars have concentrated heavily on where social movements come from and who participates. There is a sprinkling of empirical research completed on “how” social movements actually produce social change. A few studies have investigated the relationship between social movement organization strategies and outcomes (Colby, 1982; Schumaker, 1975; Snyder & Kelly, 1976; McAdam, 1983; Wolfson, 1988; Gamson, 1990). Much of this research has focused on the efficacy of violence and non-violent strategies.

A lack of recent research on how social movement organizations produce change supports the need for a current investigation. This dissertation aims to address that gap. This study moves beyond the recognition that drunk driving is a problem in the United States, and that the anti-drinking and driving movement is led by aggrieved citizens. Rather than studying the impact of the social psychological strain experienced by
aggrieved drunk driving victims, this dissertation examines the characteristics of MADD and the state office collaboration activities used to generate public policy.

Significance of the Study

This study has academic as well as practical significance for social workers. There is an absence of scholarly attention to the issue of MADD’s organizational characteristics, and state office collaborative strategies relative to drunk-driving legislation, driving-under-the-influence arrests, and alcohol-related traffic fatalities. This dissertation fills the void by gaining insight into the collaborative strategies used by this particular crime victims’ organization to influence outcomes in the American political system. These findings are important to social movement leaders, supporters, and social scientists. In addition, this study is significant in that it can make a contribution to the drinking and driving literature.

Social work simultaneously embraces casework, community organization, social change, and research. Social work practice is broadly defined and allows for intervention at the micro (individual and/or group) and macro (organization and community) level (Netting, Kettner & McMurtry, 1997). The interconnectedness of micro and macro roles is the heart of social work practice (Netting, Kettner & McMurtry, 1997). It is as important for social workers to understand the nature of organizations, community, and public policy as it is to understand individual intervention. Moreover, the discipline of social work is committed to seeking social justice in concert with vulnerable and under-served populations, and macro practice skills are often necessary in confronting these inequalities (Netting, Kettner & McMurtry, 1997). Social workers who undertake
macro-level interventions engage in what is called “policy practice” (Jansson, 1994). Policy practice involves “efforts to influence the development, enactment, implementation, or assessment of social policies” (Jansson, 1994: 8).

Policy practice distinguishes social work practice from other helping professions such as psychology, psychiatry, and nursing (Jansson, 1994). Therefore, this study is significant in that it informs the social worker interested in policy practice how social problems are addressed by social movements. Much can be learned by studying the strategic practices of a social movement organization. In essence, this research will inform social work students and practitioners how social movement organizations may be able to engineer their own success.

This study is also crucial in the area of social work practice in that it may inform Mothers Against Drunk Driving about organizational characteristics and or state office collaboration strategies that are associated with a reduction in alcohol-related traffic fatalities. Hence, this information could contribute to MADD’s administrative strategies at the national and local levels. Furthermore, the findings from this study have important implications for other social movement organizations working toward social change in that it provides insight into what activities are associated with the attainment of goals.

Outline of the Study

Chapter Two provides a description of factors influencing the formation of the crime victims’ movement, historical development and social events that influence the formation of alcohol control policies and evolution of Mothers Against Drunk Driving.
Furthermore, Chapter Two reviews three categories of alcohol-control policies found within the United States.

Chapter Three presents the theoretical foundation for the study, including a review of the literature on theoretical approaches used by scholars for analyzing social movements. This chapter describes Resource Mobilization Theory along with previous research on social movements. Also introduced within this chapter are the three research questions this study proposes to answer.

Chapter Four presents a review of the research data and methodology. Included is a review of the research questions, hypothesis to be tested, variables of interest, and analytical procedures applied to test the hypothesis.

Chapter Five presents the research findings, which can be drawn from the analytic procedures conducted in Chapter Four.

Chapter Six discusses the findings, including comments regarding the limitations of the study.

Chapter Seven culminates the study by discussing recommendations for further study, policy implications, and implications for social work.
Chapter Two begins with a review of the social, historical, and political contexts that have contributed to the crime victims' movement in the United States. What follows is an explanation of the historical development of alcohol control policies in the United States. Furthermore, Chapter Two presents a chronology of the development and present status of Mothers Against Drunk Driving. Chapter Two concludes with a description of the three drunk-driving laws this study examines.

The Crime Victims Movement

Truly one-person can start a movement. Haynes and Mickelson (1991) contend that change is started by one person seeking to inspire the masses to take action. It is often assumed that individuals who are aggrieved by some state of affairs are most likely to organize in an attempt to ameliorate the problem. The assumption of the importance of grievances has occupied a prominent place in the founding motivations of social
movements. Many analysts believe that common grievances or feelings of “having been wronged” are necessary ingredients for the subsequent development of organized action (McCarthy, Wolfson, Baker & Mosakowski, 1988).

Carrington and Nicholson (1984) report that most “rights” movements in the United States are the result of discontent with the status quo. In the past 40 years advances in the causes of racial minorities, women, prisoners, disabled and other disadvantaged groups have reached near-revolutionary proportions. Many of these advances came about through the activities of those who were discontented with the system. It appears as if the crime victims’ movement is no different (Carrington & Nicholson, 1984).

The crime victims’ movement in the United States is a complex clustering of issues and ideologies. The exact date of the beginning of the victim’s movement is unclear (Carrington & Nicholson, 1984). Grass roots groups have played an important role in the crime victims’ movement. According to Young (1988), many crime victim activists are the surviving family members of crime victims. Former victims bring an understanding of what victimization entails, and they bring the motivation to make change in the laws, social policies, and social service programs (Young, 1988). Bard and Sangrey (1986) assert that the victims’ movement which began to gather momentum in the 1970’s was empowered not by criminologists or victimologists but by crime victims themselves. For example, while Edith and Phillip Surgan grieved over the murder of their daughter Helen, they launched the Crime Victims’ Assistance Organization, which eventually came to be known as Parents of Murdered Children. The Surgans lobbied a victim compensation bill through the New Mexico legislature, and through their work...
with the National Organization of Victim Assistance, they became role models for other victim activists across the country (Young, 1988).

The first grass-roots efforts to help crime victims were initiated in 1972, when feminists in Berkeley, California and Washington, D. C. set up rape crisis centers (Karmen, 1984). Some of the first crime victim advocates were also participants of the women’s movement (Young, 1988). According to Doerner and Lab (1995), reformers complained that the criminal justice system dealt with sexual assault victims as if they themselves were on trial. These women helped to establish rape crisis centers, shelters for battered women, 24-hour hotlines, counseling services for women and children, and escorts to accompany victims to hospital emergency rooms and police stations. In response to the stigma attached to many rape victims, the crime victim advocates organized protest events, speak-outs against rape, and marches to take back the night (Bard & Sangrey, 1986). Women were able to apply pressure that resulted in the development of local mechanisms for giving assistance to victims through police or prosecutor's offices in areas where no such help had existed (Bard & Sangrey, 1986). According to Karmen (1984), a rape task force set up by the National Organization for Women (NOW) helped make rape a significant social issue.

In addition to the role grass roots organizations have played in the crime victims' movement, there are numerous other historical, social and political landmarks representing the movements escalation, some of which include a convergence of factors such as: 1) increased public anxiety resulting from the rising crime rate; 2) formation of presidential task forces; 3) findings from federal crime victimization studies; 4) the civil
rights movement; 5) creation of the National Organization for Victim Assistance; and 6) federal constitutional reform and legislation.

The Rising Crime Rate

The level of crime in the United States began to increase in the 1960's and early 1970's. According to the Uniform Crime Report (2001), crime in the United States more than doubled from 1960 to 1980. In the early 1970's along with concerns over the Vietnam War, crime was the most important issue of the day (Doerner & Lab, 1995). During this time, presidential and local elections targeted the problem of law and order as a major concern. Discontent with the plight of victims and witnesses heightened during the same period that crime and violence were rising (Carrington & Nicholson, 1984).

The 1967 and 1982 Presidential Task Forces

In 1967, President Johnson appointed a commission to examine crime and the criminal justice system. Among the victim components of the final report were the beginnings of systematic victimization surveys, suggestions for the means of alleviating the pain and loss of victims, ideas for community programs aimed at providing victim services, and calls for involving victims further in the criminal justice system.

One suggestion made by the President's Commission (1967) was the establishment of methods for compensating crime victims for their losses. However, victim compensation did not originate with the commission. Victim compensation, or state payments made to the victims of crime, was first introduced in Great Britain in 1957 by Margery Fry (Forst & Hernon, 1985). Forst and Hernon (1985) note in their analysis...

In 1982, President Reagan created the Presidential Task Force on Victims of Crime to investigate the needs of victims. The task force was established under the chairmanship of Lois Haight Harrington, a former prosecutor from Alameda, California (Carrington & Nicholson, 1984). The task force was the first major federal effort to focus exclusively on crime victims. Some say the task force gave instant legitimacy to a struggling crime victims' movement (Doerner & Lab, 1995). Many of the identified problems were similar to those noted by the 1967 commission. The task force is most remembered by its recommendation to add to the Sixth Amendment of the Federal Constitution that “the victim” in every criminal prosecution shall have the right to be present and to be heard at all critical stages of judicial proceedings. Under Harrington's leadership, 68 other recommendations were suggested. Forty-five recommendations addressed components of the criminal justice system, including the police, prosecutors, and parole boards. The remainder focused upon hospitals, the ministry, the bar, the mental health community, and the private sector (Doerner & Lab, 1995). Some of these suggestions dealt with keeping victim and witness addresses confidential, establishing a privileged relationship between victims and counselors, requiring victim impact statements, enacting federal victim compensation regulations, sensitizing criminal justice personnel to victim issues, notifying victims of parole hearings and decisions, instituting victim counseling at hospitals, undertaking background checks for all school employees,
and developing mental health responses to victimization. However, as an advisory body, the task force did not have the authority to mandate these changes. While some recommendations have found their way into action, others lie dormant.

In 1984, Congress implemented one of the principal recommendations of the Presidential Task Force on victims of crime when it passed the Victims of Crime Act (VOCA). VOCA called for the creation of a Crime Victim’s Fund, which was derived from the collection of federal fines, forfeited bail bonds, and penalty assessments imposed on federal offenders (Young, 1988). In 1984, the federal government also enacted legislation that outlined compensation in instances where federal crimes were committed. This statute also provides for monetary assistance to states with compensation programs. By 1989, 45 states had enacted compensation statutes. Today all 50 states offer some form of victim compensation.

*Federal Crime Victimization Studies*

Findings from federal crime victimization studies also contributed to the development of the victims’ movement, as criminal justice officials came to realize that crime victims were dissatisfied with the court system. Specifically, the United States Department of Justice’s victimization studies found public confidence in law enforcement so low that two-thirds of all crimes were unreported, victims were disaffected with the leniency of sentences for criminals, and victims reported on the inconveniences associated with court proceedings, which resulted in one-third of the court cases being dismissed (Friedman, 1985).
Civil Rights and Civil Liberties

The primary focus of the civil rights movement has been the fight for racial equality. The main concern of civil liberties groups has been the extension of constitutional rights and due process guarantees to all persons, especially the poor and powerless. The greatest accomplishment of the civil rights movement in terms of crime victims has been in the area of racial violence (Karmen, 1984). Civil rights organizations have rallied to the defense of victims of violent attacks by groups such as the Ku Klux Klan and victims of police brutality. The civil liberties movement has assisted crime victims primarily by furthering police professionalism, and by extending guarantees of equal protection of the law to all persons (Karmen, 1984).

Creation of the National Organization of Victim Assistance

Beginning in the mid 1970’s, national organizations were beginning to emerge to work on the behalf of crime victims. In 1975 and 1976, social service providers and criminal justice personnel met in Fresno, California to create a National Organization for Victim Assistance (NOVA). NOVA is a private, nonprofit organization of victim and witness practitioners, criminal-justice professionals, researchers, former crime victims, and others who are committed to the recognition of victim rights (Bard & Sangrey, 1986). NOVA performs an essential service in that it sustains the front-line workers responsible for delivering services to crime victims (Bard & Sangrey, 1986; Carrington & Nicholson, 1984). Many of the grass roots victim assistance programs developed without structure or organization, and they were often staffed by volunteers who had little formal training. Many of these victim advocates were in need of a forum for professional growth, support,
information, and funding. NOVA provided this support system, along with a strong national voice for victims in public policy (Bard & Sangry, 1986; Carrington & Nicholson, 1984). Today, NOVA remains the most prominent private sector national organization working on behalf of crime victims.

Constitutional Reform and Legislation

A variety of legal reforms aimed at protecting and helping crime victims has appeared since the 1960’s. Generally, victims programs and legislation can be grouped into three broad categories: 1) programs that provide financial assistance for victims; 2) statutory provisions that focus on the “rights” of victims; and 3) programs and statutory provisions that specialize in protecting specific types of victims, such as battered women and physically abused children (Morgan, 1987).

In some instances states have passed what is known as a “Victim’s Bill of Rights.” These provisions outline the rights of the victim in a manner similar to those appearing in the United States Bill of Rights. In 1981, President Reagan proclaimed the week of April the 19th as “National Victim’s Rights Week.” Following the suggestion of the President, a number of states also have made similar proclamations (Carrington & Nicholson, 1984).

On October 12, 1982, the federal government passed the Omnibus Victim/Witness Protection Act, the first federal legislation to address victim and witness rights. The bill received bi-partisan support in both houses (Carrington & Nicholson, 1984). The Act states: “The congress finds and declares that: Without the cooperation of victims and witnesses the criminal justice system would cease to function; yet with few
exceptions these individuals are either too ignored by the criminal justice system, or simply used as tools to identify and punish offenders” (Carrington & Nicholson, 1984: 8).

For victims of federal crime the act provided the right of victims to supply impact statements to the court, freedom from intimidation by the offender, and the right to consultation about plea bargaining agreements (Doerner & Lab, 1995). According to Carrington and Nicholson (1984), the act was the single most important and comprehensive piece of federal legislation on behalf of crime victims to ever come out of Congress. While the legislation applied only to the federal court, it prompted several states to enact similar legislation.

Historical Development of Alcohol Control Policies

Numerous factors have contributed to the evolution of alcohol control policies. Ever since alcohol’s invention, excessive consumption has been a problem, causing social and medical harm (Sloan, Stout, Whetten-Goldstein & Liang, 1992).

Beginning with the settlement of Jamestown, Virginia, the American colonies adopted laws that were created to curb excessive drinking. With the invention of the automobile, public policy shifted away from drinking itself, to reducing alcohol-related traffic fatalities. Regulations of alcoholic beverage in the United States can be divided into three phases; regulation before national prohibition, prohibition, and post-prohibition (Cooperider, 1940).
Regulations Before National Prohibition

Colonists began to regulate alcohol not to reform social practices, but to outlaw drunkenness (Cherrington, 1920). Tavern restriction resembled English law, the goal being to prevent public disorder while providing for the accommodations of travelers. At the same time, Krout (1925) notes that local officials recognized the importance of distilling industries for the economy. Early laws prevented the selling of wine and distilled spirits to Native Americans, but permitted beer and malts sales (Cherrington, 1920). This restriction was withdrawn to enhance fur trading and land sales, but was eventually readopted as a method of social control over the American Indian (Cherrington, 1920). In 1681, Louis XIV of France issued a decree prohibiting the sale of intoxicating liquors in New France, which included Michigan, Illinois, Indiana, and Ohio (Krout, 1925).

State governments began to grant special licenses to innkeepers, conferring a monopoly on the sale of liquor in the licensee’s district (Cherrington, 1920). State legislators initially delegated licensing power to governors and county courts. As the colonies grew, it became more difficult for the governor to select licensees, so they were chosen by the local county courts. Initial licenses cost the innkeeper a small processing fee. As trade increased, the number of alcohol-selling establishments increased, resulting in increased license fees (Cherrington, 1920).

Eventually the primary purpose of the license system became generating revenue (Krout, 1925). Initially, there were no limits set on the number of local taverns within a jurisdiction by state legislators. Price fixing began as early as 1634 in Massachusetts, and was intended to prevent the inflated prices that resulted by placing a monopoly in the
hands of a few sellers (Sloan, Stout, Whetten-Goldstein & Liang, 1992). At one time statutes determined the quantity of liquor to be sold, and hosts could not serve liquor after 9:00 p.m. (Krout, 1925). By the 1700s, women began to receive licenses as widows were granted permission to run their husbands’ businesses (Sloan, Stout, Whetten-Goldstein & Liang, 1992).

The interaction between religion and alcohol has played a key role in the evolution of alcohol-control policies in the United States. As noted by Cherrington (1920), in 1753, the Methodist Church enacted recommendations of discipline for members who drank, and in 1787, the Quakers enacted a resolution that all members refrain from dealing in “the spirits.” In 1812, the Presbyterians agreed to restrict the use of intoxicating beverages (Sloan, Stout, Whetten-Goldstein & Liang, 1992). In 1928, the Methodist General Conference advised members to abandon the sale and manufacturing of liquor (Krout, 1925). Shortly thereafter, the Congregational Church and Baptist Church proclaimed that drinking alcohol was inconsistent with Christianity (Sloan, Stout, Whetten-Goldstein & Liang, 1992).

Americans’ concern with moral standards resulted in whole societies aimed at reforming morals. In 1808, the first temperance society was founded in New York by a group of businessmen, and in 1813, the first anti-alcohol society composed of men in high social standing was created (Krout, 1925). During the mid 1800s, a prohibition group known as the American Temperance Society, grew in influence, it’s goals being self-improvement, correcting conduct, and elevating moral standards by intellectual appeals (Cherrington, 1920). The society was also associated with the antislavery movement. Most of the temperance societies were located north of the Mason-Dixon
Line and the Ohio River. Temperance also became a popular intellectual movement in the 1830s; colleges such as Amherst, Dartmouth, Brown, Yale, Union, Kenyon, and Oberlin all had temperance organizations (Sloan, Stout, Whetten-Goldstein & Liang, 1992). These early anti-alcohol movements were effective; by 1855, 13 states were dry (Sloan, Stout, Whetten-Goldstein & Liang, 1992). With the emergence of the Civil War, membership in temperance groups declined, and most of the dry states with the exception of Maine, Kansas, and North Dakota repealed their anti-alcohol laws (Sloan, Stout, Whetten-Goldstein & Liang, 1992).

The women's suffrage movement also influenced alcohol-control policies in the United States. Between 1869 and 1893, three groups -- the National Prohibition Party, the Women's Christian Temperance Union, and the Anti-Saloon League wielded great influence over state legislators, in that 30 states enacted prohibition between 1907 and 1919 (Sloan, Stout, Whetten-Goldstein & Liang, 1992).

*Prohibition*

In 1917, President Wilson asked Congress to declare war. Included in the World War I bill was the Food Control Act, supposedly designed to save grain for the war effort. The act forbid the use of food to manufacture alcohol. In January of 1919, Congress proposed national prohibition, which resulted in 46 out of the 48 states ratifying the Eighth Amendment (Rhode Island and Connecticut did not ratify the amendment). In January of 1920, the manufacture, sale, transportation, import and export of alcohol were prohibited (Sloan, Stout, Whetten-Goldstein & Liang, 1992). The resulting period of prohibition enabled organized crime to flourish and enforcing prohibition proved
impossible for law enforcement officials due to the widespread demand for alcohol (Cherrington, 1920).

Auto manufacturers, threatened by the potential danger presented by drinking and driving, supported prohibition. For example, officials from Reo Motor Car Company believed that public drinking would make automobiles a menace on the highways (Sloan, Stout, Whetten-Goldstein & Liang, 1992). General Motors president, Alfred P. Slozinak, also supported prohibition. Slozinak believed prohibition increased efficiency and improved individual purchasing power (Sloan, Stout, Whetten-Goldstein & Liang, 1992). W.C. Durant, President of Durant Motors, criticized businessmen who supported bootleggers (Sloan, Stout, Whetten-Goldstein & Liang, 1992). In essence, the automobile industry viewed public drinking as a competitor.

During this period, several cases regarding the constitutionality of federal prohibition regulation were brought before the United States Supreme Court. The court was supportive of prohibition and upheld its constitutionality. However, by the late 1920s, the backlash against prohibition grew, and the ineffectiveness of the alcohol ban became apparent. Franklin D. Roosevelt's presidential Democratic platform included prohibition repeal. Before Roosevelt was sworn in as president, congress proposed the Twenty-first Amendment to the states, calling for repeal, and in December, 1933, national prohibition ended. However, a handful of states maintained prohibition for several years: Kansas until 1948, Oklahoma until 1957, and Mississippi until 1966 (Fosdick & Scott, 1933). Additionally, the Great Depression and the Roosevelt administration's New Deal legislation forced the federal government to seek new
revenue; taxing alcohol became a potential resource (Sloan, Stout, Whetten-Goldstein & Liang, 1992).

Post-Prohibition Regulation

In 1933, John D. Rockefeller Jr. commissioned a study of liquor control, and produced guiding principles from the study (Fosdick & Scott, 1933). The study recommended state monopoly over retail sales. The private license system was alternatively recommended. In adopting the framework of the Rockefeller Commission’s recommendations, each state enacted a unique combination of regulatory policies for the alcohol beverage industry. State legislators granted a wide range of discretion to state administrative agencies to ensure the goals of regulation. For the first time, proprietary action in the form of state liquor monopolies developed on a broad scale nationwide (Sloan, Stout, Whetten-Goldstein & Liang, 1992).

History of Mothers Against Drunk Driving

Mothers Against Drunk Drivers (renamed Mothers Against Drunk Driving in 1984) was founded in 1980 by Candi Lightner, whose thirteen-year-old-daughter, Cari, who was killed while walking along a bike path in Sacramento, California by an intoxicated driver. Ms. Lightner founded MADD when she became dissatisfied with the workings of the criminal justice system in her own case and in those of others victimized by drunk-driving accidents. She founded the social movement organization with her own funds, insurance money, and a loan from her father. With the help of volunteers, legislative aides, and the director of the District Attorney Association; legislators and
California Governor Jerry Brown voiced support for the mission of the grassroots organization.

MADD began with a small nucleus of volunteers and from this original group a Board of Directors was formed. Next, grant money was obtained from the American Council on Alcohol Problems, National Highway Traffic Safety Administration, and the Levy Foundation. With these resources, a direct mail solicitation was begun and chapters began to develop throughout the United States.

In 1991, MADD National purported that neither individual chapters nor the national organization was capable of being effective at the state level. As a result of this recognition, a mid-level structure of state offices began to emerge. MADD National believed this additional layer of administration was necessary to press for ratification within the individual states.

MADD's mission is fourfold: to stop drunk driving, to support the victims of drunk driving, to prevent underage drinking, and to reduce alcohol-related traffic fatalities to no more than 11,000 by the year 2005 (http://www.madd.org).

The strategies of MADD include focusing on public education whereby citizens are made aware of the dangers of driving while under the influence of alcohol, pressuring state legislatures to enact or “tighten-up” drunk-driving laws, offering advocacy services for drunk-driving victims, and counseling victims and their families (Mawby & Gill, 1987).

**MADD Milestones**

MADD’s website (http://www.madd.org) identifies several key milestones in the
formation of the organization. Listed in the table below are critical historical dates and

events for MADD.

<table>
<thead>
<tr>
<th>Year</th>
<th>Critical Historical Events</th>
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<tbody>
<tr>
<td>1980</td>
<td>Mothers Against Drunk Drivers is established in California.</td>
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<td>1982</td>
<td>MADD serves on Presidential (Reagan) Task Force on drunk driving.</td>
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<td>1983</td>
<td>A made-for-television movie about MADD results in the growth of MADD chapters.</td>
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<td>1984</td>
<td>Canada becomes the first country outside of the United States to charter a MADD affiliate. A direct mail campaign is started to raise funds for MADD’s mission.</td>
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<tr>
<td>1985</td>
<td>England and New Zealand charter MADD affiliates.</td>
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<td>1986</td>
<td>Victim Assistance Institutes are established to train volunteers on how to support victims of drunk driving. Project Red Ribbon is introduced as motorists pledge to drive safe and sober during the holiday season.</td>
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<td>1987</td>
<td>A National 1-800 hotline is created to provide victim support.</td>
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<td>1988</td>
<td>All fifty states have passed age 21 as the minimum legal drinking age.</td>
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<td>1989</td>
<td>First MADD National Youth Conference.</td>
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<td>1990</td>
<td>MADD files an amicus brief with the United States Supreme Court over the constitutionality of sobriety of checkpoints.</td>
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<td>1991</td>
<td>A MADD sponsored Gallup survey of public attitudes on drunk driving reveals that American cite drunk driving as the number one problem on the nation’s highways.</td>
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<td>1992</td>
<td>MADD develops and offers “tragic death” seminars to educate the clergy, funeral home directors, and allied professionals on the special needs drunk driving victims.</td>
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<td>1993</td>
<td>Fifth state passes a law lowering the legal blood limit from .10 to .08.</td>
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<td>1994</td>
<td>MADD releases results from the Gallup survey on drunk driving, which shows that the public is becoming less tolerant of drunk drivers, and more supportive of stiffer penalties.</td>
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<td>1995</td>
<td>MADD begin holding public policy institutes to train state office employees in legislative how-to-techniques.</td>
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<tr>
<td>1996</td>
<td>MADD launches an online presence at <a href="http://www.madd.org">http://www.madd.org</a>. MADD begin to focus on underage drinking, and pilots six Youth in Action sites.</td>
</tr>
<tr>
<td>1997</td>
<td>DRIVEN magazine is launched.</td>
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<tr>
<td>1998</td>
<td>MADD commemorates the tenth anniversary of the Kentucky Bus Crash, the deadliest drunk driving crash in U.S. history killing twenty-seven.</td>
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<tr>
<td>1999</td>
<td>The MADD National Board of Directors votes to change the organization’s mission to include the prevention of underage drinking.</td>
</tr>
<tr>
<td>2000</td>
<td>MADD kicks-off its 20th anniversary years with campaign honoring MADD volunteers every day.</td>
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Table 2.1 Historical Development of Mothers Against Drunk Driving
Many of the social and historical factors (e.g., the rising crime rate, participation with presidential task forces and victims feeling dissatisfied with the criminal justice system) that contributed to the development of the crime victims movement in general also appear to have influenced the formation of Mothers Against Drunk Driving. As the strategies of MADD developed between 1980 and 2000, critical national and state alcohol control policies began to emerge. For example, in 1982, congress establishes the first National Drunk and Drugged Driving Awareness Week. In 1984, the Federal “21” minimum drinking age bill is enacted. By 1988, all fifty states have passed age 21 as the minimum legal drinking age. In 1990, the United States Supreme Court rules in favor of sobriety checkpoints. In 1991, the Transportation Employee Testing Safety Act passes, requiring alcohol as well as drug testing of transportation employees in safety-sensitive jobs; including random, pre-employment and post-crash testing. Release of the 1993 Fatal Accident Reporting System statistics revealed that alcohol-related traffic deaths dropped the previous year to a thirty year low; the National Highway Traffic Safety Administration credits MADD along with tougher laws. In 1998, the United States Senate overwhelmingly passes federal .08 bill.

Today Mothers Against Drunk Driving is the leading grass roots activist organization addressing impaired driving, and the largest victim assistance organization in the country (http://www.madd.org). At the present time MADD is involved with a myriad of legislative issues. It is beyond the scope of this dissertation to analyze the influence of MADD on each legislative issue and goal. Following consultation with MADD National, three organizational goals were selected for analysis: 1) the passage of drinking and driving legislation; 2) the reduction in driving-under-the-influence arrests;
and 3) the reduction in alcohol-related traffic fatalities. The three types of drinking and
driving legislation included in the analysis are .08 BAC Illegal Per Se law, Open
Container law, and Administrative License Revocation law. Each of the three laws is
described below. It was decided not to focus on the prevention of under-age drinking and
services to crime victims due to a lack of quantifiable data for these activities.

The .08 BAC Illegal Per Se level law states that it is illegal per se to drive a
motor vehicle with a blood alcohol concentration (BAC) at or above the .08 level.

The Open Container law prohibits both possession of any open alcoholic beverage
container and consumption of any alcoholic beverage, including the passenger area of
any motor vehicle.

The Administrative License Revocation law is based on objective chemical tests
(blood, breath, or urine) similar to “illegal per se” criminal law against impaired driving.
Administrative license revocation allows police and driver-licensing agencies the
authority to revoke a driver’s license while waiting for a trial, and protects the offender’s
right of due process through an appeal system. Administrative License Revocation laws
automatically suspend the driver’s license for failing or refusing to complete a Blood
Alcohol Concentration test.

*Categories of Drinking and Driving Legislation*

Drinking and driving legislation can be defined in a number of ways. A narrow
definition would include those laws directly related to the criminal offense of driving
under the influence of alcohol. A more comprehensive definition would include
legislation that governs the service of alcohol, laws that address open containers in
automobiles, mandatory seat belt legislation, and restrictions on the availability of alcohol. Drunk-driving legislation also can include laws governing alcohol tax and alcohol advertising. United States policymakers have typically adopted three types of policies aimed at reducing drinking and driving: deterrence policies (criminal types of laws), alcohol control policies (administrative types of laws), and tort laws.

Deterrence laws such as administrative license revocation and blood alcohol content laws are attempts to deter drunk driving. Deterrence policies increase the price or cost of drunk driving because the cost depends on the probability of arrest, conviction, and punishment. Deterrence that results from imposing penalties is thought to be greater when there is: 1) a higher perceived probability of apprehension, prosecution, conviction and punishment and 2) a more severe, and certain punishment that is quickly administered (Ross, 1984). The traffic law system serves to create and maintain deterrent threats to control drinking and driving through the process of, law generation, law enforcement, adjudication, and sanctioning (Liban, Vingilis & Blefgen, 1987). Indiana became the first state to enact a motor-vehicle statute incorporating a specific blood-alcohol concentration (Ross, 1984). Initial blood-alcohol concentration laws were set at a high concentration of 0.15 percent (Ross, 1984). Enactment of similar laws by other states followed. By the end of 1963, 39 states and the District of Columbia had incorporated such provisions (Ross, 1984).

Alcohol control administrative policies such as taxation, minimum drinking ages, public education, and alcohol advertising laws, attempt to reduce drunk driving by controlling alcohol consumption. Alcohol-control policies change the price of the drinking activity by increasing the cost of alcohol. Public health education programs

28
attempt to influence the perceived health costs. Minimum legal drinking age policies create extra costs for the underage individual. Statutes governing alcohol consumption have one of three goals: 1) to control the availability and consumption of alcohol; 2) to regulate business practices affecting the distribution and sale of alcoholic beverages; and 3) to raise revenue (Sloan, Stout, Whetten-Goldstein & Liang, 1992). By controlling availability and price of alcohol, the government aims to protect citizens from alcohol-related accidents and deaths, thereby mitigating social costs resulting from excessive consumption, including drunk driving, alcohol-related diseases, property damage, industrial accidents, and disturbances of the peace. With these administrative policies, the availability and regulation of business practices are controlled by restricting market entry of commercial sellers of alcoholic beverages and promulgating rules by which sellers must abide. Revenue is raised by taxing alcohol consumption and distribution, as well as through licensing fees. In 1999, state governments raised a total of 4.8 billion in revenue from alcohol sales taxes (United States Bureau of the Census, 2001).

Tort laws, the third category of drunk driving policies in the United States aim to make the servers of alcohol more cautious (Saffer, Grossman & Cahlpupka, 1998). Tort law is derived from a system of common law and statutes aimed to deter injuries, compensate injury to victims, and provide orderly redress of wrongdoings (Sloan, Stout, Whetten-Goldstein & Liang, 1992). A tort is any wrongful act, other than breach of contract, for which a private person may bring a lawsuit (Sloan, Stout, Whetten-Goldstein & Liang, 1992). Tort law has been imposed on consumers, sellers, and noncommercial servers.

Chapter Two describes the historical, social and political factors that have
contributed to the formation of the crime victims' movement. The important role of grassroots organizations as one component of the crime victims' movement is discussed, in addition to the influences from the rising crime rate, formation of presidential task forces, findings from federal crime victimization studies, the civil rights movement, creation of the National Organization for Victim Assistance, and Federal Constitutional reform and legislation. Furthermore, this chapter reviews factors that influence the formation of alcohol-control policies. Chapter Two also summarizes the historical developments of Mothers Against Drunk Driving. Chapter Two concludes by describing the three drinking and driving laws to be studied in this dissertation and summarizes three categories of drinking and driving legislation commonly found within the United States.
CHAPTER 3
REVIEW OF THE SOCIAL MOVEMENT LITERATURE

Chapter Three presents the theoretical foundation for the study. Found within is a review of the literature on theoretical approaches used by scholars for analyzing social movements. Included is a description of four classical social movement theories, and McCarthy and Zald's Resource Mobilization Theory. Chapter Three also contains a review of past empirical research on social movements. Lastly, the three research questions this study proposes to answer are introduced.

Theoretical Frameworks for Analyzing Social Movements

Social movements have been influential in a number of social transformations in American history. Because social movements are complex events there is no single definition that is relied on by everyone; however, it is helpful to look at those provided in three classic studies. McCarthy and Zald (1977: 1217-1218) define a social movement as "a set of opinions, and beliefs in a population that represents preferences for changing some elements of the social structure and/or reward distribution of a society." For Tilly (1984: 305), social movement is defined as a "sustained interaction between a specific set
of authorities and various spokesperson for a given challenge to those authorities.”

Blumer (1969: 10) defines social movements as “collective enterprises to establish new
order of life.” These classic definitions capture what is central in any conception of
social movements: group behavior directed in a concerted way to bring about social
change. Social movements are voluntary collectives that people support in order to
facilitate change in society. According to McAdam (1982), all social movements pose a
threat to existing institutional arrangements in society, and what marks social movements
as “threatening” is their challenge to the established structure of polity membership.
McAdam (1982) suggests social movements embody a demand for more influence in
political decision making.

A social movement organization is an organization that identifies its goals with
the preferences of a social movement or a counter movement and attempts to implement
those goals. Social movements are typically represented by more than one social
movement organization. Each social movement organization has a set of target goals, a
set of preferred changes toward which it claims to be working. Such goals may be broad
or narrow. These goals, which may be broad or narrow are the characteristics of the
social movement organization that link them conceptually with the particular social
movement.

There have been a myriad of social movements in the United States that have
played important roles in shaping various aspects of American society. Some of these
movements include civil rights, anti-war, woman’s, welfare mothers, physically disabled,
environmental, farm workers, gay rights, and crime victims. Some movements focus on
affecting legal and political changes, while others are devoted to changing the values of
individuals. Furthermore, social movements range from radical and all-embracing movements aimed at totally altering the social structure of society to specifically focused reform.

In the past, social movement scholars have studied three broad approaches in analyzing the emergence and activity of movements: 1) the structure of political opportunities; 2) framing processes; and 3) mobilizing structures. These three factors are discussed below.

Social movement scholars have affirmed the significance of the broader political system in structuring opportunities for collective action. The theoretical influences underpinning the link between politics and social movements in the United States include the work of Tilly (1978), McAdam (1982), and Tarrow (1983). These scholars explain the emergence of a particular social movement on the basis of changes in the institutional structure or informal power relations of a given political system. European scholars Kriesi (1989), Kriesi, Koopmans, Duyvendak and Giugni (1992), and Joppke (1991) have sought to account for the cross-national differences in the structure, extent, and success of comparable social movements on the basis of differences in the political characteristics of the nations in which they are embedded. These researchers are guided by the conviction that social movements are shaped by the broader set of political constraints unique to the national context in which they are embedded.

The second set of factors used by scholars to analyze social movements is the framing process, which is the conscious strategic efforts by groups of people to fashion shared understandings of the world, which motivates collective action (Snow et al., 1986). At a minimum, people need to feel both aggrieved about some aspect of their
lives and optimistic that collective action can redress the problem. According to Goffman (1974), lacking either one or both of these perceptions makes it highly unlikely that people will mobilize. Snow and his colleagues (Snow, Zuercher & Ekland-Olson, 1980; Snow et al., 1986; Snow & Benford, 1988) have attempted to study the complex social psychological dynamics of collective attribution and social construction. Gamson (1990, 1992), Tarrow (1983), and Tilly (1978) also have conducted research within the context of the framing process. They are best known for their work on the political structure of social movements. These authors acknowledge the effect of new ideas as a spur to collective action.

The third factor used to study social movements is mobilizing structure. Mobilizing structure studies examine collective action through the ways people mobilize social movements. This work is more focused on meso-level research, in that organizations and their informal networks comprise the unit of analysis. Research on organizational dynamics of collective action has drawn its inspiration largely from Resource Mobilization Theory (McCarthy & Zald, 1973, 1977). McCarthy and Zald (1973, 1977) assert social movements become a force for social change through social movement organizations (SMOs). Their is less of a theory about social movements and more a theory about “how” social movement organizations obtain goals through the mobilization of resources. The resource mobilization perspective has been valuable in illuminating organizational aspects of social movements that had previously been ignored by those scholars who support the social psychological perspective (Goffman, 1974; Snow et al., 1986). The resource mobilization approach examines the variety of resources that must be mobilized, and the strategies used by SMO leadership to reach
goals. This analytical factor examines social movements with the belief that movements may largely be born of environmental opportunities, but their fate is shaped by internal actions.

Classical Theories of Social Movements

There are several variations of the classical theory of social movements. In general, this theory moves from the requirement of some underlying structural weakness in society to a discussion of the psychological effect that this "strain" has on society. The progression is complete when the psychological disturbance reaches the threshold necessary to produce a social movement. Model 3.1 depicts the "classical" theory of how social movements emerge (Kornhauser, 1959).

![Diagram](image)

Model 3.1: Classical Theory

The various versions of the classical model agree on this basic sequence yet differ in their conceptualization of the parts of the model. For example, the mass society theory (Kornhauser, 1959) purports that the structural condition known as "mass society" is conducive to the rise of social movements. Social isolation is the structural prerequisite for social protest. The causes of social protests are linked to feelings of alienation and anxiety. Kornhauser (1959: 32) states that "social atomization engenders strong feelings
of alienation and anxiety, and therefore the disposition to engage in extreme behavior to escape from these tensions." Model 3.2 depicts the "mass society" theory.

Social Isolation ⟷ Alienation and Anxiety ⟷ Extreme Behavior (i.e., social movement)

Model 3.2: Mass Society Theory

Another version of the classical theory of social movements is status inconsistency (Broom, 1959). With status inconsistency, the sequence moves from structural strain to discontent to collective protest. Status inconsistency refers to the discrepancy between a person’s ranking on a variety of dimensions including occupation, education, and income. Model 3.3 depicts the "status inconsistency" theory.

Severe and Widespread ⟷ Cognitive Dissonance ⟷ Social Movement

Model 3.3: Status Inconsistency Theory

Collective behavior is yet another account of the classical theory. This model was proposed by Turner and Killian (1957), and suggests that any severe social strain can provide the antecedent for movement insurgence. Such strain is the result of disruption in the normal functioning of society; the precise form this disruption takes is not specified. In this model, social change is the source of structural strain. This strain
results in the subjective experience of “normative ambiguity” that excites feelings of anxiety or hostility. Model 3.4 depicts the “collective behavior” theory.

System Strain ► Normative Ambiguity ► Social Movements

Model 3.4: Collective Behavior Theory

These four classical theories share one thing in common to explain social movements: all movements are seen as a collective reaction to system strain, which triggers social insurgency. The classical models are focused on the psychological effects that the strain has on individuals. Furthermore, these theories contend that movement participation is based on the need to manage psychological tensions, not so much on the desire to attain political goals.

Resource Mobilization Theory

Resource Mobilization Theory was formulated in 1968 by Daniel P. Moynihan in *Maximum Feasible Misunderstandings*. In this piece, politics played a minor role, instead finding allegiance with economic theories. This theory, which makes no mention of grievances, is industrial capitalism in the political arena, presenting an economic-organizational input-output model.

Movements: A Partial Theory (McCarthy & Zald, 1977)." The scholarly perspective of McCarthy and Zald (1977) forms the theoretical foundation for this dissertation. This approach emphasizes political, sociological, and economic theories rather than social psychological propositions to explain collective behavior.

According to McCarthy and Zald (1977), social movement organizations must possess resources such as legitimacy, money, facilities, and labor in order to work toward goal achievement. Individuals as well as other organizations control resources. Some organizations depend heavily upon volunteer labor, while others may depend upon purchased labor. In any case, resources must be controlled or mobilized before action is possible. McCarthy and Zald (1977) hypothesize that the greater the amount of resources available to an organization the greater the likelihood goals will be attained. The larger the income flows to a social movement organization the more likely that cadre and staffs are professional and the larger are these groups.

Furthermore, McCarthy and Zald (1977) report that the more a social movement organization is dependent upon isolated constituents the less stable will be the flow of resources to the organization. Because isolated constituents have little involvement in the affairs of the social movement organization, support from them depends more upon organizational advertising. Advertising and media attention provide information about the dire consequences stemming from failure to attain target goals, the extent of goal accomplishment, and the overall importance of the social movement organization. Publicity is dependent upon a social movement organization’s ability to induce the media to give them free attention, as most social movement organizations cannot afford the costs of advertising. The media mediate in large measures between isolated constituents
and social movement organizations. Molotch (1988) asserts that a social movement must create a societal context in which it can survive and prosper. One important resource in providing for this context is the media, particularly print and broadcast news. Social movements represent those portions of society that lie outside the ordinary routines of exercising power and influence; the media represents a mechanism for utilizing an establishment institution to fulfill non-establishment goals (Molotch, 1988).

What follows is a listing of the 11 hypotheses proposed by McCarthy and Zald (1977):

**Hypothesis 1:** As the amount of discretionary resources of mass and elite public increases, the amount of resources available to social movement organization increases. Discretionary income can be defined as time and money, which can be easily reallocated. Here, the authors are proposing that the size of a social movement within a society varies and bears a relationship to the amount of wealth in a society.

**Hypothesis 2:** The greater the absolute amount of resources available to the social movement, the greater the likelihood that new social movement industries and social movement organizations develop to compete for resources. This hypothesis asserts that as money becomes available in a society, there will be an increased number of social movement organizations that compete for resources.

**Hypothesis 3:** Regardless of the resources available to potential beneficiary adherents, the larger the amount of resources available to conscience adherents the more likely is the development of social movement organizations and social movement industries that respond to preferences for change. A potential beneficiary adherent is someone who could benefit directly from the goals of the organization and believe in the
goals. Conscience adherents are “direct” supporters of a social movement organization, yet they do not stand to benefit directly from its success in goal attainment. For example, middle class liberals who demonstrate strong sympathies for the interests of the “underdog” or disadvantaged group.

**Hypothesis 4:** The more a social movement organization depends upon isolated constituents, the less stable is the flow of resources to the social movement organization. Constituents are those who give time and money. Isolated constituents are those persons who do not meet in face-to-face interaction with other constituents, and cannot be bound to the social movement organization through solidary incentives. Support from isolated constituents depends far more on advertising than does support from constituents who are involved on a face-to-face basis with others, which leads to hypothesis 4a.

**Hypothesis 4a:** The more dependent a social movement organization is upon isolated constituents the greater the share of its resources that are allocated to advertising.

**Hypothesis 4b:** The more a social movement organization depends upon isolated constituents to maintain a resource flow the more its shift in resources flow resembles the patterns of consumer expenditures for expendable and marginal goods. Stated differently, if a social movement organization is linked to its major source of constituents through advertising, isolated constituents will balance their contributions with other expenditures.

**Hypothesis 5:** A social movement organization that attempts to link both conscience and beneficiary constituents to the organization through federated chapter structures and solidary incentives, is likely to have high levels of tension and conflict. The authors suggest that the more dissimilar workers are the less likely there is to be
organizational unity. This provides an explanation as to why social movement leaders have been skeptical of the involvement of conscience constituents such as intellectuals in labor unions, males in the women's liberation movement, and whites in the civil rights movement.

**Hypothesis 6:** Older, established social movement organizations are more likely than newer social movement organizations to persist throughout the cycle of social movement industry growth and decline. This thought supports Stinchcombe's (1987) finding that a higher proportion of new organizations fail than old.

**Hypothesis 7:** The more competitive a social movement industry (a function of the number and size of the existing social movement organization) the more likely it is that new social movement organizations offer narrow goals and strategies. The suggestion being made here is as competition increases, the pressure to specialize intensifies. This hypothesis can be found within the context of the crime victim movement as specialized victims groups have emerged such as Parents of Murdered Children, and Mothers Against Drunk Driving.

**Hypothesis 8:** The larger the flow of income to a social movement organization the more likely that cadre and staff are professional. This proposition flows directly from an economic support model. The more that is available to an organization, the more full-time personnel it will be able to hire.

**Hypothesis 9:** The larger the social movement sector and the larger the specific social movement industry, the more likely it is that social movement careers develop. A social movement career is a sequence of professional staff and cadre positions held by adherents. Historically, social workers have held various positions and created careers
within social movement organizations, such as, employees within the welfare system as driven by the poor peoples’ movement, rape crisis counselors as part of the crime victims’ movement, and children services caseworkers as part of the child rights’ movement.

**Hypothesis 10:** The more a social movement organization is funded by isolated constituents the more likely that beneficiary constituent workers are recruited for strategic purposes rather than for organizational work. An example of this hypothesis is the creation of senior citizen groups for purposes of bargaining by the AFL-CIO in the Medicare fight and the use of poor people for strategic purposes by the Hunger Commission.

**Hypothesis 11:** The more a social movement organization comprises workers with discretionary time at their disposal the more readily it can develop transitory teams. In essence the larger the number of constituents and adherents, the more useful they can be to an organization in situations such as demonstrations, marches or boycotts.

Resource Mobilization Theory as developed by McCarthy and Zald (1977) alludes to the following variables: the interaction of authorities, the dynamics of media involvement, the relationship between social movement organization workers and authorities, the impact of industry structure, and the importance of resource mobilization strategies. The resource mobilization perspective offers important insights into the understanding of “how” social movements attain goals.

*Review of Empirical Research on Social Movements*

Although it is difficult to classify all of the social movement research, most
studies can be categorized into one of the following five groups: individual participant, organizational structure, political process, strategies used to attain goals, and social movements in general. What follows is a general discussion of the key research studies in each of these five areas. A review of Gamson’s work will commence this section because it set into motion a myriad of social movement research (Gamson published the original volume in 1975; all references are to the second edition, published in 1990).

A quarter of a century after Gamson’s book *Strategy of Social Protest*, it continues to be regarded as the most ambitious effort undertaken to analyze the impact of social movements. In 1975 Gamson set out to question the permeability and openness of the American political system. Specific questions asked by Gamson include the following:

- How can different experiences of a representative collection of American challenging groups be accounted for?

- What is the characteristic response to groups of different types and what determines this response?

- What strategies work under what circumstances?

- What organizational characteristics influence the success of the challenge?

Gamson completed an analysis of 53 American challenging groups between 1800 and 1945 and divided the groups into four categories: 38 percent were occupationally based; 32 percent were reform groups; 19 percent were rooted in the socialist tradition, and; and 11 percent were some variety of right-wing groups. Gamson presented forces, which he found to be important in determining the success of protest groups. In reporting
his findings, Gamson (1990) gives the number of cases, a goodness-of-fit statistical test (the Chi square), and the percentage of successful groups for each condition under study. There were two remarkable findings from Gamson’s analysis: results were produced when challenging groups resorted to the use of force, and results were produced when challenging groups had an internal organizational structure.

Steedly and Foley (1979) challenged Gamson’s work. They applied a variety of multivariate techniques including multidimensional scaling, regression analysis, and discriminant function analysis to explore the determinants of United States protest group success. Steedly and Foley (1979) found five forces they believe lead to a group’s success: a desire on the part of the protest group not to replace an established member of the polity, the number of alliances a group has with other groups, the absence of factional disputes, quite specific and limited goals, and a willingness to use sanction against other groups.

A number of authors have investigated the relationship between distributions of persons with common demographic characteristics such as age, race, and ethnicity to a variety of movement outcomes. For example, Rose (1967) studied the discontent of senior citizens with medical care and its relationship to Medicare legislation. Wilensky (1975) and Pampel and Williamson (1985) found the size of the aged population to be related to national security spending levels. Jacobs (1978) found wage levels to be related to various work laws.

A second conceptual unit used in analyzing social movements is the organizational variable itself. Gamson (1990) investigated the manner in which organizational characteristics, such as size, bureaucracy, goals, and centralization, affect
the likelihood of the success of social movements. Perrow (1979) found that the pursuit of collective goals within an organizational framework had advantages over individual action in the stability of a social movement. Oberschall (1973) has shown how important communal associations may be for facilitating mobilization in tribal and peasant societies. Wilson (1973) in *Introduction to Social Movements* notes the importance of organizational structure on the effect of producing change. The work of McCarthy (1987); McCarthy and Zald (1973, 1977); McCarthy, Wolfson, Baker and Mosakowski (1988); and Wolfson (1988) have contributed to our understanding of the importance of resource mobilization as it relates to goal attainment for the citizens’ movement against drunk driving and the pro-life movement.

A third arrangement of social movement research is the study of the political environment. Piven and Cloward (1979) show through their research on the unemployed workers’ movement, the industrial workers’ movement, the civil rights movement, and the welfare rights movement that social movements can succeed only insofar as they act disruptively. Kitschelt (1983) in his comparison of the anti-nuclear movement in four Western democracies has made a strong case that success strongly depends on political opportunity structures. The importance of the movements’ larger environment for their outcomes is similarly recognized by Tarrow (1983), as he makes a case for the crucial role of political opportunities in shaping the long-term effects of movements.

Another grouping of social movement research includes process strategies used to pursue organizational goals. Social movement organizations have used numerous strategies over the years in an attempt to attain goals. Some of these strategies include
riots, strikes, boycotts, rallies, marches, peaceful sit-in demonstrations, use of the media, lobbying, use of technology, and public education.

Walker (1991) asserts that the choice between what strategies to implement is a fundamental one, usually made early in an organization’s history. In order to bring pressure on policy-making officials most groups concentrate on either an “inside” strategy of conventional lobbying or an “outside” strategy meant to shape and mobilize public opinions (Walker, 1991). Inside activities are designed to convince public officials to take some form of action, or to modify an established policy by means of close consultation with political and administrative leaders (Walker, 1991). Outside activities may be an indirect effort to exert influence upon the outcome of a specific policy decision (Walker, 1991). They are intended to build support within the general public for an entirely new set of values that may eventually be manifested in public policy in the future.

Mass media as a strategy includes the development and release of newsworthy stories to newspapers, radio stations, and television networks (Haynes & Mickelson, 1991; Netting, Kettner & McMurtry, 1991). A class of strategies that has received increasing attention is social movements’ use of newspapers, radio, and television (Lipsky, 1968; Garrow, 1978; Barkan, 1984; Wolfsfeld, 1984; Molotch, 1988). The media may provide a vehicle for groups lacking resources to generate support from the elite and public masses. It has been suggested that media coverage of the civil rights movement, particularly the coverage of attacks on demonstrators, was instrumental in generating support for the movement (Garrow, 1978; Barkan, 1984).
Lobbying as a strategy means persuading elected officials to consider and to press for policy considerations that an organization feels are important (Brueggemann, 1996). Specific lobbying strategies include face-to-face interaction, letter writing, telephoning, and testifying to legislative committees (Brueggemann, 1996). Evidence seems to indicate that legislators are more responsive to interest groups that display certain characteristics (Mathews, 1982). Frequency of contact between interest groups and legislators is a major factor in determining the quality of their interactions and the amount of influence the interest group exerts (Mathews, 1982). In a four-state study, Ziegler (1969) found a significant correlation between lobbyists’ frequency of contact with legislators and the reduction of stereotypical behavior on the part of lobbyists. In addition, Wolfson (1988) found that lobbying activity by anti-drunk driving community groups (e.g., Mothers Against Drunk Driving and Remove Intoxicated Drivers) did in fact influence the passage of the minimum drinking age “21” law.

Educational strategies can be an integral part of a social movement organization. Educational strategies are interactions in which the action system presents perceptions, attitudes, opinions, data, and information about the proposed change with the intent of convincing the target system to think or act differently (Netting, Kettner & McMurtry, 1997). With the technological advancements in computers and information handling, social movement strategies can be enhanced through CD-ROM data storage, information sharing, and use of the Internet (Haynes & Mickelson, 1991).

Gamson (1990), in his study of 53 challenging groups in the United States between 1800 and 1945, found that groups that used violence were more likely to receive new advantages than were nonusers of violence. On the other hand, Snyder and Kelly
(1976) in their analysis of industrial violence in Italy found that strikes that involved violence of worker against police were significantly more likely to fail than were nonviolent strikes. Schumaker (1978) in an analysis of the outcomes of 212 protests in the United States between 1960 to 1971, found that the use of constraints was more effective than nonuse under certain conditions. Mirowsky and Ross (1981), in an attempt to determine the locus of control over movement success, elaborated on Gamson’s findings concerning the effects of violence, and have agreed with him. Similarly, other authors have found that the use of disruptive tactics by social movements improves their chances of reaching goals (Tilly, Tilly & Tilly, 1975; McAdam, 1983, 1999; Tarrow, 1983). Furthermore, Shorter and Tilly (1974) in their study of strikes in France suggested that there is a positive relationship between the use of violence and strike outcomes.

A substantial effort has been made to identify the impacts of the riots of the late 1960s in the United States. A great number of these studies are related to Piven and Cloward’s (1979) thesis regarding the effectiveness of disruptive tactics by social movements. According to Piven and Cloward (1979), disruption is the most powerful resource that movements have at their disposal to reach their goals.

At the opposite end of the violence spectrum, authors such as Schumaker (1975) have argued that militancy is generally not conducive to the attainment of social movement goals. As suggested by social movement researcher Giugni (1999), the effectiveness of disruptive tactics is likely to vary according to the societal context under which they occur. Snyder and Kelly (1976) and Taft and Ross (1969) supported these findings. Snyder and Kelly (1976), in their study of strikes in Italy between 1878 and
1903, found that violent strikes were less successful than peaceful ones. Taft and Ross (1969: 361-362), in their study of violent labor conflicts in the United States, concluded that “the effect of labor violence was almost always harmful to the union, and there is little evidence that violence succeeded in gaining advantages.”

Lastly, a number of authors have analyzed the manner in which an entire social movement has experienced various forms of success or failures. Typically these individual case studies are descriptive in nature, in that they document the rise of the social movement, its activities, and organizational structure. For example Bromley and Shupe’s (1979) unit of analysis is the Moonies in America. Freeman (1975) studied the politics of women’s liberation. Lehrer (1987) discusses the origins of the protective labor legislation for women. McCarthy (1987) explains the pro-life and pro-choice counter movements. And, McAdam (1982, 1983, 1999) reviews the civil rights movement and black insurgency.

Summary of Social Key Concepts Movement Theories

Based on the social movement literature presented above, including the hypothesis from Resource Mobilization Theory, below in Figure 3.1 is a summary of key concepts from social movement theories.
Figure 3.1 Summary of Key Concepts from Social Movement Theories
Research Questions

• RESEARCH QUESTION 1
  Is there a significant association between MADD organizational characteristics/MADD state office collaboration activities and drunk-driving legislation controlling for environmental characteristics?

• RESEARCH QUESTION 2
  Is there a significant association between MADD organizational characteristics/MADD state office collaboration activities and driving-under-the-influence arrests controlling for environmental characteristics?

• RESEARCH QUESTION 3
  Is there a significant association between MADD organizational characteristics/MADD state office collaboration activities and alcohol-related traffic fatalities controlling for environmental characteristics?

Embodied within Chapter Three is the theoretical foundation for the study. Found within is a review of the literature on frameworks that have been used by scholars studying social movements. Included is a description of four classical social movement theories and Resource Mobilization Theory. Chapter Three also takes account of past empirical research on the consequences of social movements. Finally, the three research questions this study proposes to answer are presented.
CHAPTER 4
DATA COLLECTION AND RESEARCH METHODOLOGY

This study combines primary and secondary data to examine state level policy outcomes related to the adoption of three drunk-driving laws, driving-under the influence arrests, and alcohol-related traffic fatalities. The study will determine if there is an association between characteristics of MADD and MADD state office collaboration activities with three drinking and driving laws, driving-under-the-influence arrests, and alcohol-related traffic fatalities, while controlling for various state environmental characteristics.

The purpose of Chapter Four is to describe the methodological procedures used to examine the three research questions. Presented in this chapter is a review of the research questions, 20 hypothesis, data sources and methods of data collection.

Chapter Four proceeds to elaborate on specific measures, including the variables of interest followed by a discussion about transformation of variables and missing values/imputation. The analytical procedure used to analyze the data along with three tables that explain the expected sign of the coefficients concludes Chapter Four.
Research Questions

- RESEARCH QUESTION 1
  Is there a significant association between MADD organizational characteristics/MADD state office collaboration activities and drunk-driving legislation controlling for environmental characteristics?

- RESEARCH QUESTION 2
  Is there a significant association between MADD organizational characteristics/MADD state office collaboration activities and driving-under-the-influence arrests controlling for environmental characteristics?

- RESEARCH QUESTION 3
  Is there a significant association between MADD organizational characteristics/MADD state office collaboration activities and alcohol-related traffic fatalities controlling for environmental characteristics?

Twenty Hypotheses

Hypothesis 1 tests whether the size of social movement organization Mothers Against Drunk Driving controlling for environmental characteristics is positively associated with the number of years a state has had a 0.08 BAC Per Se law.
Hypothesis 2 tests whether the size of social movement organization Mothers Against Drunk Driving controlling for environmental characteristics is positively associated with the number of years a state has had an Open Container law.

Hypothesis 3 tests whether the size of social movement organization Mothers Against Drunk Driving controlling for environmental characteristics is positively associated with the number of years a state has had an Administrative Revocation law.

Hypothesis 4 tests whether the size of social movement organization Mothers Against Drunk Driving controlling for environmental characteristics is negatively associated with driving-under-the-influence arrests.

Hypothesis 5 tests whether the size of social movement organization Mothers Against Drunk Driving controlling for environmental characteristics is negatively associated with alcohol-related traffic fatalities.

Hypothesis 6 tests whether the length of social movement organization Mothers Against Drunk Driving presence controlling for environmental characteristics is positively associated with the number of years a state has had .08 BAC Per Se law.

Hypothesis 7 tests whether the length of social movement organization Mothers Against Drunk Driving presence controlling for environmental characteristics is positively associated with the number of years a state has had an Open Container law.
Hypothesis 8 tests whether the length of social movement organization Mothers Against Drunk Driving presence controlling for environmental characteristics is positively associated with the number of years a state has had an Administrative License Revocation law.

Hypothesis 9 tests whether the length of social movement organization Mothers Against Drunk Driving presence controlling for environmental characteristics is negatively associated with driving-under-the-influence arrests.

Hypothesis 10 tests whether the length of social movement organization Mothers Against Drunk Driving presence controlling for environmental characteristics is negatively associated with alcohol-related traffic fatalities.

Hypothesis 11 tests whether characteristics of social movement organization Mothers Against Drunk Driving state office executive directors controlling for environmental characteristics is positively associated with the number of years a state has had a 0.08 BAC Per Se law.

Hypothesis 12 tests whether characteristics of the social movement organization Mothers Against Drunk Driving state office executive directors controlling for environmental characteristics is positively associated with the number of years a state has had an Open Container law.
Hypothesis 13 tests whether characteristics of the social movement organization Mothers Against Drunk Driving state office executive directors controlling for environmental characteristics is positively associated with the number of years a state has had an Administrative License Revocation law.

Hypothesis 14 tests whether characteristics of the social movement organization Mothers Against Drunk Driving state office executive directors controlling for environmental characteristics is negatively associated with driving-under-the-influence arrests.

Hypothesis 15 tests whether characteristics of the social movement organization Mothers Against Drunk Driving state office executive directors controlling for environmental characteristics is negatively associated with alcohol-related traffic fatalities.

Hypothesis 16 tests whether social movement organization Mothers Against Drunk Driving state office collaboration activities controlling for environmental characteristics is positively associated with the number of years a state has had a 0.08 BAC Per Se law.

Hypothesis 17 tests whether social movement organization Mothers Against Drunk Driving state office collaboration activities controlling for environmental characteristics is positively associated with the number of years a state has had an Open Container law.
Hypothesis 18 tests whether social movement organization Mothers Against Drunk Driving state office collaboration activities controlling for environmental characteristics is positively associated with the number of years a state has had an Administrative License Revocation law.

Hypothesis 19 tests whether social movement organization Mothers Against Drunk Driving state office collaboration activities controlling for environmental characteristics is negatively associated with driving-under-the-influence arrests.

Hypothesis 20 tests whether social movement organization Mothers Against Drunk Driving state office collaboration activities controlling for environmental characteristics is negatively associated with alcohol-related traffic fatalities.

Data Sources and Method of Collection

No single suitable data source exists for collecting reliable data on the variables of interest therefore, it was determined that the data would be collected from a number of sources. Primary data (MADD organizational characteristics and collaboration activities) were collected from a survey. Secondary data on dependent variables and environmental characteristics of the individual states (control variables) were obtained from a variety of national data sets. The sample for the study includes the averages of state level data, hence lending itself to the use of inferential statistics.
Primary Data

The data collected on MADD characteristics and collaboration activities were gathered from a survey/interview schedule. The survey was created following consultation with MADD National and the Ohio State MADD Office. The survey was designed to collect information on the size of MADD, statewide founding dates of MADD chapters, number of chapters and size of MADD State Office, staffing patterns of the MADD State Offices, revenues and expenditures of the MADD State Office, and collaboration strategies. Several versions of the data collection instrument were tested with MADD National and the Ohio MADD Office. The final instrument was completed in June, 2001.

In August 2001, one instrument per state was mailed to MADD National. MADD National in turn submitted the instrument to each state office executive director. Twenty survey instruments were returned from MADD National. For those states that did not respond to MADD National (thirty in total), a second questionnaire was mailed directly to the executive directors. As a result of this procedure, ten additional surveys were returned. Incomplete questionnaires were followed up with a telephone call to the state office. For those state offices that did not return a survey, a telephone call was made to the state office executive director, encouraging their participation in a telephone interview. As a result of this procedure, ten additional surveys were completed. Ten MADD State Offices refused to participate in the study.

These procedures resulted in an overall response from 40 MADD State Offices.
Of the 40 usable surveys, 32 surveys were completed by state office executive directors; the other eight surveys by administrative support staff. The administrative support staff are believed to have the knowledge necessary to complete the survey.

Several survey items were removed from the study due to a lack of substance in the responses. For example, section I, question 4 (MADD State Offices) was not included in the analytical model because of a lack of variation in the responses. Specifically 100 percent of the MADD executive directors respondents had not been a member of MADD prior to accepting this leadership position.

Section II (Revenues and Expenditures) of the survey was removed in its entirety. One state office had knowledge about the revenue generated via the Internet. Furthermore, it was reported that the individual state offices are not permitted to pay for advertising (per MADD National directive); all advertising is sought through public service announcements.

Section III (State Office Activities) of the survey instrument focused on collaboration strategies. The respondents rated their level of collaboration activities with a wide range of potential partners. The scale ranged from 1 to 5, with 1 = none, 2 = a little extent, 3 = some extent, 4 = great extent, 5 = very great extent.

In addition to the 20 surveys returned from MADD National, they also provided a list of the number of chapters within each state and the founding date of the first chapter in each state.
Secondary Data

The table below presents the secondary data sources, methods of data collection, and the unit of analysis.

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Method of Data Collection</th>
<th>Unit of Analysis</th>
</tr>
</thead>
</table>
| U.S. Bureau of the Census
  Http://www.census.gov.population/estimates                                  | Internet                  | State Level Data         |
| U.S. Department of Transportation, National Highway Traffic Safety Administration
  Http://www.nhtsa.gov/fars                                                     | Internet                  | State Level Data         |
| U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics
  Http://www.ojp.usdog.gov                                                       | Internet                  | State Level Data         |
| Lexis Nexis
  Http://www.lexisnexis.com/gov/stateand local                                  | Internet                  | State Level Data         |
| Federal Bureau of Investigations, Uniform Crime Report
  Http://fbi.gov                                                                | Internet                  | State Level Data         |

Table 4.1 Secondary Data Sources

Below is the analytical model that will guide the study with specific measures that are applicable to Mothers Against Drunk Driving. The arrows in the diagram do not imply causality and prediction. This study is an examination of the association between characteristics of Mothers Against Drunk Driving and public policy outcomes.
Model 4.1 Analytical Model for the Study

Independent Variables

The study includes 10 independent variables; seven are characteristics of the MADD organization and three are state office collaboration activities. These variables operationalize components of McCarthy and Zalds’ Resource Mobilization Theory (1977) and prior social movement research. The independent MADD variables include:
1. **Rate of MADD Chapters.** Prior social movement researchers such as Freeman (1975), Snyder and Kelly (1976), Jacobs (1978), and Gamson (1990) have found organizational size to be positively correlated with the attainment of public policy outcomes. In this study organizational size is measured using information provided by the survey (section IV, number 2) completed by a representative from MADD National. The number of MADD chapters in each state was divided by an estimate of the total number of all persons residing in each state in 1999 (extrapolated from 1990 census at [http://www.census.gov/population/estimates/state](http://www.census.gov/population/estimates/state)) multiplied by 100,000 to produce individual state rates.

2. **Rate of MADD members.** Prior social movement researchers such as Freeman (1975), Snyder and Kelly (1976), Jacobs (1978), and Gamson (1990) have found organizational size to be positively correlated with the attainment of public policy outcomes. In this study organizational size is also measured by MADD membership, using information provided by the survey (section IV, number 1). The number of MADD members in each state was divided by an estimate of the total number of all persons residing in each state in 1999 (extrapolated from 1990 census at [http://www.census.gov/population/estimates/state](http://www.census.gov/population/estimates/state)) multiplied by 100,000 to produce individual state rates.
3. **Number of full-time equivalent state office employees.** Resource Mobilization Theory - Hypothesis 8 states that the larger the flow of income to a social movement organization the more full-time personnel it will be able to hire. Employees are seen as resources that work to attain social movement goals. The number of full-time equivalent state office employees is used to represent the resources available to MADD. In this study the number of full-time employees is measured using information provided by the survey (section IV, number 1).

4. **Age of state office.** Resource Mobilization Theory - Hypothesis 6 states that older, established social movement organizations are more likely than newer social movement organizations to persist throughout the social movement cycle and obtain social movement goals. The age of MADD state offices is used to represent the period of time state offices have been present in a state. In this study organizational age of the state office is measured using information provided by the survey (section IV, number 2).

5. **Age of First MADD chapter.** Resource Mobilization Theory – Hypothesis 6 states that older, established social movement organizations are more likely than newer social movement organizations to persist throughout the social movement cycle and obtain social movement goals. The age of the first MADD chapter is used to represent the period of time MADD chapters have been present in a state. In this study age of the first MADD chapter is measured using information provided by the survey (section IV, number 2) completed by a representative from MADD National.
6. **Number of years and months the current MADD state office executive director has held the executive director position.** Resource Mobilization Theory – Hypothesis 8 & 9 state that the larger the flow of income to a social movement organization the more personnel it will be able to hire and the more likely the staff are career professionals. MADD state office executive directors are viewed as a resources available to the organization. In this study the number of months and years the current state office executive director has held the position is measured using information provided by the survey (section I, number 3).

7. **Number of different executive directors that have managed the MADD state office including the current executive director.** Resource Mobilization Theory – Hypothesis 8 & 9 state that the larger the flow of income to a social movement organization the more personnel it will be able to hire and the more likely the staff are career professionals. MADD state office executive directors are viewed as a resource available to the organization. In this study the number of different executive directors that have managed the state office is measured using information provided by the survey (section I, number 2).

8. **Collaboration activities with Private Corporations.** As noted by McCarthy and Zald resources are needed for the social movement organizations to attain the goals of the social movement. Collaboration activities with private corporations provide MADD with financial and personnel resources. Examples includes working together with insurance companies, or auto manufactures on the passage of particular types of
drunk-driving legislation. This variable is measured using information provided by the survey (section III, number 1. In fiscal year 2000, to what extent did the state office collaborate with private corporations for the purpose of achieving drunk driving legislation, DUI arrests, and a reduction in alcohol related traffic fatalities?). The collaboration scale ranged from 1 to 5, with 1 = none, 2 = a little extent, 3 = some extent, 4 = great extent, 5 = very great extent.

9. **Collaboration activities with the State Department of Drug and Alcohol.** As noted by McCarthy and Zald resources are needed for the social movement organizations to attain the goals of the social movement. Collaboration activities with a state department of drug and alcohol can provide MADD with the financial and personnel resources needed to conduct community prevention/education programs which aim to educate the public about the negative impact of drinking and driving. Collaboration activities with a state department of drug and alcohol may also include placing pressure on the legislature to pass tougher and more drunk-driving laws. This variable is measured using information provided by the survey (section III, number 1. In fiscal year 2000, to what extent did the state office collaborate with a state department of drug and alcohol for the purpose of achieving drunk driving legislation, DUI arrests, and a reduction in alcohol related traffic fatalities?). The collaboration scale ranged from 1 to 5, with 1 = none, 2 = a little extent, 3 = some extent, 4 = great extent, 5 = very great extent.
10. **Collaboration activities with Judges Association.** As noted by McCarthy and Zald, resources are needed for the social movement organizations to attain the goals of the social movement. Collaboration activities with a judges association can provide MADD with the personnel resources needed to pressure the legislature to adopt tougher and increased drunk-driving laws. This variable is measured using information provided by the survey (section III, number 1. In fiscal year 2000, to what extent did the state office collaborate with a judges association for the purpose of achieving drunk driving legislation, DUI arrests, and a reduction in alcohol related traffic fatalities?). The collaboration scale ranged from 1 to 5, with 1=none, 2=a little extent, 3=some extent, 4=great extent, 5=very great extent.

Limiting the variables was necessary to complete multiple regression analysis. Kerlinger (1986) recommends 8 to 15 values per variable for regression analysis. Sixteen collaboration variables were initially selected. Thirteen collaboration variables (not noted within the text of this dissertation however, they can be found within Section III of the survey instrument) were removed from the study for one of the following reasons, either: 1) there was very little variance in the variable, 2) results from the Pearson Correlation reflected multicollinearity between the variables, or 3) earlier multiple linear regression analysis which included the original variables did not produce significance.

*Dependent Variables*

Following consultation with MADD National and the Ohio State MADD Office, it was decided to focus on three MADD goals: 1) enactment of drunk-driving legislation;
2) reduction in driving-under-the-influence arrests, and; 3) reduction in alcohol-related traffic fatalities. These three goals represent the five dependent variables in this study.

1. **Number of years a state has had a .08 BAC (Blood Alcohol Concentration) Illegal Per Se Level law.** Measured by data found within Lexis Nexis (http://www.lexisnexis.com/gov/stateandlocal). Lexis Nexis is a legal data base and resource that provides a listing and description of all laws found within each state, including the year each law was enacted. The enacted year of the .08 law for each state was subtracted from 2000, which produced the number of years a state has implemented this particular drunk-driving law.

2. **Number of years a state has had an Open Container law.** Measured by data found within Lexis Nexis (http://www.lexisnexis.com/gov/stateandlocal). Lexis Nexis is a legal data base that provides a listing and description of all laws found within each state, including the year each law was enacted. The enacted year of the Open Container law for each state was subtracted from 2000, which produced the number of years a state has implemented this particular drunk-driving law.

3. **Number of years a state has had an Administrative License Revocation Law.** Measured by data found within Lexis Nexis (http://www.lexisnexis.com/gov/stateandlocal). Lexis Nexis is a legal data base that provides a listing and description of all laws found within each state, including the year each law was enacted. The enacted year of the Administrative License
Revocation law for each state was subtracted from 2000, which produced the number of years a state has implemented this particular drunk-driving law.

4. **Rate of driving-under-the-influence arrests.** Measured by data found within Federal Bureau of Investigation, Uniform Crime Report (http://www.fbi.gov/ucr). The total number of 1999 driving-under-the-influence arrests in each state were divided by an estimate of the total number of all persons residing in each state in 1999 (extrapolated from 1990 census at http://www.census/population/estimates/state) and multiplied by 100,000 to produce individual state rates.

5. **Rate of alcohol-related traffic fatalities.** Measured by data found within the U.S. Department of Transportation, National Highway Traffic Safety Administration’s Fatal Accident Reporting System (http://www-fars.nhtsa.dot.gov. Web based encyclopedia). The total number of 1999 alcohol related traffic fatalities in each state were divided by an estimate of the total number of all persons residing in each state in 1999 (extrapolated from 1990 census at http://www.census/population/estimates/state) and multiplied by 100,000 to produce individual state rates.

While Mothers Against Drunk Driving focuses on two additional goals; the prevention of underage drinking and the provision of support services to crime victims, it was determined that quantifiable data was not available for these goals, thus they were omitted from the study.
Control Variables

Control variables were included because these state characteristics preceded or exist simultaneously with MADD organizations, and/or according to prior research in the field may affect the relationship between the independent and dependent variables. The seven original control variables include:

1. **Per capita income for each state for the year 1998.** Research completed by Asch and Levy (1987), Saffer and Grossman (1987), Sloan, Reilly and Schenzler (1994), Ruhm (1996) and Whetten-Goldstein, Sloan, Stout and Liang (2000) found an association between income and alcohol-related traffic fatalities. Per Capita income for the individual states was measured by data found within a data base administered by the U.S. Bureau of the Census/Department of Commerce (http://www.census.gov). Per Capita Income was used as a measure for state wealth.

2. **Rate of alcohol beverage sales tax per state for the year 1999.** As noted earlier, controlling alcohol consumption by way of administrative policy such an increasing alcohol tax is one way policy makers have attempted to deter drunk driving. Research completed by Saffer and Grossman (1987) and Sloan, Reilly and Schenzler (1994) found an association between alcohol sales tax and alcohol-related traffic fatalities, in that increased alcohol sales tax resulted in a lesser number of alcohol-related fatalities. Therefore, it is logical to presume that alcohol sales tax could confound the relationship between key study variables. The rate of alcohol beverage sales tax for individual states was measured by data found within a data base.
administered by the U.S. Bureau of the Census/Department of Commerce
(http://www.census.gov/govs/statetax). The 1999 dollar amounts of alcohol beverage
sales tax within in each state was divided by an estimate of all persons residing in
each state in 1999 (extrapolated from 1990 census at
http://www.census/population/estimates/state) and multiplied by 100,000 to produce
individual state rates.

3. **Rate of drivers in force for the year.** Rate of drivers was included because it is
logical to presume that states with more automobile drivers are more likely to have a
greater number of DUls and alcohol-related traffic fatalities. Measured by U.S.
Department of Transportation, National Highway Traffic Safety Administration data
(http://nhtsa.gov). The 1999 total number of automobile drivers in each state was
divided by an estimate of all persons residing in each state in 1999
(extrapolated from 1990 census at http://www.census/population/estimates/state) and
multiplied by 100,000 to produce individual state rates.

4. **Population estimates for each state for the year 1999.** Population was included
because it is logical to presume that more populated states will have a greater number
of DUls and alcohol-related traffic fatalities. Population numbers for each state
include all persons estimated to be residing in each state in 1999 (extrapolated from
5. **Total crime rate for each state for the year 1998.** Doerner and Lab (1995) note that the rising crime rate was one factor contributing to the development of the crime victims' movement and increased public policy designed for social control, therefore crime rate could be expected to influence the adoption of drunk-driving laws. This variable was measured by data provided by the U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics. Total crime rates per 100,000 for the individual states were provided by a data set found online at http://www.ojp.usdoj.gov.

6. **Rate of state and local police protection for the year 1995.** It is logical to presume that states having more police protection are more able to influence DUI offenses and alcohol-related traffic fatalities therefore, police protection was included as a control variable. Measured by U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics. The total number of police officers employed within each state was provided by a data set found online at (http://www.ojp.usdoj.gov). The 1995 total number of police officers in each state was divided by an estimate of all persons residing in each state residing in 1995 (extrapolated from 1990 census at http://www.census/population/estimates/state) and multiplied by 100,000 to produce individual state rates.

7. **Number of highway miles per state for 1999.** The total number of highway miles could be expected to influence DUIs and alcohol-related traffic fatalities therefore, highway miles was included as a control variable. Measured by U.S. Department of
Transportation, National Highway Traffic Safety Administration data. A national data set was found online at (http://www.nhtsa.gov).

As noted earlier, limiting the number of variables was necessary to complete multiple linear regression analysis. Four control variables, population, crime rate, police protection, and highway miles were removed from the study as the Pearson Correlation reflected multicollinearity between these variables.

**Transformed Variables**

Four variables were transformed to improve the normality of the distribution, thus making the statistical assumptions more robust and the model less susceptible to spurious findings resulting from undue influence of outliers (Voas & Tippetts, 1999). An outlier is typically one or two variables that falls outside the normal distribution, thus contributing to the skewness of the distribution. A visual inspection of the distribution demonstrates which values are outliers.

Independent MADD variable, number of full-time employees in the state office during fiscal year 2001 had one outlier of 15 (Massachusetts), which was trimmed to the next highest value, thus creating a new value of 10.

Dependent variable driving-under-the-influence arrest rates had two outliers, 3379.1 (Delaware), and 4145.0 (Illinois). Both values were trimmed to the next highest value, thus creating two new values of 1200.00. Following this transformation, the skewness remained high, therefore the rate of driving-under-the-influence underwent an additional transformation using a natural logarithm to further improve the normality of
the distribution. "A natural logarithm is the exponent or the power to which $e$ must be raised to give $N$; for example, $\log_{10} 100=2$ since $10^2 = 100$" (Hopkins, Hopkins & Glass, 1996: 391).

Control variable per capita income also underwent a transformation using a natural logarithm. Control variable alcohol sales tax rate had one outlier of 38.7 (Florida), which was trimmed to the next highest value, thus creating a new value of 32.50.

**Missing MADD Values/Imputation**

Ten MADD State Offices refused to participate in the study: Alaska, Delaware, Maine, Montana, West Virginia, Nevada, New Hampshire, South Dakota, Utah, and Vermont. The reasons given for non-participation varied, including "we're too busy, and short staffed to participate at this time," "the information you are requesting is not available," and "we have recently moved the state office and we cannot locate the information you are requesting."

Missing observations can be problematic in analysis in that it may reflect respondent bias (Little & Rubin, 1987). Since all possible respondents were included in the sample, it appears that the missing data is a random event.

Data for two MADD variables were provided by MADD National, number of chapters found within each state ($N=50$) and age of the first chapter ($N = 50$).

Eight MADD variables had missing data: rate of MADD members, number of years state office has been operational, full-time equivalent employee, number of months and years the current executive director has held the position, number of different
executive directors that have managed the state office, collaboration activities with private corporations, collaboration activities with the state department of drug and alcohol services and collaboration activities with judges association.

For the eight independent variables with missing data, three missing value procedures were tested; they include, a procedure based on completely recorded units, mean imputation, and regression imputation - linear trend at point.

A procedure based on completely recorded units is when some of the data for a particular variable are not recorded, as a result the missing unit is discarded from the analysis, resulting in a reduced number (Little & Rubin, 1987).

Imputation-based procedures occur when the missing values are filled in and the resultant completed data are analyzed by standard methods. Commonly used procedures for imputation include mean imputation, where means from sets of recorded values are substituted; and regression imputation such as linear trend at point, where missing variables for a unit are estimated by predicting values from the known variables for that unit (Little & Rubin, 1987).

Essentially, these three techniques produced very similar results. The procedure based on completely recorded units was not used, because it reduced the sample size, whereby there would not have been enough values to complete multiple linear regression analysis. Mean imputation was not applied because this technique reduces the variability of the data. Imputation technique, linear trend at point was selected as the procedure to be applied to the missing values in this study because it produced slightly better results in terms of the level of significance, did not reduce the sample size and did not reduce the variability of the data.
Descriptive Statistics

What follows are the descriptive statistics for the ten independent variables, five dependent variables and three control variables included in the analysis.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate of MADD Chapters</td>
<td>50</td>
<td>9.44</td>
<td>7.79</td>
</tr>
<tr>
<td>Rate of MADD Members</td>
<td>32</td>
<td>24.77</td>
<td>16.64</td>
</tr>
<tr>
<td>Number of Full-Time Employees</td>
<td>36</td>
<td>2.28</td>
<td>1.97</td>
</tr>
<tr>
<td>Age of State Office</td>
<td>36</td>
<td>13.83</td>
<td>3.55</td>
</tr>
<tr>
<td>Age of First Chapter</td>
<td>50</td>
<td>15.36</td>
<td>4.65</td>
</tr>
<tr>
<td>Time Executive Director Held Position</td>
<td>33</td>
<td>3.32</td>
<td>4.08</td>
</tr>
<tr>
<td>Number Different Executive Directors</td>
<td>38</td>
<td>3.38</td>
<td>1.88</td>
</tr>
<tr>
<td>Collaboration with Private Corporations</td>
<td>39</td>
<td>2.62</td>
<td>.90</td>
</tr>
<tr>
<td>Collaboration with Dept. Drug &amp; Alcohol</td>
<td>39</td>
<td>3.18</td>
<td>1.254</td>
</tr>
<tr>
<td>Collaboration with Judges Association</td>
<td>39</td>
<td>2.13</td>
<td>1.056</td>
</tr>
</tbody>
</table>

Table 4.2 Mean and standard deviations of MADD independent variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate of MADD Members (Trend)</td>
<td>50</td>
<td>24.70</td>
<td>13.327</td>
</tr>
<tr>
<td>Number of Full-Time Employees (Trend)</td>
<td>50</td>
<td>3.86</td>
<td>2.47</td>
</tr>
<tr>
<td>Age of State Office (Trend)</td>
<td>50</td>
<td>13.85</td>
<td>3.16</td>
</tr>
<tr>
<td>Time Executive Director Held Position</td>
<td>50</td>
<td>3.33</td>
<td>3.31</td>
</tr>
<tr>
<td>Number Different Executive Directors</td>
<td>50</td>
<td>3.39</td>
<td>1.64</td>
</tr>
<tr>
<td>Collaborative Private Corporation (Trend)</td>
<td>50</td>
<td>2.60</td>
<td>.80</td>
</tr>
<tr>
<td>Collaborative Dept. Drug &amp; Alcohol (Trend)</td>
<td>50</td>
<td>3.18</td>
<td>1.10</td>
</tr>
<tr>
<td>Collaborative Judges Association (Trend)</td>
<td>50</td>
<td>2.12</td>
<td>.93</td>
</tr>
</tbody>
</table>

Table 4.3 Mean and standard deviations of imputed (linear trend at point) MADD Independent variables

75
Variable        N    Mean    Standard Deviation

Years .08 BAC Per Se law 50  1.76  2.79
Years Open Container law 50 12.24 17.817
Years Administrative License Revocation law 50  6.88  11.28
Rate of Driving-Under-the-Influence Arrests 50  5.55  0.60
Rate of Alcohol-Related Traffic Fatalities 50  6.64  3.08

Table 4.4 Mean and standard deviations of dependent variables

Variable        N    Mean    Standard Deviation

Per Capita Income 1998 50 10.1206  .15025
Rate of Alcohol Sales Tax 1999 50 14.00  8.26
Rate of Automobile Drivers 1999 50 70537.67  5017.14

Table 4.5 Mean and standard deviations of control variables

Statistical Analysis of Data – Multiple Linear Regression

Survey data and state characteristic data were entered into SPSS 11.0 data files, after which a Pearson bivariate correlation matrix of all variables of interest was created. Pearson correlation coefficient values that fell above .700, indicating a high level of multicollinearity, were removed from the model. Appendix B presents a 1-tailed Pearson correlation for the entire set of variables included in the analysis.

Multiple linear regression analysis was completed to test 20 hypotheses. Causality and prediction are not inferred. Rather, association between the independent and dependent variables is revealed while controlling for a variety of state characteristics that could confound the relationship between the study variables. The causal order of the independent and dependent variables is disjointed. Specifically, the data reported for
state-characteristic control variables – per capita income, rate of alcohol sales tax, and rate of total drivers in force was for the years 1998 and 1999. Driving-under-the-influence arrests and alcohol-related traffic fatalities were both analyzed for the year 1999. Independent MADD characteristic and process variables were reported for fiscal year 2000 (July 1, 1999 to June 30, 2000). Finally, many of the Open Container and Administrative License Revocation laws were enacted prior to the formation of individual MADD chapters or a MADD state office.

In addition to the problem with the causal order of the variables under examination, the sample size is small. Kerlinger (1986) contends 8 to 15 subjects per independent variables are needed for a reliable regression equation. Due the number of independent and control variables under examination, four models were created to guide the statistical analysis. The four models are: the size of MADD; the length of MADD's presence; characteristics of MADD state office executive directors, and state office collaboration activities.

Multiple linear regression is the best statistical tool to test or answer the research questions in that the strength of association between the independent and respective dependent variables can be determined, along with the statistical significance, and the "goodness of fit" of the regression equation in explaining variation in the dependent variable. By controlling for the influence of the extraneous environmental variables more confidence is possible in explaining the relationship observed between MADD organizational characteristics/MADD state office collaboration strategies and the dependent variables used in the study. Multiple linear regression calculates individual regression coefficients of the linear equation, involving one or more independent
variables (Pedhazur & Schmelkin, 1991). In other words, regression analysis is a method of analyzing variability of a dependent variable by resorting to information on one of more independent variables (Pedhazur & Schmelkin, 1991).

In this study a two-step regression procedure is applied. In step one, three control variables - per capita income, rate of alcohol sales tax, and rate of total drivers in force were entered simultaneously into the model. Therefore, the variance in each of the respective five dependent variables explained by the three control variables can be partialled out (controlled). The second step adds to the model the remaining independent MADD variables simultaneously. In this way, the additional variance (after controlling for per capita income, rate of alcohol sales tax, and rate of total drivers in force) explained by MADD organizational characteristics and state office collaboration activities for each dependent variable could be determined. The simultaneous entry model is most appropriate when there is no logical or theoretical basis for considering any independent variable prior to any other independent variable (Hair, Anderson, Tatham & Black, 1998).

For all the multiple linear regression tables constructed, the full model is presented. The statistical hypothesis tested is \( R^2 = 0 \). Each regression equation examines the following statistics, \( b \) (unstandardized partial regression coefficient), \( \text{Beta} \) (standardized partial regression coefficient), \( t \) (the calculated test statistic – the decision rule is if the probability associated with the calculated test statistic is equal to or less than alpha, reject the statistical hypothesis). \text{Significance test} (all coefficients are based on a one-tailed significance level. For all analysis significance is based on 90 percent, 95 percent and 99 percent confidence levels or .10, .05 and .01 level of significance). \( R \)
(coefficient of multiple correlation, the magnitude or strength of the relationship between the dependent variable, and the linear combination of the independent variables). \( R \) square (coefficient of determination, or the proportion of variance in the dependent variable explained by the linear combination of the independent variables. \( R \) square indicates the "goodness of fit" of the linear regression model. Ideally small residuals are desired. 1 minus \( R \)-square is the residual variance or the proportion of variance in the dependent variables not explained by the linear combination of independent variables. The larger the residual the "poorer the fit"). \( R \)-square change (a way of defining the contribution of each independent variable to the explanation of variance in the dependent variable. The increment in proportion of variance of the dependent variable accounted for by a given independent variable after controlling for the other independent variables). \( F \) (calculated test statistic). Tolerance statistic (calculated for each independent variable to assess the extent to which each variable is a linear combination of all other independent variables. Values of the tolerance statistic near 1.0 indicate that multicollinearity of an independent variable is not a linear combination of the other independent variables; low values near .00 indicate multicollinearity. Multicollinearity limits the size of \( R \) and makes determining the importance of the independent variable difficult because the effects of the independent variable are confounded. Also the standard errors of the partial regression coefficient increase as the correlations among the independent variable increase. The greater the standard errors, the more unstable the regression equation will be). \( VIF \) (value inflation factor statistic is one divided by "tolerance." Low values for \( VIF \) indicate that an independent variable is not a linear combination of all other independent variables. Values for \( VIF \) that are higher than 10...
indicate that multicollinearity is a problem in the model). And, Durbin-Watson (tests independence of residuals. A small Durbin-Watson is desired. Durbin-Watson statistics near 2.0 indicate that the assumption of independence is not violated).

*Expected Sign of the Coefficients*

Tables 4.6, 4.7 and 4.8 show the expected sign of the coefficients on the independent variables and gives a brief explanation for the expectations.
<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Expected Sign on Coefficient</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income</td>
<td>?</td>
<td>The association between per capita income and drunk driving laws is ambiguous.</td>
</tr>
<tr>
<td>Rate Alcohol Sales Tax</td>
<td>+</td>
<td>Increased tax is public policy created to limit alcohol consumption. States that have made efforts to limit consumption are more likely to have adopted additional drunk-driving policies to address the drinking driving problem.</td>
</tr>
<tr>
<td>Rate Total Drivers in Force</td>
<td>-</td>
<td>Lower number of drivers may be associated with the number of years a state has had drunk driving laws.</td>
</tr>
<tr>
<td>Rate of MADD Chapters</td>
<td>+</td>
<td>Greater number of chapters is associated with greater number of years a state has had a drunk driving law. This rationale is consistent with Freeman (1975), Gamson (1990), Jacobs (1978), Snyder and Kelly (1976).</td>
</tr>
<tr>
<td>Rate of MADD Membership</td>
<td>+</td>
<td>Greater numbers of MADD members is associated with the greater number of years a state has had a drunk driving law. This rationale is consistent with Freeman (1975), Gamson (1990), Jacobs (1978), Snyder and Kelly (1976).</td>
</tr>
<tr>
<td>Number of Full-time Employees</td>
<td>+</td>
<td>Greater numbers of employees is associated with a greater number of years a state has had a drunk driving law. Resource Mobilization Theory Hypothesis 8.</td>
</tr>
<tr>
<td>Age of State Office</td>
<td>+</td>
<td>Age of the state office is associated with a greater number of years a state has had a drunk driving law. This rationale is consistent with Resource Mobilization Theory Hypothesis 6.</td>
</tr>
<tr>
<td>Age of First MADD Chapter</td>
<td>+</td>
<td>Age of MADD chapters is associated with a greater number of years a state has had a drunk driving law. This rationale is consistent with Resource Mobilization Theory Hypothesis 6.</td>
</tr>
<tr>
<td>Months and Years Executive Director Held Position</td>
<td>+</td>
<td>The greater amount a time an Executive Director has held the executive director position is associated with a greater number of years a state has had a drunk driving law. This rationale is consistent with Resource Mobilization Theory Hypothesis 8 &amp; 9.</td>
</tr>
<tr>
<td>Number of Different Executive Directors</td>
<td>+</td>
<td>Leadership that has withheld the test of time is associated with a greater number of years a state has had a drunk driving law. This rationale is consistent with Resource Mobilization Theory Hypothesis 8 &amp; 9.</td>
</tr>
<tr>
<td>Collaboration Activities</td>
<td>+</td>
<td>MADD collaborative activities are associated with a greater number of years a state has had a drunk driving law. This rational is consistent with &quot;outside&quot; activity as described by Walker (1991). Resource Mobilization Theory suggests that the greater amount of resources (labor and money) available to an organization, the greater the likelihood organizational goal with be attained. Collaboration activities provide MADD with the resources of labor and money.</td>
</tr>
</tbody>
</table>

Table 4.6 Expected sign of the coefficients of the independent variables on drunk-driving laws along with a rationale for the expectations.
<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Expected Sign on Coefficient</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income</td>
<td>+</td>
<td>The association between income and DUIs is positive. Higher per capita income states should have more policing resources available to detect DUIs.</td>
</tr>
<tr>
<td>Rate Alcohol Sales Tax</td>
<td>+</td>
<td>Higher per capita alcohol consumption may be associated with greater incidence of DUIs.</td>
</tr>
<tr>
<td>Rate Total Drivers in Force</td>
<td>+</td>
<td>Higher number of drivers may be associated with greater incidence of DUIs.</td>
</tr>
<tr>
<td>Rate of MADD Chapters</td>
<td>-</td>
<td>Greater number of chapters is associated with a fewer number of DUIs. This rationale is consistent with Freeman (1975), Gamson (1990), Jacobs (1978), Snyder and Kelly (1976).</td>
</tr>
<tr>
<td>Rate of MADD Membership</td>
<td>-</td>
<td>Greater numbers of MADD members is associated with a fewer number of DUIs. This rationale is consistent with Freeman (1975), Gamson (1990), Jacobs (1978), Snyder and Kelly (1976).</td>
</tr>
<tr>
<td>Number of Full-Time Employees</td>
<td>-</td>
<td>Greater numbers of employees is associated with a fewer number of DUIs. This rationale is consistent with Resource Mobilization Theory Hypothesis 8.</td>
</tr>
<tr>
<td>Age of State Office</td>
<td>-</td>
<td>Age of state office is associated with a fewer number of DUIs. This rationale is consistent with Resource Mobilization Theory Hypothesis 6.</td>
</tr>
<tr>
<td>Age of First MADD Chapter</td>
<td>-</td>
<td>Age of MADD Chapters is associated with a fewer number of DUIs. This rationale is consistent with Resource Mobilization Theory Hypothesis 6.</td>
</tr>
<tr>
<td>Months and Years Executive Director Held Position</td>
<td>-</td>
<td>Age of Executive Director is associated with a fewer number of DUIs. This rationale is consistent with Resource Mobilization Theory Hypothesis 8 &amp; 9.</td>
</tr>
<tr>
<td>Number of Different Executive Directors</td>
<td>-</td>
<td>Leadership that has withheld the test of time is associated with a fewer number of DUIs. This rationale is consistent with Resource Mobilization Theory Hypothesis 8 &amp; 9.</td>
</tr>
<tr>
<td>Collaboration Activities</td>
<td>-</td>
<td>MADD Collaborative activities is associated with a fewer number of DUIs. This rational is consistent with &quot;outside&quot; activity as described by Walker (1991). Resource Mobilization Theory suggests that the greater amount of resources (labor and money) available to an organization, the greater the likelihood organizational goal with be attained. Collaboration activities provide MADD with the resources of labor and money.</td>
</tr>
</tbody>
</table>

Table 4.7 Expected sign of the coefficients of the independent variables on driving-under the-influence arrests along with a rationale for the expectations.
<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Expected Sign on Coefficient</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income</td>
<td>-</td>
<td>The association between per capita income and fatalities is negative. If per capita income is negative, it suggests that states with higher per capita income are less involved in alcohol-related traffic fatalities.</td>
</tr>
<tr>
<td>Rate Alcohol Sales Tax</td>
<td>+</td>
<td>Higher per capita alcohol consumption may be associated with greater incidence of fatalities.</td>
</tr>
<tr>
<td>Rate Total Drivers in Force</td>
<td>+</td>
<td>Higher number of drivers may be associated with greater incidence of fatalities.</td>
</tr>
<tr>
<td>Rate of MADD Chapters</td>
<td>-</td>
<td>Greater number of chapters is associated with a lower number of fatalities. This rationale is consistent with Freeman (1975), Gamson (1990), Jacobs (1978), Snyder and Kelly (1976).</td>
</tr>
<tr>
<td>Rate of MADD Membership</td>
<td>-</td>
<td>Greater numbers of MADD members is associated with a lower number of fatalities. This rationale is consistent with Freeman (1975), Gamson (1990), Jacobs (1978), Snyder and Kelly (1976).</td>
</tr>
<tr>
<td>Number of Full-Time Employees</td>
<td>-</td>
<td>Greater numbers of employees is associated with a lower number of fatalities. This rationale is consistent with Resource Mobilization Theory Hypothesis 8.</td>
</tr>
<tr>
<td>Age of State Office</td>
<td>-</td>
<td>Age of state office is associated with a lower number of fatalities. This rationale is consistent with Resource Mobilization Theory Hypothesis 6.</td>
</tr>
<tr>
<td>Age of First MADD Chapter</td>
<td>-</td>
<td>Age of MADD chapters is associated with a lower number of fatalities. This rationale is consistent with Resource Mobilization Theory Hypothesis 6.</td>
</tr>
<tr>
<td>Months and Years Executive Director Held Position</td>
<td>-</td>
<td>Longevity of Executive Director is associated with a reduction in fatalities. This rationale is consistent with Resource Mobilization Theory Hypothesis 8 &amp; 9.</td>
</tr>
<tr>
<td>Number of Different Executive Directors</td>
<td>-</td>
<td>Leadership that has withheld the test of time is associated with a lower number of fatalities. This rationale is consistent with Resource Mobilization Theory Hypothesis 8 &amp; 9.</td>
</tr>
<tr>
<td>Collaboration Activities</td>
<td>-</td>
<td>Greater MADD Collaborative activities is associated with a lower number of alcohol-related traffic fatalities. This rational is consistent with “outside” activity as described by Walker (1991). Resource mobilization theory suggests that the greater amount of resources (labor and money) available to an organization, the greater the likelihood organizational goal with be attained. Collaboration activities provide MADD with the resources of labor and money.</td>
</tr>
</tbody>
</table>

Table 4.8 Expected sign of the coefficients of the independent variables on alcohol-related traffic fatalities along with a rationale for the expectations
Chapter Four describes the research methodology used to determine if there is an association between characteristics of the MADD organizations/MADD state office collaboration activities controlling for environmental characteristics and three drinking and driving laws, driving-under-the-influence arrests, and alcohol-related traffic fatalities. Contained within this chapter is a review of the research questions, 20 hypothesis, presentation of data sources and methods of data collection. Chapter Four elaborates on specific measures including the independent, dependent and control variables; followed by a discussion about the transformation of variables and missing values/imputation. What follows is a presentation of the descriptive statistics for the variables of interest. The statistical procedure used to analyze the data along with three tables that explain the expected sign of the coefficients concludes Chapter Four.
Chapter Five present the results of twenty hypothesis tested using multiple linear regression.

**Hypothesis 1:** The first hypothesis tested whether the size of social movement organization Mothers Against Drunk Driving controlling for environmental characteristics is positively associated with the number of years a state has had a .08 BAC Per Se law. Table 5.1 demonstrates that the full model is not statistically significant at the alpha < .10 level with a calculated test statistic $F = 1.773$, $P = .127$. Therefore, hypothesis 1 is rejected.
Table 5.1 Multiple regression analysis of the number of years a state has had a .08 BAC Per Se law and independent variables (MADD chapters, state MADD membership, and MADD state office full-time equivalent employees, n = 50)

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>Beta</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income</td>
<td>2.549</td>
<td>.137</td>
<td>.894</td>
<td>.188</td>
</tr>
<tr>
<td>Rate of Alcohol Sales Tax</td>
<td>.102</td>
<td>.302</td>
<td>2.110</td>
<td>.020**</td>
</tr>
<tr>
<td>Rate of Driver</td>
<td>1.155 E-04</td>
<td>.208</td>
<td>1.443</td>
<td>.078*</td>
</tr>
<tr>
<td>Rate of MADD Chapters</td>
<td>-3.224E-02</td>
<td>-.002</td>
<td>-.010</td>
<td>.496</td>
</tr>
<tr>
<td>Rate of State MADD Membership</td>
<td>-4.006E-02</td>
<td>-.191</td>
<td>-1.351</td>
<td>.092*</td>
</tr>
<tr>
<td>Full-Time Employees</td>
<td>3.648E-02</td>
<td>.027</td>
<td>.189</td>
<td>.425</td>
</tr>
</tbody>
</table>

R = .445  R square = .198  F = 1.773  P = .127  R-square change = .035
Tolerance Statistic (.700-.928)  VIF Statistic (1.077-1.265)  Durbin-Watson (2.647)
* Significant at .10 level  ** Significant at .05 level  *** Significance at .01 level

Hypothesis 2: The second hypothesis tested whether the size of social movement organization Mothers Against Drunk Driving controlling for environmental characteristics is positively associated with the number of years a state has had an Open Container law. Table 5.2 demonstrates that the full model is not statistically significant at the alpha <.10 level, with a calculated test statistic F = .736, P = .623. Therefore, hypothesis 2 is rejected.
Variable | \( b \) | \( \beta \) | \( t \) | \( p \)
---|---|---|---|---
Per Capita Income | -1.044 | -.009 | -.054 | .478
Rate of Alcohol Sales Tax | -.537 | -.249 | -1.633 | .055*
Rate of Driver | 2.735E-04 | .077 | .503 | .309
Rate of MADD Chapters | -19.885 | -.148 | -1.917 | .182
Rate of State MADD Membership | -6.118E-02 | -.046 | -.304 | .381
Full-Time Employees | -.744 | -.087 | -.566 | .287

\( R = .305 \quad R \text{ square} = .093 \quad F = .736 \quad P = .623 \quad \text{R-square change} = .029 \quad P = .623 \)

Tolerance Statistic (.790-.928) VIF Statistic (1.077-1.265) Durbin-Watson (1.915)  
* Significant at .10 level  ** Significant at .05 level  *** Significance at .01 level

Table 5.2  Multiple regression analysis of the number of years a state has had an Open Container law and independent variables (MADD chapters, state MADD membership, and MADD state office full-time equivalent employees, \( n = 50 \))

Hypothesis 3: The third hypothesis tested whether the size of social movement organization Mothers Against Drunk Driving controlling for environmental characteristics is positively associated with the number of years a state has had an Administrative License Revocation law. Table 5.3 demonstrates that the full model is statistically significant at the alpha <.10 level, with a calculated test statistic \( F = 1.968, \) \( P = .091^* \). Control variables per capita income (\( p = .047^{**} \)) and rate of drivers (\( p = .042^{**} \)) are significant. MADD variable number of full time employees is significant (\( p = .005^{***} \)) however, the direction of the coefficient is not as expected. This finding suggests that a higher number of full-time employees working within a MADD state office is associated with the fewer number of years since a state has enacted an Administrative License Revocation law. Further discussion of this finding will follow in Chapter 6. Hypothesis 3 is rejected.
Table 5.3 Multiple regression analysis of the number of years a state has had an Administrative License Revocation law and independent variables (MADD chapters, state MADD membership, and MADD state office full-time equivalent, n = 50)

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>Beta</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income</td>
<td>19.502</td>
<td>.260</td>
<td>1.709</td>
<td>.047**</td>
</tr>
<tr>
<td>Rate of Alcohol Sales Tax</td>
<td>.105</td>
<td>.077</td>
<td>.542</td>
<td>.295</td>
</tr>
<tr>
<td>Rate of Driver</td>
<td>-5.667E-04</td>
<td>-.252</td>
<td>-1.768</td>
<td>.042**</td>
</tr>
<tr>
<td>Rate of MADD Chapters</td>
<td>9.565</td>
<td>.112</td>
<td>.749</td>
<td>.229</td>
</tr>
<tr>
<td>Rate of State MADD Membership</td>
<td>9.968E-02</td>
<td>.118</td>
<td>.840</td>
<td>.203</td>
</tr>
<tr>
<td>Full-Time Employees</td>
<td>-2.096</td>
<td>-.385</td>
<td>-2.709</td>
<td>.005***</td>
</tr>
</tbody>
</table>

R = .464 R square = .215 F = 1.968 P = .091* R-square change = .159
Tolerance Statistic (.790-.928) VIF Statistic (1.077-1.265) Durbin-Watson (2.141)
* Significant at .10 level ** Significant at .05 level *** Significance at .01 level

Hypothesis 4: The fourth hypothesis tested whether the size of social movement organization Mothers Against Drunk Driving controlling for environmental characteristics is negatively associated with driving-under-the-influence arrests. Table 5.4 demonstrates that the full model is not statistically significant at the alpha <.10 level, with a calculated test statistic F = 1.142, P = .355. Therefore, hypothesis 4 is rejected.

Table 5.4 Multiple regression analysis of DUIs and independent variables (MADD chapters, state MADD membership, and MADD state office full-time equivalent employees, n = 50)

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>Beta</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income</td>
<td>.453</td>
<td>.113</td>
<td>.707</td>
<td>.241</td>
</tr>
<tr>
<td>Rate of Alcohol Sales Tax</td>
<td>2.516E-03</td>
<td>.034</td>
<td>.232</td>
<td>.409</td>
</tr>
<tr>
<td>Rate of Driver</td>
<td>-1.028E-05</td>
<td>-.085</td>
<td>-.571</td>
<td>.285</td>
</tr>
<tr>
<td>Rate of MADD Chapters</td>
<td>-.539</td>
<td>-.118</td>
<td>-.753</td>
<td>.228</td>
</tr>
<tr>
<td>Rate of State MADD Membership</td>
<td>6.148E-03</td>
<td>.014</td>
<td>.092</td>
<td>.463</td>
</tr>
<tr>
<td>Full-Time Employees</td>
<td>7.271E-02</td>
<td>.250</td>
<td>1.675</td>
<td>.050**</td>
</tr>
</tbody>
</table>

R = .371 R square = .137 F = 1.142 P = .355 R-square change = .072
Tolerance Statistic (.790-.928) VIF Statistic (1.077-1.265) Durbin-Watson (1.937)
* Significant at .10 level ** Significant at .05 level *** Significance at .01 level

Table 5.4 Multiple regression analysis of DUIs and independent variables (MADD chapters, state MADD membership, and MADD state office full-time equivalent employees, n = 50)
Hypothesis 5: The fifth hypothesis tested whether the size of social movement organization Mothers Against Drunk Driving controlling for environmental characteristics is negatively associated with alcohol-related traffic fatalities. Table 5.5 demonstrates that the full model is statistically significant at the alpha < .01 level, with a calculated test statistic \( F = 6.236, P = .000^{***} \). Control variable per capita income is significant \( (p = .000^{**}) \). None of the MADD variables are significant. Therefore, hypothesis 5 is rejected.

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>Beta</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income</td>
<td>-12.481</td>
<td>-.607</td>
<td>-4.843</td>
<td>.000^{***}</td>
</tr>
<tr>
<td>Rate of Alcohol Sales Tax</td>
<td>-2.492E-02</td>
<td>-.067</td>
<td>-.570</td>
<td>.286</td>
</tr>
<tr>
<td>Rate of Driver</td>
<td>9.350E-05</td>
<td>.152</td>
<td>1.291</td>
<td>.101</td>
</tr>
<tr>
<td>Rate of MADD Chapters</td>
<td>2.989</td>
<td>.128</td>
<td>1.036</td>
<td>.153</td>
</tr>
<tr>
<td>Rate of State MADD Members</td>
<td>-5.232E-03</td>
<td>-.023</td>
<td>-.195</td>
<td>.423</td>
</tr>
<tr>
<td>Full-Time Employees</td>
<td>6.881E-02</td>
<td>.046</td>
<td>.394</td>
<td>.348</td>
</tr>
</tbody>
</table>

\( R = .682 \)  \( R^2 = .465 \)  \( F = 6.236 \)  \( P = .000^{***} \)  \( \text{R-square change} = .015 \)

Tolerance Statistic (.790 -.928)  VIF Statistic (1.077-1.265)  Durbin-Watson (1.825)

* Significant at .10 level  ** Significant at .05 level  *** Significance at .01 level

Table 5.5  Multiple regression analysis of alcohol-related traffic fatalities and independent variables (MADD chapters, state MADD membership, and MADD state office full-time equivalent employees, \( n = 50 \))

Hypothesis 6: The sixth hypothesis tested whether the length of social movement organization Mothers Against Drunk Driving’s presence controlling for environmental characteristics is positively associated with the number of years a state has had a .08 BAC Per Se law. Table 5.6 demonstrates that the full model is not statistically significant at the alpha < .10 level, with a calculated test statistic \( F = 1.936, P = .107 \). Therefore, hypothesis 6 is rejected.
Table 5.6 Multiple regression analysis of number of years a state has had a .08 BAC Per Se law and independent variables (number of years state office has been operational and age of first MADD chapter, n = 50)

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>Beta</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income</td>
<td>2.624</td>
<td>.141</td>
<td>.882</td>
<td>.191</td>
</tr>
<tr>
<td>Rate of Alcohol Sales Tax</td>
<td>.102</td>
<td>.301</td>
<td>2.103</td>
<td>.020**</td>
</tr>
<tr>
<td>Rate of Driver</td>
<td>1.042E-04</td>
<td>.187</td>
<td>1.225</td>
<td>.113</td>
</tr>
<tr>
<td>Number of years/ state office</td>
<td>-.112</td>
<td>-.124</td>
<td>-.858</td>
<td>.198</td>
</tr>
<tr>
<td>Number of years/first MADD Chapter</td>
<td>5.334E-02</td>
<td>.089</td>
<td>.530</td>
<td>.299</td>
</tr>
</tbody>
</table>

R = .425  R square = .180  F = 1.936  P = .107  R-square change = .017
Tolerance Statistic (.662 - .906)  VIF Statistic (1.103-1.510)  Durbin-Watson (2.499)
* Significant at .10 level  ** Significant at .05 level  *** Significant at .01 level

Hypothesis 7: The seventh hypothesis tested whether the length of social movement organization Mothers Against Drunk Driving's presence controlling for environmental characteristics is positively associated with the number of years a state has had an Open Container law. Table 5.7 demonstrates that the full model is not statistically significant at the alpha < .10 level, with a calculated test statistic F = .863, P = .514. Therefore, hypothesis 7 is rejected.

Table 5.7 Multiple regression analysis of number of years a state has had an Open Container law and independent variables (number of years state office has been operational and age of first MADD chapter, n = 50)

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>Beta</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income</td>
<td>14.871</td>
<td>.125</td>
<td>.742</td>
<td>.231</td>
</tr>
<tr>
<td>Rate of Alcohol Sales Tax</td>
<td>-.571</td>
<td>-.265</td>
<td>-1.753</td>
<td>.043**</td>
</tr>
<tr>
<td>Rate of Driver</td>
<td>1.013E-04</td>
<td>.029</td>
<td>.177</td>
<td>.430</td>
</tr>
<tr>
<td>Number of years/ state office</td>
<td>-.242</td>
<td>-.042</td>
<td>-.276</td>
<td>.392</td>
</tr>
<tr>
<td>Number of years/first MADD Chapter</td>
<td>-.707</td>
<td>-.185</td>
<td>-1.045</td>
<td>.151</td>
</tr>
</tbody>
</table>

R = .299  R square = .089  F = .863  P = .514  R-square change = .026
Tolerance Statistic (.662 - .906)  VIF Statistic (1.103-1.510)  Durbin-Watson (2.046)
* Significant at .10 level  ** Significant at .05 level  *** Significant at .01 level

Table 5.7 Multiple regression analysis of number of years a state has had an Open Container law and independent variables (number of years state office has been operational and age of first MADD chapter, n = 50)
Hypothesis 8: Hypothesis eight tested whether the length of social movement organizations Mothers Against Drunk Driving’s presence controlling for environmental characteristics is positively associated with the number of years a state has had an Administrative License Revocation law. Table 5.8 demonstrates that the full model is not statistically significant at the alpha <.10 level, with a calculated test statistic $F = .572$, $P = .721$. Therefore, hypothesis 8 is rejected.

<table>
<thead>
<tr>
<th>Variable</th>
<th>$b$</th>
<th>Beta</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income</td>
<td>8.782</td>
<td>.117</td>
<td>.682</td>
<td>.249</td>
</tr>
<tr>
<td>Rate of Alcohol Sales Tax</td>
<td>.134</td>
<td>.098</td>
<td>.638</td>
<td>.263</td>
</tr>
<tr>
<td>Rate of Driver</td>
<td>-5.124E-04</td>
<td>-.228</td>
<td>-1.391</td>
<td>.085*</td>
</tr>
<tr>
<td>Number of years/ state office</td>
<td>-.272</td>
<td>-.075</td>
<td>-.482</td>
<td>.316</td>
</tr>
<tr>
<td>Number of years/first MADD Chapter</td>
<td>-3.278E-04</td>
<td>-.000</td>
<td>-.001</td>
<td>.499</td>
</tr>
</tbody>
</table>

$R = .247$  
$R$ square = .061  
$F = .572$  
$P = .721$  
R-square change = .005  
Tolerance Statistic (.662 - .906)  
VIF Statistic (1.103-1.510)  
Durbin-Watson (2.008)  
* Significant at .10 level  
** Significant at .05 level  
*** Significance at .01 level

Table 5.8 Multiple regression analysis of number of years a state has had an Administrative License Revocation law and independent variables (numbers of years state office has been operational and age of first chapter, $n = 50$)

Hypothesis 9: Hypothesis nine tested whether the length of social movement organization Mothers Against Drunk Driving’s presence controlling for environmental characteristic is negatively associated with driving-under-the-influence arrests. Table 5.9 demonstrates that the full model is not statistically significant at the alpha <.10 level, with a calculated test statistic $F = .616$, $P = .688$. Therefore, hypothesis 9 is rejected.
Table 5.9 Multiple regression analysis of driving-under-the-influence arrests and independent variables (number of years state office has been operational and age of first MADD chapter, n = 50)

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>Beta</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income</td>
<td>.843</td>
<td>.210</td>
<td>1.226</td>
<td>.113</td>
</tr>
<tr>
<td>Rate of Alcohol Sales Tax</td>
<td>2.000E-03</td>
<td>.027</td>
<td>.179</td>
<td>.429</td>
</tr>
<tr>
<td>Rate of Driver</td>
<td>-1.312E-05</td>
<td>-.109</td>
<td>-.667</td>
<td>.254</td>
</tr>
<tr>
<td>Number of years/ state office</td>
<td>1.512E-03</td>
<td>.008</td>
<td>.050</td>
<td>.480</td>
</tr>
<tr>
<td>Number of years/first MADD Chapter</td>
<td>1.789E-04</td>
<td>.014</td>
<td>.077</td>
<td>.469</td>
</tr>
</tbody>
</table>

R = .256  \( R \text{ square} = .065 \)  \( F = .616 \)  \( P = .688 \)  \( \text{R-square change} = .000 \)
Tolerance Statistic (.662 - .906)  VIF Statistic (1.103 - 1.510)  Durbin-Watson (2.062)
* Significant at .10 level  ** Significant at .05 level  *** Significance at .01 level

Hypothesis 10: Hypothesis ten tested whether the length of social movement organization Mothers Against Drunk Driving’s presence controlling for environmental characteristics is negatively associated with alcohol-related traffic fatalities. Table 5.10 demonstrates that the full model is statistically significant at the alpha < .01 level, with a calculated test statistic \( F = 8.828, P = .000*** \). Control variable per capita income \( (p = .000***) \) and number of years a state MADD chapter has been in operation \( (p = .036**) \) are statistically significant in their association with alcohol-related traffic fatalities.
Hypothesis 10 is accepted. Therefore, states in which MADD chapters have been around longer have a fewer number of alcohol-related traffic fatalities controlling for environmental characteristics at the time of data collection.

The total variance in alcohol-related traffic fatalities (dependent variable) explained by the regression equation is .501 (R-square). For each independent variable the calculated test statistic is “t,” with the statistical hypothesis tested being that each
partial regression coefficient (b) is equal to a zero when all the other independent variables are held constant. The regression equation for the full model is:

\[
\text{Alcohol-related traffic fatalities} = 19.329 - 10.589 (X1) - 2.610E-02 (X2) + 4.039E-05 (X3) - 9.446E-02 (X4) - .160 (X5)
\]

\(X1 = \) per capita income, \(X2 = \) alcohol sales tax, \(X3 = \) auto drivers, \(X4 = \) years a state office has been operational, \(X5 = \) years the first chapter has been operational

The standardized regression coefficient (Beta) measures the relative importance of the independent variable in its association with alcohol-related traffic fatalities. Therefore, per capita income (Beta = -.515) is the most important variable in its association with alcohol-related traffic fatalities, with independent variable number of years since the formation of the first chapter (Beta = -.240) being the second most important.

Additional statistics for determining the degree of multicollinearity in the regression analysis (in addition to the examination of the bivariate correlation matrix) are the Tolerance statistic and the Variance Inflation Factor (VIF). Both the Tolerance and the VIF statistics indicate that multicollinearity is not a problem in this regression analysis. To test for the assumptions that the residuals are independent, the Durbin-Watson statistic was calculated, yielding a value of 1.832, indicating the independence of residuals in this regression analysis. Finally, the assumption that the residuals for the full model have a mean of zero is supported.
Table 5.10 Multiple regression analysis of alcohol-related traffic fatalities and independent variables (number of years state office has been operational and age of first MADD chapter, n = 50)

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>Beta</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income</td>
<td>-10.589</td>
<td>-.515</td>
<td>-4.119</td>
<td>.000***</td>
</tr>
<tr>
<td>Rate of Alcohol Sales Tax</td>
<td>-2.610E-02</td>
<td>-.070</td>
<td>-6.24</td>
<td>.268</td>
</tr>
<tr>
<td>Rate of Driver</td>
<td>4.039E-05</td>
<td>.066</td>
<td>.550</td>
<td>.292</td>
</tr>
<tr>
<td>Number of years/ state office</td>
<td>-9.446E-02</td>
<td>-.095</td>
<td>-.840</td>
<td>.203</td>
</tr>
<tr>
<td>Number of years/first MADD Chapter</td>
<td>-.160</td>
<td>-.240</td>
<td>-1.837</td>
<td>.036**</td>
</tr>
</tbody>
</table>

R = .708  R square = .501  F = 8.828  P = .000***  R-square change = .050
Tolerance Statistic (.662 - .906)  VIF Statistic (1.103 - 1.510)  Durbin-Watson (1.832)
* Significant at .10 level  ** Significant at .05 level  *** Significance at .01 level

Hypothesis 11: Hypothesis eleven tested whether the characteristics of social movement organization Mothers Against Drunk Driving state office executive directors controlling for environmental characteristics is positively associated with the number of years a state has had a .08 BAC Illegal Per Se law. Table 5.11 demonstrates that the full model is not statistically significant at the alpha < .10 level, with a calculated test statistic F = 1.881, P = .117. Therefore, hypothesis 11 is rejected.

Table 5.11 Multiple regression analysis of number of years state has had a .08 BAC Per Se law and independent variables (amount of time state office executive director has held the position and number of different executive directors that have managed the state office, n = 50)

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>Beta</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income</td>
<td>4.000</td>
<td>.215</td>
<td>1.436</td>
<td>.079*</td>
</tr>
<tr>
<td>Rate of Alcohol Sales Tax</td>
<td>9.346E-02</td>
<td>.277</td>
<td>1.913</td>
<td>.031**</td>
</tr>
<tr>
<td>Rate of Driver</td>
<td>1.079E-04</td>
<td>.194</td>
<td>1.348</td>
<td>.092*</td>
</tr>
<tr>
<td>Time Executive Director held position</td>
<td>-.115</td>
<td>-.137</td>
<td>-.833</td>
<td>.204</td>
</tr>
<tr>
<td>Number of Different Executive Directors</td>
<td>-.119</td>
<td>-.070</td>
<td>-.457</td>
<td>.325</td>
</tr>
</tbody>
</table>

R = .420  R square = .176  F = 1.881  P = .117  R-square change = .013
Tolerance Statistic (.694 - .904)  VIF Statistic (1.106 - 1.440)  Durbin-Watson (2.637)
* Significant at .10 level  ** Significant at .05 level  *** Significance at .01 level

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Hypothesis 12: Hypothesis twelve tested whether the characteristics of social movement organization Mothers Against Drunk Driving state office executive directors controlling for environmental characteristics is positively associated with the number of years a state has had an Open Container law. Table 5.12 demonstrates that the full model is not statistically significant at the alpha <.10 level, with a calculated test statistic $F = 1.140$, $P = .354$. Therefore, hypothesis 12 is rejected.

<table>
<thead>
<tr>
<th>Variable</th>
<th>$b$</th>
<th>Beta</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income</td>
<td>14.813</td>
<td>.125</td>
<td>.803</td>
<td>.213</td>
</tr>
<tr>
<td>Rate of Alcohol Sales Tax</td>
<td>-.609</td>
<td>-.282</td>
<td>-1.883</td>
<td>.033**</td>
</tr>
<tr>
<td>Rate of Driver</td>
<td>.067</td>
<td>.449</td>
<td>.328</td>
<td></td>
</tr>
<tr>
<td>Time Executive Director Held Position</td>
<td>-1.455</td>
<td>-.270</td>
<td>-1.587</td>
<td>.060*</td>
</tr>
<tr>
<td>Number of Different Executive Directors</td>
<td>-1.392</td>
<td>-.128</td>
<td>-.805</td>
<td>.212</td>
</tr>
</tbody>
</table>

$R = .339$  $R^2 = .115$  $F = 1.140$  $P = .354$  $R^2$ change = .051
Tolerance Statistic (.694 - .904)  VIF Statistic (1.106 - 1.440)  Durbin-Watson (1.947)
* Significant at .10 level  ** Significant at .05 level  *** Significance at .01 level

Table 5.12 Multiple regression analysis of number of years state has had an Open Container law and independent variables (amount of time state office executive director has held the position and number of different executive directors that have managed the state office, $n = 50$)

Hypothesis 13: Hypothesis thirteen tested whether characteristics of social movement organization Mothers Against Drunk Driving state office executive directors controlling for environmental characteristics is positively associated with the number of years a state has had an Administrative License Revocation law. Table 5.13 demonstrates that the full model is not statistically significant at the alpha <.10 level, with a calculated test statistic $F = .746$, $P = .593$. Therefore, hypothesis 13 is rejected.
Variable | b | Beta | t | p
---|---|---|---|---
Per Capita Income | 11.746 | .156 | .985 | .165
Rate of Alcohol Sales Tax | 9.811E-02 | .072 | .469 | .320
Rate of Driver | -4.781E-04 | -.213 | -1.396 | .085*
Time Executive Director Held Position | -.484 | -.142 | -.816 | .209
Number of Different Executive Directors | -1.028 | -.149 | -.920 | .181

R = .280  R square = .078  F = .746  P = .593  R-square change = .022
Tolerance Statistic (.694 - .904)  VIF Statistic (1.106 - 1.440)  Durbin-Watson (2.014)
* Significant at .10 level  ** Significant at .05 level  *** Significance at .01 level

Table 5.13 Multiple regression analysis of number of years state has had an Administrative License Revocation law and independent variables (amount of time state office executive director has held the position and number of different executive directors that have managed the state office, n = 50)

**Hypothesis 14:** Hypothesis fourteen tested whether characteristics of social movement organization Mothers Against Drunk Driving state office executive director controlling for environmental characteristic is negatively associated with driving-under-the-influence arrests. Table 5.14 demonstrates that the full model is not statistically significant at the alpha < .10 level, with a calculated test statistic F = 1.273, P = .292. Therefore, hypothesis 14 is rejected.
Variable | b   | Beta | t    | p    
---|-----|------|------|------
Per Capita Income | 1.226 | .305 | 1.974 | .027**
Rate of Alcohol Sales Tax | 1.418E-03 | .019 | .130 | .448
Rate of Driver | -1.618E-05 | -.134 | -.907 | -.184
Time Executive Director Held Position | -4.651E-02 | -.255 | -1.507 | .069*
Number of Different Executive Directors | 8.518E-03 | .023 | .146 | .442

R = .356  R square = .126  F = 1.273  P = .292  R-square change = .061
Tolerance Statistic (.798 - .904)  VIF Statistic (1.106 - 1.440)  Durbin-Watson (2.037)
* Significant at .10 level  ** Significant at .05 level  *** Significance at .01 level

Table 5.14 Multiple regression analysis of driving-under-the-influence arrests and independent variables (amount of time state office executive director has held the position and number of different executive directors that have managed the state office, n = 50)

**Hypothesis 15:** Hypothesis fifteen tested whether the characteristics of social movement organization Mothers Against Drunk Driving state office executive director controlling for environmental characteristics is negatively associated with alcohol-related traffic fatalities. Table 5.15 demonstrates that the full model is statistically significant at the alpha < .01 level, with a calculated test statistic F = 8.812, P = .000***. Control variables per capita income (p = .000***), is significant and rate of drivers in force (p = .073*) is significant. MADD characteristic variable, the amount of time the current state office executive director has held the position (p = .073*) is also statistically significant however, the direction of the coefficient is not as expected. This finding suggests that states where the MADD executive director has been in a leadership position longer report higher numbers of alcohol related traffic fatalities. Further discussion of this finding will follow in Chapter 6. Hypothesis 5.15 is rejected.
<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>Beta</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income</td>
<td>-14.525</td>
<td>-.707</td>
<td>-6.049</td>
<td>.000***</td>
</tr>
<tr>
<td>Rate of Alcohol Sales Tax</td>
<td>-2.390E-02</td>
<td>-.064</td>
<td>-.567</td>
<td>.286</td>
</tr>
<tr>
<td>Rate of Driver</td>
<td>1.018E-04</td>
<td>.165</td>
<td>1.476</td>
<td>.073*</td>
</tr>
<tr>
<td>Time Executive Director held position</td>
<td>.176</td>
<td>.189</td>
<td>1.475</td>
<td>.073*</td>
</tr>
<tr>
<td>Number of Different Executive Directors</td>
<td>-.154</td>
<td>-.081</td>
<td>-.682</td>
<td>.249</td>
</tr>
</tbody>
</table>

R = .707  R square = .500  F = 8.812  P = .000***  R-square change = .050
Tolerance Statistic (.694 - .904)  VIF Statistic (1.106 - 1.440)  Durbin-Watson (1.629)
* Significant at .10 level  ** Significant at .05 level  *** Significance at .01 level

Table 5.15 Multiple regression analysis of alcohol-related traffic fatalities and independent variables (amount of time state office executive director has held the position and number of different executive directors that have managed the state office, n = 50)

**Hypothesis 16:** Hypothesis sixteen tested whether the social movement organization Mothers Against Drunk Driving state office collaboration activities controlling for environmental characteristics is positively associated with the number of years a state has had a .08 BAC Illegal Per Se law. Table 5.16 demonstrates that the full model is statistically significant at the alpha <.10 level, with a calculated test statistic F = 2.139, P = .068*. Control variables rate of alcohol sales tax (p = .071*) is statistically significant. None of the MADD variables are significant. Therefore, hypothesis 16 is rejected.
Variable | b   | Beta | t   | p   \\
---|------|------|-----|-----
Per Capita Income | 1.583 | .085 | .579 | .283 |
Rate of Alcohol Sales Tax | 7.550E-02 | .224 | 1.493 | .071* |
Rate of Driver | 9.072E-05 | .163 | 1.142 | .130 |
Collaboration Private Corporation | .566 | .163 | 1.142 | .130 |
Collaboration Dept. Drug & Alcohol | .439 | .174 | 1.167 | .124 |
Collaboration Judges Association | -.263 | -.088 | -.608 | .273 |

R = .479  R square = .230  F = 2.139  P = .068*  R-square change = .067
Tolerance Statistic (.799 - .880)  VIF Statistic (1.137 - 1.252)  Durbin-Watson (2.695)
* Significant at .10 level  ** Significant at .05 level  *** Significance at .01 level

Table 5.16  Multiple regression analysis of number of years a state had had a .08 BAC Per Se law and independent MADD collaboration variables, n = 50

Hypothesis 17: Hypothesis seventeen tested whether social movement organization Mothers Against Drunk Driving state office collaboration activities controlling for environmental characteristics is positively associated with the number of years a state has had an Open Container law. Table 5.17 demonstrates that the full model is statistically significant at the alpha < .10 level, with a calculated test statistic F = 1.980, P = .090*.

MADD collaboration activities with both private corporations (p = .008***) and state department of drug and alcohol (p = .023**) are statistically significant. The sign of coefficient, collaboration activities with state department of drug and alcohol is not as expected. This finding suggests that greater collaboration activities by MADD state office with a state department of drug and alcohol occurs in states where the Open Container law has been in existence for fewer years. Greater MADD collaboration activities with private corporations is reported in states where the Open Container law has been in existence for more years, lending partial support for acceptance of Hypothesis 17.

Further discussion of this finding will follow in chapter 6.
The total variance in the number of years a state has had an Open Container law (dependent variable) explained by the regression equation is .465 (R-square). The regression equation for the full model is:

Number of years a state has had an Open Container law = -10.690 + 11.697 (X1) - .387 (X2) + 9.261E-05 (X3) + 7.927 (X4) - 4.944 (X5) - 1.319 (X6)

X1 = per capita income, X2 = rate of alcohol sales tax, X3 = rate to auto drivers in force, X4 = collaboration activities with private corporation, X5 = collaboration activities with state department of drug and alcohol services, X6 = collaboration activities with judges association

The standardized regression coefficient (Beta) measures the relative importance of the independent variable in predicting number of years that a state has had an Open Container law. Therefore, collaborative activities with private corporations, the only variable influencing the model, has a Beta of .357. Additional statistics for determining the degree of multicollinearity in the regression analysis (in addition to the examination of the bivariate correlation matrix) are the Tolerance statistic and the Variance Inflation Factor (VIF). Both the Tolerance and the VIF statistics indicate that multicollinearity is not a problem in this regression analysis. To test the assumption that the residuals are independence, the Durbin-Watson statistic was calculated, yielding a value of 1.940, indicating the independent of residuals in this regression analysis. Finally, the assumption that the residuals for the full model have a mean of zero is supported.
### Table 5.17 Multiple regression analysis of number of years a state had had an Open Container law and pre-selected independent MADD collaboration variables, n = 50

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>Beta</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income</td>
<td>11.697</td>
<td>.099</td>
<td>.663</td>
<td>.255</td>
</tr>
<tr>
<td>Rate of Alcohol Sales Tax</td>
<td>-.387</td>
<td>-.179</td>
<td>-1.188</td>
<td>.121</td>
</tr>
<tr>
<td>Rate of Driver</td>
<td>9.261E-05</td>
<td>.026</td>
<td>.2181</td>
<td>.428</td>
</tr>
<tr>
<td>Collaboration Private Corporation</td>
<td>7.927</td>
<td>.357</td>
<td>2.484</td>
<td>.008***</td>
</tr>
<tr>
<td>Collaboration Dept. Drug &amp; Alcohol</td>
<td>-4.944</td>
<td>-.306</td>
<td>-2.041</td>
<td>.023**</td>
</tr>
<tr>
<td>Collaboration Judges Association</td>
<td>1.319</td>
<td>.069</td>
<td>.474</td>
<td>.319</td>
</tr>
</tbody>
</table>

R = .465  R square = .216  F = 1.980  P = .090*  R-square change = .153  
Tolerance Statistic (.799 - .880)  VIF Statistic (1.140 - 1.252)  Durbin-Watson (1.940)  
* Significant at .10 level  ** Significant at .05 level  *** Significance at .01 level

### Hypothesis 18: Hypothesis eighteen tested whether social movement organization Mothers Against Drunk Driving state office collaboration activities controlling for environmental characteristics is positively associated with the number of years a state has had an Administrative License Revocation law. Table 5.18 demonstrates that the full model is not statistically significant at the alpha <.10 level, with a calculated test statistic F = .672  P = .687. Therefore, hypothesis 18 is rejected.

### Table 5.18 Multiple regression analysis of number of years a state has had an Administrative License Revocation law and independent MADD collaboration, n = 50

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>Beta</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income</td>
<td>10.792</td>
<td>.144</td>
<td>.896</td>
<td>.187</td>
</tr>
<tr>
<td>Rate of Alcohol Sales Tax</td>
<td>.162</td>
<td>.118</td>
<td>.726</td>
<td>.236</td>
</tr>
<tr>
<td>Rate of Driver</td>
<td>4.046E-04</td>
<td>-.180</td>
<td>-1.157</td>
<td>.127</td>
</tr>
<tr>
<td>Collaboration Private Corporation</td>
<td>-1.503</td>
<td>-.109</td>
<td>-.701</td>
<td>.243</td>
</tr>
<tr>
<td>Collaboration Dept. Drug &amp; Alcohol</td>
<td>-1.201</td>
<td>-.117</td>
<td>-.725</td>
<td>.236</td>
</tr>
<tr>
<td>Collaboration Judges Association</td>
<td>-.224</td>
<td>-.018</td>
<td>-.118</td>
<td>.453</td>
</tr>
</tbody>
</table>

R = .296  R square = .087  F = .672  P = .687  R-square change = .031  
Tolerance Statistic (.799 - .880)  VIF Statistic (1.140 - 1.252)  Durbin-Watson (2.011)  
* Significant at .10 level  ** Significant at .05 level  *** Significance at .01 level
Hypothesis 19: Hypothesis nineteen tested whether social movement organization Mothers Against Drunk Driving state office collaboration activities controlling for environmental characteristic is negatively associated with driving-under-the-influence arrests. Table 5.19 demonstrates that the full model is not statistically significant at the alpha <.10 level with a calculated test statistic $F = .786, P = .586$. Therefore, hypothesis 19 is rejected.

<table>
<thead>
<tr>
<th>Variable</th>
<th>$b$</th>
<th>Beta</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income</td>
<td>.585</td>
<td>.146</td>
<td>.913</td>
<td>.183</td>
</tr>
<tr>
<td>Rate of Alcohol Sales Tax</td>
<td>-3.166E-03</td>
<td>-.043</td>
<td>-.267</td>
<td>.395</td>
</tr>
<tr>
<td>Rate of Driver</td>
<td>-1.304E-05</td>
<td>-.108</td>
<td>-.701</td>
<td>.243</td>
</tr>
<tr>
<td>Collaboration Private Corporation</td>
<td>-4.543E-02</td>
<td>-.060</td>
<td>-.392</td>
<td>.348</td>
</tr>
<tr>
<td>Collaboration Dept. Drug &amp; Alcohol</td>
<td>8.235E-02</td>
<td>.151</td>
<td>.936</td>
<td>.177</td>
</tr>
<tr>
<td>Collaboration Judges Association</td>
<td>-9.493E-02</td>
<td>-.146</td>
<td>-.939</td>
<td>.176</td>
</tr>
</tbody>
</table>

$R = .314$  
$R^2 = .099$  
$F = .786$  
$P = .586$  
$R^2$ change = .034

Tolerance Statistic (.799 - .880)  
VIF Statistic (1.137 - 1.252)  
Durbin-Watson (2.131)

* Significant at .10 level  ** Significant at .05 level  *** Significance at .01 level

Table 5.19 Multiple regression analysis of driving-under-the-influence arrests and independent MADD collaboration variables, n = 50

Hypothesis 20: Hypothesis twenty tested whether social movement organization Mothers Against Drunk Driving state office collaboration activities controlling for environmental characteristics is negatively associated with alcohol-related traffic fatalities. Table 5.20 demonstrates that the full model is statistically significant at the alpha < .01 level, with a calculated test statistic $F = 6.828, P = .000^{***}$. Control variables income ($p = .000^{***}$) and rate of drivers ($p = .067^*$) are statistically significant. None of the MADD variables are significant. Therefore, hypothesis 20 is rejected.
<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>Beta</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income</td>
<td>-11.838</td>
<td>-.576</td>
<td>-4.793</td>
<td>.000***</td>
</tr>
<tr>
<td>Rate of Alcohol Sales Tax</td>
<td>-2.963E.03</td>
<td>-.008</td>
<td>-.065</td>
<td>.474</td>
</tr>
<tr>
<td>Rate of Driver</td>
<td>1.094E-04</td>
<td>.178</td>
<td>1.526</td>
<td>.067*</td>
</tr>
<tr>
<td>Collaboration Private Corporation</td>
<td>-.516</td>
<td>-.134</td>
<td>-1.155</td>
<td>.127</td>
</tr>
<tr>
<td>Collaboration Dept. Drug &amp; Alcohol</td>
<td>-.216</td>
<td>-.077</td>
<td>-.637</td>
<td>.264</td>
</tr>
<tr>
<td>Collaboration Judges Association</td>
<td>.434</td>
<td>.131</td>
<td>1.112</td>
<td>.135</td>
</tr>
</tbody>
</table>

R = .698  R square = .488  F = 6.828  P = .000***  R-square change = .037
Tolerance Statistic (.799 - .880)  VIF Statistic (1.137 - 1.252)  Durbin-Watson (1.724)
* Significant at .10 level  ** Significant at .05 level  *** Significance at .01 level

Table 5.20  Multiple regression analysis of Alcohol-related Traffic Fatalities and independent MADD collaboration variables, n = 50

Chapter Five presents the results of 20 hypothesis tested using multiple linear regression.
CHAPTER 6

CONCLUSION AND DISCUSSION

Chapter Six presents the research findings. Chapter six also discusses the findings in terms of resource mobilization theory and prior social movement research. Lastly, the limitations of the study are noted.

Summary of Findings

Two hypothesis are accepted. Hypothesis 10, the length of social movement organization Mothers Against Drunk Driving’s presence controlling for environmental characteristics is negatively associated with alcohol-related traffic fatalities is accepted. And, hypothesis17, social movement organization Mothers Against Drunk Driving state office collaboration activities controlling for environmental characteristics is positively associated with the number of years a state has had an Open Container law is accepted.

Specifically, MADD structural variable - age of first chapter, and MADD process variable - collaboration with private corporations are associated with state level variance
in public policy outcomes. These results suggest that Mothers Against Drunk Driving can impact public policies.

There is statistical significance in length of time (age) MADD chapters have been present in a state with a fewer number of alcohol-related traffic fatalities. The relationship between age of the first MADD chapter and alcohol-related traffic fatalities is negative. In other words, states in which MADD chapters have been present longer have a fewer number of alcohol-related traffic fatalities. Research question number 3 (Is there a significant association between MADD organizational characteristics/MADD state office collaboration activities and alcohol-related traffic fatalities controlling for environmental factors?) is answered in the affirmative.

Furthermore, MADD state office collaboration activities with private corporations is statistically associated with the number of years a state has had an Open Container law. The relationship between collaboration activities with private corporations and the greater number of years a state has had an Open Container law is positive. The findings suggest that greater MADD state office collaboration activities with private corporations is reported in states where the Open Container law has been in enacted for a greater number of years. Research question number 1 (Is there a significant association between MADD organizational characteristics/MADD state office collaboration activities and drunk-driving legislation controlling for environmental factors?) is answered in the affirmative.

These results are consistent with prior social movement research and supports Resource Mobilization Theory's explanation for "how" organizational characteristics influence public policy outcomes. Therefore, the credibility of the results is strengthened by their conformity to theoretical expectations.
No evidence was found suggesting the size/membership of MADD and characteristic of the state office executive director influenced the five dependent variables under review. As discussed within the literature review of social movements, membership is viewed as an essential resource. The finding that the size/membership of MADD chapters is not a significant variable is in opposition to prior research that found size/membership to influence the goals of the organization. For example, Freeman (1975) found support for the size of the membership base within a social movement organization in her studies of the women’s movement. Gamson’s (1990) analysis of American challenging groups is one of the earliest empirical investigations of the role of membership size in social movement success. Evidence of the importance of membership size also results from studies of organized labor. Jacobs (1978) found that the extent to which state laws in the United States favor labor is strongly influenced by the percentage of the workforce unionized in each state. Furthermore, Snyder and Kelly (1976), in their analysis of factors influencing the success of Italian strikes, found that the size of union membership had a positive effect on the likelihood of success.

In addition, none of the variables included in the analysis are significant with driving-under-the-influence arrests. Moreover, there is no support for research question number 2 (Is there significant association between MADD organizational characteristics/MADD state office collaboration activities and driving-under-the-influence arrests controlling for environmental factors?).

Hypothesis 3 tested whether the size of social movement organization Mothers Against Drunk Driving controlling for environmental characteristics is positively associated with the number of years a state has had an Administrative License.
Revocation law. MADD variable, number of full-time employees is significant (p=.005***), however the direction of the coefficient is not as expected. The finding suggests that a higher number of full-time employees working within a MADD state office is associated with fewer number of years since a state enacted an Administrative License Revocation law. This finding is inconsistent with Resource Mobilization Theory. Resource Mobilization Theory, Hypothesis 8 suggests that personnel are a resource for the organization, thus contributing to the goals of the organization. An explanation for this finding may be that increased personnel at the state offices may not have focused on the enactment of an Administrative License Revocation law. Perhaps state offices with more full-time staff directed their work activities toward “other” organizational goals such as services to crime victims or the prevention of underage drinking. As noted earlier, an analysis of these two organizational goals was not completed.

Hypothesis 15 tested whether the characteristics of social movement organization Mothers Against Drunk Driving state office executive director controlling for environmental characteristics is negatively associated with alcohol-related traffic fatalities. MADD characteristic variable, the amount of time the current executive director has been directing the state office is statistically significant (p=.073*), however the direction of the coefficient is not as expected. This finding suggests that states where the MADD executive directors have been directing the state office longer report higher numbers of alcohol-related traffic fatalities. However, as noted earlier, longevity of MADD chapters was found to be associated with a fewer number of alcohol-related
traffic fatalities. These findings suggest that the age of individual chapters has produced better outcomes for the social movement organization than age of state office leadership.

Interestingly, individual MADD chapters have been present since 1980, with a mean age of 9.44 years. MADD state offices have arisen since the early 1990s with a mean age of 13.85. The mean number of different state office executive directors is 3.39 years. The mean amount of time an executive director has directed the state office is 3.33 years. Furthermore, since their advance, state offices have averaged three different leaders. By comparison the mean age (length of time) an executive director has been directing the state office is less than the mean age of the first state chapter. A possible explanation for this finding might be that executive directors have not directed the state office “long enough” to lower the number of alcohol-related traffic fatalities. In other words, the “lack” of longevity for state office executive directors may be having a negative impact for the social movement organization, particularly in the area of reducing alcohol-related traffic fatalities.

An additional explanation as to why the tenure of executive directors is longer in states where there are more alcohol-related traffic fatalities might be that these particular executive directors have devoted their time and energy toward “other” organizational goals.

Hypothesis 17 tests whether social movement organization Mothers Against Drunk Driving state office collaboration activities controlling for environmental characteristics is positively associated with the number of years a state has had an Open Container law. MADD variable, collaboration activities with a state department of drug and alcohol is statistically significant ($p=.023^{**}$), however the sign of the coefficient is
not as expected. This finding suggests that greater collaboration activities by MADD with a state department of drug and alcohol occurs in states where the Open Container law has been in existence for a fewer number of years. It was also found that greater collaboration activities by MADD with private corporations occurs in states where the Open Container law has been in existence for more years. MADD has had a long-standing collaborative relationship with private corporations. A possible explanation for this finding is that the social movement organization is strategically expanding its collaboration network to additional partners (state department of drug and alcohol) in those states that are slow to enact drunk-driving legislation. The thinking might be that more collaborative partners are needed in states that are not leaders in creating various types of drunk-driving policies. Although it is beyond the scope of this study, there is the beginnings of evidence which suggests that private corporations may be more influential with the American polity than state government per se.

Discussion Regarding the Age of MADD Chapters

Age of the first MADD chapter is associated with a fewer number of alcohol-related traffic fatalities. In other words, states in which MADD chapters have been around longer have a fewer number of alcohol-related traffic fatalities. This finding suggests that local chapters are contributing to the goals of the organization. Local chapters are staffed mainly by volunteer drunk-driving victims or beneficiary adherents (someone who could benefit directly from the goals of the organization). The efficacy of local chapters was questioned by MADD National in the late 1980s and early 1990s. This concern over the abilities of local chapters to contribute to the goals of the
organization resulted in the formation of state offices. State offices are staffed mainly by career professionals. A potential explanation for this finding is that the staff of volunteer beneficiary adherents working within local chapters are more effective in reducing alcohol-related traffic fatalities than a staff of career professionals who work within the context of a state office. How this is being accomplished can not be reported as this study did not include an examination of specific duties and activities completed within the local chapters verses the state office. Moreover, there is evidence that the work being completed within the local chapters maybe more effective than MADD National had questioned thirteen years ago.

Furthermore this finding supports hypothesis 6 of McCarthy and Zald's (1977) Resource Mobilization Theory. Hypothesis 6 indicates that older, established social movements are more likely than newer movement organizations to achieve goals. Individuals state MADD chapters began to emerge in 1980. The first state MADD offices were created in 1991. Moreover, Stinchcombe's (1987) analysis suggests that new organizations tend to suffer from inefficiencies and low levels of legitimacy. He provides three reasons why new organizations are prone to failure: 1) new organizations involve new roles which have to be learned; 2) the process of inventing new roles and the determination of their relations have high costs in inefficiency; and 3) new organizations must rely heavily on social relations among strangers. Stinchcombe's (1987) analysis also suggests that new organizations suffering from legitimacy are handicapped in their ability to attain goals other than survival. The empirical analysis of Freeman, Carroll, and Hannan (1983) provides some support for this argument as well. The authors studied age dependence in organizational death rates using data from three types of
organizations: national labor unions, semiconductor electronics manufacturers, and newspaper publishing companies. Freeman, Carroll, and Hannan (1983) found a liability of newness in each of these populations.

Discussion Regarding State Office Collaboration Activities

The finding that greater MADD state office collaboration activities with private corporations is reported in states where the Open Container law has been in existence for more years has aided MADD in achieving the desired goals of generating drinking-and-driving legislation. MADD has had a long standing collaborative relationship with numerous private corporations. As suggested by Brager and Holloway (1978), a strategy is the long-range linking of activities to achieve the desired goal. The choice of which strategy to implement is a critical decision for social movement organizations (Netting, Kettner & McMurtry, 1997). As noted by Lipsky (1968) and McAdam (1983, 1999), social movement organizations are especially dependent on the development of strategies that can give them leverage in influencing public policy. Finally, it has been shown that the capacity of movements to achieve their goals depends on their ability to create innovative strategies and tactics (McAdam, 1983). Walker (1991) asserts that the choice between what strategies to implement is a fundamental one, usually made early in an organization's history. Furthermore, collaboration activities with private corporations are considered an “outside activity” as described by Walker (1991). According to Walker (1991) outside activities may be an indirect effort to exert influence upon the outcome of a specific policy decision. Furthermore, they (outside activities) are intended to build support within the general public for an entirely new set of values that may eventually be
manifested in public policy in the future. In sum, the choice of using “outside” strategy, collaboration activities with private corporations has been effective for the MADD organization in terms of establishing an Open Container drunk-driving law.

Furthermore, Resource Mobilization as explained by McCarthy and Zald (1977) is an economic-organizational, input-output theory. The authors suggest that social movement organizations must possess resources to achieve goals. Resources can include money and labor. McCarthy and Zald (1977) hypothesize that the greater the amount of resources available to an organization, the greater the likelihood the goals will be attained. The results suggest that Resource Mobilization Theory offers a partial explanation for how MADD state office collaborative activities with private corporations is associated with one MADD goal, the creation of drinking-and-driving legislation. As noted earlier, collaboration activities are defined as groups or individuals working together toward a shared goal. Private corporations have collaborated with MADD by producing money as well as labor. For instance, the Ohio State MADD Office reports receiving cash donations from private organizations including Nationwide Insurance, restaurants, and automobile dealers. In addition, local business owners support MADD by participating in the distribution of holiday red ribbons. Furthermore, MADD reports that private corporations have provided labor, by way of directly lobbying legislators for the passage and “tightening-up” of drinking and driving laws.

On a final note, in an earlier study conducted by Wolfson (1988) he found an association between MADD and Remove Intoxicated Drivers lobbying activities and the passage of minimum age of 21 drink law.
Limitations

First and foremost, causality and prediction are not inferred in the discussion. As noted earlier, associations between the independent and dependent variables are revealed because the causal order between the independent and dependent variables is disjointed. Specifically, the data reported for state-characteristic control variables - per capita income, rate of alcohol sales tax, and rate of total drivers in force was for the years 1998 and 1999. Driving-under-the-influence arrests and alcohol-related traffic fatalities were both analyzed for the year 1999. However, independent MADD characteristic variables were reported for fiscal year 2000 (July 1, 1999 to June 30, 2000). Finally, many of the Open Container and Administrative License Revocation drunk driving laws were enacted prior to the formation of a MADD chapter or MADD state office in an individual state.

In addition to the problem with the causal order of the variables under examination, the sample size is small. A larger sample size might have provided more significant findings than those observed.

While some of the findings may be significant, they provide at best a modest explanation of the association between the observed relationships. Moreover, this study has a weakness inherent in all regression analysis in that the validity relies on the extent to which all significant predictors of the dependent variable have been accounted for (Voas & Tippetts, 1999). The public policy outcomes being studied are complex occurrences. Additional variables not identified in the study might offer an explanation or predict what state characteristics and MADD characteristics are associated with a reduction in alcohol-related traffic fatalities. For instance, this study did not include any...
measures of public attitude toward drinking and driving. The trend regarding the social undesirability drinking and driving may be an underlying factor affecting the dependent variables. Furthermore, the presence of sobriety checkpoints also may account for the reduction of alcohol-related traffic fatalities within the past 20 years. It has also been suggested that the long-term decline in automobile fatalities may be attributed to safer roads, lower speed limits, and auto-safety engineering requirements (Zimring, 1978).

Many drunk driving laws were created to ensure that a state became eligible to receive federal highway dollars for the purpose of creating new or repairing local roadways. The enactment of drunk driving laws could be the result of the role national government has played in ameliorating the problem of drunk driving. As noted by Welch and Thompson (1980), federal incentives can have a strong effect on state policy-making. On the other hand, Eyestone (1977) pointed out that a state adopts or rejects a policy due to a complex web of factors, of which federal incentive is only one.

MADD state offices do not maintain a computerized database with the statistical information relevant to this study. Furthermore, MADD state offices and individual chapters do not systematically collect the data being studied. As a result, it is suspected that there is measurement error among these variables.

In addition, early on in the study’s history, MADD National was interested and supportive of the research study. Chief Executive Office, Mr. Wilkerson provided staff from the organization to assist with data collection efforts. When attempts were made to collect data on lobbying activities and revenues generated by the organization, their support for the study weakened. McCarthy and Zald note in their theory (hypothesis 4) the importance of isolated constituents to a social movement organization. Isolated
constituents are those persons who do not meet in a face-to-face interaction with other constituents, and cannot be bound to the social movement organization through solidary incentives. Isolated constituents provide time and money to the organization. This research study was intended to serve a similar purpose as an isolated constituent by way of providing information to the organization. The role of this researchers as an isolated constituent who was willing to provide time and information to the organization was rejected.

Furthermore, the collaboration variables are perceptual data. It is also recognized that the term “collaborative activity” was not defined for the survey participants. A collaborative activity refers to groups or individuals working together to achieve a shared goal. While the term is used frequently within the context of Mothers Against Drunk Driving and the crime victims’ movement in general, it could have been interpreted differently by those responding to the survey instrument.

This research study did not include every drunk driving law supported by MADD; three were selected for analysis (.08 BAC Per Se, Open Container, and Administrative License Revocation). It is possible that more significant findings could have been attained had additional or varied drunk driving laws been included in the analysis. Additionally, the analysis did not include all the characteristics of the state office executive directors. Including additional characteristics of the MADD state office executive directors conceivably could have contributed to the model.

The secondary data sets also may be unreliable. For example, the data collected from the FBI Uniform Crime Report and the National Highway Traffic Safety Administration’s Fatality Analysis Reporting System relies on information reported by
law enforcement jurisdictions. There exists the possibility of measurement error as a result of the "under reporting" of alcohol-related fatalities, and driving-under-the-influence arrests. Also, the income data provided by the U.S. Bureau of the Census were estimates based on the 1990 and 1995 census data.
CHAPTER 7
IMPLICATIONS FOR RESEARCH AND PRACTICE

The purpose of this dissertation has been to study the public policy outcomes of social movements through an analysis of one particular crime victims' movement organization, Mothers Against Drunk Driving. In order to accomplish this work, the following has been completed. In Chapter Two the historical development of the Crime Victims' Movement, Mothers Against Drunk Driving and alcohol control policies were discussed. In Chapter Three, the theoretical foundation for the study, including ways in which social movement organizations might influence the public policy formation were identified. Within Chapter Four the research and data methodology is presented. Chapter Five presents the results of the statistical procedures. Chapter Six provides a discussion about the research findings. Found within Chapter Seven are implications for research and practice.
Recommendations for Further Research

This dissertation may serve as a model for social workers interested in examining the link between organizational characteristics (meso-level) and public policy outcomes (macro-level). However, the methodological strategies used should not necessarily be adopted in future research; in fact, an analysis of MADD activities would probably benefit from a variety of research approaches.

Future research concerned with understanding the effects of certain explanatory variables on the presence of drunk-driving laws, driving-under-the-influence arrests, and alcohol-related traffic fatalities must involve more empirical and methodological depth if advances in our knowledge are to occur.

Our understanding of other social and environmental phenomena that influence the presence of drunk driving policies is unclear at this time and critically needs to be explored. Examining the creation of specific government policies usually must be done under conditions that do not readily lend themselves to a rigorous experimental design. Laws and policies are often introduced by governments for political reasons. Analysis incorporating a broader range of social influences or control measures would allow for a much stronger conclusion.

A number of areas for further study have emerged from this research. Increased use of more sophisticated time series, multiple time series, cross-sectional time series, and path analysis would be useful. Campbell and Stanley (1967) report that multiple time series designs can provide the same control over confounding factors as is provided in randomized trials. Another possible study opportunity would be for the researcher to compare two or three states regarding characteristics of individual MADD state offices.

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and policy outcomes. This information could be obtained using a qualitative research approach through face-to-face interviews. An ethnographic study in which the researcher takes on the role of participant observer within one particular MADD State Office also could provide valuable information about organizational policy making strategies.

Similarly, an in-depth investigation into state legislator's perspectives on drunk-driving legislation could also be undertaken. Exploring views about the formation of drinking-and-driving legislation could occur in face-to-face meetings with legislators. Confining a study to two or three states would make it possible to compare the political structure of the legislature, including the issues positions of the governor.

Lowi (1971) asserts that many governmental agencies are the result of successful social movements and the formation of these bureaucratic agencies affect the strategies utilized by "local" social movement organizations (Lowi, 1971). For example, the expanded Civil Rights Division in the Justice Department affected the tactics of civil rights organization in pursuing civil rights goals. Additional suggestions for research about Mothers Against Drunk Driving include examining the effect of the National Organization of Victim Assistance on strategies employed by MADD National.

In addition, a comparative study of various crime victims' social movement organizations could contribute to the social movement literature. For example, comparing the organizational structure, collaboration strategies, and policy outcomes between Mothers Against Drunk Driving and Parent of Murdered Children.

Gamson (1968) delineates several factors that constitute the basis for a person's solidarity with a group. Some of these factors include the number of friends and relatives affiliated with the organization, to what extent persons participate with other members of
the group, and the extent to which a person is identified and treated as a member of the
group. Hence, solidarity becomes an important basis for mobilization. A systematic
investigation into what strategies in which situations work best to align MADD with the
interests of a constituency offers promising ground for advancing social movement
theories.

The historical context adds something to our understanding of the dynamics of
success and failure of challenging groups (Gamson, 1990). Each challenge has many
unique features. Future research about MADD could include an analysis of the historical
context of the social movement organization. For example, was the organization more
successful at effecting change during particular economic conditions? Has MADD’s
strategies changed over the twenty-year period of their existence? Did changes in
presidents, or governors have an effect on MADD’s ability to reach its goals? More
specifically, does success have the same connection with challenging group goals,
strategy, and organization at different times?

This dissertation examines three MADD goals, which is not inclusive of all the
goals of the organization. Another direction for future research might include an
examination of additional goals of the organization, such as services to crime victims and
the prevention of underage drinking. It might also prove useful to study the
characteristics and policy-making strategies of MADD organizations operating within the
context of other countries such as Canada, Australia, and New Zealand.

Lastly, among the various drinking-and-driving laws there is wide variation in the
extent and severity to which penalties are imposed. For example, 19 out of 50 states have
mandatory imprisonment for the first driving-under-the-influence conviction. Within this
sanction, the length of incarceration ranges from twenty-four hours in the state of Montana to five days in Colorado (Alcohol Epidemiology Program, University of Minnesota, 2001). Certainly, the opportunity exists to explore not only the presence of a particular law within a state as it relates to MADD policy-making strategies and alcohol-related traffic fatalities, but to include "type of sanction" as a variable in the model.

**Policy Implications**

Anderson (2000) contends that the extensive array of public policies effects individual lives directly and indirectly. Every year a large volume of laws flows from federal and state legislative bodies. The proliferation of public policies has occurred in such areas as foreign affairs, education, welfare, law enforcement, business and labor regulations, international trade, health care, and transportation. During a typical two-year term of Congress, 300 to 400 public laws are enacted (Anderson, 2000).

The dilemma for public policy is how to weigh the rights of free consumers to spend their money as they choose, for business to operate within the context of a capitalist society, and for everyone to navigate safe roadways. Several questions remain: How does society promote roadway safety while protecting individual rights and how can a democratic society safely control alcohol? As suggested by Margues, Tippetts, Voas and Beirness (2001) there is no perfect control strategy to reduce the public health and safety burden imposed by alcohol-impaired drivers. Research demonstrates that reductions in alcohol-related mortality might be achieved by implementing a mix of public policies. As suggested by Sloan, Reilly and Schenzler (1994), no single policy is a panacea.
Hundreds of laws and public policy have been created in the United States to alleviate drunk driving by controlling the production and distribution of alcohol, influencing the behavior of individual drinkers, and influencing the behaviors of others who might be in a position to limit consumer drinking. Between 1981 and 1986, 729 state laws pertaining to drunk driving were enacted (Kenkel, 1993). In 1998 alone, there were 4,315 bills introduced and 755 new laws enacted across the 50 states on various dimensions of alcohol-control policy (Wagenaar et al., 2000). In the United States between 1998 and 1999, a total of 1,101 alcohol control policies were enacted: 46% addressed regulation of alcohol distribution, 25% addressed drinking and driving, 9% addressed retail sales, 9% focused on underage possession and consumption, 4% covered prevention programs, 3% focused on taxation and fees, 2% focused on drug and alcohol testing and 1% addressed liability for alcohol-related injuries (Alcohol Epidemiology Program, University of Minnesota, 2001). As a result of this multifaceted social control strategy to the problem of drunk driving, in the past 20 years the rate of drunk driving has declined.

The discussion below highlights three public policy directions that are related to alcohol-control polices. The three public policy directions under review include protecting society through punishment, treating the public health epidemic and educating for societal change. Protecting society through punishment – the growth in America’s prison and jail population in the 1990s, has been correlated with a steady drop in crime (United States Department of Justice, Bureau of Justice Statistics, 1999). This particular public policy option gives a strong message about the public’s intolerance for drunk driving. Expanding mandatory sentencing laws and incarceration removes the
habitual drunk driver from society. There are two benefits to this public policy approach: punishment may deter drunk driving and protect law-abiding citizens and forcing drunk drivers into rehabilitation may give them a chance to lead a productive life. Drawbacks to protecting society through a punishment strategy are twofold: you can not incarcerate the drunk-driving problem, in that mandatory sentencing laws fill jails with nonviolent offenders who may leave the jail environment more prone to “criminal thinking” than when they went in, and the emphasis on incarceration is costly and money needed to build and maintain jails or prisons will not be there for other needed social programs.

Perhaps the abuse of alcohol is not a law enforcement problem, but a public health epidemic that the practice of medicine might be better able to address. The American Medical Association recognizes that alcoholism is a disease. The United States Department of Health and Human Services states unequivocally that treatment for alcohol problems is effective and recovery is possible. Many more programs for prevention, early detection, counseling, and treatment are needed to address the range of alcohol problems leading up to and including addiction. This particular public policy approach supports an increase in funding for research, prevention, and treatment programs. Expansions in health coverage for alcohol treatment also would be supported under this type of public policy strategy. An additional approach might be to have physicians counsel all patients about the abuses of alcohol. Drawbacks to utilizing the public health epidemic approach include the costs that might be incurred, and it may take a long time to show results.
Progress in enforcing laws or in curbing an epidemic will remain elusive until Americans personally confront the problems of alcohol abuse in much the same manner they have done with cigarette smoking and cancer. The anti-smoking campaign could be used as a model, whereby educational efforts to dispel falsehoods and ignorance about alcohol could generate popular social norms for responsible behaviors. Included in this educational effort could be an insistence that the liquor industry institute a ban on advertising all alcohol products. One drawback to implementing a public policy strategy of this nature is that promoting an entirely negative view of alcohol might result in the formation of a “counter movement” from the alcohol industry.

The importance of understanding “how” certain decisions are made and whether they are grounded in research is important in both policy and society as a whole. Ideally, research should be the foundation for public policy. Caplan, Morrison, and Stambaugh (1975) purport that the application of research to specific problems was severely limited at the governmental level. Galbraith (1973) argues that public administrators are limited in their ability to give attention to all the data and information they receive. Johnson (1985) found that agencies responsible for controlling and preventing violence utilized research when making decisions. Others (Deshpande & Zaltman, 1983) have shown that in contrast to public agencies, the use and application of research in the private sector is high.

The literature points to a variety of factors that explain why research does not have an impact on policy and programming decisions (Johnson, 1985). Factors such as research quality (Caplan, 1976; Weiss & Bucuvalas, 1980) and methods of dissemination...
(Glaser & Coffey, 1967; Roberts & Larsen, 1971) have been introduced as determinants that affect research use.

Key Research Findings & Policy Implications for Mothers Against Drunk Driving

Understanding the type of research conducted and the analytical method employed is of critical importance before enacting or reformulating policies. Based on the results of this study, additional knowledge is now available to guide policy making within MADD. To this end, the following policy implications for Mothers Against Drunk Driving presented must be taken in the context of the limitations of the research:

1. The longevity of MADD chapters is associated with a reduction in alcohol-related traffic fatalities.
2. Greater collaboration activity with private corporations is associated with a greater number of years since a state has enacted an Open Container law.

As noted earlier (Table 2.1) in 1995, MADD began holding public policy institutes to train state office employees on driving-under-the-influence issues and to teach legislative how-to-techniques. Through the already established policy institutes, MADD administrators could teach two additional important concepts: individual chapters need to be expanded and more importantly maintained and MADD employees should continue securing support for their goals from within the private sector.
Private sector supports may have the resources that MADD may lack to influence public policy decision-makers. As noted earlier, McCarthy and Zald (1977) hypothesize that the greater the amount of resources available to an organization the greater the likelihood the goals will be attained. Moreover, it may behoove MADD to consider placing executives from local private corporations as members of the board of directors.

As suggested by this research, these policy recommendations might aid this particular social movement organization in attaining future goals and objectives. As noted earlier in the study, MADD state offices did not consistently maintain a database that contained information about the characteristics of their organization. In the future, if MADD seeks out researchers (isolated constituents) to study the effects of their organization, it would be helpful for the organization to establish a database that is maintained by each state office.

**Implications for Social Work Education**

Social work received much of its early impetus one hundred years ago from social reformers like Jane Addams who were committed to social change. There are advantages to having politically knowledgeable social work graduates, the most important being the potential for creating social policy that focuses on ameliorating social problems and conditions. Throughout seventy years of social work education in the United States, political content strategies have not consistently been provided in the curriculum (Haynes & Mickelson, 1991). Accreditation standards for graduate and undergraduate social work programs speak in generalities about policy course content and coverage (Haynes & Mickelson, 1991). Perhaps equally responsible is the lack of
knowledge and training in strategies to implement social change. Perhaps what is needed are more “policy-action” or “policy skills” courses added to the curriculum to supplement the descriptive and historical policy courses commonly offered. This dissertation can contribute to social work policy education in that it can teach students how specific strategies for political intervention produce societal change.

Implications for Social Work Practice with Individuals and Groups

Social work practice is often determined by social policy (Mahaffey & Hanks, 1982). Policy emphases shift frequently, giving recognition to the unmet needs of the population (Mahaffey & Hanks, 1982). Which forces social workers to change their focus continually to keep pace with developing policies. Until the twentieth century, social service interventions centered around asylums, work houses, and settlement houses, reflecting public policies that identified these sites as the appropriate locus for welfare services during that period. In recent years, policies of deinstitutionalizing the mentally ill and mentally retarded have placed social workers in community-based practice settings, while the “get tough” on crime policies have forced other social workers to take their practice within the confines of the correctional environment. Furthermore, the policies that dictate “treatment” for drug and alcohol abusers have placed some social work practitioners within residential treatment centers. Although these changes can open new avenues in which social workers can exercise leadership in service design, many social welfare policies have forced social workers to fit into narrow service specializations. This research can benefit those social work practitioners who are
interested in providing services with two distinct populations: alcohol-abusing individuals and crime victims.

Many of the repeat-intoxicated-driver laws being enacted in the United States require the offender to serve mandatory imprisonment. Social workers interested in providing treatment and rehabilitative services for this population will need to work collaboratively with jail and prison administrators on the availability of recovery services treatment for the alcohol-abusing offender. While many of the drunk driving laws mandate short terms of incarceration, it will be imperative for direct service practitioners to stay informed about effective treatment methods utilized on a short-term basis. Furthermore, these drinking-and-driving policies also may require jail social workers to have knowledge of community resources to ensure continuity of treatment.

This dissertation also has implications for social workers motivated to serve crime victims. Although this research did not focus on all of the goals of MADD; particularly services to crime victims, there is evidence within that suggests this population could benefit from a host of services including "recovery" counseling and the need for advocates helping the victims understand the criminal justice system.

Implications for Social Work Macro Practice

This dissertation also contributes to social work practice within the area of community organization and social reform, known as macro practice. The need for social workers to be able to understand and practice in macro systems is based on the history of the profession and the society in which it evolved. Macro systems pervade all types of social work practice, and the ability to recognize and redirect their influence is critical to
all social workers. Social work is a profession oriented toward action and change.

People who practice social work commit themselves to serve as a resource for those who have problems, with limited or no control over the changes that need to be made in order to resolve their problems, and who request or are willing to accept help (Netting, Kettner & Mcurtry, 1997). Regardless of the professional social worker’s focus, it is crucial that practitioners of all types understand that while some problems can be resolved at an individual level, others will require intervention that takes in a broader scope, including the need to effect changes in organizations and communities (Netting, Kettner & Mcurtry, 1997).

Managing macro-level change requires knowledge and skills. This research has contributed to the area of knowledge and skills needed to create social change. Finally this study has implications for social work policy practice in that it examines “how” challenging groups gain entry into the American polity.
BIBLIOGRAPHY


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A Questionnaire for MADD National

(State Name)

Please complete the following questionnaire for each of the 50 states. Fifty surveys have been included for your use (one for each state). Each questionnaire is divided into four sections: information about MADD state offices, MADD state office revenues and expenditures, MADD state office activities, and MADD chapter information.

Section I:

MADD State Offices

The following questions ask about characteristics of the (State Name) MADD State Office and the MADD State Office Executive Director.

1. What was the founding date of the (State Name) MADD State Office? ________________ (MM/YYYY).

2. Since the (State Name) MADD State Office was founded, in total how many different executive directors have managed the office, including the current executive director? ________________ (total # of executive directors).

3. How many months and years has the current (State Name) MADD State Office executive director held the executive director position? __________ (# of months and years).

4. How many months and years has the current (State Name) MADD State Office executive director been a member of the MADD organization? ________________ (MM/YYYY).

5. During fiscal year 2000 what was the total number of paid full-time equivalent (State Name) MADD State Office employees ________________ (# of FTEs).
Section II:

Revenues and Expenditures

These questions ask about MADD (State Name) State Office revenues and expenditures.

1. In fiscal year 2000, what percent of the total revenue generated by the (State Name) MADD State Office was generated via the internet? ____________ (%).

2. What percent of the fiscal year 2000 (State Name) MADD State Office budget was allocated for advertising in the following three areas.

__________ TV (%) ____________ Radio (%) ____________ News Paper (%)

Section III:

State Office Activities

The following questions address the activities of the (State Name) MADD State Office.

1. In fiscal year 2000, to what extent did the (State Name) MADD State Office and or one or more (State Name) MADD Chapter collaborate with the following groups for the purpose of achieving drunk driving legislation, DUI arrests, and a reduction in alcohol-related traffic fatalities?

   Department of Public Safety:

   None    A little extent    Some extent    Great extent    Very great extent
   1       2                    3                  4                      5

   Law Enforcement:

   None    A little extent    Some extent    Great extent    Very great extent
   1       2                    3                  4                      5
Department of Drug and Alcohol Services:

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148
Other (please specify)__________________________:

None   A little extent   Some extent   Great extent   Very great extent
1      2                 3           4             5

**Section IV:**

**MADD Chapters**

This final set of questions asks for information about MADD membership and state chapters.

1. What is the current total number of MADD members in (State Name)? ______ (#).

2. What was the founding date of each MADD Chapter in (State Name). Please complete your answer in table below. If needed, additional sheets to answer question number 4 are attached.

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149
Continued. What was the founding date of each MADD Chapter in (State Name). Please complete your answer in table below.

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Thank you for completing this survey

150
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* Correlation is significant at the 0.05 level (1-tailed).

** Correlation is significant at the 0.01 level (1-tailed).

* Listwise N = 50