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Patterns of Differential Involvement in Terrorist Activities: Evidence from DHKP/C  
and  
Turkish Hezbollah Cases

A dissertation submitted in partial fulfillment of the requirements for the degree of  
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by  
Ismail Yilmaz

B. A., Turkish Police Academy, Ankara, 1995  
M.S., University of North Texas, Denton, 2005

Director: William W. Newmann, Ph.D.  
Professor  
L. Douglas Wilder School of Government and Public Affairs

Virginia Commonwealth University  
Richmond, Virginia  
July, 2009

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## Abstract

### PATTERNS OF DIFFERENTIAL INVOLVEMENT IN TERRORIST ACTIVITIES: EVIDENCE FROM DHKP/C AND TURKISH HEZBOLLAH CASES

By Ismail Yilmaz, Ph.D.

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Major Director: Dr. William W. Newmann, Ph.D., Professor of Political Science, L.  
Douglas Wilder School of Government and Public Affairs

This study examines the patterns of involvement in terrorist activities for the Revolutionary People's Liberation Party/Front (DHKP/C) and Turkish Hezbollah members. The study is based on the assumption that terrorists differ in terms of their involvement in terrorist activities. In this sense, there are full-time and part-time terrorists. Full-time terrorists act professionally and do the assignments given by their commanders. Part-time terrorists, on the other hand, act on a non-professional basis and have their own motivations to participate in terrorist activities. For part-timers, there are various factors that may have an effect on their degree of involvement in terrorist activities. Their decisions regarding whether to participate in a specific terrorist act can be influenced by individual factors as well as the instructions and assignments given to them. In this study, these factors are categorized under four different headings; demographic, relative deprivation, frustration, and social learning.

Data regarding the involvement in terrorist activities (as measured by arrest records) and demographics (age, gender, marital status, social class), relative deprivation (education, work status), frustration (school dropout, loss of a loved one in a counter-terrorism operation, family arrest), and social learning (family association to a terrorist group and recruitment method) was collected from terrorists' autobiographies. Research hypotheses were tested using bivariate and multivariate statistical analyses.

The findings indicated that relative deprivation, frustration, and social learning models can explain the differences in the degree of involvement in terrorism for DHKP/C members, but not for Turkish Hezbollah members (controlling for demographic variables). The results showed that these three models may account for some of the differences in involvement in terrorist activities.

## CHAPTER I: INTRODUCTION

### Introduction

For the past three decades, studies on terrorism have expended great efforts to determine whether or not there are unique background and personality traits common to all terrorists; researchers from different parts of the world have attempted to draw a general terrorist character in order to understand different processes of terrorism such as becoming a terrorist or engaging in terrorist acts (Clark, 1983; Handler, 1990; Hassan, 2001; Pedahzur, Perliger, & Weinberg, 2003; Russell & Miller, 1977; Sageman, 2004; Strentz, 1988; Weinberg & Eubank, 1987). Findings from these studies suggested that a typical terrorist is predominantly male, well-educated, in his mid-twenties, and middle class. However, current studies are not immune to methodological issues.

In general, the above studies suffer from two shortcomings. First, they did not use control groups, which would allow a comparison between the characteristics of terrorists and non-terrorists. Second, they focused mostly on “who becomes a terrorist and why”, whereas other processes such as involvement or engaging in terrorist acts and leaving terrorism are usually ignored. Most existing studies assumed a homogenous terrorist profile. They tended to ignore the possibility that terrorists may have different characteristics, which ultimately may determine not only one’s becoming a terrorist in the first place but also his degree of involvement and dedication to terrorism. As a result, the questions of whether

terrorists are different from an average person and whether all terrorists are equally involved in terrorism have not been answered yet. This study aims to address these shortcomings by examining demographics and backgrounds of terrorists from several domestic terrorist networks in Turkey.

### Problem Statement

Terrorism has been one of the major threats to the safety of the Turkish people for the past three decades. Since 1984 the number of people killed in terrorist attacks has reached up to 36,000 civilians and combatants. In addition to personal loss, monetary loss spent for counter-terrorism efforts only approximates \$400 billion. When the cost of opportunities lost within this time period is added, the amount is even higher (Teymur, 2007).

The Turkish government's efforts to combat terrorism have strongly emphasized counter-terrorism tactics (Yayla, 2005). In the last three decades of combating terrorism, the Turkish Army and National Police have assumed significant roles in determining and implementing counter-terrorism policies. On the other hand, Turkish legislators have passed several legislations, what were publicly known as "Return to Home", to encourage terrorists to leave terrorism and return to their homes. In addition, governments started social, economic, and cultural initiatives in districts that were most vulnerable to terrorist attacks.

In Turkey, there is a dearth of scientific studies on terrorism in general and the motivations of terrorists in particular. Most existing studies are opinion-based (Dilmac, 1997). Few studies have used an appropriate research design to obtain

systematic information on terrorism and the motivations of terrorists. This study is seeking to fill such a gap. Before stating what is fully expected with this study, a brief summary of major terrorist organizations and their background will be presented.

### The Current Gap in the Literature

Understanding the nature of terrorism is the key to identifying the motivations of terrorists. However, the nature of terrorism has undergone significant changes recently. Modern terrorists have extensive technical skills ranging from piloting an aircraft to making the most sophisticated bombs. Moreover, conducting deadly attacks went from being a highly technical issue to a matter of finding inexpensive explosives. Today, terrorist organizations have the ability to plot highly violent attacks with little cost by using a human body as a bomb.

Parallel to the changes in world politics, the nature of domestic terrorism has changed in Turkey. One of the significant changes has occurred in the structure of leftist terrorist organizations. The collapse of the USSR and the demise of communism as a promising prospect pushed leftist terrorists to a greater utilization of legal activities such as gathering around solidarity associations, student confederations, and labor unions. Many potential recruits had lost their belief in a communist revolution. This has been the case at least for DHKP/C and other leftist terrorist organizations in Turkey for the last two decades.

The legalization trend had an impact on the recruitment methods of terrorist organizations as well. More precisely, to ensure their own survival, DHKP/C and

other leftist terrorist groups kept their recruitment criteria very lax by granting many sympathizers membership status. As a result, membership has become available to many more persons than it was in the past. The purpose of greater legalization is to make more propaganda and attract more potential recruits. Sympathizers now serve both covertly or publicly. Police witnessed a changing trend in the familiar terrorist characteristics, from professional and fully dedicated terrorists to non-professional and part-time workers. Interestingly and unexpectedly, new terrorists have regular occupations during the day, whereas they may go out and plot terrorist attacks during the night.

The terrorism literature, however, has a tendency to see terrorists as full-time workers. In this view, terrorists are not part-timers, but rather professionals who are thoroughly dedicated. The problem with this view is that it tends to ignore the differences amongst terrorists, which in turn creates a stereotypical terrorist profile in the minds of terrorism scholars. As a result, the degree to which a terrorist is involved in terrorist activities, which is the central focus of this study, does not draw enough attention from terrorism scholars.

This study aims to contribute to expanding literature by examining the terrorist profile from a different angle. In other words, this study tries to make a profile of terrorists in respect to their involvement levels. It takes a sociological approach for analysis using sociological profiling, relative deprivation, frustration-aggression, and social learning as frameworks. Sociological profiling is a method of identifying personal characteristics using socio-demographic variables such as

age, gender, and education. Relative deprivation theory asserts that terrorism is a response to poor market opportunities. Frustration-aggression claims that terrorism is a response to some social problems such as injustice and government oppression. Finally, social learning theory claims that terrorism is learned just like any other human behavior. The chapter two identifies studies and evidence relating to each of these frameworks in detail.

### Major Terrorist Organizations in Turkey

In Turkey, there are over twenty different terrorist organizations of different orientations and sizes. These terrorist organizations can be categorized under three different groups with respect to their orientations or ideology: (a) Marxist-Leninist or leftist, such as the Revolutionary People's Liberation Party/Front (DHKP/C), the Marxist-Leninist Communist Party (MLKP), and the Turkish Communist Party/Marxist-Leninist (TKP/ML); (b) Religiously-motivated or radical, such as the Turkish Hezbollah, the Islamic Great Eastern Raiders-Front (IBDA-C), and the Islamic Movement (IH); (c) Ethnic or separatist such as Kurdistan's Worker Party (PKK).

This study examines the involvement levels of DHKP/C and Turkish Hezbollah members in respect to social backgrounds and motivations. These two terrorist organizations were purposely selected because they were responsible for almost half of all terrorist incidents that happened during the last fifteen years

(Sevinc, 2008). Further, these two organizations have the largest terrorist population within their respective categories<sup>1</sup>.

*Revolutionary People's Liberation Party/Front (DHKP/C)*

The Revolutionary People's Liberation Party/Front (DHKP/C) is a leftist terrorist group founded by Dursun Karatas and his friends in 1978 under the name "Dev-sol". Before 1978 the group was a part of the Turkish People's Liberation Party/Front (THKP/C). In 1994, delegations from different factions of Dev-Sol congregated in Damascus, Syria and decided to change their party's name to DHKP/C. The group has claimed a widespread atrocity; during the 1980s and the first half of 1990s DHKP/C militants killed over 1,000 police, military officials, and civilians in Turkey (Yayla, 2001).

DHKP/C adopts a Marxist-Leninist revolution model and it explicitly states its ultimate purpose as destroying the current democratic regime in Turkey and founding a communist state instead. The group strongly opposes the U.S. and Western culture. In DHKP/C's ideology, Western countries in general and the U.S. in particular symbolize oligarchy and imperialism; Turkey is a part of the western world and the current political system is found to serve to the objectives of imperialist powers. Those who hold the power are the collaborators of imperialists and they should be removed from power to establish a classless society.

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<sup>1</sup> Further details are given in the sampling section of the Chapter III. Also, the reason as to why any terrorist organization from the separatist camp was not included is also discussed in the same chapter.



DHKP/C has three main extensions: political, military, and legal (Sevinc, 2008). The political extension is responsible for the entire organization and the recruitment of the new members. The military extension is responsible for carrying out armed operations. DHKP/C views armed struggle as a propaganda technique and therefore names its military cells as “Armed Propaganda Units” (Yayla, 2005). Finally, the legal extension is responsible for forming public opinions in various policy issues such as the rights of terrorist inmates in corrections and the rights of workers in workplaces. Unlike Turkish Hezbollah, DHKP/C is active in most units of social life. It has clandestine cells and legal extensions among labor and office workers, university and high school students, inhabitants of slums in big cities, and even media workers. The group is not only active in Turkey, but also in some European countries such as Belgium, Germany, the Netherlands, and Greece. DHKP/C has the capacity to plot sensational assassinations, suicides and remote-controlled bombings.

DHKP/C militants appear in mobs, chant slogans, hang banners, and throw Molotov cocktails at police, military officials, government buildings, and bank ATMs. Among its major attacks are the assassinations of a former prime minister, a justice minister, a couple of military generals, and an attempted assassination of the U.S. president George W.H. Bush in 1992 during his official visit to the city of Istanbul (Teymur, 2004).

### *Turkish Hezbollah*

Turkish Hezbollah seeks to establish a religious state based on Islamic rules on Turkish territory. The foundation of Turkish Hezbollah dates back to late the 1980s. During that time, religious extremists in the south east part of Turkey formed a book club by gathering around Ilim and Menzil bookstores, which were owned by major Hezbollah figures Huseyin Velioglu and Fidan Gungor. The names of these bookstores were then given to two different factions of Hezbollah when they broke their connection over the use of violence. The faction known as Ilim which was led by Huseyin Velioglu committed to violence in the early 1990s.

Hezbollah's transition to violence inflicted a hidden turf battle between it and the PKK (Kurdistan Worker's Party), which then claimed 700 lives from both sides between 1992 and 1995. Along with the PKK, Hezbollah became one of the major threats during the 1990s in Turkey until the police raided a Hezbollah's cell in January 2000 and killed Huseyin Velioglu with his two top aides. In this operation, police reached the archives of Hezbollah saved in a computer folder. According to official records, between 1991 and 2003, police arrested as many as 14,000 Hezbollah members and supporters (Ozeren & Van De Voorde, 2006). Turkish Hezbollah is mostly active in the south-eastern part of Turkey even though it carries out its terrorist attacks throughout the country. Unlike DHKP/C, Turkish Hezbollah has no legal extensions and operates more clandestinely.

Even though the Turkish Hezbollah is confused with the Lebanon Hezbollah, evidently these two groups are totally different in strategy, if not the ideology. For

one thing, the Lebanon Hezbollah is a Shiite group located basically in Lebanon and dedicated to the destruction of the Israeli state. The Turkish Hezbollah, on the other hand, is a Sunni group and acts only within Turkish territory. The fact that the Lebanon Hezbollah was inspired by the Iranian Islamic Revolution is also true for Turkish Hezbollah (Ozeren & Van De Voorde, 2006).

### Purpose of the Study

The purpose of this study is two-fold: First, it focuses on DHKP/C and Turkish Hezbollah terrorists' degree of involvement in terrorist activities (as measured by arrest) in relation to their socio-demographic characteristics such as education, social class, work status, and school dropout records. Second, this study also examines the similarities and differences in socio-demographic characteristics between the groups of arrested DHKP/C and arrested Turkish Hezbollah members.

This study aims to complement a series of studies conducted by Teymur (2004, 2007) and Yayla (2005). In these studies, researchers sought to find out general characteristics of Turkish domestic terrorists. Both of these studies used descriptive and bivariate statistical analyses and reported backgrounds and demographics. However, further analysis is required to find out whether domestic terrorism in Turkey is borne out of some social and demographical forces common to all terrorists and their families. Such an analysis is a must to develop "early intervention" methods to counter terrorism.

In addition to early intervention methods, a counter-terrorism strategy must also consider those terrorists who are already committed to terrorism. Terrorists are

not equally committed to and involved in terrorism. Depending on arrest histories, statistical findings suggest some differences among terrorists. These results beg further statistical analysis which will be conducted in a multivariate setting to see what socio-demographic forces drive terrorists to repeat their offenses.

### Research Questions

This study seeks to answer following research questions:

1. To what extent are terrorists similar or different in terms of their degree of involvement in terrorist activities?
2. What factors are influential in the degree of involvement in DHKP/C and Turkish Hezbollah?

### Definition of Terms

There is a need for a framework to understand what is counted as terrorism, terrorist, terrorist organization, and terrorist act in the Turkish context. Turkish judges adjudicate anyone who is charged with being an active member of a terrorist organization and/or acting on behalf of a terrorist organization according to Turkish Anti-Terror Law.

### Terrorism

The Turkish Anti-Terror Law of 1991 defines as terrorism any act of violence, oppression, intimidation, and threat committed by an individual or a group of individuals who act on behalf of an organization which is gathered (a) to change the constitutionally determined characteristics of the Turkish Republic; (b) to weaken or

to take over state authority; and (c) to abolish fundamental rights and freedoms of citizens. This definition implies that an act of terrorism involves not only politically-motivated violence, but also politically-motivated oppression, intimidation, and threat. The definition is operational when the broad and complicated characteristics of a terroristic act are considered (Anti-Terror Law, 1991, Article 1).

### Terrorist Organization

The Anti-Terror Law defines a terrorist organization as a group formed by two or more individuals to realize the aforementioned objectives cited in the very definition of terrorism in the same law (Anti-Terror Law, 1991, article 1).

### Terrorist

The Anti-Terror Law's definition cites three different types of terrorists or who are counted as terrorists, which has also some application for the purpose of this research. Accordingly, a person who is a member of a terrorist organization which is seeking to realize the aforementioned goals is considered as a terror offender if he or she (a) commits a crime with others or alone in accordance with these goals or (b) becomes a member of a terrorist organization even though he or she did not commit the intended crime. A third category of terrorists is defined as those (c) who commit a crime on behalf of a terrorist organization even if he or she is not a member of any terrorist organization. At this point, there is a need to examine the process of joining in a terrorist organization (Anti-Terror Law, 1991, article 2).

### Act of Terrorism

The Turkish Anti-Terror Law does not define any specific activity as an act of terrorism. However, the law refers to a number of Turkish Penal Code articles. Accordingly, any violent or non-violent act of crime such as assassination, bombing, hijacking, robbery, restriction of liberty, threatening and forcing is considered an act of terrorism if it is committed to achieve the goals cited in the definition of terrorism section. If someone is proven to be a member of a terrorist organization, he or she is liable to 12.5 years in prison. If he or she is proven to commit a crime as a member of a terrorist organization, this sentence would be even higher (Anti-Terror Law, 1991, article 3).

### Recidivism

Recidivism refers to the proportion of offenders who are arrested, prosecuted, convicted or returned to prison within a year of release from a correctional program (Maltz, 1984). The elapse time of re-arrest, re-prosecution, re-conviction, or return may vary from study to study. In fact, the term recidivism has not been applied to terrorism because terrorists are viewed as recidivist offenders.

Terrorism scholars have a tendency to see terrorists as “once a terrorist always a terrorist”. This stereotypical view of terrorist assumes one type of terrorist in terms of personality characters and commitment. However, in practice, even terrorists tend to make a distinction between professional terrorists and non-professional terrorists. They define a professional terrorist as someone who

dedicates 24 hours of a day to the cause. Those who have sympathy to the ideology or who actively support the organization, but who do not have an official membership fall under the non-professional category. These non-professionals may concurrently be involved in terrorist activities while they maintain their regular activities.

In Turkey, official databases regarding crime and terror offenses have not been designed in a way to measure recidivism. Therefore, a researcher has no way to measure what great a portion of the terrorism and crime is perpetrated by recidivist offenders or what motivates recidivist offenders to repeat their offenses. This research is not interested in recidivism. Instead, it attempts to model patterns of involvement in relation to socio-demographic characters and backgrounds.

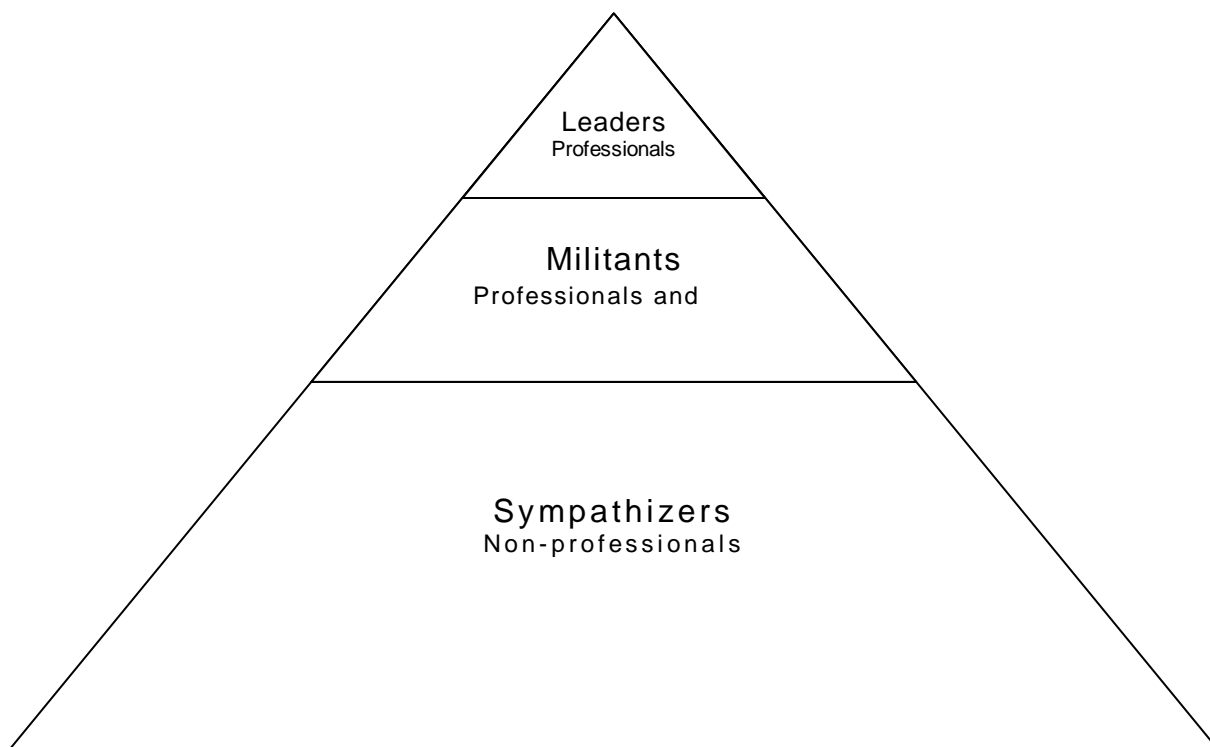
### *Degree of Involvement*

As aforementioned, terrorism scholars have a tendency to define unique terrorist characteristics. They then attempt to associate these characteristics with different processes in terrorism, such as becoming a terrorist, engaging in a terrorist act, and leading a terrorist organization. For example, psychological profiling studies of terrorist characteristics have aimed to measure the impact of some personality attributes such as being extrovert and hostile neurotic on becoming a terrorist (Victoroff, 2005).

This study hypothesizes that there is no one best profile that defines a typical terrorist. However, certain sociological characteristics may play different

roles in different processes. This study is interested in the process of involvement in terrorist acts rather than becoming a terrorist in the first place. In other words, the central focus of this study is the factors that may have an impact on the degree of involvement in terrorist act. The degree of involvement has to do with the level of activity. In this study, the degree of involvement is measured by arrest history. Terrorists who have a prior arrest history are defined as highly-involved, whereas terrorists who do not have a prior arrest history are defined as less-involved.





**Figure 1: Terrorists by Position in the organization**

In order to better understand how “involvement” works as a process in a terrorist’s life, one needs to know the differences between the various positions in a typical terrorist group. As Figure 1 illustrates, there are three types of terrorists depending on the positions in a terrorist organization. Accordingly, there are professional and non-professional terrorists. Professional terrorists maintain a standard terrorist life. The clandestine nature of terrorist activities requires that a terrorist be isolated from the entire society. Professional terrorists, in this sense, do not marry; stay in terrorist cells; assume leadership positions; and plan and engage in violent terrorist attacks.

On the other hand, terrorist organizations have a wide array of secondary missions (legal and illegal). Hence, they should recruit many non-professional cadres as they hire professionals. Most of the time, the number of non-professional cadres is far higher than that of professionals. Non-professionals maintain a regular lifestyle in which they drift in and out of a terrorist life. They try to remain their anonymous role and continue their legitimate professions. In a sense, they become terrorists only when they are given instructions to carry out certain missions. The types of missions carried out by non-professionals are somewhat different than those of professionals. Non-professional terrorists are sometimes assigned certain legal duties such as managing a solidarity association. They may also take part in some violent terrorist attacks. They arrange public meetings on various policy issues to form a public opinion on their behalf. Depending on their activity level (involvement), they remain under the risk of being frequently arrested.

This study aims to model if there is a pattern in the involvement of non-professional terrorists in relation to their sociological characteristics and backgrounds. This research hypothesizes that there are factors other than instructions of leadership such as school dropout, death or arrest of family members, and unemployment that determine a non-professional terrorist's degree of involvement in terrorist activities.

### Organization of the Study

The first chapter of this dissertation research highlights the problem statement, purpose of the study, research questions, and definitions of important terms. The purpose of this study is to identify what impacts involvement in terrorism among DHKP/C and Hezbollah members and to understand the differences and similarities between DHKP/C and Turkish Hezbollah members in terms of involvement level. The significance of the study lies in its originality as the study seeks to understand the underlying factors of involvement in terrorism. This study assumes that characteristics of terrorists are not totally identical.

The second chapter reviews the related literature about terrorist profiling, demographic studies, and what impacts involvement level. This chapter identifies the variables that may have an impact on involvement in terrorism; relative deprivation, frustration-aggression, and social learning theories as they apply to the behaviors of terrorists, the nature of terrorism studies in general, the issues relating to terrorism studies, and to what extent previous researches identified the factors of involvement.

The third chapter introduces the methodology of the research. This chapter summarizes the methodology including research design, sources of data, sampling, and data analysis. This study is an exploratory one in the sense that it explores the patterns of involvement in terrorist activities. The subject topic is rarely touched by terrorism scholars. The required data was collected from autobiographies of terrorists. In general, autobiographies are not written in a way to conduct an in-depth analysis about terrorists. However, in the DHKP/C and Turkish Hezbollah cases, the content and format of a typical autobiography allows researchers to conduct studies beyond descriptive purposes. In general, profiling studies suffer from several methodological shortcomings such as lack of quality data collection and weak statistical techniques (Schmid & Jongman, 1988; Silke (2001). This study contributes to the literature by using terrorists' autobiographies, a relatively hard-to-access data source, and advanced multivariate techniques.

The fourth chapter presents the findings of statistical analysis. This section contains outputs concerning demographics and other characteristics of terrorists, bivariate relationships of variables, and multivariate relationships between involvement in terrorism and demographic and other characteristics. Findings suggested that terrorists with some negative life experiences such as school dropout and family arrest have a greater involvement in terrorist activities than terrorists with no such experiences.

The final chapter concludes with a broad discussion of the results. In this section, the researcher first presents a list of supported and unsupported

hypotheses to lay the groundwork for further discussions. The purpose of this study goes beyond a theoretical contribution. The practical implications of this study will help criminal justice specialists at all levels to better identify the terrorist offender.

## CHAPTER II: LITERATURE REVIEW

### Introduction

Terrorism is a complex phenomenon; therefore, it cannot be explained in vacuum (McCormick, 2003). What makes terrorism so attractive for dissident groups is its effectiveness among other alternative forms of dissidence. Terrorism is a choice made by terrorists and terrorist organizations. However, how, what, why, and when terrorist make these choice is subject to a hot debate among scholars.

Terrorism theories can be broken down into four categories depending on their point of interest: (a) strategic theories; (b) structural theories; (c) psychological theories and (d) sociological theories. Strategic theories views terrorism as an instrument to achieve a set of goals identified by rational actors, while structural theories see the terrorism resulting from internal dynamics of political organizations. Psychological and sociological theories, on the other hand, emphasize the influence of individual factors such as personality, gender, age, education, and political affiliation.

These four set of theories have some applications for this research. However, in strategic and structural theories, the main focus is on the determinants of decision to act. In other word, the dependent variable which is the focus of interest is “terrorist act”. On the other hand, psychological and sociological theories center their focus on individual characteristics and their likely relationship with terrorist decision making in different processes of terrorism. Both approaches

attempt to draw a terrorist profile and try to find out common psychological and sociological attributes of terrorists. While these theories emphasize individual factors, there are significant differences about their explanations of what factors lead an individual to resort terrorism. Psychological theories of terrorism take a behavioral approach and assume an atypical personality. Sociological theories, however, emphasize the importance of demographic traits such as age, gender, education, and social class on the behaviors of terrorists.

The psychological approach is deemed more promising, but it is subject to criticism in two respects. First, some scholars such as Laquer (1999) and Wilkinson (1998) argued that there is no profile of a terrorist. In this opinion, the fact that the nature of terrorism varies over time and geography results in a constant change in the profiles of terrorists. According to Laquer (1999), one can be sure about some sociological characteristics such as the age of terrorists, by saying that terrorists are mostly young, but their psychological characteristics may vary across different cultures. White (2002) furthers a similar argument to that of Laquer (1999) when he says that individual personalities vary considerably that it is impossible to draw a single behavioral profile. Second, studying psychological profiles involves some methodological issues such as limited accessibility of research subjects. According to Israeli (1997), even the most comprehensive studies about the personality of terrorists rely on historical analysis of biographical information.

The issue of accessibility of research subject is also applicable for sociological profiling. However, juxtaposed each other sociological variables are far more accessible than psychological variables. The data regarding demographical background of terrorists such as age, gender, education, and social class can be obtained from government authorities or published biographies of terrorists. Hence, sociological profiling is considered a more reliable strategy than psychological profiling even though it is not completely infallible.

Given the limitations of a psychological approach, this study takes a sociological approach to the research at hand. A psychological profiling seems less achievable because the researcher does not have a direct contact with terrorists. However, the researcher has an access to the secondary data sources, which makes it possible to gather data about sociological characteristics and backgrounds of terrorists. The literature about sociological theories will be reviewed next to understand what sociological variables were examined by previous studies.

### Sociological Theories

Sociological theories can be broken down into four parts; sociological profiling, relative deprivation, frustration-aggression, and social learning. Sociological profiling does not offer a theoretical explanation to terrorism. Rather, it focuses on the common sociological attributes of terrorists such as age, gender, education, and social class. Sociological profiling assumes that terrorism



is a function of some socio-demographic characteristics common to all terrorists. It does not offer far-reaching accounts as to why these demographic attributes are related to one's choice of terrorism or greater involvement in terrorism. In this sense, profiling is a simplistic way of understanding the relationship between terrorism and demographic attributes.

Relative deprivation theory assumes that political violence result from the gap between expectation and actual achievement. Frustration-aggression theory asserts that political violence is a result of desperation, which occurs in the face of oppression. Finally, social learning theory suggests that violence results from the observation and imitation of an aggressive role model. Studies and evidence related to each sociological explanation are provided next to have a better insight about sociological characteristics of terrorist.

### Sociological Profiling

This study aims to answer the question, "To what extent are terrorists similar or different in terms of their degree of involvement in terrorist activities?" Studies regarding the demographics of terrorists have some applications to this study. Demographic analysis is usually applied to find who becomes a terrorist and for what reasons. This study, however, tries to determine if there is a difference between the involvement levels of terrorists in relation to their certain sociological characteristics. The hypothesis that terrorists have different involvement levels in respect to their educational levels, gender, social class and certain other characteristics has not been studied yet. The findings of this study

would not only contribute to current literature, but also would help security personnel to identify terrorists who might repent and turn over information.

Previous studies on terrorist characteristics attempted to define a common terrorist portrait to understand why some individuals engage in terrorism while others do not under similar conditions. This type of analysis was extensively used in the past (Clark, 1983; Handler, 1990; Hassan, 2001; Pedahzur, et al., 2003; Russell & Miller, 1977; Sageman, 2004; Strentz, 1988; Weinberg & Eubank, 1987). Previous studies concerning the sociological characteristics of terrorists can be categorized under two different headings: Early studies and contemporary studies of terrorist characteristics. Early studies relate to the studies of early terrorist movements in Russia in the late nineteenth century (Itenberg, 1965; Mironov (1975). Contemporary studies concerns contemporary terrorist organizations worldwide ( Russell & Miller, 1977; Sageman, 2004). These studies started toward the end of the 1970s when terrorism soared to the top of the world's agenda.

### Early Studies on Terrorist Characteristics

Studies regarding terrorist characteristics date back to the 19th century. A number of scholars studied the Russian populist movement of the 1870s by using quantitative data (Itenberg, 1965; Mironov 1975; Young, 1980). There were two major reasons for scholars to study the populist movement extensively. The size of the group was manageable and there were available biographical materials on most activists. Almost all activists were arrested at least one time in their lives. Also, tsarist police were very diligent in their record-saving efforts.

The first two statistical analyses of terrorist profiles appeared as early as the 1870s. M.M. Merkulov, who was an official in Third Section of Tsarist Russia, wrote a report about some 1600 terrorists (Young, 1980). He included several categories such as age, educational attainment, social status, and geographical origin. Merkulov was able to identify the potential recruitment grounds such as universities. Another study was conducted by terrorists from Narodnaia Volia (People's Will) themselves, who attempted to study the revolutionaries in the movement. Narodnaia Volia was a political party formed by a dedicated group of narodniks in Russia in 1879. Narodnaia Volia's study revealed that terrorists had diverse backgrounds (Young, 1980).

Both Merkulov's and Narodnaia Volia's studies were short in terms of the number of variables included, which would allow identifying a true revolutionist character. Further, these studies suffered from the self-serving objectives of the researchers. Merkulov was seeking to write an official report, while Narodnaia Volia was trying to recognize its own cadres. Therefore, the findings of these studies were suspicious.

After the Bolshevik revolution of 1917, populism attracted great attention from Russian scholars who studied the general characteristics of early populism activists of the 1870s based on their arrest records. Merkulov's confidential record was published after the revolution. Moreover, several other research projects were launched by Russian scholars who drew some official and unofficial data sources which were available to them. The major source of data was individual

autobiographies of populist movement activists from the 1860s and 1870s. Stalin's reign in 1925, however, gave a halt to such studies for the next two decades. The Russian scholars' initiative for the biographical study of populist activists could not go beyond the 1880s. Following Stalin's death, studies on revolutionary populism were regenerated in the 1950s (Young, 1980).

One of the best studies on revolutionary populism was conducted by Itenberg (1965) who examined the Dvizhenie v. Narod of the 1870s. In a similar study to that of Merkulov, Itenberg's (1965) study compared 1800 detained activists from Dvizhenie. This study, however, suffered because of the number of variables introduced and therefore revealed little about the characteristics of revolutionists. Itenberg's (1965) study identified Dvizhenie activists as educated men and women from the university towns of Russia.

Another study was conducted by Mironov (1975) who used advanced statistical techniques in his analysis of revolutionary activists. Mironov (1975) tested the impact of some social background factors on the participation of the populist movement of the 1870s. Even though he did not mention the size and source of his data, Mironov's (1975) statistical analysis disclosed some significant background factors on the participation. Accordingly, age and educational level as opposed to religion, nationality, and social origins, constituted the most important factors of revolutionary predisposition.

More recently, a study on populist activists was carried out by an American historian. Young (1980) conducted a statistical analysis based on group and

individual biographies of activists within the populist movement of the 1870s. In his statistical analysis of 355 activists, Young (1980) first took 131 activists, who later turned to terrorism, to examine the hypothesis that quantifiable background and developmental variables (such as gender, father's occupation, birth date, province of birth, educational attainment, occupation of self, entry date, arrest history) distinguish terrorists from non-terrorists. His findings indicated that there are no background and developmental variables that are common to all terrorists, which distinguishes them from their non-terrorist counterparts.

Young (1980) then investigated the role of group dynamic or radical fraternity, and the continued coercion and oppression from the autocratic Russian tsars in turning to political terrorism by examining the biographies of three active terrorists: Mark Natanson, Sofia Perovskaia, and Nikolai Morozov from Narodnaia Volia. He concluded that these individuals felt frustration and that revenge mixed with a sense that highly dedicated individuals could change the course of history as later illustrated by the Bolshevik revolution of 1917 in Russia.

Thirdly, Young (1980) tested the hypothesis that quantifiable background and developmental variables have no impact on levels of involvement within the terrorist movement. Level of involvement was measured with an interval scale ranking from least to most extreme terrorist acts. He used the same groups of 131 activists who turned to terrorism as samples. Results revealed that it was circumstances within the terrorist group rather than a specific terrorist profile which determined the involvement level.

Finally, Young (1980) tested the hypothesis that there is a relationship between prior arrest and detainment experiences and the level of political violence subsequently committed by individual terrorists. To test this hypothesis, he created a scale of time spent in incarceration prior to the commission of first terrorist act. He then used the previously created scale of level of involvement. Findings suggested a relationship between prior arrest history and detainment experiences and level of political violence committed by individual terrorists.

In conclusion, studies on the Russian populist movement suffered from a common shortcoming. Most utilized arrest data, which, according to Young, reflected the assessment of tsarist police practices rather than the revolutionary movement itself. Young's (1980) study, however, differed from early studies by its sampling technique. He used published autobiographies of activists from the populist movement who turned to violence. Young's (1980) comparison of violent and non-violent activists (terrorists and non-terrorists) revealed no significant differences.

### Contemporary Profiling Studies

Contemporary (terrorist) profiling studies were first introduced in the 1970s when many scores of people were inspired by a socialist revolution ideal. Since then, many profiling studies were conducted with different orientations. Most recently, the orientation has changed to religiously motivated terrorists (Hassan, 2001; Pedahzur, Perliger, & Weinberg, 2003; Sageman, 2004). Thus, Contemporary profiling studies can be analyzed under three different headings in

terms of their scopes: (a) Worldwide Analysis of the Terrorist Profile; (b) Regional and Domestic analysis of the Terrorist Profile; and (c) Analysis of Middle Eastern suicide and non-suicide terrorists. The next three sections present brief information about the studies under each category. Findings are summarized in a different section.

*(a) Worldwide Analysis of the Terrorist Profile*

The first worldwide analysis of terrorist profiling was conducted by Russell and Miller in 1977. The findings of this study were widely cited in terrorism literature. Russell and Miller (1977) attempted to draw a sociological profile of Contemporary urban terrorists by compiling more than 350 terrorist cadres and leaders from German, Irish, Turkish, Spanish, Argentinean, Brazilian, Iranian, Palestinian, Japanese, and Uruguayan terrorist groups. Russell and Miller's (1977) study confirmed some of the widely reported sociological characteristics of terrorists in the 1970s such as age, gender, educational and socio-economic background, and marital status. They collected the information regarding these variables from published data.

However, their study suffered from some methodological issues such as comparing the characteristics of terrorists from various part of the world and then making generalizations about terrorist characteristics, which ultimately harmed the validity of their study. On the other hand, they limited their analysis with urban terrorists by leaving out those carrying out rural guerilla warfare. Still, the findings of

this study have been cited widely and used as references when making some generalization about terrorist characteristics (RA Hudson, 2002).

Long after Russell and Miller (1977), Sageman (2004) compiled information from public domain on 172 persons who identify themselves as a members of “Salafi Mujahidin”, an informal umbrella organization under which a number of religiously-motivated and transnational terrorist groups convened such as the Egyptian Islamic Jihad and Al-Qaeda. When compiling the information for his analysis, Sageman (2004) used the documents and transcripts of legal proceedings, government documents and press, academic and internet articles.

In his analysis, Sageman (2004) included: social background as measured by social origin, education, socio-economic status, occupation, family status; psychological background as measured by mental illness and terrorist personality (pathological narcissism, paranoia, and authoritarian personality); circumstances of joining the jihad as measured by age, place of recruitment, faith, employment, and relative deprivation; and social affiliation as measured by friendship, kinship, discipleship, and worship. Sageman (2004) also presented a social network analysis of global Salafi Mujahidin and the characteristics of this network. Sageman (2004), however, did not include terrorists engaged in local terrorism; his sampling is biased toward the groups engaged in transnational terrorism and toward those terrorists who have not been investigated.



*(b) Regional and Domestic Studies of the Terrorist Profile*

The lack of worldwide data sources about terrorists led many researchers to conduct regional studies on the terrorist profile. For instance, Clark (1983) focused on the profile of Basque separatists from what is known as ETA (Euzkadi ta Askatasuna). Clark (1983) used two different kinds of biographical information. The first consisted of 48 case studies of ETA members. The second included more limited information on 447 other ETA members. Clark's (1983) study examined the age, sex, and socioeconomic background of members and families, and the ethnic and linguistic characteristics of ETA terrorists. Clark's (1983) study also discussed various processes in the lives of ETA members including radicalization of Basque youth, recruitment, relationship with families, friends, and loved ones, and leaving the organization.

Another study by Weinberg and Eubank (1987) examined the profiles of Italian terrorists. Obtaining information from two major newspapers in Italy and from court files, Weinberg and Eubank (1987) reported biographical characteristics of Italian terrorists such as sex, age, place of birth, place of residence, role in the organization, group affiliation, nature of relationship to other terrorists, occupation prior to becoming terrorist, and membership to political organizations prior to becoming a terrorist. This was also the first known study that ever examined the role of women in a terrorist organization; of the 2,512 terrorists whose biographical characteristics were reported, 451 were women.

The final study to be mentioned in this category was conducted by Handler (1990) who analyzed the socioeconomic profile of American terrorists. Handler (1990) placed the American experience with domestic terrorism in his focus as some issue-oriented and reformist political groups such as anti-abortionists began to take stage in American politics toward the end of 1970s. To this end, he compiled the biographical backgrounds of 280 known right-wing and left-wing terrorists who were active in the United States in the 1960s and 1970s.

Differently than previous studies, Handler (1990) tabulated socio-economic variables with right-left wing affiliation, gender, and position in the terrorist organizations. As for socio-economic variables, Handler (1990) included education, religion, race, occupation, income, and parents' occupation and income. Handler's (1990) study of right and left wing terrorists serves to achieve understanding of reasons as to why people choose to participate in specific groups.

*(c) Analysis of Middle Eastern Terrorist and Suicide Bombers*

Most recently, another category of profiling studies has emerged with a special interest in Middle Eastern terrorists. In fact, Russell and Miller's (1977) study included Middle Eastern terrorist organizations long before this category of profiling started. However, early terrorist organizations in the Middle East such as Al-Fatah and the Popular Front for the Liberation of Palestine (PFLP) acted with a Marxist-Leninist motive even though their ultimate purpose was the same as their contemporary religious counterparts. On the other hand, recently established terrorist organizations such as Hezbollah, the Palestinian Islamic Jihad, and Hamas

came into the picture by using religious motives. Since these organizations were involved in highly sensational suicide attacks during the last two decades, the characteristics and motives of their militants drew considerable scholarly attention.

For instance, Hassan (2001) conducted an on-site study and interviewed almost 250 members of Hamas and Islamic Jihad in Gaza during three years between 1996 and 1999. Most of the terrorists Hassan (2001) interviewed were participants in attempted suicide attacks but failed to complete the attack as planned. Hassan (2001) was able to interview her subjects in meetings arranged by intermediaries. Hence, Hassan's (2001) study has been extensively cited for her exceptional data collection method (Krueger & Malecková, 2003; Newman, 2006; Silke, 2004; Victoroff, 2005).

Normally, the clandestine structure of terrorist organizations and terrorists' lives rarely allows the independent researcher to have systematic access to the research subject. Most independent researchers who previously conducted profile studies had to rely on secondary resources. Hassan's (2001) study, however, constitutes an exception to this. Unfortunately, she did not report any specific demographic and socio-economic variables of terrorists she interviewed as part of her promise to keep the records strictly anonymous.

Pedahzur et al. (2003) compared the characteristics of suicide and non-suicide terrorists in the Middle East. Pedahzur et al. (2003) did not limit their study with a specific terrorist organization. They collected data from an Israeli daily newspaper (Ha'aretz) by detecting all terrorist events (suicide or non-suicide)

between 1993 and 2002. The population of their research consisted of 819 subjects, 743 of whom were non-suicide and 80 were suicide terrorists. Among the variables included were previous experiences in terrorism acts, education, ideological affiliation, marital status, age, socio-economic background, and gender. Pedahzur et al.'s (2003) study offered a useful comparison of terrorists with different motives, suicidal and non-suicidal. However, this study was criticized on the basis of its data sources. More specifically, it heavily relies on journalistic accounts. However, heavy reliance on journalistic accounts is problematic because researchers have limited ways to know the reliability of information given unless they triangulate or confirm the same information from another data source (Sageman, 2004).

Most recently Berrebi (2004) attempted to investigate the potential link between terrorism and economic desperation. Another focus of his study was to investigate the potential similarities and differences between terrorists from Hamas and the Palestinian Islamic Jihad (PIJ) and the general population of Palestine. Berrebi (2004) collected data from the biographies of 335 (285 killed and 50 Palestinian Islamic Jihad leaders) terrorists from the Palestinian Islamic Jihad (PIJ) and Hamas from their online sources. His data set included the age, poverty status, education, marital status, resident type (rural vs. urban), and district of residence.

Berrebi's (2004) comparison between terrorists and the general population of Palestine indicated that terrorism studies can take the advantage of quasi-experimental research designs by using control groups. In the terrorism field, the

root cause of approach is highly problematic from a methodological standpoint; therefore, terrorism scholars have not been so eager to apply it (Newman, 2006). However, this study can be considered as an exception. One of the significant limitations of Berrebi's (2004) study was related to the accuracy of biographical information. Since the data was collected from terrorist websites, the possibility of exaggerating some facts was high. In addition, there was no clear indication of the poverty status of terrorists in their biographies. Therefore, the researcher had to infer the poverty status by looking at the individual's occupation, foreign travel history, car ownership, and computer availability, where any of these was available. In other words, the poverty status of terrorists was constructed conveniently.

As seen in this brief review, most profiling studies suffered from a common methodological problem, the reliability of information collected. This was because of the nature of terrorism studies, which gives a little room to an independent observer to conduct an on-site data collection opportunity. Despite this shortcoming, previous studies found a similar pattern in the profiles of terrorists. Evidence from the aforementioned studies will be provided next to demonstrate that terrorists have common social backgrounds and that a similar analysis is possible to determine their involvement level as well.

### *Findings of Contemporary Profiling Studies*

#### Age

Findings from previous studies suggest that as age increases, participation in terrorism diminishes (Clark, 1983; Russell & Miller, 1977; Weinberg & Eubank, 1987). This is a relationship which also exists between crime and age. This pattern (in terrorism) remains remarkably the same across time, geography, and type of crime. However, this does not necessarily mean that there is no variance between participation age, peak age, and dropout age<sup>2</sup>. The participation age in terrorism shows great variance across regions and organizations. The dropout age, however, is somewhat similar and begins toward the end of the twenties (Clark, 1983; Russell & Miller, 1977; Taylor & Ryan, 1988; Weinberg & Eubank, 1987). There is no evidence for peak age.

Age trends change from one group to another. However, terrorists tend to be young. Russell and Miller (1977) reported that the average age of a typical terrorist ranged from 22 to 25, except for German, Japan, and Palestinian terrorists. The mean (participation) age for terrorists from these countries was even lower, ranging from 20 to 25. Sageman (2004), however, found that the joining age was almost 26 for Salafi Mujahidin. Clark (1983) found a similar result to that of Sageman (2004) when he said that ETA members tend to be in their middle or late twenties when they joined the organization. Weinberg and Eubank (1987) found that a majority of

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<sup>2</sup> These terms refer to different time periods in a terrorist life. Participation age refers to the age of first engagement with a terrorist group. Peak age, on the other hand, represents the age when the participation in terrorist activities peaks. Finally, dropout age indicates the age when a terrorist quits.

terrorists were between 20 and 29 in age when they joined a terrorist organization. The same study also reported that the lowest age of participation was as low as 15 for Italian women terrorists. A similar pattern was reported by Taylor and Ryan (1988) concluding that the average age was dropping in the 1980s for different terrorist groups such as the Liberation Tigers of Tamil Eelam (LTTE). The participation in the PKK is also as low as 14, as reported by the organization itself on its own website<sup>3</sup>.

Even though the mean age for a typical terrorist ranged between 20 and 29 in most studies, and even lower in some cases, terrorist leaders tend to be older than ordinary terrorists. Carlos Marighella of Brazil was 58 and Huseyin Velioglu of the Turkish Hezbollah was 49 when they were killed; Abdullah Ocalan of the PKK is 60 and Dursun Karatas of DHKP/C is 55 and they are still alive<sup>4</sup>. Russell and Miller (1977) found that of the 17 terrorist organizations they examined most leadership cadres were in their mid-30s or early 40s. A similar pattern was reported by Weinberg and Eubank (1987) for Italian women terrorists; almost 25 percent of their samples were at least in their early 30s and higher.

Although there is evidence for participation and dropout ages, there is no evidence for peak age. Normally, a terrorist can participate in any terrorist activity at any point in his career. However, younger terrorists are more likely to take risks than older terrorists, which in turn affect their willingness to participate in terrorist

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<sup>3</sup> The PKK has a website which can be reached from [www.hpg-online.net](http://www.hpg-online.net). On this website, the organization publishes the profiles of killed terrorists.

<sup>4</sup> Dursun Karatas passed away in August, 2008.

acts. On the other hand, one can equally assert that older terrorists are much more committed to the causes and therefore their willingness to participate would also be more than that of younger terrorists. As a result, the relationship between age and participation in terrorist activities is not certain.

### Education

Profiling studies, in general, concluded that terrorists are well-educated persons. For instance, Russell and Miller (1977) reported that two-thirds of the terrorists had some type of university degree. The educational level was even higher for German Baader-Meinf terrorist groups with almost 80 percent having a university degree. This pattern did not change for the countries with Muslim majority such as Turkey, Iran, and Palestine.

After the 9/11 terrorist attacks terrorism scholars focused on the type of education as well as its level. Sageman's (2004) study of the global Salafi Mujahidin measured education in two different ways: the type of education and the educational level achieved. According to Sageman (2004), contrary to the common view that Pakistan and Saudi Arabia encourages a system of education that advocates hatred of the West, only 17 percent of the terrorists he analyzed had participated in religious schools. However, a majority of them had a secular education in elementary and secondary schools. Sageman (2004) also rejects the argument that links the participation in terrorism to a low level of education, which in turn makes terrorists vulnerable to brainwashing by religious extremists. According



to his findings, almost 71 percent of the terrorists from global Salafi Mujahidin had a college or graduate degree.

Sageman's (2004) finding was consistent with that of Kruger and Maleckova (2003) who measured the support for political violence among Palestinians.

Accordingly, the support for political violence against Israeli civilians was more common among professionals than labor workers (43 vs. 35 percent); and the support was higher among people with secondary education than among people with no education (39 vs. 32 percent).

However, the pattern that terrorists are highly educated is not the same across terrorist organizations. Russell and Miller (1977) reported that almost none of the terrorists from the Provisional Wing of Irish Republican Army (IRA) had higher educational levels. Handler (1990) found that the percentage of college degree earning among American leftist terrorists was as high as 75 percent whereas this figure for rightist ones was only 22 percent. Nevertheless, the number of studies which reported that terrorists are highly educated is far more than the number of studies which reported otherwise. Does the education level vary between highly involved and lowly involved terrorists? Previous studies did not report any finding whether there is a relationship between the levels of education and involvement.

### Gender

Findings from previous researches suggested that terrorism is a male profession. For instance, Russell and Miller (1977) reported that among the Latin

American and European terrorist groups they profiled, male terrorists accounted for more than 80 percent whereas female terrorists accounted for only 16 percent.

Clark (1983) reported that males accounted for 91 percent of all ETA terrorists arrested between 1979 and 1980. In Weinberg and Eubank's (1987) biographical study of Italian terrorists who acted between 1970 and 1984, 82 percent was male.

Russell and Miller's (1977) findings suggested that gender proportion is closely associated with the strategy followed. In Russell and Miller's (1977) study, urban terrorists were predominantly male. On the contrary, females usually assumed secondary positions in urban-based terrorist groups. On the other hand, rural-based insurgent groups in Latin America such as the FSLN and Shining Path of Peru included a large number of female terrorists in their cadres.

Handler's (1990) finding indicated that gender proportion may also be related to the political orientation of a terrorist group. In his study of American terrorists, Handler (1990) found significant differences in the number of female cadres between the left-wing and right-wing terrorist organizations. Accordingly, of the American right-wing terrorists he studied, 89 percent was male and 11 percent was female. However, gender proportion in American left-wing terrorist groups was almost even, with 54 percent male and 46 percent female. Similar to Handler's (1990) finding, Russell and Miller (1977) reported that the number of women served in two leftist Latin American groups, Rote Armee Fraktion (RAF) and July Second Movement, reached up to 60 percent in 1976. Weinberg and Eubank (1987) reported a parallel pattern; of the 451 Italian female terrorists they studied, only 10 percent

were affiliated with neo-fascist terrorist groups. The remaining 90 percent were connected with different leftist groups such as the Red Brigades.

A couple of explanations were brought as to why females join a terrorist group at a low rate which is disproportionate to their population rate in society. In Galvin's (1983) view, the women are involved in terrorism with a totally different motivation than the men. In her opinion, most of the time women are attracted to terrorism with an expectation for glory and power. Weinberg and Eubank (1987) found that companionship and family ties were cited as other reasons for female's for their involvement in terrorism. Of the Italian terrorists they profiled, 27 percent were related by family and companion ties to other terrorists.

Previous researches also questioned the level of involvement in terrorist activities by gender. Most studies reported that female terrorists mostly carry out low profile jobs in a terrorist organization. For instance, Russell and Miller (1977) found that most of the terrorist attacks that occurred in Latin America and West Europe between 1966 and 1976 were planned and executed by male terrorists. Females were mostly deployed in jobs that required little or no man power such as intelligence collection, and assisting terrorist cadres as nurses or couriers. A similar pattern was reported by Clark (1983) about the ETA members in Spain. Clark (1983) stated that ETA systematically denied women from being involved particularly in active duties. In addition, there was a "pronounced antipathy" against women in the ETA.

On the other hand, there were women terrorists, especially from leftist groups, who assumed leadership positions. According to Handler (1990), of the American leftist women terrorists, 35 percent were identified as a member of the leadership team, while of the men, 27 percent assumed leadership positions. In the past, there were charismatic female terrorist leaders who brought great influence on many female terrorists such as Sofia Perovskaia of Narodnaia Volia, Susanne Albrecht, Gudrun Esslin, and Ulrike Meinhof of the Baader-Meinof, Leila Khaled of the Popular Front for the Liberation of the Palestine (PFLP), and Dora Maria Tellez of the Sandinista National Liberation Front (FSLN). Nevertheless, women's involvement in terrorism in general and terrorist attacks in particular still remains low.

#### *Social Class (Socioeconomic Status)*

Is terrorism a response to poor market opportunities? Previous profiling studies have tried to answer this question by examining the socioeconomic class where terrorists come from. Russell and Miller (1977) found that most of the terrorists they surveyed were either upper-middle class or upper class. Most of the European and Japanese terrorists were the children of affluent families except terrorists from certain terrorist groups such as the PKK, the LTTE, and the Revolutionary Armed Force of Columbia (FARC). For instance, the German RAF and the Italian Red Brigades were exclusively composed of middle-class terrorists who had dropped out of high schools or universities. Throughout the 1960s and 1970s, socialist ideology attracted many affluent young people from West Europe,

the United States, and Japan into the radical groups with a sense of responsibility for the sufferings of the poor of the world (RA Hudson, 2002).

However, not all terrorists in Russell and Miller's (1977) study were middle and upper class members. Terrorists from the PKK, LTTE, and FARC, as well as terrorists from paramilitary groups of Ireland such as the Official Irish Republican Army (Official IRA) and the Provisional Republican Army (Provisional IRA) were mostly coming from working class families. Related to their social class, terrorists from these paramilitary groups did not have a higher educational background either. For Palestinian terrorist groups, most of the rank and file cadres were of a lower class of their society, while their leadership cadres were middle and upper class.

Similarly to that of the gender proportion, the strategy of terrorist groups (urban versus rural) seems to be one of the factors which determine the social class of terrorists. Most rural-based insurgent terrorist groups such as the PKK, FARC, and the Provisional IRA attracted people from lower the segments of society. On the other hand, most urban-based leftist terrorist groups such as the Japanese Red Army, German Baader Meinhof, and Uruguayan Tupamaros recruited people from middle and upper classes. This fact was clearly stated by Uruguayan Chancellor Jorge Peirano Facio in 1970 when he said "for each family of the upper class there is a Tupamaro" (Russell & Miller, 1977).

A similar prototype was reported by Clark (1983) about the terrorists from the Basque region of Spain. Most of the ETA terrorists in his study were either

working class or lower middle class. Considering the fact that ETA is a rural-based insurgent group that is aiming to separate a part of Spain and that most of its members were industrial small town workers, this result corresponds to that of Russell and Miller (1977).

The same analysis was also true for American right-wing and left-wing terrorists. According to Handler (1990), right-wing American terrorists were mostly middle and lower class, while left-wing American terrorists were mostly middle and upper class. As a result, one can conclude that terrorists may come from a wide variety of social class backgrounds. However, upper-middle class and upper class members prefer left-wing and urban-based terrorist organizations, while lower-middle class and working class members make their choice for right-wing and rural-based terrorist organizations.

Studies of Middle Eastern terrorists founded similar results to the previous researches. For instance, Hassan's (2001) interview with 250 Palestinian suicide bombers indicated that none of the suicide bombers were "desperately poor". Similarly, Berrebi's (2004) comparison of 48 killed suicide bombers from Hamas and the Palestinian Islamic Jihad (PIJ) and the general population of Palestine revealed that the terrorists were less likely to come from impoverished families when compared to the general Palestinian population. Kruger and Maleckova's (2003) study found no support for the link between poverty and participation in the (Lebanon) Hezbollah.

Most recently, Sageman (2004) points out that the traditional way of measuring socioeconomic status tends to ignore differences among the various clusters. His analysis of the Global Salafi Mujahidin revealed that most of the leadership cadres and core Arab clusters (terrorists from Saudi Arabia, Kuwait, Egypt, and Syria) were of the middle and upper classes. On the other hand, most of the Southeast Asian cluster (terrorists from Indonesia, Malaysia, and Singapore) and the Maghreb Arab cluster (terrorists from Morocco, France, and Algeria) were of the middle and lower classes. Overall, three-fourths of all terrorists he examined were middle and upper classes. According to Sageman (2004), this was “refuting the argument that terrorism emerges from poverty (p. 74)”.

Similar to Sageman’s (2004) point on socioeconomic status of terrorists, this study is a comparison of two different clusters of terrorists; highly involved versus less involved terrorists. Previous studies, however, did not present any evidence of whether social class has an impact on the degree of involvement. On the other hand, there is no conceptual argument about whether differential involvement in terrorism is a function of socioeconomic status.

#### *Place of Recruitment (Rural versus Urban)*

Terrorists groups recruit members in the areas where they concentrate their operations most because local recruits have the advantage of knowing the area of operation and the ability to contact local aides. Therefore, urban-based terrorist organizations focus on urban areas, whereas rural-based terrorist organizations targets rural areas for recruitment. For the potential recruits of terrorists, a terrorist

organization's being conveniently available in a surrounding area becomes a significant factor in their decision to join in. Previous researches support this argument.

For instance, Russell and Miller (1977) reported that most of the terrorists in Latin American and European terrorist groups in the 1970s joined from urban areas. This pattern was almost the same across different groups such as the Uruguayan Tupamaros, the German Baader-Meinof, and the Italian Red Brigades. For Palestinian terrorists, especially those from the PFLP, many were born or lived a significant portion of their lives in urban cities. Most of the terrorist organizations mentioned in Russell and Miller's study were based in urban cities of their country of origin.

Weinberg and Eubank (1987) reported that 65 percent of the Italian terrorists they surveyed were recruited from big cities, whereas only 10 percent were from small cities. On the other hand, 30 percent of the terrorists were born in small communities where the populations were under 100,000. When the place of birth is compared to the place of recruitment, it is clear that almost half of the terrorists recruited from big cities were mobile and emigrated from smaller communities. Weinberg and Eubank's (1987) findings were similar to those of Russell and Miller (1977) because they studied urban-based neo-fascist and leftist terrorists groups.

Studies on rural-based terrorist organizations, such as Clark's (1983) analysis of ETA of Spain, did not report the place of recruitment. Clark (1983), however, reported that a typical ETA member comes from a working class or lower



middle class. He concluded that those from the working class were not likely to be employed by large factories but rather by small factories in small towns. In other words, the ETA, which is a rural-based (Basque region) terrorist organization in Spain, recruits its members among the dwellers of small industrial towns in Basque, Spain.

Despite ample evidence indicating a relationship between the place of recruitment and the type of organizations, there is no evidence for differential involvement in terrorism activities and the place of recruitment. In Turkey, both urban-based and rural-based terrorist groups organize their activities in the slums of big cities where most of the residents are the immigrants of rural towns of the inner country. The immigrant population is concentrated in certain neighborhoods. The integration of the immigrant population into the urban society takes a long time, which in turn makes them vulnerable to the exploitation of terrorist organizations. Even though most of the terrorists join from urban cities, many have a rural family background. However, to what extent this feature of terrorists impact the level of involvement is not clear.

### Marital Status

According to Russell and Miller (1977), unmarried terrorists is the rule. The need for security, mobility, and dedication to the cause prevents many terrorists from taking the responsibilities of a family and forces them to remain single. Russell and Miller's (1977) findings indicated that 75-80 percent of Latin American,

European, Middle Eastern and Asian terrorists were single. The only exception was Uruguayan Tupamaros, with almost 30 percent of its cadres being married.

Contrary to the findings of Russell and Miller (1977), Sageman (2004) found that almost 75 percent of Salafi Mujahidin members were married. Sageman (2004) attributes the high marriage rate among the Salafi Mujahidin to their faith.

Accordingly, Islam encourages its believers to marry and have children. Thus, the pattern of low marriage rate among the Palestinian terrorists in Russell and Miller's (1977) study was not confirmed by Sageman's (2004) study of the Salafi Mujahidin. For one thing, Palestinian terrorists in Russell and Miller's (1977) study were not the members of religious oriented groups. Rather, terrorists in Russell and Miller's (1977) study were from the Popular Front for the Liberation of Palestine (PFLP) and the Black September Organization, both of which were secular and did not have a religious orientation. Sageman (2004) also confirmed that this high marital status pattern is unique to Salafi Mujahidin as studies on other types of terrorism found that a typical terrorist is an unmarried one. Sageman (2004) also denoted that most terrorists were single because they were either too young, or still students, or financially unable to afford a marriage.

In conclusion, previous studies found that most of the terrorists from leftist groups are unmarried, whereas most of the terrorists from religiously motivated groups are married. However, previous studies did not report any finding on the association between the level of involvement in terrorist acts and marital status. One can still assume that there might be a difference in the level of involvement

among the terrorists in relation to their marital status. Those who have family responsibilities are expected to have a lesser involvement in terrorist acts because there is a risk of being arrested in frequent involvement. In other words, married terrorists have a stake in conformity and they take part in low-profile terrorist activities.

### Degree of Involvement

Hudson (2002) pointed out that it may be misleading to consider terrorists as “former professionals” (p.49). As aforementioned, there are many terrorists who are able to keep their identity anonymous while acting on behalf of a terrorist organization, but maintain their legitimate professions. These people continue to practice their normal jobs, but act for the terrorist organization whenever they receive an order from the leadership. Hudson (2002) mentioned ETA and IRA terrorists as an example. In order to avoid police infiltration, the ETA established a team of “sleeping commandos”. These commandos maintain a regular life style with regular jobs, but after work they are assigned to carry out specific missions without knowing each others’ identity. The ETA permits its young members (not the leadership cadres) to serve only for three years before they let them return to normal society. In terrorist organizations such as the RAF and Red Brigades, however, terrorism is a “full-time profession”. “Sleeping Commando” type of backup positions and supportive missions are not limited to the ETA only. Most of the leftist terrorist organizations in Turkey, as well as the religiously motivated Turkish Hezbollah, use non-professional part-timers to carry out specific missions. Hudson

(2002) and some other scholars pointed out the existence of non-professionals or part-timers, but there is no study in the literature that specifically focused on these individuals.

### Occupation

Russell and Miller (1977) found that the principal occupation among the Latin American terrorists was that of student. Terrorists from Tupamoros and the followers of Carlos Marighella were mostly in their early twenties and conducted terrorist operations as part of their college work on university campuses. In the 1970s, over 70 percent of Argentinean and Uruguayan and 50 percent of Brazilian arrested terrorists were students. Older terrorists had mostly high-profile occupations such as banking, engineering, and journalism. Palestinian terrorist organizations such as PFLP and Al-Fatah had the same pattern as their Latin American counterparts. Terrorist groups in Palestine were composed of terrorists from high-profile jobs and university graduates. Sageman (2004) found a different pattern for the global Salafi mujahidin. Accordingly, 42 percent of the Salafi mujahidin were professionals who had high-profile jobs such as physicians, architects, and teachers; 33 percent had semi-skilled jobs such as police, military, civil service, and students; and 25 percent were unemployed.

According to Weinberg and Eubank (1987), 27 percent of the Italian terrorists were students; 26 percent were manual workers; 15 percent were white-collar clerks; and 7 percent were professionals (like architects, lawyers, journalists, and physicians). Finally, Handler (1990) found that of the American right-wing

terrorists 75 percent had blue-collar jobs, while only 18 percent had white-collar jobs. The pattern was different for American left-wing terrorists; only 24 had blue-collar jobs, while 39 percent had white-collar jobs.

**Table 1: Reported Characteristics of Terrorists**

Researcher	Data Source	Sample Size	Age	Gender	Marital	Education	Socialclass	Occupation
<b>Russell &amp; Miller (1977)</b>	Government, newspaper, and research publications	350 Terrorists Worldwide	22-25 (Mean)	80% male vs. 16% female	75% single vs. 25% married	Two-thirds had some College Degree	Most upper-middle and upper	Most high-paying jobs (only 70% of Latin student)
<b>Sageman (2004)</b>	Government and legal documents, research/internet articles	172 Salafi Mujahidin from Middle East, France, and Indonesia	26 (Mean)	NA	25% single vs. 75% married	71% college and graduate degree	75% middle or upper class	75% either high or mid-level jobs; 25% unemployed
<b>Clark (1983)</b>	Biographies from open sources and government records	495 ETA members from Spain	25 (Mean)	NA	NA	NA	Most working class or lower-middle class	NA
<b>Weinberg &amp; Eubank (1987)</b>	Biographies from open sources and court files	2512 Italian	20-29 (Mean)	82% male vs. 12% female	NA	NA	NA	27% student; 26% manual worker; 15% White-collar
<b>Handler (1990)</b>	Biographies and Autobiographies from FBI records	280 terrorists from U.S. left vs. right	NA	54% male vs. 45 female (left); 89%-11% (right)	NA	75% (left) college, 22 (right) college	NA	24% blue-collar (left) vs. 39% white collar (right) vs. 75% - 18% (right)
<b>Pedahzur et. al (2003)</b>	Ha'aretz (Israeli daily newspaper)	819 Middle Eastern (suicide vs. non-suicide)	24.5 vs. 22.4 (Mean)	99% male-1% female vs. 97%-3%	16% married-84% single vs. 40%-60%	17% secular-83% non-sec. vs. 64%-36%.	Both suicide and non-suicide have low SES	NA
<b>Berrebi (2004)</b>	Biographies from online sources	335 terrorist from PIJ and Hamas	50% of them were between 18-24	NA	39% single vs. 32% married	65% some college degree	Mostly non-poor	NA

## Relative Deprivation

Another line of inquiry in terrorism researches concentrated on what is known as relative deprivation. This theory posits that people feel deprivation when they perceive that they are treated unjustly when compared to some standards or reference groups. Relative deprivation is often related with economic conditions. Accordingly, people may turn to collective violence such as revolutions, rebellions, and riots when they are economically deprived. This study seeks to find out whether relative deprivation is related to the level of involvement in terrorism.

The application of relative deprivation to terrorism is not new. Early studies of terrorist characteristics sought to understand whether low socioeconomic status was an indicator of a typical terrorist character (Clark, 1983; Russell & Miller, 1977; Weinberg & Eubank, 1987). None of these studies, however, indicated that terrorists were economically deprived. This pattern seems to have not changed for Contemporary terrorists. The plight of Palestinian people pushed many scholars to research whether terrorism in the Middle East is related to poverty (Berrebi, 2004; Hassan, 2001; Krueger & Malecková, 2003; Sageman, 2004). Findings from these studies did not suggest a direct relationship between terrorism and poverty. However, reducing the relative deprivation concept simply to the poverty level may be considered as a flaw because not all people with low socio-economic status feel deprivation. Hence, researchers need to fully

understand the theoretical underpinnings of relative deprivation before they initiate a test of the concept.

### *Basic Assumptions and Versions of Relative Deprivation*

The assumptions of relative deprivation theory correspond to the assumptions of the frustration-aggression hypothesis (Dollard, Doob, Miller, Mowrer, & Sears, 1939). Both theories assert that individual feel deprived of something they have a desire for. The major difference between the relative deprivation theory and the frustration-aggression hypothesis is that the former asserts that thinking others as having something and feeling oneself as entitled to have the same thing are necessary preconditions for deprivation, whereas the latter asserts that the desire for something and thinking it feasible to obtain are sufficient to instill frustration (Berkowitz, 1972).

The term 'relative deprivation' was first used by Samuel Stouffer and his colleagues of the Research Division of the U.S. Army in their study named *The American Soldier* (Davis, 1966). They used it as a provisional explanation for their findings that the respondents they examined were better off in some situations whereas they were worse off in other situations in reference to comparison groups. Since then relative deprivation has attracted a great attention from political scientists (Gurr, 1968, 1970; Nagel, 1974), sociologists (Davis, 1959; Merton & Rossi, 1997; Runciman, 1966) and psychologists (Adams, 1965; Crosby, 1976; Pettigrew, 1964, 1967). Four famous models of relative deprivation will be discussed for further clarification.



Davis (1959) was considered first to establish a formal theory of relative deprivation. According to him, an individual who lacks certain goods and opportunities will have a sense of injustice whenever he feels that others have those goods and opportunities. Davis' (1959) formulation of relative deprivation encompasses three essential conditions for deprivation: the individual who lacks something desired should (a) perceive others have it; (b) have a desire for it; and (c) have a feeling of entitlement for it. In the absence of anyone of these factors, deprivation does not occur. In Davis' (1959) opinion, the individual can make two distinct comparisons, the first one of which occurs between in-group members and the second of which occurs between out-group members.

Adding another condition to that of Davis (1959), Runciman (1966) claimed that an individual should also feel that obtaining the desired goods and opportunities is feasible. According to Runciman (1966), this last condition helps the individual to distinguish between unrealistic and realistic hopes. If the individual knows that his desire is an unrealistic one, he does not feel a deprivation. If an individual thinks otherwise, he feels a deprivation. Runciman (1966) made a differentiation between egoistic deprivation in which an individual compares himself to others and fraternal deprivation in which the individual compares his group to other groups.

Contrary to Davis (1959) and Runciman (1966), Gurr (1970) made a definition of relative deprivation by making no assumption about the sources of expectation. He defined relative deprivation as the individual's perception of

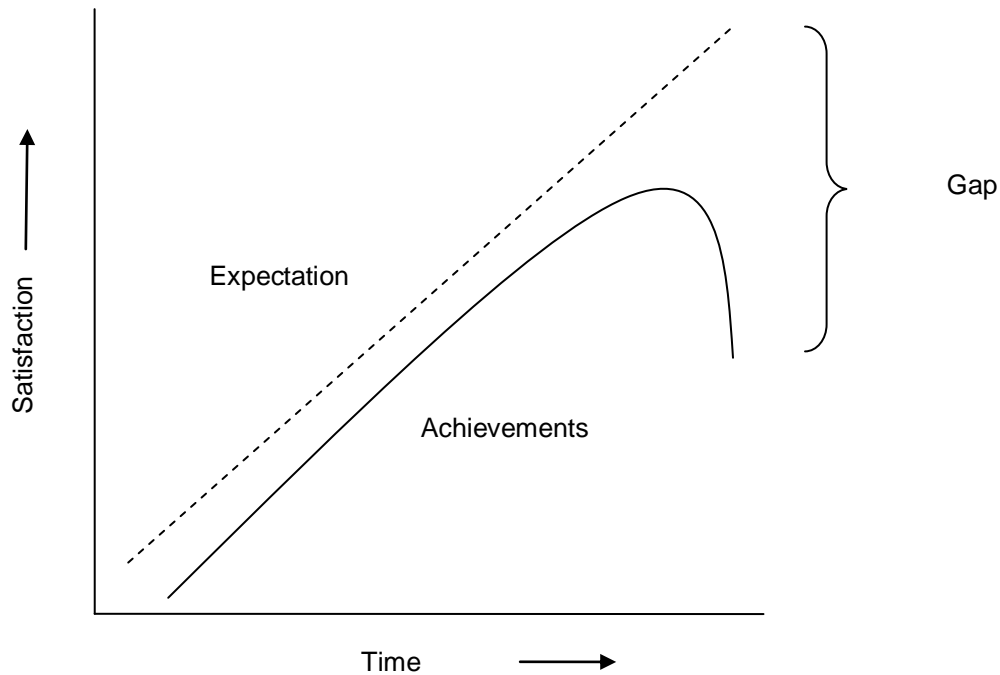
discrepancy between his expectations and capabilities. Accordingly, the expected status or standards may not only be determined in reference to others. Rather, the so-called or perceived deprivation may also reflect a desire for one's own past condition, or an abstract ideal, or standards put by leaders.

In Gurr's (1970) opinion, if the source of deprivation is based on a loss of what a person has once had or believed he could have, it is a decremental deprivation. In this situation, that person experiences a relative deprivation by reference to his own past condition. In other words, the person's value capabilities begin to decline while his value expectation remains at the same level. Examples include the loss of political influence by oppositional groups or the decline in status of the middle class population as the status or influence of the working-class population increases.

In aspirational deprivation, however, the person does not experience a significant loss. Rather, he is angered since he has no means to attain increasing or intensifying expectations. Contrary to decremental deprivation, in aspirational deprivation expectations begin to rise while capabilities remain the same. For instance, the contemporary demands of the African American population in the 1970s for social equality when compared to those made earlier reflected an increase in the expectations of African Americans for more status. According to Gurr (1970), traditional people's mere exposure to education increases their expectations. Such an increase in expectations may cause a relative deprivation if the level of actual achievement (or capabilities) remains the same.

As a special case of aspirational deprivation, Gurr (1970) defined a third category of deprivation, called progressive deprivation, in which an upward improvement in both expectations and achievements generates an expectation of continued improvement. If the achievements stabilize or decrease somehow, then a progressive deprivation is likely. This kind of deprivation is seen in societies where there occurs an economic recession in a growing economy.

Gurr's (1970) concept of progressive deprivation can be considered as a generalized version of Davies' J-curve (1962) (see Figure 2.1). According to Davies (1962), individuals feel angry when they lack certain standards and opportunities (a) if they have a desire for them and (b) if they possessed them in the past. The major difference between relative deprivation theory and Davies' J-Curve (and also Gurr's progressive deprivation) is that the former claims that an individual should make a comparison with others while the latter posits that the individual can also make a comparison with his past. In addition, Davies (1962) did not talk about the feasibility of desires.



**Figure 2: Davies J-Curve (1962)**

### Empirical Support for Relative Deprivation

Empirical support for relative deprivation can be examined under two different headings: general support for relative deprivation and support from terrorism literature.

#### General Support for Relative Deprivation

Runciman's (1966) categorization of egoistic deprivation (self versus others) and fraternal deprivation (my group versus other groups) and Gurr's (Gurr, 1970) introduction of decremental, aspirational, and progressive

deprivation enhanced the earliest applications of relative deprivation theory. Since then, the theory has received a mixed support. For instance, Brush (1996) examined the extent of empirical support for relative deprivation theory (as manifested by Gurr) by reviewing the studies listed in the Social Science Citation Index. According to his findings, relative deprivation theory received a considerable support during the first half of the 1970s. However, the support for the theory declined during the second half of the 1970s and the first half of the 1980s especially among the political scientists and sociologists. This pattern, however, was not the same among psychologists. Crosby (1976), who was a psychologist herself, reported that she found support for egoistic deprivation in 95 different studies.

At this point, it is reasonable to ask why there is a disagreement on the empirical validity of relative deprivation theory between psychologists on the one side and sociologists and political scientists on the other side. According to Brush (1996), psychologists more often directed their attention to the feelings of resentment, whereas sociologists and political scientists focused more on the occurrence of collective violence. More specifically, while psychologists often succeeded in explaining individual deprivation, political scientists and sociologists failed to explain how individual deprivation is transformed into collective violence. Today, it is known that strains of aspiration can produce psychopathology (Parker & Kleiner, 1966). However, the relationship between strain and collective violence is suspect.

According to Laqueur (1977), no truly scientific theory of collective violence has emerged, maybe because no quantitative measure suffices to understand the qualitative nature of human frustration. On the contrary, Brush (1996) argued that refutation of a theory in general, and relative deprivation theory in particular, should not be taken as a failure. Rather, refutation, as well as validation, would be taken as progress because oftentimes the theories in social science are judged by harsh standards. In natural science, however, each experiment is considered as progress toward the perfection of a theory regardless of failure or success<sup>5</sup>.

#### *Support for Relative Deprivation from Terrorism Literature*

Terrorism researchers rarely questioned the link between relative deprivation and participation in terrorist activities. However, there are a handful of studies which question the relationship between poverty and socioeconomic class and participation in terrorist activities. For instance, Kruger and Maleckova (2003) tested if there was a link between poverty (or education) and participation in the (Lebanon) Hezbollah. Comparing a dataset on 129 Hezbollah members to the general Lebanese population, they found that there was “little direct connection between poverty or education and participation in terrorism (p.141)”. More precisely, members of Hezbollah were as likely to come from wealthy

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<sup>5</sup> For example, theories about the assumed properties of the atom were accepted long before atoms could be observed. Hence, current charges against relative deprivation theory relating to its unobservable parts would not be taken as a critical flaw. Rather, each study in the literature has a contribution in the current status of relative deprivation theory.

families and have a high education level as they were to come from poor families and have a low education level.

Other than Krueger and Maleckova (2003), some of the aforementioned studies examined the probable link between poverty and participation in terrorism. For instance, Berrebi's (2004) analysis of 285 suicide terrorists found no evidence for economic deprivation even though they were considered as the most economically deprived of all terrorists. Hassan's (2001) vis-à-vis interview with 250 Palestinian terrorists did not find any support for poverty.

These studies, however, have failed to construct relative deprivation. Mostly, relative deprivation is either implied or simply reduced to poverty, unemployment, or low socioeconomic status without knowing if these factors really led people to relative deprivation in reality. The deprivation, on the other hand, cannot be measured simply with poverty level or socioeconomic status. A true measurement of relative deprivation should be able demonstrate the gap between expectation and achievement.

The only exception to these studies was Sageman's (2004) analysis of 172 global Salafi Mujahedin. As mentioned early on, Sageman (2004) reported that most of the terrorists he examined were either middle or upper class members. Based on this finding, he concluded that terrorism does not arise from poverty. However, he still found evidence of relative deprivation when he compared terrorists' occupational skills to their actual employment status. According to his findings, there was a considerable discrepancy between

terrorists' occupational skills and their employment status. For most terrorists, Sageman (2004) continued, relative deprivation was a temporary situation rather than a "structural deprivation in their original background (p.p.95)". In conclusion, Sageman's (2004) analysis demonstrated that poverty does not necessarily lead someone to join a terrorist organization. This was evident in previous studies (Table 2). However, if expectations rise contrary to the actual achievements, this might probably result in relative deprivation, which in turn may lead one to join a terrorist organization.

**Table 2: Reported Findings on Poverty and RD\***

<b>Researcher</b>	<b>Samples</b>	<b>Variables</b>	<b>Findings</b>
<b>Brush (1996)</b>	Previous studies on Relative Deprivation (meta-analysis)	Relative Deprivation	Studies by psychologists mostly supported the theory, while studies by sociologists did not support it.
<b>Krueger and Maleckova (2003)</b>	Compared 129 Hezbollah members to General Lebanese population	Poverty (inferred from parent's occupation, economic conditions)	Found no support for the link between poverty and participation in terrorism
<b>Hassan (2001)</b>	250 Hamas and PIJ members	Poverty (measured by social class)	Many were middle class members, but none of them were desperately poor
<b>Berrebi (2004)</b>	285 Suicide terrorists from PIJ	Poverty (inferred from occupation, foreign travel history, car ownership)	Found no evidence favoring the link between poverty and suicide terrorism
<b>Sageman (2004)</b>	172 Salafi Mujahidin from Middle East, France, and Indonesia	Relative Deprivation (qualitatively measured by the discrepancy between actual jobs and occupational skills)	Found support for relative deprivation.

*Notes:* RD refers to relative deprivation



### Frustration-Aggression Hypothesis

Does frustration have a role in terrorist decision-making? To what extent can frustration explain the variation in the involvement level of terrorists? At first glance, a relationship between a frustrating event and a consequent involvement in terrorism seems likely. However, constructing such a relationship requires an extensive psychological analysis of terrorists, which is very demanding and hard to apply in the study of terrorism due to difficulties in the accessibility of research subjects.

On the other hand, the relationship between frustration and aggression had been largely examined in the psychology long before it was first applied to the study of social violence in the 1970s. The frustration-aggression hypothesis has dominated the psychological study of aggression during the preceding three decades of its invention in 1939 by Dollard and his colleagues. Although the concept has been extensively criticized in the following years and the original version has been reviewed several times, the central proposition of a causal relationship between a preceding frustrating event and a following aggressive behavior still remains as the rule (Berkowitz, 1969, 1972; Feshbach, 1971; Whiting & Child, 1953). The hypothesis has inspired several other modern concepts regarding the nature and source of human aggression, such as the relative deprivation theory of social violence (Davies, 1962; Gurr, 1970) and the scapegoat theory of prejudices (Allport, 1954).

### *Basic Assumptions and Versions of Frustration-Aggression*

The hypothesis initially proposed that “the occurrence of aggression always presupposes the existence of frustration and, contrariwise, that the existence of frustration always leads to some form of aggression” (Dollard, et al., 1939). In this context, frustration was defined as the “interference with an instigated goal response at its proper time in the behavioral sequence”.

Occasionally, however, the term frustration is used not only as the process of blocking a personal goal, but also as reaction to such blocking. In other words, in order for a person to be considered frustrated, that person should not only be thwarted from reaching his goal, but should also show some types of reactions.

If frustration always leads to aggression, how does this process occur? In developing the original formulation, Dollard et al. (1939) stated that the certainty of aggression depends on (a) the reinforcement value of interfered goal response, (b) the level of frustration, and (c) the number of interference. In the occurrence of aggression; first, the reinforcement value of the interfered with goal is important because frustration is related to goal attainment. Second, the level of frustration becomes a significant factor because not all frustrations instigate aggression, but rather frustration instigates aggression only if it is complete. Third, if frustrations can be leveled, then the amount of interference becomes important. That is, frustration is an additive process and it develops cumulatively.

Dollard et al. (1939) recognized that sometimes aggression may be inhibited and it may break out in a different form. Inhibition occurs when the

anticipated severity of punishment exceeds the anticipated gratification of aggression. In such situations, frustration results in covert aggression. Dollard et al. (1939) denoted that inhibited overt aggression cannot be taken as nonaggression. Accordingly, inhibited overt aggression can be considered as covert aggression. Those who manifest the aggression covertly sometimes are described as “furious inside”.

One of the significant components of the frustration-aggression hypothesis concerns the displacement of aggression. Dollard et al. (1939) proposed that frustration directs aggression against the primary source of frustration. However, at times frustration instigates aggression against an alternative target. The displacement of the target occurs if there is an association between the primary and the alternative source of frustration. The strength of instigation is related to the similarities between the primary and alternative targets.

How long can an instigation to aggression ensue? Instigation to aggression can only be reduced by aggressive or hostile activities either against the primary or alternative targets. Since frustration is an additive process, the instigation to aggression increases with every frustration until it eventually results in violence. Consequently, one may imply from the theory that frustration has long-term effects.

As aforementioned, the frustration-aggression hypothesis assumes that (a) aggression is always based on frustration and (b) frustration always leads to aggression. It was soon when proponents of the hypothesis acknowledged that

these assumptions were too simplistic and general. Miller (1941), one of the coauthors of the original version, then had to rephrase the latter part holding that frustration may lead to a number of responses, one of which is “instigation to aggression”. Thus, he clearly acknowledged that frustration may not only result in aggression, but also may result in alternative actions.

Miller’s revised version of the frustration-aggression hypothesis put forth that (a) any aggressive behavior occurs as a result of frustration, and (b) frustration instigates behaviors that may or may not be aggressive. Accordingly, frustration is a sufficient but not a necessary condition for aggression. Thus, Miller’s (1941) reformulation was applied to the second part of Dollard et al.’s (1939) original proposition.

Other than Miller (1941), there have been a number of attempts to revise the Frustration-Aggression Hypothesis. For example, Barker et al. (1941) proposed what they called as the Frustration-Regression Hypothesis. Maier (1949), on the other hand, developed his Frustration-Fixation Hypothesis. However, these two revisions made negligible contributions to the original version of the theory. Probably, the most sweeping contribution was made by a contemporary scholar, Berkowitz (1962).

Like Dollard et al. (1939), Berkowitz (1962) recognized that a frustrating event increases the probability of aggression and this relationship exists “in many animal species, including man” (p. 2). Berkowitz (1962) also agreed with Dollard et al. (1939) when he held that “frustration is an interference with an instigated

goal response at its proper time in the behavioral sequence” (p.6). On the other hand, he asserted that goal response should be active and the individual should be prevented from reaching that goal if frustration is to result in aggression. In other words, for Berkowitz (1962), frustration is neither a simple deprivation nor a state of mind, but rather it is an interference with the realization of a (specific) goal-driven activity at a specific time.

Contrary to Dollard et al. (1939) and Miller (1941), Berkowitz (1962) identified that frustration is neither a necessary nor a sufficient condition for aggression. However, frustration stimulates an emotional reaction which then creates a “readiness” for aggressive behaviors. In Berkowitz’s (1962) opinion, even this readiness is not sufficient alone to create aggression unless there are what he calls as “suitable cues”. Berkowitz (1962) defined suitable cues as stimuli that are associated with previous or present frustrating instigators. Accordingly, all stimuli which can be associated with a frustrating experience could be a potential aggressive cue one day. In this context, the probability of aggression depends on two factors: (1) the strength of association between the stimulus and the past or the present frustrating instigators; and (2) the strength of readiness.

When does frustration actually result in aggression? According to Berkowitz (1962), the state of aggressiveness or aggressive drive ends whenever the frustrated individual encounters an aggression-triggering stimulus. In other words, aggression results whenever the frustrated individual finds an

appropriate target to direct his aggression. However, the appropriateness of target or the existence of aggression-triggering stimulus does not suggest that the target could be anyone or anything. For Berkowitz (1962), aggressive means and agents may be substituted whereas a target may not. That is, aggression cannot be displaced in the sense of changing the primary target. Attacks on alternative targets can be explained by excess violence that is committed by extremely ready aggressors.

### *Empirical Evidence for Frustration-Aggression*

The literature on the terrorist profile has often questioned the probable link between frustration and joining in terrorism. A majority of the existing studies found support for this relationship. For the purpose of this study, a summary of literature is presented, in addition to the attempt to determine what factors have been considered to cause frustration, which ultimately motivate potential terrorists to participate in terrorism.

In a study of Palestinian women's motivation to participate in terrorism, Berko and Erez (2007) found that 5 out of 14 women they interviewed reported that they sought revenge for harms and losses which they suffered and which they attributed to Israeli military operations before they joined a terrorist organization. Of the women who sought revenge, three mentioned offenses against their brothers and two indicated their brothers' death as their motivations.

In another study of Columbian terrorists, Florez-Morris (2007) used an in-depth interview with 42 terrorists. She reported that the police use of excessive

force in demonstrations was one of the motivating factors for joining in a terrorist organization. Furthermore, some terrorists reported that they joined terrorist organizations because of the belief that they were going to become a government target.

On the other hand, there is an apparent dearth of literature focusing specifically on the impact of frustration on engaging in terrorist activities. On the other hand, studies on the characteristics of suicide bombers could help us to better understand what role frustration plays in the “involvement” process. A number of researchers point out that frustration has an undeniable role in engaging in suicide attacks.

Stern (2003), for example, mentions that real or perceived humiliation of the Palestinian people by Israeli policies has given a rise to desperation and unmanageable outrage among the Palestinian people. Sprinzak (2003), on the other hand, points out that Hamas’ resorting to suicide bombing did not result from their opposition to the peace process, but it was rather a tactical choice which was meant to take revenge for humiliating Israeli actions. According to Sprinzak (2003), Baruch Goldstein’s massacre of 29 Palestinians in Hebron in 1994 was a turning point for Hamas to resort to suicide bombing. According to Hudson (2002), “Hamas thrives on the misery and frustrations of Palestinians” (p.183). Similarly, in Mogadham’s (2003) opinion, the fact that many suicide bombers in Palestine have a desire to take revenge is attributable to the high rate of casualty and injury especially during the Second Intifada. In addition,

Moghadam (2003) continues, many Palestinians, as well as Israelis, have remained untouched by the violence so far and almost everybody has a loved one who has either been injured or killed.

Empirical evidence supports the points made by Stern (2003), Sprinzak (1991), Hudson (2002), and Moghadam (2003). For instance, Weinberg et Al. (2003) studied the motivations of 80 suicide bombers by comparing their profiles to those of 743 Palestinians who were imprisoned for committing other types of terrorist activities. They reported that there was evidence that suggested that suicide bombers had negative experiences with Israeli authorities and thus acted in vengeance.

Similarly, in a study of 87 Palestinian suicide bombers, Yom and Saleh (2004) reported that many of the bombers had an experience of violent encounters with the Israel Defense Force in which they were either imprisoned, or injured, or lost their family members. Soibelman's (2004) analysis of "the factors underlying the development of the Palestinian suicide bomber" presented similar findings. Having interviewed five bombers caught before they detonated the bombs, Soibelman (2004) reported that all had some types of negative experiences with Israeli military forces such as shooting and killing a friend, beating, and unnecessary use of force at checkpoints.

Most recently, Well and Horowitz (2007) surveyed the biographies of 43 Hamas members and the opinions of 23 terrorism experts. They identified 10 different motivational factors (latent variables) that may have an effect on



committing a suicide attack. Among the motivations they identified were psychological disorder, small group dynamics, operational usefulness, religious factors, frustration against Israeli oppression, economic factors, cultural factors, revenge, and social network factors. Using what is known as structural equation modeling as a statistical technique, they found that frustration was the second most important factor for volunteering to commit a suicide attack. Although they suffered from lack of a theoretical model, previous terrorism studies found that frustration, revenge, police use of excessive force, government repression, vengeance, and negative experiences with military forces were related to either participation in terrorism in general or the commission of a suicide attack.

**Table 3: Reported Findings on Frustration**

<b>Researcher</b>	<b>Samples</b>	<b>Significant Findings</b>
<b>Berko and Erez (2007)</b>	Interviewed 14 Palestinian women on women participation in terrorism	Revenge (as a result of harms and losses which they attributed Israeli military operations)
<b>Florez-Morris (2007)</b>	Interviewed 42 Columbian terrorists	Police use of force, government repression, inequality, injustice
<b>Weinberg et. al (2003)</b>	Compared the profiles of 80 suicide bombers to those of 743 Palestinians	Vengeance, negative experiences with military forces
<b>Yom and Saleh (2004)</b>	Analyzed the biographies of 87 suicide bombers	Violent encounters with military forces
<b>Soibelman (2004)</b>	Interview with 5 suicide bombers	Negative experiences with military forces
<b>Wells &amp; Horowitz (2007)</b>	Analyzed the biographies of 43 suicide bombers from Hamas, Conducted surveys on 23 terrorism experts	Frustration against Israeli authorities (was the second biggest factor out of 10 motivations)

### Social Learning Theory of Deviance

Both relative deprivation and frustration-aggression theories suggested that terrorism results from feelings of economic deprivation, hopelessness, and frustration. Accordingly, some politically discontented people commit to terrorism thinking that there is no way to express their feelings of discontent other than by using violence (Knutson, 1984). An alternative explanation to relative deprivation and frustration-aggression is offered by social learning theory. This theory suggests that terrorism is learned just like any other human behaviors (Akers & Silverman, 2004). From this point of view, terrorism is a consequence of social, economic, and political influences rather than a consequence of dysfunctional personality traits such as deprivation, hopelessness, and frustration (Schmid, 2005).

Indeed, the argument about terrorism being a consequence of social, economic, and political influences is not new. Three decades ago, Cooper (1976) pointed out that terrorism is functional in the sense that the harm terrorists do is secondary compared to their primary political objectives. Cooper (1976) compared the logic of conventional warfare to the logic of unconventional fighting methods. In this sense, terrorism is instrumental because the ultimate goal of terrorists is not to terrorize, but to achieve political objectives.

Today, a considerable number of researchers think that terrorism is a function of learned ideological values whether they are political or religious (Crenshaw, 1988; RA Hudson, 2002). From the learning perspective, terrorists

are viewed as rational individuals. That is, the psychological typology with terrorists is useless because the probability of having a mental illness is no more likely for terrorists than it is for non-terrorists. Psychological accounts, on the other hand, tend to ignore the social processes by which terrorist behaviors are learned just like any other human behaviors. The basic assumptions of the social learning theory are presented next to understanding in what way the theory differs from relative deprivation and frustration-aggression.

### *Basic Assumptions and Versions of Social Learning*

Social learning of deviance refers to a set of theories that explain how deviant and criminal behaviors are acquired, maintained, and changed. The social learning of deviance seeks to understand the social and cultural determinants of crime, deviance, and conformity. This theory proposes that both criminal and deviant behaviors are subject to the same learning processes as conforming behaviors.

Although the application is new, the social learning perspective on terrorism seeks to explain whether terrorist behaviors are learned (Akers & Silverman, 2004). The theory posits that individuals learn terrorism through observing one another. Accordingly, if the observed behavior yields the desired outcome, then the individual who observes that behavior is likely to imitate. Unlike relative deprivation and frustration-aggression in which the emphasis is more on social structure, the social learning theory of terrorism puts an emphasis on social processes. While relative deprivation and frustration-aggression explain

why certain feelings and attitudes that promote terrorism emerge, social learning explains how people espouse these feelings and attitudes and why they result in terrorism.

Social learning was examined by both psychologists and sociologists to understand how people learn what they do. This study is interested in whether social learning can be applicable to terrorist behaviors just like it was applied to other human behaviors. Following this, social learning perspectives are reviewed to project the social processes by which deviant behaviors are learned and to lay the foundation for research hypotheses.

### *Gabriel Tarde's Three Laws of Imitations*

The earliest formulation of the learning theory dates back to the works of a French social theorist, Gabriel Tarde, (1843-1904), who was considered the forerunner of contemporary learning theorists. Tarde (1962) focused on the social processes whereby behaviors are learned through imitation. Tarde's (1962) social learning perspective viewed learning as a function of imitation. He proposed a concept of social learning called "three laws of imitations". These laws were (1) the law of close contact, (2) the law of imitation of superiors of inferiors, and (3) the law of insertion. Tarde's (1962) three laws of imitation describe how and why individuals deviate.

First, individuals imitate those with whom they have a close contact. Imitation occurs in various forms. In general, individuals tend to imitate the customs and fashions of their close contacts. If individuals are surrounded by

deviant people, they are likely to imitate these people more than others with whom they have no such contacts.

Second, imitation occurs in a top-down fashion. Accordingly, the young imitate the older; the poor imitate the rich; and the peasants imitate the nobles. Crime is the effort of the young or the poor to imitate the older and the wealthy. Individuals try to follow high-status people with a hope of rewards that are associated with the behaviors of the superior class. Deviance by high-class people is likely to encourage others in the society to do the same.

Third, new behaviors are superimposed on the old ones in a way that they either encourage or discourage them. This occurs because of the power that is inherent to originality. If the new fashion is drug using, for example, then it may spread among college students who previously used alcohol. On the other hand, those students who used alcohol may also begin to use drugs at the same time.

Tarde's (1962) learning theory is based on behaviorism and explains learning solely with environmental factors. Further, Tarde (1962) focused solely on imitation as a form of learning, whereas he disregarded other forms of learning such as observing and modeling. Nevertheless, Tarde's (1962) learning perspective as articulated in his three laws of imitation pioneered the contemporary learning theories. Also, the theory had a significant impact on the study of deviance.

### Albert Bandura's Social Learning of Violence

The social learning theory of Bandura (1973) has become the most influential theory of learning and development in the last century. Bandura (1973) proposed that direct reinforcement does not account for all learning processes. Adding his observational learning concept, or what he calls modeling, Bandura (1973) argued that people can learn aggressive behaviors through observing each other. Observational learning or modeling can be applicable to a variety of human behaviors including crime and deviance (Bandura, 1973).

Bandura (1973) identified three different models of observational learning based on his famous Bobo doll test. Accordingly, a live model involves an actual person who demonstrates an aggressive behavior. In the verbal instructional model, aggressive behavior is learned through descriptions or explanations. The symbolic model involves a real or imaginary figure who demonstrates an aggressive behavior in books, films, or television programs.

In Bandura's (1973) opinion, indirect or external reinforcement is not the only factor that influences learning. However, there are also intrinsic reinforcements such as pride and sense of accomplishment. This exclusive focus on intrinsic reinforcement makes Bandura's (1973) theory is a cognitive learning model as opposed to traditional learning theories that are generally categorized under behavioral theories. Cognitive learning emphasizes the importance of psychological factors in shaping human behaviors. While behavioral learning

assumes a permanent change in behaviors, cognitive learning assumes a change in information, but not necessarily in behaviors.

Bandura (1973) also pointed out different sources of modeling. Accordingly, modeling comes from three different sources with family being the most prominent one. Children who show aggressive behaviors have parents who also show similar behaviors. A second category of modeling occurs through environmental experiences. For instance, individuals living in highly criminal areas are more likely to show violent behaviors than those living in safer areas. The final category of modeling is offered by the mass media. Movies and television present violent behaviors in a way that spectators take them as if they are the norms. For instance, heroes never get punished and even praised for their violent actions, which reinforces violence in the eyes of spectators.

Bandura's (1973) learning perspective had a tremendous impact on theories regarding human personality. Replacing the behaviorist approach, during the 1960s a "cognitive revolution" occurred in psychology and Bandura (1973) made a great contribution to this movement. Moreover, he is considered to be the father of cognitive revolution in the field of psychology.

### Edwin Sutherland's Differential Association

Integrating Tarde's (1962) imitation to criminology, Sutherland (1947) put forth his differential association theory of crime. The theory argues that criminal behavior is learned through the interaction with others. Similar to Tarde's (1962) law of close contact, Sutherland (1947) proposed that learning occurs within

intimate groups. Differently from Tarde (1962), however, Sutherland (1947) does not restrict learning to imitation. Rather, the process of learning criminal behaviors involves all mechanisms of learning as well as imitation. A seduced person, for example, learns through association, which is a process different from imitation.

The principle part of Sutherland's (1947) learning theory is what he calls as differential association. Accordingly, a person becomes criminal when exposed to the excess of definitions favorable to the violation of law as opposed to the definitions unfavorable to the law. By and large, all people in a society have some types of membership to the intimate personal groups where they are exposed to the excess definitions unfavorable to the violation of societal rules. In their families, people learn how to obey the law. However, most people at some point in their lives become involved in groups where the law is defined as unfavorable. For instance, one may have intimate friends who might define the law that prohibits the use of drugs as unreasonable. In Sutherland's (1947) opinion, however, mere exposure to unfavorable definitions of the law is not sufficient to convince someone to become involved in criminal groups. Such an involvement occurs only when the definitions unfavorable to the law exceed the definitions favorable to the law. Thus, it is not the simple exposure to criminal definitions that matters, but it is the differential associations with criminal and non-criminal groups that determine the involvement in criminal activities. On the other hand, the excess definitions favorable to the violation of law alone are not



sufficient to yield criminal behaviors. Sutherland (1947) states that the learning process “includes the techniques of committing crime, which are sometimes very complicated, sometimes very simple” (p.75). Finally, cultural meaning that is attached to criminal behaviors is also a crucial component of criminality. This may include motives, rationalizations, and attitudes that might lead someone to commit crime.

In short, criminal behaviors result from a social learning process that occurs in the course of interaction with intimate groups such as family and friends. Learning criminal behaviors occurs as a result of excess definitions unfavorable to the law over the definitions favorable to the law. Thus, the difference between unfavorable definitions and favorable definitions is important to channel someone into the criminal direction. This is also what Sutherland (1947) refers to as differential association.

Sutherland’s (1947) differential association theory gained much more attention than Merton’s anomie in the years following his reformulation of the theory in 1947. Subsequent theories of social learning were mostly based on Sutherland’s (1947) differential association either in the form of critical debates on the merits of the theory or in the form of its revision or extension. Sutherland, himself, was one of the first to criticize his own theory when he admitted that he failed to incorporate criminal opportunities to the emergence of criminal behaviors (Cohen, Lindesmith, & Schuessler, 1956). Sutherland’s own criticism then helped Cloward and Ohlin (1960) develop their sub-cultural theory of

delinquency in which they argued the role of illegitimate opportunities. Another critical point was generally based on the lack of any psychological explanation about how learning occurs. Sutherland was criticized for his failure to provide any psychological details to the learning process (RL Akers, 1977; Ronald Akers, 1977; Burgess & Akers, 1966; Jeffery, 1965).

### *Empirical Evidence for Social Learning*

As aforementioned, the application of social learning to terrorism is new (Akers & Silverman, 2004). The evidence presented here was drawn from previous terrorism studies. Research findings and arguments indicated that social learning as a theory of human behavior can also be applicable to terrorist behaviors. The roles of family and friends in shaping human behaviors were extensively studied by psychology literature. On the other hand, there are examples in terrorism literature indicating that differential association or behavioral modeling through family and friends is possible for terrorists. A number of researchers indicated that family and friends are the principal means of recruitment and terrorists' motivations to involve in terrorist activities (RA Hudson, Majeska, Division, & Congress, 1999; Krueger & Malecková, 2003; Moghadam, 2003; Nesser, 2006; Ozeren, 2007; Ozsoy, 2007; Sageman, 2005; Weinberg & Eubank, 1987; Wolters, 2002).

For instance, Sageman (2004) study of global Salafi mujahidin emphasized the importance of friendship and kinship in mujahidin's recruitment strategy. He found that mujahidin relied mainly upon a bottom-up process of

recruitment in which a person is recruited by a friend and a family member instead of a top-down process in which recruitment is organized mostly by the organization. The reason for adopting a bottom-recruitment strategy was the security. Friendship had an important role in the formal association of 68 percent of the mujahidin, while kinship had a role in the recruitment of 14 percent of the mujahidin (p.112).

**Table 4: Reported Findings on Social Learning**

<b>Researcher</b>	<b>Samples</b>	<b>Variables</b>	<b>Findings</b>
<b>Sageman (2004)</b>	172 Salafi Mujahidin from Middle East, France, and Indonesia	Friendship, kinship	Friendship had an effect on 68%, kinship had an effect on 14% of the mujahidin
<b>Weinberg &amp; Eubank (1987)</b>	2512 Italian Terrorists	Family	13% of the Italian terrorists had family ties
<b>Wells and Horowitz (2007)</b>	43 suicide bombers from Hamas and 23 terrorism experts	Friends, family members, and cultural factors	Social network and cultural factors were less effective when compared to economic and frustration factors
<b>Russell &amp; Miller (1977)</b>	350 Terrorists Worldwide	Place of Recruitment	University environment was the primary ground (implying friends)

Weinberg and Eubank's (1987) analysis of 2,512 Italian terrorists also found that family had a role in the decision to participate in terrorism. Thirteen percent of the terrorist they examined had such relationship, mostly as husbands and wives. Weinberg and Eubank (1987) added that the proportion would be even higher because the number of unmarried couples was unknown (p.83).

In their analysis of 43 suicide bombers from Hamas, Wells and Horowitz (2007) hypothesized that Hamas recruit preferentially among friends and family members of existing militants just like Al-Qaeda. However, they found less support for social network factors compared to economic and frustration indicators. The impact of environment and cultural factors on individual decision-making was also studied in the literature. Some researchers claimed that people who live in environment (or culture) where political violence is considered a norm are subject to an overwhelming exposure to terrorist propaganda (Berko & Erez, 2007; Della Porta, 2006; Moghadam, 2006; Post, Ruby, & Shaw, 2002; Shelley, 2008; Wells III & Horowitz, 2007). However, empirical evidence showed mixed support for environmental or cultural factors. In their analysis of 43 suicide bombers from Hamas, Wells and Horowitz (2007) found little support for cultural factors when these were compared to economic and frustration factors (p.11). A similar finding was reported by Sageman (2004) who analyzed 172 global Salafi mujahidin. He found that 70 percent of the mujahidin were recruited in countries where they were not born and grew up. Contrary to Wells and Horowitz (2007) and Sageman (2004), Russell and Miller (1977) found that the environment where terrorists were first recruited into terrorism was important. Their analysis of worldwide terrorists of the 1960s and 1970s found that universities were the primary recruiting grounds for terrorists (p.57). In conclusion, social learning variables including family, friends, and environment had little support in terms of their effects on the participation in terrorism (Table 4).

## CHAPTER III: METHODOLOGY

### Introduction

Studying terrorism involves some methodological issues. Silke (2001) pointed out specific key problems while building upon Schmid and Jongman's (1988) earlier work on terrorism research. Accordingly, if the aim of research in any field is to develop from one level to the next level of understanding, namely from the exploratory level to the descriptive and explanatory levels, terrorism researches have failed to achieve such aim. In Silke's (2001) opinion, the reason for this failure is that terrorism is not a topic that is easily researched. The clandestine nature of terrorist networks makes key actors (or terrorists) hard to access, at least in a systematic manner. According to Schmid and Jongman (1988), only 24 percent of those terrorism researchers whom they surveyed indicated that they had obtained information from interviews with terrorists.

Silke (2001) attempted to make a similar analysis to that of Schmid and Jongman (1988) by reviewing scholarly articles published between 1995 and 1999 in two academic journals, *Terrorism and Political Violence* and *Studies in Conflict & Terrorism*. His analysis revealed that only in 22 percent of articles did researchers use some type of interviewing, a result not different than that achieved by Schmid and Jongman (1988) after a decade. The proportion of structured and systematic interviews is even less. Only 1 percent of all articles used systematic interview. Further, of all the researchers interviewed, 97 percent

indicated that they used opportunity (convenient) sampling. In opportunity sampling, however, the researcher has no way to know whether he or she is studying the population of interest. In other words, in most studies they reviewed, sampling bias was likely.

The quality of research is not limited to method of data collection. According to Silke (2001), only 20 percent of articles provided new knowledge over and above what was already known. Moreover, only 3 percent of the articles he reviewed used inferential statistics. Besides, terrorism researches rarely use statistics and when they do, they are five times more likely to use descriptive statistics. On the other hand, in forensic psychology and criminology, two similar areas to terrorism studies in terms of subject of interest, the use of statistics is more than 60 percent with the majority being inferential statistics. Finally, Silke (2001) denotes that the reason for statistics being so uncommon is that terrorism researches need extensive efforts but existing studies were hardly the production of collaborative efforts.

That being said, this study was exploratory in nature because it attempted to explore the motives that may have an effect on terrorists' differential involvement in terrorist activities. As seen in the literature review section, a study with this specific focus has not been conducted yet. Most profiling studies have been conducted to find out the motives of terrorists before they were channeled into terrorism. Studies of this type, however, contributed to terrorism literature only to a certain extent in terms of understanding what makes a person a

terrorist. Today, we know little about true motivations of terrorists beyond their demographic characteristics.

This study utilized terrorist autobiography as the data source. Surveying autobiographies is a well-known data collection technique in terrorism studies, but the major problem is the availability. Further details regarding how autobiographies were collected will be provided in the data collection section. Finally, this study was distinctive in the sense that it used inferential statistics in an effort to extend its findings beyond the simple description of a typical terrorist.

### Research Questions and Hypotheses

This study addressed the following research questions and hypotheses;

1. To what extent terrorists are similar or different in terms of their degree of involvement in terrorist activities?
2. What factors are influential in the degree involvement in DHKP/C and Turkish Hezbollah?

#### *Research Question One*

This question asks what impacts involvement in terrorism or what differences and similarities exist between terrorists in terms of their involvement in terrorist activities. In order to answer this question, 11 different hypotheses were developed. Hypotheses 1 through 8 are bivariate hypotheses since they propose a bivariate relationship between involvement in terrorism and different factors such as social class, education, work status (employment status), loss of

a loved one in a counter-terrorism operation, school dropout, family arrest, family association to a terrorist group and recruitment method (family, relatives, friends, and others). Hypotheses 9, 10, and 11 are multivariate hypotheses since they propose a multivariate relationship between involvement in terrorism and the concepts of relative deprivation, frustration, and social learning, each of which was constructed by the combination of the above factors. Each hypothesis was tested twice, once for DHKP/C and once for Turkish Hezbollah members.

Multivariate hypotheses tested both the combined effect of independent variables (model testing) and the individual effect of each variable in the model.

- H1. The probability of involvement in terrorist activities is negatively related to terrorists' social class levels.
- H2. The probability of involvement in terrorist activities is positively related to terrorists' education levels.
- H3. The probability of involvement in terrorist activities is positively related to terrorists' probability of being unemployed.
- H4. The probability of involvement in terrorist activities is higher for those who have lost a loved one in a counter-terrorism operation than for those who have not.
- H5. The probability of involvement in terrorist activities is higher for those who have dropped out of school than for those who have not.
- H6. The probability of involvement in terrorist activities is higher for those who have experienced a family arrest than for those who have not.



- H7. The probability of involvement in terrorist activities is higher for those who have a family member (father, mother, brother, and sister) associated to a terrorist group than for those who do not.
- H8. The probability of involvement in terrorist activities is higher for those who have been first recruited by a family member, or by a relative, or by a friend than for those who have been recruited by other means (by reading publications or in prison).
- H9. Relative deprivation has a significant effect on the probability of involvement in terrorist activities controlling for social class, age, gender, and marital status<sup>6</sup>.
- H10. Frustration has a significant effect on the probability of involvement in terrorist activities controlling for age, gender, and marital status
- H11. Social learning has a significant effect on the probability of involvement in terrorist activities controlling for age, gender, and marital status.

### *Research Question Two*

The second question asks what impacts DHKP/C members' involvement in terrorist activities different than Turkish Hezbollah members or vice versa. Is there any difference in the motivations of arrested DHKP/C and arrested Turkish Hezbollah members? As stated in previous hypotheses, motivations for involvement in terrorist activities are assumed to be identical for both DHKP/C

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<sup>6</sup> Hypotheses regarding the individual effect of variables that constitute relative deprivation, frustration, and social learning were not stated. However, they were tested for significance proposing that their individual effect was significantly different from zero.

and Turkish Hezbollah members. Thus, following hypotheses are stated in the null form.

- H12. There was no difference in social class levels between the groups of arrested DHKP/C and arrested Turkish Hezbollah members.
- H13. There was no difference in education levels between the groups of arrested DHKP/C and arrested Turkish Hezbollah members.
- H14. There was no difference in work status between the groups of arrested DHKP/C and arrested Turkish Hezbollah members.
- H15. Arrested DHKP/C and arrested Turkish Hezbollah members were not different when compared in respect to having a loved one killed in a counter-terrorism operation.
- H16. There was no difference in school dropout rates between the groups of arrested DHKP/C and arrested Turkish Hezbollah members.
- H17. Arrested DHKP/C and arrested Turkish Hezbollah members were not different when compared in respect to having an arrested family member.
- H18. Arrested DHKP/C and arrested Turkish Hezbollah members were not different when compared in respect to having a family member associated to a terrorist group.
- H19. There was no difference in recruitment methods between the groups of arrested DHKP/C and arrested Turkish Hezbollah members.

## *Sources of Hypotheses*

### *Hypothesis 1 (Socialclass)*

Hypothesis 1 was based on the researcher's own field experiences. Terrorism literature provided mixed evidence about the social class of terrorists. Russell and Miller (1977), for instance, found that most of the terrorists around the world were middle or upper class members. Sageman (2004) reported a similar pattern for global Salafi mujahidin. However, Clark reported that the majority of ETA members were either from working or lower middle classes. This study assumes that most DHKP/C and Turkish Hezbollah members come from the lower classes of society<sup>7</sup>. Terrorists with low social class background generally come from poorer sectors of the society. They either reside in rural areas or slums in urban areas. Their parents are either illiterate or had little education (Sayari, 1985).

Social class has become one of the determinants of involvement in terrorist activities. First of all, DHKP/C members' social class levels have changed a great deal since the 1970s. As Russell and Miller (1977) reported, the terrorists of the 1970s came from the middle or upper middle classes of society. Before they were radicalized, most of these terrorists were first organized under highly ideological and intellectual organizations such as the Federation of Idea Clubs and Revolutionist Youth (Yayla, 2005). However, the military coup of 1980

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<sup>7</sup> Social class is inferred from father's occupation. Further details are given in measurement section.

forced terrorist organizations and their militants underground. In the second half of the 1980s when most terrorists were released from prisons, they altered their recruitment strategy by organizing in the slums of big cities and acting clandestinely. As a result, certain characteristics of terrorists including their social class have undergone considerable changes.

Second, Turkish Hezbollah members' social class cannot be assessed independently from the socioeconomic status of the region in which the organization is most active. As mentioned earlier, Turkish Hezbollah organized mostly in the south-eastern part of Turkey. This part of the country is known as the most underdeveloped region in terms of economic indicators like GDP per capita. Therefore, social class is assumed to be one of the most important indicators of the involvement in terrorist activities for Turkish Hezbollah members.

### Hypothesis 2 (Education)

Hypothesis 2 was developed based on the findings in literature and the relative deprivation theory. Accordingly, previous studies reported that a majority of leftist and religiously motivated terrorists were highly educated (Berrebi, 2004; Handler, 1990; Pedahzur, et al., 2003; Russell & Miller, 1977; Sageman, 2004). However, they did not provide any evidence regarding why highly educated people join in terrorist organizations. This study expects that, as the education level increases, the probability of participation in terrorist activities increases because highly educated people are more likely to experience relative deprivation especially when they fail to achieve their expectations.

### Hypothesis 3 (Workstatus)

Hypothesis 3 was based on the principles of relative deprivation theory and the findings of Sageman (2004). Indeed, terrorists' work status has not drawn enough attention from terrorism scholars when compared to social class. In most studies, terrorists were assumed as full-time (terrorism) workers (Clark, 1983; Russell & Miller, 1977; Weinberg & Eubank, 1987). However, they ignored the fact that most terrorists act on a part-time or what this study calls as "non-professional" basis. With this hypothesis, it is expected that those who are employed (full-time or part-time) are less likely to participate in terrorist activities than those who are unemployed because employed people are less likely to experience relative deprivation.

### Hypothesis 4 (Loss)

Hypothesis 4 tests the effect of loss of a loved one (in a counter-terrorism operation) on the probability of involvement in terrorism. This hypothesis was drawn from the works of Berko and Erez (2007). These studies found that terrorists seek revenge for harms and personal losses they suffer and which they attribute to police and military operations before they join a terrorist organization. Accordingly, it is expected that both DHKP/C and Turkish Hezbollah members who lost a loved are more likely to participate in terrorist activities than those who had no such loss.

### Hypothesis 5 (School Dropout)

Like Hypothesis 1, Hypothesis 5 reflected the researcher's own field experiences. This hypothesis tests the effect of school dropout on the probability of involvement in terrorism. Previous studies viewed school dropout as an educational category (Post, 2005; Russell & Miller, 1977). For instance, the educational level of a university dropout was defined as "some college education" even though they did not graduate from a university (Russell & Miller, 1977, p. 57; Sevinc, 2008, p. 172).

On the other hand, dropout can be taken as an indicator of frustration especially when the person had to leave school against his will. According to my own observation, most dropout terrorists have to leave school against their will because they are permanently suspended from school for participating in illegal activities. In such situations, school dropout is likely to cause frustration because it interferes with educational objectives. As noted in the literature review, interfered with goals are important in the occurrence of frustration because it is related to goal attainment (Dollard, et al., 1939). Thus, it is expected that terrorists who dropped out of school are more likely to participate in terrorist activities than those who did not, due to the element of frustration.

### Hypothesis 6 (Familyarrest)

Hypothesis 6 was developed based on the findings of previous studies. It tests the relationship between family arrest and involvement in terrorism. A number of studies found that police and military operations (negatively) motivate

relatives of terrorists to join a terrorist organization (RA Hudson, 2002; Moghadam, 2003; Soibelman, 2004; Sprinzak, 1991; Stern, 2003; Wells III & Horowitz, 2007; Yom & Saleh, 2004). Hence, it is expected that terrorists who had a family arrest are more likely to participate in terrorist activities than those who had no such experiences.

#### Hypothesis 7 (Family)

Hypothesis 7 was based both on the findings of previous studies and the researcher's own experiences. A number of studies reported that family association (to a terrorist organization) was an effective factor in the involvement in terrorism (Moghadam, 2003; Sageman, 2004; Weinberg & Eubank, 1987; Wells III & Horowitz, 2007). With this hypothesis, it is expected that terrorists who had a family member associated with a terrorist group are more likely to participate in terrorist activities than those who did not have such a family member.

#### Hypothesis 8 (Friends and Relatives)

Like family association to a terrorist organization, friends and relatives were equally important to be recruited into a terrorist organization (Moghadam, 2003; Sageman, 2004; Weinberg & Eubank, 1987; Wells III & Horowitz, 2007). It is expected that those who were recruited by friends and relatives were more likely to engage in terrorist activities than those who were recruited by other means.

### Hypothesis 9 (Relative Deprivation)

Hypothesis 9 is a multivariate hypothesis of relative deprivation<sup>8</sup>. This hypothesis was drawn from Gurr's (1970) aspirational deprivation. As pointed out in the literature review, Gurr (1970) stated that traditional people's mere exposure to education increases their expectations. Such an increase in expectations may cause a relative deprivation if the level of achievement remains the same. Hypothesis 9 tests the combined effect of education and work status on the probability of involvement in terrorism. The purpose of testing the combined effect is to understand how well these two variables combined predict the probability of arrest. Other than the combined effect of education and work status, the individual effect of education and workstatus are also tested. Testing the individual effect of education is important because as long as work status remains the same, education serves to increase relative deprivation (Gurr, 1970). This in turn increases the probability of involvement in terrorism. Testing the individual effect of work status is also important because a positive change in work status is expected to increase the probability of relative satisfaction, which in turn decreases the probability involvement in terrorism.

### Hypothesis 10 (Frustration)

Like Hypothesis 9, Hypothesis 10 is a multivariate hypothesis which was designed to test the effect of frustration on the involvement in terrorism. This

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<sup>8</sup> Multivariate hypothesis is a hypothesis proposing a relationship among more than two phenomena (Powell, 1997).



hypothesis was based on the findings from literature. A number of studies found that frustration is one of the factors that have an effect on involvement in terrorism (Florez-Morris, 2007; R Hudson, 2000; Moghaddam, 2005; Soibelman, 2004; Sprinzak, 1991; Stern, 2003; Van Bruinessen, 1988; Wells III & Horowitz, 2007; Yom & Saleh, 2004). Among the factors the researchers of these studies found are losses which terrorists attributed to military operations (Berko & Erez, 2007; Moghadam, 2003), police use of excessive force (Florez-Morris, 2007), and humiliation by police and military forces (Sprinzak, 1991; Stern, 2003). Based on these findings, Hypothesis 10 tests the combined effect of family arrest, loss, and school dropout. Loss was mentioned by Berko and Erez (2007), Weinberg et al. (2003), and Soibelman (2004). Family arrest was mentioned by Sprinzak (1991), Stern (2003) and Florez-Morris (2007). School dropout was not explicitly mentioned. However, Dollard et al. (1939) stated that frustration is related to goal attainment. Therefore, dropout can be assessed as what they refer to as "interfered goal" (Dollard, et al., 1939). Testing the combined effect of these variables is important provided that frustration is an additive process and develops cumulatively (Dollard, et al., 1939). It is expected that frustration has a significant effect on the probability of involvement in terrorism. Other than the combined effect of family arrest, loss, and school dropout, their individual effect are also tested to see their contribution to the model. It is expected that all three variables of frustration positively and significantly influence the probability of involvement in terrorism.

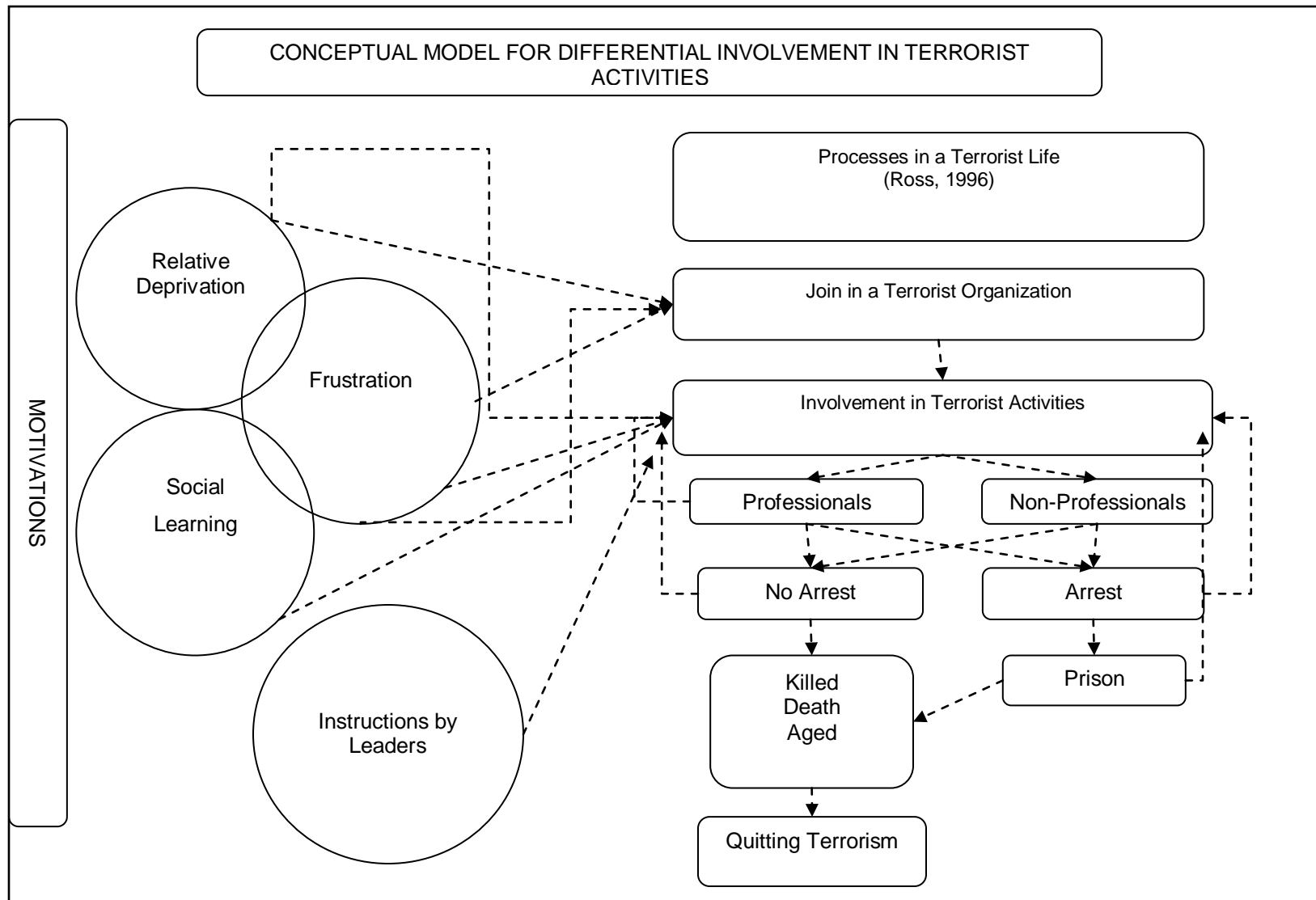
Hypothesis 12 (Social Learning)

Hypothesis 12 was designed based on the findings in literature. This hypothesis tests the effect of social learning on the involvement in terrorism. In other words, this hypothesis is interested in whether terrorists learn terrorism through social processes. There is ample theoretical reasoning showing that social learning is possible for terrorists (Crenshaw, 2000; Fields, 1979; RA Hudson, 2002; Moghaddam, 2005; Weinberg & Eubank, 1987) . However, no specific learning theory has been applied to terrorism so far. Findings from previous studies demonstrated that many terrorists had intimate groups such as family and friends with whom they are differentially associated and are thereby exposed to the excess definitions favorable to revolt against government (Berko & Erez, 2007; Krueger & Malecková, 2003; Moghadam, 2003; Weinberg & Eubank, 1987). Based on these findings, Hypothesis 11 tests the combined effect of family association and the recruitment method of terrorists on the involvement in terrorism. The impact of family and friends on terrorist decision-making was studied by few scholars although it was echoed by many. Among the studies cited, Weinberg and Eubank (1987) mentioned the impact of companionship and family ties; Sageman (2004) mentioned the impact of friendship and kinship; and Wells and Horowitz (2007) mentioned the impact of friends, family members, and cultural environment on participation in terrorist activities. As well as the combined effect of family association and the recruitment method, individual effects are also tested on the probability of

involvement in terrorism. It is expected that both the combined and individual effects of family association and recruitment are significant.

*Hypotheses 12 Through 19*

Since in previous hypotheses motivations for involvement in terrorist activities were assumed to be identical for both DHKP/C and Turkish Hezbollah members, hypotheses 12 through 19 were all stated in the null form.



**Figure 3: Conceptual Model for Differential Association in Terrorism**

### Conceptual Model

Ross (1996) stated that there are different processes in a typical terrorist life such as joining a terrorist organization, involvement in terrorist activities, and quitting terrorism (Figure 3). The literature review showed that the process of becoming a terrorist or joining a terrorist organization has been addressed many times (Berko & Erez, 2007; Florez-Morris, 2007; Hassan, 2001; Russell & Miller, 1977; Sageman, 2004; Weinberg & Eubank, 1987; Wells III & Horowitz, 2007). The process of involvement in terrorist activities has only been addressed from suicide bombing perspective (Berrebi, 2004; Soibelman, 2004; Wells III & Horowitz, 2007; Yom & Saleh, 2004). The process of quitting terrorism, on the other hand, has not drawn enough attentions of terrorism scholars (Victoroff, 2005)<sup>9</sup>.

As shown in Figure 3, terrorists are involved in terrorist activities at different levels. According to their involvement levels, terrorists can be examined under two different groups; professionals and non-professionals. Professional terrorists dedicate their entire life to the terrorist activities. They act clandestinely, do not marry, stay in terrorist cells, assume administrative or commanding positions, and plan and engage in violent terrorist attacks. Non-professionals, on the other hand, maintain a regular life-style. They drift in and out of terrorism. They sometimes assume legal duties such as running a student association at a

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<sup>9</sup> Since factors that may have an effect on quitting terrorism have not been addressed in the literature, the figure does not depict what makes a terrorist quit terrorism.

university<sup>10</sup>. They may also take part in violent terrorist attacks such as throwing Molotov cocktails at banks and public buildings and hanging banners with a bombing mechanism. They go to demonstrations, try to provoke crowds against the police, confront the police, and chant terrorist slogans.

Compared to professionals, non-professional terrorists do not always act when they are given instructions, but act on the basis of their own decisions. This gives them some freedom to participate or not to participate in terrorist activities. Their involvement levels vary by their commitment to their organization's objectives. There are individual factors that may have an effect on their commitment such as being frustrated against the authority or feeling relatively deprived for their economic problems. These factors not only impact their commitment to terrorism (joining to a terrorist organization) but also may have an effect on their involvement levels. Sometimes they get arrested and imprisoned for their offenses. However, they generally serve a shorter time in prison compared to professionals. Most resume to terrorist activities because once they are criminally charged, their records adversely affect their quality of life and future opportunities. Still, they may get never caught by the police for their offenses if they are not recognized by their identity. In anyway, terrorists quit terrorism at some point in their life either because they age, or because they are killed, or just because they wish to maintain a regular life.

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<sup>10</sup> For instance, DHKP/C supports a nationwide student association called The Federation of Turkish Student Association (TODEF).

The literature review showed that relative deprivation, frustration, and social learning can explain individuals' joining a terrorist organization. This study assumes that they also can explain some of the variations in involvement in terrorist activities. In other words, involvement in terrorist activities cannot only be explained by the instructions given by terrorist leaders. Terrorists who are acting on a non-professional basis have some freedom to make their own decisions because they do not maintain a regular terrorist life. They drift in and out of terrorism.

As shown in Figure 3, these concepts are not mutually exclusive. For instance, terrorists who were frustrated against some negative life experiences might also have been exposed to social learning. In such situations frustration is learned through social processes. A terrorist may learn frustration from family members or close associates. Thus, both family arrest and loss of loved one can be considered a function of family association and/or friend association. Similarly, frustrated terrorists may also have been exposed to relative deprivation. For instance, terrorists who dropped out of school may feel relatively deprived if they think that they cannot realize their expectations anymore. On the other hand, social learning and relative deprivation are different concepts. Therefore, they are depicted as mutually independent concepts. Further discussions on these concepts and their relevance to this study are presented in measurement and validation of measurement sections of this chapter.

## Data

This study used two different datasets. These datasets were collected from Turkish National Police Records. Datasets, DHKP/C ( $N=75$ ) and Turkish Hezbollah ( $N=144$ ), were drawn from terrorist autobiographies by Teymur (2004; 2007)<sup>11</sup>. Autobiographies that were used to construct DHKP/C and Turkish Hezbollah datasets were written by terrorists from DHKP/C and Turkish Hezbollah during their membership process before they were confiscated by the police in counter-terrorism operations that were conducted against terrorist cells between 1990 and 2000.

In general, autobiographies offer valuable information about terrorists' demographics, motivations, and family backgrounds. Terrorist organizations ask their recruits to write their autobiographies as part of a membership procedure. The reason for asking autobiographies is two-fold: First, terrorist organizations want to know the motivation of the new recruits. Second, they ask new recruits to write about their references such as family members, friends, and relatives so that they can check their backgrounds and know the applicant better. Terrorists write their autobiographies in essay format. However, this does not mean that they are totally free about what to include. The fact that most of the information was common to most autobiographies indicates that terrorists write their autobiographies as a response to a standard set of questions. In this sense, autobiographies were authored in a similar format to a semi-structured interview.

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<sup>11</sup> Samih Teymur is a high-ranking TNP officer at the Counter-Terrorism Unit in Ankara, Turkey.



Before entering the variables into the datasets, Teymur (2004; 2007) first determined what variables he could extract from terrorist autobiographies. In general, there were three types of variables in terms of the way they were operationalized. First, data relating to gender (*gender*), marital status of self (*maritalstatus*), education level (*education*), and work status (*workstatus*) were all clearly indicated in most autobiographies.

Second, data regarding the age (*age*), social class (*socialclass*), and school dropout (*dropout*) were not directly drawn from autobiographies, but from other variables. For instance, social class was defined based on father's occupation<sup>12</sup>. Age was calculated by subtracting the date of report from the date of birth<sup>13</sup>. Dropout, on the other hand, was drawn from educational categories.

Third, data regarding the prior arrest of self (*arrest*), arrest of a family member (*familyarrest*), family members' association with a terrorist organization (*familyassociation*), recruitment method (*recruitment*) or loss of someone which the terrorist attributes to military and police operations (*loss*) were also common to most autobiographies even though there were missing cases<sup>14</sup>. Most terrorists included detailed information about these variables. For instance, those who mentioned a loss of somebody important indicated who (by their code names), when, and where they lost people important to them. Similarly, those who mentioned a family arrest indicated when and where that arrest took place.

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<sup>12</sup> *Socialclass* was not available in Turkish Hezbollah members' autobiographies.

<sup>13</sup> Turkish Hezbollah members included ages in their autobiographies.

<sup>14</sup> Like *social*, *familyarrest* was not available in Turkish Hezbollah members' autobiographies.

Further details on how these variables were operationalized are provided in the measurement section. Also, issues on reliability and validity of autobiographies are discussed in detail at the end of this chapter.

### Sample

The population of interest for this research is all terrorists who have an affiliation to a domestic organization in Turkey. Indeed, there are no statistics showing the actual size of the population. Since terrorist organizations act clandestinely, terrorists who act on behalf of a terrorist organization can be considered a hidden population. Therefore, selection of samples was accomplished in two stages.

#### *Selection of Terrorist Organizations*

In the first stage, two different terrorist organizations were determined for inclusion in the study. As mentioned earlier, in Turkey there are as many as twenty different domestic terrorist organizations of different orientations and different sizes. In general, terrorist organizations can be clustered under three different groups with respect to their motivations. (a) Marxist-Leninist or leftist, such as DHKP/C, MLKP (Marxist-Leninist Communist Party), and TKP/ML (Turkish Communist Party/Marxist-Leninist); (b) Religiously-motivated or radical, such as Turkish Hezbollah, IBDA-C (Islamic Great Eastern Raiders-Front), and the Islamic Movement (IH); (c) Ethnic or separatist such as PKK (Kurdistan's Worker Party).

Within these clusters, DHKP/C and Turkish Hezbollah were selected purposely because they were thought to be representative of the most domestic terrorist organizations in Turkey in two respects. First, DHKP/C and Turkish Hezbollah were responsible for almost half of all terrorist incidents that happened during the last fifteen years. Second, these two terrorist organizations have the largest terrorist population within their respective clusters (leftist and radical camps) (Table 5).

**Table 5: Terrorist Incidents in Turkey (1994-1995)**

<b>Responsibility</b>	<b>Incidents</b>	<b>Arrest</b>	<b>Civilian Casualties</b>	<b>Security Forces Casualty</b>
<b>Leftist</b>				
DHKP/C	2,503	8,410	112	259
TKP/ML	665	2,529	70	112
MLKP	1,528	2,508	22	82
<b>Radicals</b>				
Turkish Hezbollah	523	10,720	530	71
IBDA-C	253	751	44	-
ICB	182	327	-	-
Hizb-ut Tahrir	463	734	-	-
Vasat	5	200	24	-

Source: Sevinc (2008).

Table 5 demonstrates the statistics of terrorist incidents that happened between 1994 and 2006 in Turkey. The statistics show the total number of terrorist incidents, the name of the terrorist organization which claimed responsibility for the incidents, the number of arrested terrorists, the number of casualties of civilians, and the number of casualties of security forces. Accordingly, DHKP/C and Turkish Hezbollah were responsible for almost half of

the 6,122 terrorist incidents (49%) that occurred during the above mentioned period. Further, the number of arrested terrorists gave some ideas about the population of DHKP/C and Turkish Hezbollah. For instance, three-fifths of all arrested terrorists from the leftist cluster consisted of DHKP/C members (60%). Similarly, a great majority of those who were arrested from the radical cluster were Turkish Hezbollah members (84%). These figures indicated that the DHKP/C and Turkish Hezbollah are most probably the largest terrorist organizations within their respective clusters. In addition to the size of population and the number of terrorist incidents for which they assumed the responsibility, the number of casualties of civilians and security forces indicated that these two were the most violent groups among the leftist and radical terrorist organizations (Sevinc, 2008).

On the other hand, there was no terrorist organization selected from the ethnic cluster. There were three different reasons as to why this cluster was excluded from the study. First, most separatist terrorist organizations, except the PKK, have been inactive for the last two decades. A majority of them abandoned violence and engaged in legitimate political processes. Second, the PKK was the only group to focus within this cluster, but there were difficulties in obtaining relevant data about the PKK terrorists. The organization was mostly active in the rural sides of south-eastern Turkey and recruited its members mostly from this part of the country. Their recruitment process was different from those of the DHKP/C and Turkish Hezbollah. More specifically, there were few accessible

documents about the backgrounds of PKK terrorists to investigate. Third, interviewing the PKK terrorists in prisons was another option for data collection, but mostly terrorists in prisons were reluctant to talk about their stories<sup>15</sup>.

### *Selection of Terrorist Autobiographies*

Having determined the terrorist organizations in which the samples are drawn, autobiographies of terrorists were selected conveniently from DHKP/C and Turkish Hezbollah terrorists' court files. As mentioned, this study utilized terrorist autobiographies as the source of data. These autobiographies were collected by Teymur (2004; 2007) from court files. Autobiographies are considered documentary evidence of membership to terrorist organizations. Given their high importance, terrorist organizations archive them under high security. Therefore, counter-terrorism units do not have a high number of terrorist autobiographies in their court files. Since evidence is kept in separate files, there is no way to determine the total number autobiographies under police security. Therefore, Teymur (2004; 2007) conveniently drew 219 autobiographies from court files with the permission of authorities.

From the methodological standpoint, convenient sampling is a non-probability sampling technique. In convenience sampling, not all units in a population have the equal opportunity of being selected (Frankfort-Nachmias & Nachmias, 2000). In this study, sampling was biased toward the terrorists who had previously given an autobiography and whose autobiographies were seized

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<sup>15</sup> Given the researcher's police background, this was even harder.

by the police. On the other hand, given the nature of terrorism studies in which researchers mostly lack the opportunity to create a sampling frame that is representing the whole population, non-probability sampling is a norm. Hence, terrorism is one of the applied social research fields where probability sampling is not feasible.

Although samples cannot be considered as representative of the population of interest, the generalizability of the findings was not the primary goal of the current study. As noted earlier, the purpose of the current study was to explore the patterns of involvement in terrorist activities using an accessible population. Still, the findings of this study can be generalized to DHKP/C and Turkish Hezbollah terrorists.

## Measurements

### *Dependent Variables*

#### Research Question One

The first question is interested in the patterns of differential involvement in terrorist activities. The dependent variable, *arrest*, measures whether the individual terrorist has a previous arrest history. The variable is measured as a dichotomous variable (“0” indicating non-arrested terrorists and “1” indicating arrested terrorists). This variable is clearly indicated in most autobiographies and taken as a measure of involvement in terrorist acts. Accordingly, those who have at least one arrest history were defined as “arrested” to indicate greater

involvement, otherwise as “non-arrested” to indicate lesser involvement in terrorism.

The construction of involvement in terrorist activities seems weak in two respects. First, the dependent variable measures the involvement in terrorist acts in probability (0, 1) rather than in frequency, which increases the likelihood that an observation occurs by chance. For instance, the involvement in terrorist acts for a terrorist who was previously arrested only once could be measured as high whereas the actual involvement level might be low. On the other hand, a terrorist might have been arrested more than once but still might be measured as if he or she was arrested once. In the first case the arrest rate is inflated whereas in the second case it is understated just because it is measured in probability.

On the other hand, the arrest rate was measured based on a criterion that a terrorist should have at least one arrest history to be qualified for the “arrested” category. Most of the terrorists, however, had an arrest history of more than once but still categorized if they were arrested only once (Teymur, 2004). The fact that most terrorists had an arrest more than once reduces the probability of miscoding by chance.

Another issue is related to the dependent variable’s quantitative nature. Obviously, the quantitative nature of the dependent variable curtails the quality of the terrorist act(s) involved. For instance, those who were arrested for plotting a bomb and those who were arrested for hanging illegal banners on the streets are grouped under the same category as they have a previous, one-time arrest

history. Further, a researcher has a limited or no way to know about the reason for the arrest that the author is talking about. This is because in their autobiographies terrorists do not mention the details of the event for which they have been arrested—in order not to be recognized and their identity given away<sup>16</sup>. As a result, lack of quality in the data would potentially lead the researcher to draw unreliable conclusions from quantitatively constructed measures. However, terrorists in both DHKP/C and Turkish Hezbollah datasets were all applicants or, what this study already describes as non-professional terrorists, who generally take part in minor offenses. Therefore, the quantitative measurement of the dependent variable should not result in any significant loss in the quality of the terrorist act indicated (by arrest) in autobiographies when the reason for the arrest is the issue. Further, unlike in the United States in Turkey the term arrest does not refer to a simple police detention rather it is used to refer a judge's decision. If a person is arrested on a judge's decision, he or she goes to the jail at least until the next hearing. That is, arrest shows that there is strong evidence against the person relating to an offense. As a result, the quantitative nature of the dependent variable is not considered a threat to the validity of its construction.

### Research Question Two

This question is interested in whether the pattern of differential involvement changes from the DHKP/C to Turkish Hezbollah. This question begs

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<sup>16</sup> They use their code names in their autobiographies.



for a comparison of arrested DHKP/C versus arrested Turkish Hezbollah members. Thus, the dependent variable measures arrest by organization ("0" indicating arrested Turkish Hezbollah members and "1" indicating arrested DHKP/C members).

### *Independent Variables*

In general, independent variables can be categorized into three groups: demographics, family backgrounds, and recruitment. Demographic variables in this study include age (*age*), gender (*gender*), education (*education*), school dropout (*dropout*), marital status (*maritalstatus*), work status (*workstatus*), and social class (*socialclass*). Variables indicating family backgrounds include family arrest (*Familyarrest*), family association (*familyassociation*), and loss of somebody (*loss*). There is one variable in the last category: method of recruitment (*recruitment*)

#### Age

DHKP/C members did not indicate their exact age when writing their autobiographies. Instead, they put their date of birth. As mentioned earlier, DHKP/C members' ages were calculated by subtracting the date of birth from the date of report. Turkish Hezbollah members, on the other hand, explicitly indicated their age in their autobiographies. Thus, in both datasets, age was measured in ratio level.

### Gender

Both DHKP/C and Turkish Hezbollah members explicitly indicated their gender in their autobiographies. As presented in descriptive statistics in Table 8, Turkish Hezbollah's gender makeup was disproportionate (with 1 female against 143 males), which reduced the explanatory power of this variable for this group. On the other hand, DHKP/C's gender composition was almost even. Gender was measured as a nominal (dichotomous) variable ("0" indicating female and "1" indicating male).

### Education

In both DHKP/C and Turkish Hezbollah datasets, education level was measured based on educational level at the time (date) of report. In Teymur's (2004; 2007) datasets, education was measured in a 10-item nominal measure. According to the highest degree obtained, there were primary school graduates, middle school graduates, high school graduates, and university graduates. Those who dropped out were also measured as primary school dropout, middle school dropout, high school dropout, and university dropout. Other than graduates and dropouts, there were also students at the time when they wrote their autobiographies. To reduce the number of categories, dropout categories were collapsed and cases in these categories were added in the educational category where the person attended last before the dropout<sup>17</sup>. Accordingly, education was

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<sup>17</sup> Alternatively, dropouts could have been incorporated into the educational categories where the person had a degree last. A treatment of this type, however, could cause a significant information

measured on a 4-point ordinal scale (“1” indicating primary school, “2” indicating middle school, “3” indicating high school, and “4” indicating university). Thus, the primary school category included primary school graduates and dropouts. The middle school category included middle school graduates and dropouts. The high school category included high school graduates, dropouts, and current students. The university category included university students, dropouts, and current students. Since categories are rank-ordered, the higher the education level, the better, or vice versa.

### Maritalstatus

Marital status of both DHKP/C and Turkish Hezbollah members was also specified in all autobiographies. Marital status was measured on a 3-point nominal scale: never married, married, and divorced/separated. In Turkish Hezbollah dataset, there was no observation in divorced/separated category. Therefore, the scale was recoded into a nominal (dichotomous) scale (“0” indicating never married and “1” indicating married). In DHKP/C datasets, there were 2 observations in the divorced/separated category. This category was collapsed and the 3-point scale was recoded in a nominal (dichotomous) scale using the same indicators.

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loss because the proportion of dropouts among DHKP/C members was as high as 47 percent. In the past, Russell and Miller (1977) measured the educational level of the terrorists in this way. In a most of recent study of Turkish terrorists, Sevinc (2008) included the dropouts in the educational categories where the person attended last.

### Socialclass

Social class refers to hierarchical stratification in a society. Although there is no agreed upon operational definition, occupation, education, and family background (father's and mother's work/profession/occupation) are considered as generally-accepted determinants of social class (Krieger, Williams, & Moss, 1997). In this study, the social class of DHKP/C terrorists was inferred from the father's occupation. Accordingly, five categories of social class were described (lower class, working class, lower middle class, upper middle class, and upper class) using Gilbert's (2008) classification<sup>18</sup>. Thus, *socialclass* was measured on a 5-point ordinal scale (ranging from "1" indicating lower class and "5" indicating upper class). Since categories are rank-ordered, the higher the social class, the better, or vice versa. There was no indicator of social class for Turkish Hezbollah members. Therefore, the social class of Turkish Hezbollah members was not measured.

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<sup>18</sup> Gilbert's classification of social class is widely used as a way of classifying people in any society. In this model, five different categories of social classes are defined as stated above. Accordingly, those who reported that their fathers were a state employee and doing a white collar job were considered lower middle class members. In Gilbert's model, white collar employees were considered to be part of the lower middle class. Some reported that both father and mother were state employees indicating that family income was doubled. These were classified under upper middle class members. Those blue collar and clerical workers who work for the state or private sector organizations were considered to be part of the working class even though their income level was close to that of members of the lower middle classes. Compared to white collar workers, blue collar and clerical workers had less job security since most worked on contract. Those who reported that their fathers were farmers and owned a small field were considered part of the working poor. Compared to the lower middle class and working class members, they had a greater risk of economic insecurity and poverty. Finally, some reported that their fathers were self-employed, did not have regular income, and relied on government benefits to survive. They were considered to be part of the underclass.

### Workstatus

Work status refers to the employment status of respondents. In both DHKP/C and Turkish Hezbollah datasets, work status is defined using a 4-point nominal scale (“1” indicating unemployed, “2” indicating working-part-time, and “3” indicating working full-time, and “4” indicating students). In this study, “Student” category was dropped because there were only 4 cases in DHKP/C and 8 cases in Turkish Hezbollah datasets. Thus, the new work status variable is comprised of a 3-point scale (“1” indicating unemployed, “2” indicating working-part-time, and “3” indicating working full-time). As for the measurement level, most researchers treated work (or employment status) as a nominal variable (Ferguson, 2000). Still, some others treated it as an ordinal variable (Dickerson, et al., 2004; Liao, 1994). In his book, *Interpreting Probability Models*, Liao (1994) cited employment status (unemployed, part-time, and full-time) as an example of ordinal scale. Even though there was ranking among the categories, obviously the differences between the categories cannot be treated as the same. Therefore, in this study, work status was treated as a nominal variable.

### Dropout

As stated before, dropout, as a separate variable, was not available in the original datasets. Rather, dropout was defined as an educational category. Considering that school dropout can be a motivation for some terrorists, dropout categories at various educational levels were collapsed into a dummy variable to

distinguish school dropouts from non-dropouts<sup>19</sup>. In other words, if the person reported that he or she dropped out of school (at any educational level), that person was categorized under “dropout” or otherwise “non-dropout”. The measurement level was dichotomous (“0” indicating non-dropouts, “1” indicating dropouts).

### Family Background Variables

Data regarding the family backgrounds of terrorists included *familyarrest*, *loss*, and *familyassociation*. *Familyarrest* measured whether the person had a family arrest. *Loss* measured whether the person lost a loved in a counter-terrorism operation. *Familyassociation* measured whether the person had a family members associated with a terrorist group. These three variables are dichotomous (“0” indicating no and “1” indicating yes) measures. Data relating to the arrest of a family member was not available in Turkish Hezbollah members’ autobiographies. Therefore, *familyarrest* was not measured for Turkish Hezbollah members.

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<sup>19</sup> Reasons for dropout vary. Some terrorists may have simply failed or had to leave school for economic or other reasons. This explanation might be true to some extent, but still dropout rate was fairly high that almost one half of all DHKP/C members (47%) dropped out of school at some level. Therefore, there might be some other reasons that may account for the high dropout rate for DHKP/C members. There are two more possible reasons. First, some terrorists may have chosen to dropout to carry out certain missions given by their leaders. Considering that terrorists in the dataset had no full membership as of the date they dropped out, this was not likely. Second, some terrorists may have been expelled or suspended from school due to the criminal or disciplinary sanctions imposed on them for participating in illegal activities. In such cases, school dropout can be a motivation for greater participation in terrorist activities.

### Recruitment

In both DHKP/C and Turkish Hezbollah datasets, terrorists mentioned the person by whom they were recruited first. Response categories included: friends, relatives (including family members), organizational publication, in prisons, in demonstrations, and others. Since there was small number of cases in the in publications, in prison and in demonstration categories, they were collapsed and cases were merged with the “other” category. Thus, recruitment is comprised of a 3-point nominal scale (“1” indicating friends, “2” indicating relatives, “3” indicating “others”).

### Relative Deprivation

The measurement of relative deprivation was challenging. First of all, there is no agreed-upon measurement of relative deprivation at the individual level. In research areas where researchers can have direct access to the research subject, relative deprivation at the individual level was measured using self-report data (Crawford & Naditch, 1970; Geschwender & Geschwender, 1971; Grofman & Muller, 1973). On the other hand, in terrorism studies where researchers have limited access to the research subject, relative deprivation was measured with the social class from which people originate (Atran, 2004; Moghaddam, 2005; Sageman, 2004). The underlying assumption that drove the latter studies was that people of lower classes are more likely to experience relative deprivation since they are less likely to achieve their expectations.

However, mere social class may not be a good indicator of relative deprivation if people can still achieve economic success regardless of their social classes. It is true that people have more equal opportunities today compared to the 1960s and 1970s when the concept of relative deprivation was first invented. It is because in this study relative deprivation is not measured in the light of one's social class. This study measures relative deprivation as the combined effect of *education* and *workstatus* controlling for *socialclass*, *gender*, *age*, and *maritalstatus*. As aforementioned, this model is adapted from Gurr's (1970) "aspirational deprivation".

#### *Frustration-Aggression Variables*

As aforementioned, terrorism literature did not mention a frustration model that applied specifically to the behaviors of terrorists. This study measures the frustration as the combined effect of *loss*, *familyarrest*, and *dropout*. Data regarding these variables were available in both DHKP/C and Turkish Hezbollah datasets<sup>20</sup>. All three variables are dichotomous measures. Hence, there is no way to determine the certainty of aggression as measured by the level and number of frustrating interferences (Dollard, et al., 1939). On the other hand, Miller et al. (1941) suggested that "simply occurrence or existence of a frustrating event" is a sufficient, if not a necessary, condition for aggression. Therefore, the dichotomous-level measurement satisfies the requirement for what Miller et al. (1941) calls the "occurrence or existence of a frustrating event".

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<sup>20</sup> Family arrest was not reported by Turkish Hezbollah members in their autobiographies.



### Social Learning

As noted early on, the application of social learning theory to the study of terrorism is new. This study draws upon Sutherland's (1975) differential association theory because it clearly identified the social processes by which people learn from each other<sup>21</sup>. Differential association is mostly measured by the number of friends and family members with criminal records. In this study, differential association is measured by the combined effect of *family association* and *recruitment* (method of recruitment).

### *Validation of Measurement*

To explore the latent dimensions of the variables used to define theoretical concepts (relative deprivation, frustration-aggression, and social learning), two different factor analyses were performed, one for DHKP/C and one for Hezbollah datasets. This statistical technique is mostly employed to reduce large number of variables into a small number of factors. On the other hand, it is also used to validate a concept by showing that its constituent variables load on the same factor.

As mentioned in source of hypothesis and measurement sections, variables used to define each theoretical concept were constructed based on the literature review. Here, factor analysis was conducted to enhance the validity of concepts. Before running the analysis, however, both DHKP/C and Hezbollah

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<sup>21</sup> The theory was not directly tested, but used as a framework.

datasets were tested for the assumptions of factors analysis on interval/ratio data, absence of high multicollinearity, and no outliers<sup>22</sup>.

### Factor Analysis on DHKP/C Dataset

First, factor analysis assumes that variables are measured at interval/ratio level. However, none of the variables included in the analysis was measured at interval/ratio level. On the other hand, Kim and Mueller (1978) allow the use of ordinal variables if the researcher thinks that the assignment of ordinal variable do not seriously distort the underlying interval/ratio scaling (p.74). Accordingly, *education* did not seem to distort interval/ratio scaling because as mentioned in measurement section, categories of *education* were rank-ordered. Further, the differences between adjacent educational categories can be treated as the same. This means that *education* can be treated as an interval measure. Kim and Mueller (1978) also allows the use of dichotomous variable as long as the correlation between the variables were moderate (.70 and lower). *Dropout*, *familyarrest*, *familyassociation*, and *loss* were all dichotomous measures. On the other hand, when one of the categories was collapsed, both *workstatus* and *recruitment* qualified for dichotomous-level measurement<sup>23</sup>. Thus, these variables met the criteria for running a factor analysis.

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<sup>22</sup> Data was not checked for homoscedasticity and multivariate normality. Homoscedasticity is not a critical assumption of factor analysis. On the other hand, factor analysis has no distributional assumptions when Principal Component Analysis (PCA) is used as an extraction method, which was the case for this study.

<sup>23</sup> To this end, “working part-time” and “working fulltime” categories of the *workstatus* were combined under “employed” category. The “unemployed” category remained untouched.

After these treatments, variables were checked for the absence of multicollinearity. There were two methods available to test multicollinearity. The first method was to check bivariate correlation coefficients between the variables. The second method was to run a collinearity diagnostic which was available in SPSS linear regression analysis. Here, the first method was employed. As a rule of thumb, correlation coefficient of .70 and above may indicate a potential multicollinearity issue. As seen in bivariate correlation table (Appendix A), none of the bivariate correlations exceeded .70, except the one between *familyarrest* and *familyassociation*. The correlation between these two variables was .821 ( $p=.00$ ), which was highly strong. The crosstab analysis of these two variables indicated that of the DHKP/C terrorist who had a family arrest, all (100%) had a family association (Appendix B). This indicated that *familyarrest* is a function of *familyassociation*. Therefore, it was dropped from the analysis.

Finally, the data was checked for (multivariate) outliers. To detect multivariate outlier, one may regress the dependent variable on all independent variable with a request for Mahalanobis distance which is available in SPSS linear regression analysis. A Mahalanobis distance of 15.0 and above can be considered a multivariate outlier. When *arrest* was regressed on *education*, *dropout*, *loss*, *familyassociation*, *workstatus*, and *recruitment*, it was seen that three cases (case number 60, 73, and 75) were identified as outliers (Appendix C). Therefore, these cases were excluded from the analysis.

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Similarly, “friends” and “relatives” categories of *recruitment* were combined under “close associates”. The “others” category remained untouched.

After the assumptions were met, a factor analysis was conducted on *education, workstatus, dropout, loss, familyassociation, and recruitment*. Both Kaiser-Meyer-Olkin Measures of Sampling Adequacy Test (.495=.5) and Bartlett's Test of Sphericity ( $p=.000$ ) indicated that factor analysis is an appropriate method to proceed (Appendix D)<sup>24</sup>. Thus, one can safely reject the null hypothesis that the variables in the correlation matrix are uncorrelated. As an extraction technique, principal component analysis (PCA) was used because the purpose was not to test a causal model, but validate the items used to test theoretical concepts. The PCA was undertaken by employing varimax rotation to "maximize the tendency of each variable to load highly on only one factor" (Hedderon, 1987).

As seen in Table 6, factor analysis produced three factors indicating that there were three dimensions in DHKP/C terrorists' motivations. These three factors cumulatively accounted for 73% of the total variance explained. Variables loaded on different factors indicated that these were the indicators of the same phenomena<sup>25</sup>. For instance, *loss* and *dropout* both loaded on factor 1. This suggested that *loss* and *dropout* were the different measures of the same concept. As mentioned before, *dropout* and *loss*, along with *familyarrest*, were

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<sup>24</sup> Kaiser-Meyer-Olkin (KMO) is a sampling adequacy test. It shows whether variables can be grouped under a smaller set of underlying dimension. KMO scores vary between 0 and 1.0. A KMO score of .60 and over is desirable but some researchers allow .5 as a cut-off point (Hutcheson & Sofroniou, 1999). Similarly, Bartlett's Test of Sphericity tests the null hypothesis test variables in correlation matrix are uncorrelated. A statistically significant Bartlett value shows that factor analysis is appropriate to proceed (Tobias & Carlson, 1969).

<sup>25</sup> Hair et al. (1998) consider factor loadings of .6 and above high and .4 and below low. For exploratory purposes, some researchers used factor loadings of .4 for central factors and .25 for other factors.

classified under frustration variables in measurement section. On the other hand, *education* and *workstatus* loaded on factor 2. This was not surprising considering that *education* and *workstatus* were categorized under relative deprivation. The negative loading for *workstatus* indicated that *workstatus* was negatively related to the factor (or latent dimension). More precisely, the extent of relative deprivation was negatively related to the employment; the higher the probability of employment the lesser the relative deprivation. Finally, *familyassociation* and *recruitment* loaded on factor 3. As mentioned earlier, *familyassociation* and *recruitment* (method of recruitment) were categorized under of social learning concept.

Table 6 Factor analysis of variables for DHKP/C

	Component		
	1	2	3
Education	.016	.847	.065
Dropout	.817	.432	-.043
Loss	.877	-.237	.253
Familyassociation	.208	-.108	.817
Recruitment	-.018	.197	.816
Workstatus	.031	-.679	.019

Notes: Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

As mentioned in conceptual model section, factor analysis of DHKP/C dataset indicated that theoretical frameworks were not mutually exclusive. For instance, the factor loading of .253 for *loss* in factor 3 indicated that this variable

can also be considered a social learning variable along with *familyassociation* and *recruitment*. As noted in conceptual model section, *loss* is a frustration variable, but it also indicates that those who had a loss in a counter-terrorism operation had a close associate to a terrorist organization. Likewise, the factor loading of .453 for *dropout* indicated that this variable can also be considered as relative deprivation variable along with *education* and *workstatus*. It is likely that most DHKP/C terrorists' being a school dropout may have affected their achievement in employment.

#### Factor Analysis on Turkish Hezbollah Dataset

A second analysis was performed on Turkish Hezbollah dataset. Before the analysis, the dataset was checked for the assumptions of factor analysis on interval/ratio data, absence of high multicollinearity, and no outliers. There was no measurement issue after *workstatus* and *recruitment* were treated in the same way as DHKP/C dataset was treated. As seen in bivariate Table (Appendix E), none of the bivariate correlation coefficient was above the moderate level ( $r=.70$ ). This indicated that there was no potential multicollinearity issue.

After the assumptions were met, a factor analysis was conducted on *education*, *workstatus*, *dropout*, *loss*, *familyassociation*, and *recruitment*. Kaiser-Meyer-Olkin Measures of Sampling Adequacy Test indicated that sample size was adequate ( $.496=.5$ ). However, Bartlett's Test of Sphericity showed that the null hypothesis that variables in correlation matrix are uncorrelated cannot be rejected ( $p=.557>.05$ ) (Appendix F). That is, factor analysis was not appropriate

method to proceed. Therefore, results for factors loadings were not reported. The result for Turkish Hezbollah data can be taken as an indication of poor fit for the given models.

Table 7: Variables in Datasets and Measurement Levels

<b>Name</b>	<b>Label</b>	<b>Values</b>	<b>Measurement Level</b>
<b>Arrest</b>	Ever been arrested	0 No Arrest 1 Arrested	Dichotomous
<b>Age</b>			Ratio
<b>Gender</b>		0 Female 1 Male	Dichotomous
<b>Maritalstatus</b>		0 Single 1 Married	Dichotomous
<b>Education</b>		1 Primary School 2 Middle School 3 High School 4 University	Ordinal
<b>Workstatus</b>		1 Unemployed 2 Part-time 3 Full-time	Ordinal
<b>Dropout</b>	Ever dropped out	0 Non-dropout 1 Dropout	Dichotomous
<b>Loss</b>	Ever lost somebody	0 No 1 Yes	Dichotomous
<b>Familyarrest</b>	Ever had a family arrest	0 No 1 Yes	Dichotomous
<b>Familyassociation</b>	Have a family member associated to a terrorist group	0 No 1 Yes	Dichotomous
<b>Recruitment</b>	Who did you recruited by	1 Friend 2 Relatives 3 Others	Nominal



## Research Design

Datasets used in this study were collected through cross-sectional research design. Indeed, terrorism researchers often have to use cross-sectional designs because they have a limited or no way to manipulate situations where they can thoroughly have control over variables that are affecting a terrorist's life. As terrorists act secretly, researchers lack the opportunity to access them systematically; assign them randomly to control and experiment groups; and assess the impact of variables that may have an effect on their decision making.

Obviously, the fact that terrorism studies are mostly based on cross-sectional design creates serious methodological limitations. First of all, cross-sectional design rarely allows the establishment of a causal relationship as measurements are done at one point in time. Sometimes researchers cannot establish a temporal relationship between dependent and independent variables. In such situations, cross-sectional design simply allows one to identify the pattern of relationship between these variables.

Secondly, in cross-sectional research design researchers have no methodological control over variables, which makes it hard to assess the partial correlations between dependent and independent variables. For instance, research question one and research question two try to address whether demographics and social backgrounds matter in differential involvement in terrorist activities. To answer these questions thoroughly, one needs to have methodological control over independent variables that may have an effect on

differential involvement in terrorist activities. In order to overcome such methodological challenges, this study uses multivariate statistical techniques (ex., logistic regression) to achieve some of the operations (ex., methodological control of the measurement process) that naturally exist in experimental designs. In other words, this research achieves what methodological control does in experimental designs through statistical control. Thus, the researcher improves the cross-sectional design “to approximate post-test only control group design” and assess the partial correlations between differential involvement and its predictors (Frankfort-Nachmias & Nachmias, 2000, p. 118)<sup>26</sup>. Further details concerning statistical analysis are discussed in the data analysis section.

## Data Analysis

### *Research Question One*

Research hypotheses relating to research question one will be analyzed through both bivariate and multivariate analysis techniques. Bivariate analysis is the analysis of two variables at the same time. Bivariate testing of research hypotheses is needed because this study is an exploratory one. Hence, the relationship between the DV and the IV should be examined on a one-to-one basis before it is tested in a multivariate setting. Multivariate analysis, on the other hand, examines more than two variables simultaneously. In general, multivariate analysis is used to refine the findings of bivariate analysis. In

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<sup>26</sup> Post-test only control group design is a special type of experimental design.

particular, because involvement in terrorist activities (DV) is multidimensional, testing the combined effects of variables is essential.

### *Bivariate Hypothesis Testing*

A number of statistics was available to measure the strength and significance of (bivariate) association between DV and IVs. As stated in the measurement section: the dependent variable (*arrest*) was a dichotomous measure and independent variables included dichotomous (*dropout*, *loss*, *familyarrest*, and *familyassociation*), ordinal (*socialclass*, and *education*) and nominal (*workstatus* and *recruitment*) variables. Hypotheses 1 through 8 were tested by constructing contingency tables using the SPSS crosstab function. Statistical significance was determined through Pearson's chi-square and the Mantel-Haenszel chi-square (or linear-by-linear association). All statistical tests were conducted at the .05 alpha level. Results were considered statistically significant when the p-value was less than .1.

### *Multivariate Hypothesis Testing*

Hypotheses 9 through 11 were tested using binary logistic regression. Binary logistic regression is an appropriate multivariate analysis technique to predict a dichotomous DV from a set of nominal, ordinal, and interval/ratio IVs; to determine the amount of variance in the DV that is explained by the combined

IVs; and to calculate the effect size made by each IV. When testing hypotheses 9 through 11, the hierarchical logistic regression method was used<sup>27</sup>.

### *Research Question Two*

Research question two asked whether the arrest pattern varies between the DHKP/C and the Turkish Hezbollah. In other words, the statistical analysis used to answer this question was to compare arrest rates of DHKP/C and Turkish Hezbollah members on a number of independent variables. Since the variables on which group differences were measured were dichotomous, ordinal, and nominal, crosstab analysis with a Pearson Chi-Square test was an appropriate method.

### Missing Data Analysis

Some of the variables have a high number of cases with missing values (ex., <9 and larger). This reduces the sample size, especially, in a multivariate analysis when the missing cases are dropped. Missing values should be handled carefully. Otherwise, an improper treatment will distort analysis. A proper treatment is important because, when missing data is imputed, the researcher assumes that missing cases are analytically different from those nonmissing. On the other hand, missing data must be deleted if the researcher cannot prove that missing cases are analytically different.

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<sup>27</sup> This method is used when there are control variables.

There is no simple rule to decide whether to delete or impute missing values. If the proportion of missing values is small, a common treatment is to drop the cases with missing values from the analysis. Mostly statistical programs do this by default. If, however, the proportion of missing values is large, researcher's task is to detect whether missing has occurred nonrandomly or randomly. If missing occurs in a nonrandom fashion, then they must be imputed without dropping the observation. If, however, missing occurs randomly across all observations, then the researcher may either choose to drop the cases or run the analysis twice, first with dropping the cases and then imputing cases, to see if there is any difference between the two analyses. For univariate analysis imputing the missing values tends to reduce bias, but for multivariate analysis it can distort correlation coefficient. However, researchers still allow imputation for multivariate analyses at least when the analysis is run twice, again first with deletion and then with imputation (Tabachnick & Fidell, 2000).

### *Treatment of Missing Values*

Missing values can be distributed across the data set or at least within one or more subsample (ex., missing more among females than males). While the former is called "*missing completely at random*" (*MCAR*), the latter is called "*missing at random*" (*MAR*). Both *MCAR* and *MAR* can be detected through SPSS MVA (missing value analysis) function as it supports *Little's MCAR Test* for *MCAR* and *Separate Variance t-Test* for *MAR*. *Little's MCAR* is a chi-square test in which the mean value of each variable is compared with the mean of value

of its missing cases. If the p value of chi-square analysis is not significant, then *MCAR* can be assumed. Similarly, *Separate Variance t-Test* is t-Test in which independent variables are tested against dependent variables whether the missing values of independent variables occur in a random fashion with respect to dependent variables. Next, the results of *Little's MCAR* and *Separate Variance t-Test* are presented to determine whether there is MCAR or MAR. Since these two tests run the analysis on the basis of mean values, only those variables that are continuous in nature or that can be treated as continuous are included.

#### *Little's MCAR Test and Separate Variance t-Test*

##### *Test on DHKP/C Dataset*

In order to understand whether missing values occur across all observations a Little's MCAR test is conducted on DHKP/C dataset. Along with dependent variable (*arrest*), independent variables (*gender, age, maritalstatus, education, socialclass, loss, dropout, familyarrest, and familyassociation*) that are stated in hypotheses were included in the test<sup>28</sup>. The univariate statistics analysis showed that *socialclass, loss, familyarrest, and familyassociation* have all high number cases with missing values (more than %5) (Appendix G). However, missing values seem to be distributed randomly across all observations. The null hypothesis that missing values are MCAR (missing completely at random) cannot be rejected ( $p > .05$ ) (Appendix H).

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<sup>28</sup> *Workstatus* and *recruitment* were not included because these variables were categorical measures.

Another test for MAR was conducted using variables with missing values more than 5 percent. *Separate Variance t-Test* is t-Test indicated that independent variables are *MAR* (missing at random) with respect to dependent variable (*arrest*) (Appendix I). The results of these two tests showed that imputation of missing values was not appropriate for DHKP/C dataset.

#### *Test on Turkish Hezbollah Dataset*

Both *Little's MCAR Test* and *Separate Variance t-Test* were conducted on Turkish Hezbollah datasets using the same set of variables. The univariate statistics showed that *age*, *education*, *dropout*, and *familyassociation* have all high number of cases with missing values (more than 5%) (Appendix J). However, missing values were distributed randomly across all observations. The null hypothesis that missing values are MCAR (missing completely at random) cannot be rejected ( $p > .05$ ) (Appendix K). Similarly, *Separate Variance t-Test* is t-Test indicated that independent variables with high number of missing values are *MAR* (missing at random) with respect to dependent variable (*arrest*) (Appendix L). The result for Turkish Hezbollah dataset indicated that imputation was not appropriate.

Since no imputation is undertaken, missing values should be deleted before running the analysis. However, SPSS do this by default. Therefore, analyses were run without imputation and deletion, but SPSS automatically excluded missing cases. Deletion of the missing cases, however, reduced the

sample size for DHKP/C dataset, but still assumption for adequate sample size was not violated in any case. Further details are presented in Chapter IV.

### Reliability and Validity Issues

Measurements of variables in the datasets are not immune to reliability and validity issues, some of which have already been addressed in the sampling and measurements sections. In this section, reliability and validity issues regarding the source of data or data collection are discussed in detail. From the methodological standpoint, the survey of autobiographies is considered a valid method of data inquiry as they reflect the author's semi-official accounts of one's personal life experiences (Nachmias & Nachmias, 2000). Surveying autobiographies is one of the special types of secondary data analysis. In the absence of any other means and when researchers have difficulty in accessing the population of interest, autobiographies become a valuable source of information. For instance, in both DHKP/C and Turkish Hezbollah cases, terrorists provided information about their demographics, family backgrounds and motivations; all are important to know to identify a typical DHKP/C and Turkish Hezbollah member.

Besides, a number of terrorism scholars, so far, have utilized terrorist biographies and autobiographies to describe a typical terrorist personality (Berrebi, 2004; Della Porta, 1992; RA Hudson & Majeska, 1999; Sageman, 2004). Some scholars used open sources such as terrorist websites or publications to have access to terrorists' biographies (Berrebi, 2004; Della Porta,



1992; Sageman, 2004). Others used official sources to obtain autobiographical information about terrorists (RA Hudson, 2002; Sageman, 2004). Some others interviewed friends and family members of terrorists to obtain their biographies (Hassan, 2002). That is, in terrorism studies, biographical information has been a popular means of data collection of terrorists' backgrounds due to the ease of access.

On the other hand, autobiographies are not written for the purpose of research; therefore, they may potentially have some bias and problems with reliability and validity. The major issue in using autobiography for research purposes relates to their authenticity. In general, all records that are deliberately produced to deceive and that are unconsciously misinterpreted are considered inauthentic. Therefore, using autobiographies without testing their accuracy can bias the findings of any research.

Nachmias and Nachmias (2000) mention two different procedures that can be employed by researchers to ensure authenticity. Accordingly, the researcher can first critically examine the intention of the author in writing their autobiographies. In both DHKP/C and Turkish Hezbollah cases, terrorists submit their autobiographies to their leadership to become an official member of their respective organizations. It is not wrong to assume that terrorists are aware that leadership has the capability to verify the accuracy of the information they provide in their autobiographies. In fact, it is known that all applicants, as a rule, are subject to a background check before they are admitted into a terrorist

organization. Terrorist autobiographies, in this sense, can be considered reliable sources of information.

Second, Nachmias and Nachmias (2000) continue, researchers, themselves, can verify some of the facts by cross-checking the information mentioned in autobiographies. For instance, if someone is talking about a prior arrest history in his autobiography, this can be crosschecked from official records for verification. Unfortunately, this was not the case for DHKP/C and Turkish Hezbollah members since they did not include their official names in their autobiographies. Even though a crosscheck of this type was not possible, still the information concerning the facts about their demographics and family backgrounds can be considered reliable because of the internal investigation system (or background check) that exists in a typical terrorist organization over the new applications. Aside from the facts, the only way that a terrorist can escape from the truth is when they are talking about their motivations, which is also possible in a typical survey.

## CHAPTER IV: ANALYSIS AND FINDINGS

### Descriptive Statistics for Research Question One

A descriptive statistical analysis was performed on the cases from DHKP/C ( $N=75$ ) to determine population characteristics (Table 8). The arrest rate was quite high with more than two-thirds of the DHKP/C terrorists having a prior arrest history (69%). Age distribution showed that more than two-fifth of all DHKP/C terrorists were between 21 and 25 (45%)<sup>29</sup>. On the other hand, one-third of them were between the ages of 14 and 20 (33%). Two-thirds of all DHKP/C terrorists were male, whereas the remaining one-third was female (67% vs. 33%). As noted in the literature review section, unmarried terrorists were the norm. This was also true for the DHKP/C members with almost 90 percent being single.

Another finding which was consistent with the literature was DHKP/C members' education level. Even though there were dropouts, almost one-third of all DHKP/C terrorists had some university education (30%). A majority of them had some high school education (36%). Contrary to their educational level, almost two-thirds of the DHKP/C members were unemployed (65%). This can probably be attributable to the fact that almost half of them had dropped out of school at some point in their educational career (47%).

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<sup>29</sup> Originally, age was measured in ratio level. The mean age was 23.43( $SD=5.78$ ). In Table 8, the age is described in categories along with other categorical variables.

Other than their demographics, DHKP/C members provided some information about their family backgrounds and how they were first recruited into the organization. Accordingly, more than half of the DHKP/C members had a family member associated with a terrorist organization (56%). Almost half of them had a family arrest (45%). Similarly, almost half of them reported that they were first recruited by their relatives (which included their family members) (45%). On the other hand, almost a quarter of them indicated that they were first recruited by a friend (24%).

Another descriptive statistical analysis was performed on Turkish Hezbollah members ( $N=144$ ) to determine their population characteristics. The number of arrested and non-arrested Hezbollah members was almost evenly distributed (46% vs. 49%). More than half of the Hezbollah members were between the ages of 14 and 20 (54%). The gender proportion showed that almost all Hezbollah members were male (99%)<sup>30</sup>. The proportion of married terrorists, on the other hand, was considerably high with almost one-third being married (30%).

Almost half of the Hezbollah members had some high school education (47%). On the other hand, the proportion of those who had some university education was less than 10 percent. Nevertheless, more than one-third of the Hezbollah members were working on a full-time basis (37%). The proportion of those who dropped out of the school was almost 10 percent.

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<sup>30</sup> This may be due to a sampling error, but Hezbollah is generally known as a male-dominant terrorist organization.

Like DHKP/C members, Hezbollah members also provided some information about their family backgrounds. More than one-third reported that they had a family member who had an affiliation to a terrorist organization (37%). On the other hand, they did not report any information on family arrest. More than two-thirds reported that they were first recruited either by a friend or by their relatives (69%).

Table 8: Descriptive Statistics of DHKP/C and Hezbollah Datasets

VARIABLES	DHKP/C		Hezbollah	
	N=75	%	N=144	%
<b>Arrest</b>				
Not Arrest	20	26.7	71	49.3
Arrested	52	69.3	67	46.5
Missing	3	4.0	6	4.2
<b>Age</b>				
14-20	25	33.3	78	54.2
21-25	34	45.3	25	17.4
26-35	11	14.7	15	10.4
35<	5	6.7	1	.70
Missing	0	0.0	25	17.4
<b>Gender</b>				
Female	25	33.3	143	.70
Male	50	67.7	1	99.3
<b>Maritalstatus</b>				
Single	67	89.3	98	70.0
Married	8	10.7	42	30.0
Missing	0	0.0	4	2.8
<b>Education</b>				
Primary School	10	13.3	34	23.6
Middle School	14	18.7	17	11.8
High School	27	36.0	68	47.2
University	23	30.7	10	6.9
Missing	1	1.3	15	10.4
<b>Workstatus</b>				
Unemployed	49	65.3	51	35.4
Working Part-time	11	14.7	11	7.6
Working Full-time	10	13.3	53	36.8
Missing	5	6.7	29	20.1
<b>Dropout</b>				
Non-dropout	39	52.0	115	79.9
Dropout	35	46.7	14	9.7
Missing	1	1.3	15	10.4
<b>Loss</b>				
No	38	50.7	118	81.9
Yes	30	40.0	23	16.0
Missing	7	9.3	3	2.1
<b>Familyarrest</b>				
No	25	33.3	NA	NA
Yes	34	45.3	NA	NA
Missing	16	21.3		
<b>Familyassociation</b>				
No	25	33.3	83	57.6
Yes	42	56.0	53	36.8
Missing	8	10.7	8	5.6
<b>Recruitment</b>				
Friend	18	24.0	51	35.4
Relative	34	45.3	49	34.0
Other	16	21.3	30	27.0
Missing	7	9.3	5	3.5

## Bivariate Statistics for Research Question One

As mentioned early on, Hypotheses 1 through 8 are bivariate hypotheses. These hypotheses will be tested by constructing contingency tables using the SPSS *Crosstab* function. Statistical significance of the associations will be tested by Pearson's Chi-square.

### Hypothesis 1

As seen in Table 9, the average probability of arrest was 73 percent when the impact of social class was zero. This figure, however, did not significantly change when the arrest was predicted from social class. Accordingly, the probability of arrest was 75 percent for underclass, 71 percent for working poor, 80 percent for working class, 72 percent for lower middle class, and 67 percent for upper class terrorists. As a result, social class appeared to have no significant impact on arrest ( $p < 0.5$ )<sup>31</sup>. The hypothesis regarding the relationship between Hezbollah members' social class and their arrest could not be tested because the data concerning the social class of Hezbollah members was not available.

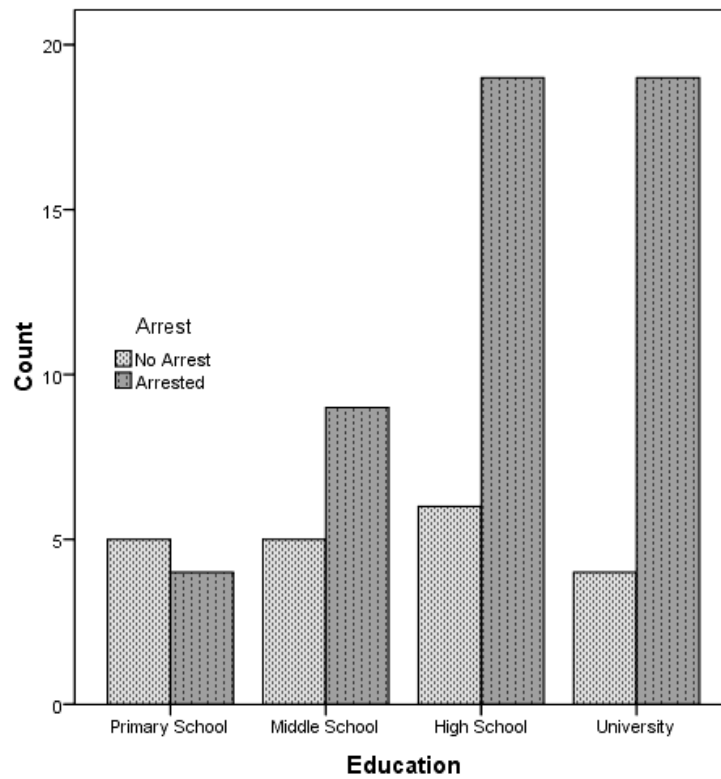
### Hypothesis 2

Unlike social class, education seemed to have an impact on DHKP/C members' probability of arrest. As seen in Table 9, the average probability of arrest was 72 percent without education. However, the probability of arrest changed noticeably across the categories of education. Accordingly, those who

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<sup>31</sup> For *socialclass* and *education*, the linear-by-linear chi-square test was used since they were measured in ordinal.

went to primary (44%) and middle schools (64%) were less likely to have an arrest than an average DHKP/C member whereas those who went to high school (76%) and university (83%) were more likely to experience this (72%). The impact of education on the arrest rate of DHKP/C members was statistically significant ( $p < 0.5$ ). Moreover, the pattern of arrest across educational categories suggested that the probability of arrest increased as educational level increased (Figure 4).



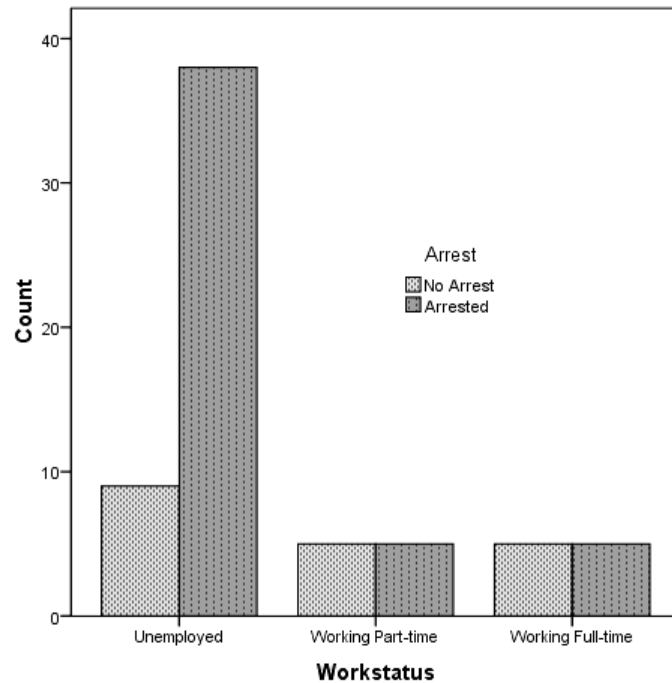
**Figure 4: DHKP/C Members' Arrest Rate by Education**



On the other hand, education did not seem to have an impact on Hezbollah members' probability of arrest. As seen in Table 9, the average probability of arrest was 50 percent without education. However, the probability did not seem to vary significantly across different educational categories, except for those who went to a university (25%). The differences were not statistically significant ( $p>0.5$ ).

### Hypothesis 3

Like education, work status was a significant determinant of arrest for DHKP/C members. As seen in Table 9, the average probability of arrest was 72 percent when the impact of work status was zero. However, this figure was not identical across different categories of work status. Accordingly, the probability of arrest was 81 percent for those who were unemployed; 50 percent for those who were working part-time; and 50 percent for those who were working full-time. The differences were statistically significant ( $p<0.5$ ). The pattern of arrest within the categories of work status indicated that the probability of arrest dropped as work status improved (Figure 5).



**Figure 5: DHKP/C Members' Arrest Rate by Work status**

On the other hand, work status did not seem to have a significant impact on Hezbollah members' probability of arrest. As seen in Table 9, the average probability of arrest was equal (50%) for all work status categories. The probabilities within the categories of work status, however, were not significantly different. Accordingly, the probability of arrest was 58 percent for those who were unemployed; 45 percent for those who were working part-time; and 43 percent for those who were working full-time. As seen in these figures, the probability of arrest dropped as work status improved. However, the differences were not statistically significant ( $p > 0.5$ ).

Table 9: Socialclass, Education, and Workstatus by Arrest

Variables	$\chi^2$ (df)	DHKP/C				HEZBOLLAH			
		No Arrest		Arrest		No Arrest		Arrest	
		n	%	n	%	n	%	n	%
<b>Socialclass</b>	.134 (1)/NA								
Underclass		5	25.0	15	75.0	NA	NA	NA	NA
Working poor		2	28.6	5	71.4	NA	NA	NA	NA
Working class		2	20.0	8	80.0	NA	NA	NA	NA
Low-mid class		5	27.8	13	72.2	NA	NA	NA	NA
Upper-mid class		3	33.3	6	67.7	NA	NA	NA	NA
<b>Total</b>		17	26.6	47	73.4	NA	NA	NA	NA
<b>Education</b>	4.859(1)**/.080(1)								
Primary		5	55.6	4	44.4	17	51.5	16	48.5
Middle School		5	35.7	9	64.3	8	47.1	29	52.9
High School		6	24.0	19	76.0	31	47.0	35	53.0
University		4	17.4	19	82.6	6	75.0	52	25.0
<b>Total</b>		20	28.2	51	71.8	62	50.0	62	50.0
<b>Workstatus</b>	6.57**(1)/2.21(1)								
Unemployed		9	15.6	38	84.4	21	42.0	29	58.0
Working Part-time		5	50.0	5	50.0	6	54.5	5	45.5
Working Full-time		5	50.0	5	50.0	29	56.9	22	43.1
<b>Total</b>		19	28.4	48	71.6	56	50.0	56	50.1

Notes: \* $p < .1$  \*\* $p < .05$  \*\*\* $p < .01$

#### Hypothesis 4

Having a loss in a counter-terrorism operation was important for DHKP/C members, but not for Hezbollah members. As seen in Table 10, the probability of arrest was considerably higher for DHKP/C members who had a loss (86%) than for those who had no such loss (58%). The difference between two probabilities were statistically significant ( $p < 0.5$ ). On the other hand, the probability of arrest for Hezbollah members was somewhat higher for those who had a loss (61%) than for those who had no such loss (47%). However, the difference was not statistically significant ( $p > .05$ ).

#### Hypothesis 5

Similarly to losing somebody in a counter-terrorism operation, school dropout was an important factor for the arrest of DHKP/C members. As seen in Table 10, the probability of arrest was higher for dropouts (85%) than it was for non-dropouts (61%). The difference between these two probabilities was statistically significant ( $p < .05$ ). On the other hand, school dropout was not as significant for Hezbollah members as it was for DHKP/C members. Accordingly, the probability of arrest was somewhat higher for dropout Hezbollah members (57%) than it was for non-dropout Hezbollah members (49%). However, the difference was not statistically significant ( $p > .05$ ).

### Hypothesis 6

As noted in Chapter II, police and military operations motivate relatives of terrorists against the authority. According to the results presented in Table 10, this was the case for DHKP/C members. Of those who had a family arrest, four-fifths (80%) had an arrest, while of those who did not have a family arrest less than three-fifths (56%) had an arrest. The difference between these two groups was statistically significant ( $p < .05$ ). On the other hand, the hypothesis regarding the relationship between Hezbollah members' family arrest and their arrest could not be tested due to the unavailability of family arrest data for Hezbollah members.

### Hypothesis 7

The literature review puts forth that family ties to a terrorist organization was one of the determinants of one's recruitment into a terrorist organization. This study tests whether it is equally important to one's involvement in terrorist activities. As seen in Table 10, of the DHKP/C members who had family associations to a terrorist organization, four-fifths (80%) had an arrest, while of those who had no such association slightly more than half (52%) had an arrest. The difference between these two groups was statistically significant ( $p < .05$ ). This finding suggested that family ties have an impact on DHKP/C members' (greater) involvement in terrorist activities.

Family ties to a terrorist organization seemed to have an impact on Hezbollah members' involvement in terrorist activities as well. Of the Hezbollah

members who had a family tie to a terrorist organization more than half (55%) had an arrest, while of the Hezbollah members who had no such tie less than half (45%) had an arrest. However, the difference between the groups was not statistically significant ( $p>.05$ ).

### Hypothesis 8

The literature review revealed that family and friends are the two prominent agents by means of which terrorist organizations recruit new members. This study tests whether those individuals recruited by relatives (including family members) and friends were more likely to be arrested than those who were recruited by other means. As seen in Table 10, the probability of arrest was 85 percent for DHKP/C members who were recruited by relatives; 61 percent for DHKP/C members who were recruited by friends; and 57 percent for DHKP/C members who were recruited by other means (in prisons, in demonstrations, and via reading publications). The differences between the groups were statistically significant at the .1 alpha level ( $p=.059<.1$ ). On the other hand, the probability of arrest was 47 percent for Hezbollah members who were recruited by relatives; 52 percent for Hezbollah members who were recruited by friends; and 49 percent for DHKP/C members who were recruited by other means. Obviously, the differences between groups were not statistically significant ( $p>.05$ ).

Table 10: Loss, Dropout, Familyarrest, Familyassoc, and Recruitment by Arrest

Variables	$\chi^2$ (df)	DHKP/C				HEZBOLLAH			
		No Arrest		Arrest		No Arrest		Arrest	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
<b>Loss</b>	6.03**(1)/1.58(1)								
No		15	41.7	21	58.3	61	53.1	53	46.5
Yes		4	13.8	25	86.2	9	39.1	14	60.9
<b>Total</b>		19	29.2	46	70.8	70	51.1	67	48.9
<b>Dropout</b>	5.16**(1)/.322(1)								
Non-dropout		15	39.5	23	60.5	56	50.9	54	49.1
Dropout		5	15.2	28	84.8	6	42.9	8	59.1
<b>Total</b>		20	28.2	51	71.8	62	50.0	62	50.0
<b>Familyarrest</b>	3.69**(1)/NA								
No		10	43.5	13	56.5	NA	NA	NA	NA
Yes		7	20.0	28	80.0	NA	NA	NA	NA
<b>Total</b>		17	29.3	41	70.7	NA	NA	NA	NA
<b>Familyassoc</b>	5.66**(1)/1.55(1)								
No		11	47.8	12	52.2	45	56.3	35	43.8
Yes		8	19.5	33	80.5	23	45.1	28	54.9
<b>Total</b>		19	29.7	45	70.3	68	51.9	63	48.1
<b>Recruitment</b>	5.646(3)*/.269(3)								
Friend		7	38.9	11	61.1	24	48.0	26	52.0
Relative		5	14.7	29	85.3	25	53.2	22	46.8
Other		6	42.9	8	57.1	19	51.4	18	48.6
<b>Total</b>		18	27.3	48	72.7	68	50.7	66	49.3

Notes: \* $p < .1$  \*\* $p < .05$  \*\*\* $p < .01$

### Multivariate Statistics for Research Question One

Hypotheses 9 through 19 were tested through binary logistic regression analysis. For hypotheses 9, 10, and 11, hierarchical logistic regression analysis was used because there were control variables in the models. In hierarchical logistic regression, all control variables were entered in Block 1 whereas all independent (predictor) variables were entered in Block 2. Interpretations were made based on the model at Block 2 where both control and independent variables were entered into the analysis. For instance, hypotheses regarding the combined effect of independent variables were tested based on the block chi-square scores at Block 2 because these scores tested the significance of the model after the independent variables were added to the analysis. Hypotheses regarding the individual effect of independent variables were based on the significance of the Wald test of the  $\beta$  coefficient and the odds ratio. Before running each model, a baseline model was run to test following logistic regression assumptions.

First, logistic regression assumes that variables are measured in a dichotomous or interval/ratio level. Therefore, categorical variables must be recoded into a set of dummy variables before they are included in the analysis. When testing the hypotheses 9 and 11, *workstatus* and *recruitment* were recoded into a set of dummy variables using the SPSS binary logistic categorical function. For the *workstatus* variable, *unemployed* served as the reference category, while the predictions were made for the *working part-time* and *working full-time*



categories. For the *recruitment* variable, *others* served as the reference category, while predictions were made for the *friends* and *relatives* categories.

Second, logistic regression analysis is based upon maximum likelihood estimation (MLE), which in turn relies on large sample asymptotic normality. If there is an inadequate number of case for each combination of independent variable, the reliability of prediction automatically declines. Traditionally, the minimum ratio of valid cases to independent variable is to be 10 to 1 (Hosmer & Lemeshow, 2004). None of the logistic regression analysis suffered from inadequate sample sizes. However, in the logistic regression analysis of the frustration model for DHKP/C members, the ratio of the case to independent variable was (53/5) 10.6 to 1, which was barely adequate when the convention of 10 to 1 was followed. The ratio was sufficient for a logistic regression analysis, however, there were still 16 missing values on *familyarrest* (Table 12). As mentioned in previous chapter, the SPSS Missing Value Analysis (MVA) found no statistical significant deviation from randomness. Since missing values were distributed randomly across all observation, imputation was not appropriate. As an alternative, missing values on *familyarrest* were imputed based on the absence of family association. The crosstab analysis of *familyarrest* and *familyassociation* indicated that of the cases which had no family association none had *familyarrest* (Appendix B). This indicated that if there was no family association, there was no family arrest. This further suggested that the absence of family arrest could be assumed if the *familyassociation* value was 0. Based on

this finding, seven missing values (case numbers 11, 28, 29, 30, 33, 55, and 56) on *familyarrest* were inferred from *familyassociation*. After this treatment, it was seen that the ratio of the case rose to (59/5) 11.8 to 1 (Table 12).

Third, logistic regression is sensitive to the multicollinearity issue. Multicollinearity results from excessive correlation between independent variables. If multicollinearity is detected, the independent variable with the least theoretical support must be dropped. Multicollinearity in the logistic regression model can be detected through the collinearity diagnostic which is found under the SPSS linear regression. Alternatively, researchers can check the standard error score for the  $\beta$  coefficient larger than 2.0. If any of the standard error is larger than 2.0, this may indicate a potential multicollinearity issue between independent variables or cells with a small number of cases (Hosmer & Lemeshow, 2004). In this study, the second method was preferred. In any logistic regression models, no multicollinearity issue was detected. In the logistic regression analysis of the relative deprivation model for DHKP/C members, however, the standard error of *maritalstatus* was larger than 2.0, which indicated that there might be a multicollinearity issue. However, there was no other standard error exceeding 2.0. This might probably be due to the cells with a small number. As seen in Table 8, there were only few cases in the “married” category ( $n=8$ ), which in turn reduced the explanatory power of the variable. Therefore, the variable was dropped from the analysis<sup>32</sup>.

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<sup>32</sup> Maritalstatus for DHKP/C member was also dropped from further analysis.

Finally, logistic regression results can be affected if there are outliers in the data. Outliers should be removed from the analysis to obtain more reliable results. In order to detect outliers, logistic regression analysis should be run with a request for casewise listing of residuals. This function by default detects outliers lying outside 2 standard deviations. For all logistic regression analyses, casewise listing of residuals were requested from SPSS<sup>33</sup>. However, no outlier case was identified in any logistic regression model.

### Hypothesis 9

#### *Logistic Regression Analysis of Relative Deprivation for DHKP/C*

A hierarchical logistic regression analysis was performed on *arrest* as dependent variable and two relative deprivation variables, *education* and *workstatus*, controlling for *socialclass*, *age*, and *gender*. As seen in Table 11, there was a good model fit even after the addition of the relative deprivation variables ( $p > .05$ )<sup>34</sup>. The model in Block 2 yielded a pseudo-R<sup>2</sup> of .469 as opposed the model in Block 1 which yielded a pseudo-R<sup>2</sup> of .129. This indicated that the model in Block 2 has more discriminatory power than the model in Block 1. On the other hand, classification accuracy was quite high. At Block 1 where only control variables were included, the correct classification rate was 6.3

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<sup>33</sup> To calculate the values for studentized residuals and save those residuals to the dataset so that outliers can be removed easily, the studentized residuals box was checked from the save menu.

<sup>34</sup> For a good model fit, Hosmer and Lemeshow chi-square statistics should be insignificant (Hosmer & Lemeshow, 2004).

percent for non-arrested DHKP/C terrorists and 98 percent for arrested DHKP/C terrorists. The overall correct percentage was 71 percent. With the addition of *education* and *workstatus* at Block 2, the correct classification rate rose to 62 percent for non-arrested DHKP/C terrorists and reduced to 91 percent for arrested DHKP/C terrorists. The overall correct rate was 83 percent, which was quite high.

As noted early on, the hypothesis regarding the combined effect of *education* and *workstatus* were tested based on the block chi-square scores at Block 2. As shown in Table 11, a test of the relative deprivation model with two independent variables against constant-only and the model with control variables was statistically significant ( $p < .01$ ). That is, *education* and *workstatus* combined significantly distinguished between arrested and non-arrested DHKP/C terrorists, controlling for *socialclass*, *age*, and *gender* (H9).

Hypotheses regarding the individual effects of *education* and *workstatus* were tested based on the significance of the Wald test of the  $\beta$  coefficient and the odds ratio. Accordingly, the log of the odds of *arrest* was positively related to *education* holding *age*, *gender*, *socialclass*, and *workstatus* constant ( $p < .05$ ). In other words, the higher the education, the higher the probability of arrest. Since *education* was treated as an interval/ratio, higher numeric values were associated with DHKP/C members whose education levels were better. Thus, the odds ratio of 3.266 indicated that one unit increase in *education* increased the odds of arrest by 3 times. On the other hand, the log of the odds of *arrest* was

negatively related to *workstatus* holding *age*, *gender*, *socialclass*, and *education* constant ( $p < .05$ ). Since *unemployed* was entered as a reference category, the predictions were made for *working part-time* and *working full-time* categories. That is, as the probability of working part-time and working full-time increased, the probability of arrest decreased. The odds ratio of .074 indicated that the odds of arrest for a DHKP/C terrorist who was working part-time were .07 times (93% less than) the odds of arrest for an unemployed DHKP/C terrorist. Similarly, the odds ratio of .037 indicated that the odds of arrest for a DHKP/C terrorist who was working full-time were .037 times (96% less than) the odds of arrest for an unemployed DHKP/C terrorist.

In conclusion, both *education* and *workstatus* significantly distinguished between arrested and non-arrested DHKP/C terrorists. DHKP/C members whose educational levels were high were more likely to face relative deprivation due to the gap between their educational level and work status.

#### *Logistic Regression Analysis of Relative Deprivation for Hezbollah*

This time, a hierarchical logistic regression analysis was run on *arrest* versus *education* and *workstatus* controlling for *age* and *maritalstatus* to test whether relative deprivation variables, as a set, significantly predict Hezbollah members' involvement in terrorism<sup>35</sup>. Overall, the logistic regression model fit to the data well ( $p > .05$ ). However, the model in Block 2 yielded a pseudo- $R^2$  of

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<sup>35</sup> *Socialclass* was not available in the Hezbollah dataset. Gender proportion was also uneven (Table 8). Therefore, these two variables were excluded from the analysis.

.076, which indicated that the explanatory power of the model was small (Table 11). Classification accuracy was not impressive and remained the same across Block 1 and 2. In Block 1 where only *age* and *maritalstatus* were included, the correct classification rate was 38 percent for non-arrested Hezbollah members and 82 percent for arrested Hezbollah members. The overall correct classification rate was 61 percent, which was low. With the addition of *education* and *workstatus* in Block 2, the correct classification rate did not change. This indicated a poor model fit.

The hypothesis regarding the combined effect of *education* and *workstatus* was tested based on the block chi-square score at Block 2. A test of the relative deprivation model against constant-only and the model with control variables was not statistically significant ( $p > .05$ ). That is, relative deprivation variables combined did not significantly distinguish between arrested and non-arrested Hezbollah members controlling for *age* and *maritalstatus*.

Hypotheses regarding the individual effects of *education* and *workstatus* were tested based on the significance of the Wald test of the  $\beta$  coefficient and the odds ratio. The log of the odds of arrest was not related to neither *education* nor *workstatus* ( $p > .05$ ). In other words, neither *education* nor *workstatus* significantly distinguish between arrested and non-arrested Hezbollah members.

Table 11: Logistic Regression Analysis of Relative Deprivation Models

Variables	DHKP/C			Hezbollah		
	Log Odds (B)	SE	Odds Ratio (B)	Log Odds (B)	SE	Odds Ratio (B)
<b>Block1</b> <sup>a, d</sup>						
Gender	-1.124	.810	.325	NA	NA	NA
Age	.113**	.065	1.120	.030	.054	1.031
Socialclass	-.115	.228	.891	NA	NA	NA
Maritalstatus <sup>b</sup>	NA	NA	NA	-1.152	.555	.316
Constant	-.493	1.779	.611	-.091	.956	.913
<b>Block2</b> <sup>c, g</sup>						
Gender <sup>e</sup>	-.642	1.017	.526	NA	NA	NA
Age	.164**	.084	1.179	.041	.058	1.042
Socialclass <sup>f</sup>	-.069	.301	.933	NA	NA	NA
Maritalstatus	NA	NA	NA	-1.101**	.604	.333
Education	1.183**	.474	3.266	-.057	.244	.945
Workstatus						
Workstatus(1)	-2.600**	1.172	.074	-.501	.788	.606
Workstatus(2)	-3.294**	1.152	.037	-.263	.567	.769
Constant	-4.076	2.663	.017	-.022	1.194	.979

## Notes:

<sup>a</sup> DHKP/C Block 1,  $\chi^2=5.515$ ,  $df=3$ ,  $R^2=.129$

<sup>b</sup> Maritalstatus was dropped from DHKP/C models

<sup>c</sup> DHKP/C Block 2 ( $n=59$ ),  $\chi^2=17.455^{***}$ ,  $df=3$ ,  $R^2=.469$ , Goodness-of-fit=14.166,  $df=8$

<sup>d</sup> Hezbollah Block 1,  $\chi^2=4.761$ ,  $df=2$ ,  $R^2=.068$

<sup>e</sup> Gender was dropped from Hezbollah models since inadequate sample sizes

<sup>f</sup> Socialclass was not available for Hezbollah datasets

<sup>g</sup> Hezbollah Block 2 ( $n=91$ ),  $\chi^2=.565$ ,  $df=3$ , Nagelkerke  $\rho^2=.076$ , Goodness-of-fit=3.191,  $df=8$

\* $p<.1$ ; \*\* $p<.05$ ; \*\*\* $p<.01$ .

### Hypothesis 10

#### *Logistic Regression Analysis of Frustration-Aggression for DHKP/C*

A hierarchical logistic regression analysis was performed on *arrest* as the dependent variable and three frustration variables, *loss*, *dropout*, and *familyarrest*, controlling for *age* and *gender*. As shown in Table 12, there was a good model fit even after the addition of the frustration variables ( $p > .05$ ). The model in Block 2 yielded a pseudo- $R^2$  of .37 as opposed to the model in Block 1 which yielded a pseudo- $R^2$  of .09. This indicated that the model in Block 2 has more discriminatory power than the model in Block 1. Further, the classification accuracy was high. On the basis of 2 control variables alone, the correct classification rate was 0 percent for non-arrested terrorists and 98 percent for arrested terrorists. The overall correct percentage was 68 percent. With the addition of the frustration variables, the correct classification rate rose to 50 percent for non-arrested terrorists, but reduced to 85 percent for arrested terrorists. The overall correct classification rate was 75 percent.

Hypothesis 11 was tested based on the block chi-square value given at Block 2. Accordingly, the frustration model against constant-only and the model with control variables was statistically significant ( $p < .05$ ). The result confirmed that *loss*, *dropout*, and *familyarrest*, as a set, significantly distinguished between the arrested and non-arrested DHKP/C members controlling for *age* and *gender*.



The hypotheses concerning the individual effects of *loss*, *dropout*, and *familyarrest* were analyzed through the Wald statistics. Accordingly, the log of the odds of arrest for a DHKP/C member was not related to neither *loss* ( $p > .05$ ) nor *familyarrest* ( $p > .05$ ). On the other hand, the log of the odds of *arrest* was positively related to *dropout* holding *loss*, *dropout*, *familyarrest*, *age* and *gender* constant ( $p < .05$ ). In other words, *dropout* significantly distinguished the arrested terrorists from non-arrested terrorists. Since it was entered as a dichotomous covariate, the prediction was made for the higher category of *dropout*. Accordingly, the odds ratio of 6.417 indicated that the odds of arrest for dropout DHKP/C members were 6 times the odds of arrest for non-dropout DHKP/C members.

In conclusion, frustration variables, except *dropout*, did not significantly predict arrest. It is obvious that the insignificant effect sizes cannot be attributable to control variables because the model with the frustration variable was significant against constant-only and the model with control variables. Considering that both *loss* and *familyarrest* had a significant relationship with arrest on a one-to-one (bivariate) basis, insignificant effect size can be attributable to small sample size. Logistic regression, as a statistical analysis, is based on maximum likelihood estimation (MLE), which in turn relies on large sample asymptotic normality. If there is an inadequate number of cases for each combination of independent variable, the reliability of prediction automatically declines (Hosmer & Lemeshow, 2004).

### *Logistic Regression Analysis of Frustration-Aggression for Hezbollah*

To test whether frustration variables combined significantly predict Hezbollah members' involvement in terrorism, a hierarchical logistic regression analysis was performed on *arrest* as dependent and *loss* and *dropout* as independent variables controlling for *age* and *maritalstatus*. As shown in Table 12, there was a poor model fit. Hosmer and Lemeshow's test of model fit indicated that the model which was developed after frustration variables were added to the equation did not fit to data well ( $p < .05$ ). This was also evident in the pseudo- $R^2$  score of .095, which was very small. Further, the change in the rate of classification was negligible. The overall correct classification rate increased from 58.6 percent to 59.6 percent.

Although there was a poor model fit, a test of frustration model against constant-only and the model with control variables was statistically significant at the .10 alpha level ( $p = .10$ ). This result confirmed that *dropout* and *loss* combined significantly distinguished arrested Hezbollah members from non-arrested Hezbollah members controlling for *age* and *maritalstatus*. Since the overall model was statistically significant at the .10 alpha level, the individual effects of *dropout* and *loss* were tested through Wald statistics. The log of the odds of *arrest* was positively related to *loss* holding *dropout*, *age* and *maritalstatus* constant ( $p = .058 < .10$ ). The odds ratio of 3.303 indicated that the odds of arrest for a Hezbollah member who had a loss was 3 times the odds of arrest for a Hezbollah member who had no loss. Even though the log of the odds of *loss* was barely

significant, the effect size of 3.303 indicated that loss of somebody is an important factor for Hezbollah members in their probability of arrest. On the other hand, the individual effect of *dropout* was not statistically significant ( $p > .05$ ).

Table 12: Logistic Regression Analysis of Frustration-Aggression Models

Variables	DHKP/C			Hezbollah		
	Log Odds (B)	SE	Odds Ratio (B)	Log Odds (B)	SE	Odds Ratio (B)
<b>Block1</b> <sup>a,d</sup>						
Gender	-1.066	.665	.344	NA	NA	NA
Age	.067	.055	1.069	.016	.049	1.016
Maritalstatus <sup>b</sup>	NA	NA	NA	-.854*	.475	.426
Constant	.047	1.263	1.049	.015	.868	1.015
<b>Block2</b> <sup>c,f</sup>						
Gender <sup>e</sup>	-1.315*	.764	.268	NA	NA	NA
Age	.123	.077	1.131	.007	.051	1.007
Maritalstatus	NA	NA	NA	-.746	.485	.474
Loss	.919	.767	2.507	1.195*	.631	3.303
Dropout	1.859**	.789	6.417	.182	.660	1.199
Familyarrest <sup>g</sup>	.848	.714	2.336	NA	NA	NA
Constant	-2.468	1.840	.085	-.037	.910	.963

## Notes:

<sup>a</sup> DHKP/C Block 1;  $\chi^2=3.804$ ,  $df=2$ ,  $R^2=.088$

<sup>b</sup> Maritalstatus was dropped from DHKP/C models

<sup>c</sup> DHKP/C Block 2 ( $n=59$ );  $\chi^2=14.347^{***}$ ,  $df=3$ ,  $R^2=.374$ , Goodness-of-fit=7.251,  $df=7$

<sup>d</sup> Hezbollah Block 1;  $\chi^2=3.577$ ,  $df=2$ ,  $R^2=.058$

<sup>e</sup> Gender was dropped from Hezbollah models since inadequate sample sizes

<sup>f</sup> Hezbollah Block 2 ( $n=111$ );  $\chi^2=4.595^*$ ,  $df=2$ ,  $R^2=.095$ , Goodness-of-fit=18.126,  $df=8$

<sup>g</sup> Familyarrest was not available for Hezbollah datasets

\* $p<.1$ ; \*\* $p<.05$ ; \*\*\* $p<.01$

### Hypothesis 11

#### *Logistic Regression Analysis of Social Learning for DHKP/C*

A hierarchical logistic regression analysis was run on *arrest* as a dependent variable and two social learning variables, *familyassociation* and *recruitment*, controlling for *age* and *gender*. As shown in Table 13, the overall model fit was good after social learning variables were added into the equation ( $p > .05$ ). The model in Block 2 yielded a pseudo- $R^2$  of  $= .366$  as opposed to the model in Block 1 which yielded a pseudo- $R^2$  of  $= .139$ . This indicated that the model in Block 2 has more discriminatory power than the model in Block 1. Further, the accuracy of classification was satisfactory. On the basis of 2 control variables alone, the correct classification rate was 18 percent for non-arrested terrorists and 98 percent for arrested terrorists. The overall correct classification was 75 percent. With the addition of the social learning variables, the correct classification rate for non-arrested terrorists rose to 47 percent, while it reduced to 90 percent for arrested terrorists. The overall correct classification rate was 78 percent.

The hypothesis concerning the combined effect of *familyassociation* and *recruitment* was tested based on the block chi-square score for Block 2. As seen in Table 13, a test of the social learning model against constant-only and the model with control variables was statistically significant ( $p < .05$ ). That is, social

learning variables combined significantly distinguish between arrested and non-arrested DHKP/C terrorists controlling for *age* and *gender*.

The hypotheses concerning the individual effects of *familyassociation* and *recruitment* were analyzed through the Wald statistics. The log of the odds of *arrest* was not significantly related to *familyassociation* ( $p > .05$ ). That is, family association was not a significant predictor of arrest for DHKP/C members. On the other hand, the log of the odds of *arrest* was significantly and positively related with *relatives* holding *familyassociation*, *age*, and *gender* constant ( $p < .05$ ). In other words, those who were recruited by their relatives (including family members) were more likely to have an arrest than those who were recruited by other means. The odds ratio of 15.869 indicates that the odds of arrest for a DHKP/C member who was recruited by relatives were 16 times the odds of arrest for a DHKP/C member who was recruited by other means. The log of the odds of *arrest*, on the other hand, was not significantly related to *friends* ( $p > .05$ ). In other words, recruitment by friends compared to recruitment by other means was not a significant predictor for DHKP/C members in their arrest.

This finding suggested that simply having a family association did not seem to have an impact on DHKP/C members' involvement in terrorist activities. If the person, however, was recruited by one of his relatives (this includes family members) the probability of involvement in terrorism increased. That is, family association did not guarantee that terrorist behaviors were passed onto other family members.

### *Logistic Regression Analysis of Social Learning for Hezbollah*

Another logistic regression model was run on *arrest* against *familyassociation* and *recruitment* controlling for *age* and *maritalstatus* to test whether social learning impacts Hezbollah members' probability of involvement in terrorism. As shown in Table 13, there was a poor model fit. Even though the  $p$  value for Hosmer and Lemeshow's chi-square for goodness of fit was not smaller than the conventional alpha levels, it was still low ( $p=.111$ ). The pseudo  $R^2$  of .079 indicated that the explanatory power of the model was weak. Further, the correct classification rate was not impressive. On the basis of two control variables alone, the overall correct classification rate was 59 percent, whereas it dropped to 56 percent with the addition of the social learning variable.

As seen in Table 13, a test of the social learning model against constant-only and the model with control variables was not statistically significant ( $p>.05$ ). This indicated that *familyassociation* and *recruitment* combined were not able to distinguish non-arrested Hezbollah members from arrested Hezbollah members. On the other hand, the overall model (the model with social learning variables and 2 control variables given at Block 2) was not statistically significant ( $p>.05$ ). Therefore, the hypotheses concerning the individual effect of *familyassociation* and *recruitment* were not tested for significance.

Table 13: Logistic Regression Analysis of Social Learning Models

Variables	DHKP/C			Hezbollah		
	Log Odds (B)	SE	Odds Ratio (B)	Log Odds (B)	SE	Odds Ratio (B)
<b>Block1</b> <sup>a, d</sup>						
Gender	-1.380	.743	.252	NA	NA	NA
Age	.105	.062	1.111	.028	.042	1.029
Maritalstatus <sup>b</sup>	NA	NA	NA	-1.003**	.463	.367
Constant	-.492	1.401	.611	-.242	.759	.785
<b>Block2</b> <sup>c, g</sup>						
Gender <sup>e</sup>	-1.791**	.850	.167	NA	NA	NA
Age	.187**	.087	1.205	.026	.043	1.026
Maritalstatus	NA	NA	NA	-1.006**	.478	.366
Familyassociation	-.768	.975	.464	.273	.443	1.314
Recruitment		.				
Recruitment (1)	-.154	.866	.858	-.428	.498	.652
Recruitment (2)	2.764**	1.163	15.869	-.529	.540	.589
Constant	-2.708	1.959	.067	.067	.891	1.070

**Notes:**

<sup>a</sup> DHKP/C Block 1;  $\chi^2=6.048^{**}$ ,  $df=2$ ,  $R^2=.139$

<sup>b</sup> Maritalstatus was dropped from DHKP/C models

<sup>c</sup> DHKP/C Block 2 ( $n=59$ );  $\chi^2=11.388^{**}$ ,  $df=3$ ,  $R^2=.366$ , Goodness-of-fit=9.236,  $df=8$

<sup>d</sup> Hezbollah Block 1;  $\chi^2=5.035$ ,  $df=2$ ,  $R^2=.056$

<sup>e</sup> Gender was dropped from Hezbollah models since inadequate sample sizes

<sup>f</sup> Hezbollah Block 2 ( $n=117$ );  $\chi^2=2.110$ ,  $df=3$ ,  $R^2=.079$ , Goodness-of-fit=13.018,  $df=8$

<sup>g</sup> Familyarrest was not available for Hezbollah datasets

\* $p<.1$ ; \*\* $p<.05$ ; \*\*\* $p<.01$



### Descriptive Statistics for Research Question Two

To understand what impacts DHKP/C members' involvement in terrorist activities differently from Hezbollah members' involvement or vice versa, DHKP/C and Hezbollah datasets were merged into a single dataset. As seen in Table 14, there were  $N=219$  cases in the new dataset. Almost two-thirds of the terrorists in the dataset were comprised of Hezbollah members, whereas the remaining one-third was comprised of DHKP/C members (66% vs. 34%). A majority of the terrorists had a prior arrest history (54%). The distribution of education indicated that most terrorists had some high school education (43%). On the other hand, the proportion of those who had some university education was not impressive (15%). More than one-fifth of the terrorists dropped out of school at some point in their educational career (22.4%). Almost half of the terrorists were unemployed at the time when they reported their autobiographies (47%). The proportion of working full-time was less than one-third (28%). More than two-fifths reported that they had a family member associated to a terrorist group before (43%). Almost a quarter of terrorists indicated that they had lost somebody in a counter-terrorism operation (24%). Most terrorists reported that they were first recruited into their respective terrorist organization by their relatives (38%). On the other hand, almost one-third of them indicated that they were recruited by their friends (31.5%).

**Table 14: Descriptive Statistics of Merged Datasets**

<b>Variables</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
<b>Organization</b>		
DHKP/C	75	34.2
Hezbollah	144	65.8
<b>Arrest</b>		
Non-Arrested	91	41.6
Arrested	119	54.3
Missing	9	4.1
<b>Education</b>		
Primary School	44	20.1
Middle School	31	14.2
High School	95	43.4
University	33	15.1
Missing	16	7.3
<b>Workstatus</b>		
Unemployed	100	45.7
Working Part-time	22	10.0
Working Full-time	63	28.8
Missing	34	15.5
<b>Dropout</b>		
Dropout	154	70.3
Non-dropout	49	22.4
Missing	16	7.3
<b>Loss</b>		
No	156	71.2
Yes	53	24.2
Missing	10	4.6
<b>Familyassociation</b>		
No	108	49.3
Yes	95	43.4
Missing	16	7.3
<b>Recruitment</b>		
Friends	69	31.5
Relatives	83	37.9
Others	55	25.1
Missing	12	5.5

## Bivariate Statistics for Research Question Two

Hypotheses 12 through 19 are tested using bivariate statistics. More specifically, these hypotheses were tested through crosstab analysis. Statistical significance of the associations was tested by Pearson's Chi-square test of independence. Hypothesis 12 and 17 could not be tested due to the unavailability of data concerning the social class and family arrest of Turkish Hezbollah members.

### Hypothesis 13

This hypothesis tested whether there was a difference in education levels between the groups of arrested DHKP/C and arrested Turkish Hezbollah members. As seen in Table 15, of all arrested DHKP/C and Turkish Hezbollah members combined, almost one-fifth (19%) had some university education, about a half (48%) had some high school education and one-third (34%) had some middle and primary school education. If there was no difference in education between these two groups, one would expect that group averages of arrested DHKP/C and arrested Turkish Hezbollah members be exactly the same as the above figures. However, this was not the case. Accordingly, of the arrested DHKP/C members more than one-third (37%) had some university education, while of the arrested Turkish Hezbollah members only 3 percent had some university education. These proportions were statistically different than the overall average for all arrested terrorists of the same educational category, which was 19 percent ( $p < .000$ ).

#### Hypothesis 14

This hypothesis tested whether there was a difference in work status between the groups of arrested DHKP/C and arrested Turkish Hezbollah members. As seen in Table 15, of all the arrested DHKP/C and Turkish Hezbollah terrorists combined, almost two-thirds (64%) were unemployed, 10 percent were part-time workers, and more than one-fourth (26%) were full-time workers. There were considerable differences in unemployment and working full-time categories between the groups of arrested DHKP/C and arrested Turkish Hezbollah members. Accordingly, of the arrested DHKP/C members almost four-fifth (79%) were unemployed while of the arrested Turkish Hezbollah members slightly more than half (52%) were unemployed. On the other hand, of the arrested DHKP/C members only 10 percent were full-time workers whereas of the arrested Turkish Hezbollah members almost two-fifth (39%) were full-time workers. The differences were statistically significant ( $p < .01$ ).

#### Hypothesis 15

This hypothesis tested whether there was a difference in loss (of someone) between the groups of arrested DHKP/C and arrested Turkish Hezbollah members. As seen in Table 15, of all the arrested DHKP/C and Turkish Hezbollah slightly more than one-thirds (34.5%) had loss. However, there were considerable deviations from this figure across DHKP/C and Turkish Hezbollah. Accordingly, of all the arrested DHKP/C terrorists more than half (54%) lost someone in a counter-terrorism operations whereas of all the Turkish

Hezbollah members slightly more than one-fifth (21%) had such a loss. The differences were statistically significant ( $p < .000$ ).

#### Hypothesis 16

Hypothesis 16 tested whether there was a difference in school dropout rates between the groups of arrested DHKP/C and arrested Turkish Hezbollah members. As seen in Table 15, almost one-third (32%) of all arrested terrorists had a school dropout at some points in their educational life. However, there were significant deviations from this figure across DHKP/C and Turkish Hezbollah. Accordingly, of the arrested DHKP/C members more than half (55%) were school dropout whereas of the arrested Turkish Hezbollah members only 13 percent had such an experience. These figures were significantly different than overall average of school dropout for all arrested terrorists ( $p < .000$ ).

#### Hypothesis 18

Hypothesis 18 tested whether there was a difference in family association between the groups of arrested DHKP/C and Turkish Hezbollah members. As seen in Table 15, more than half (56%) of all arrested terrorists had a family member who had an association to a terrorist group. This figure was significantly different across DHKP/C and Turkish Hezbollah. Accordingly, almost three-fourth of all arrested DHKP/C terrorists (73%) had a family association to a terrorist group whereas less than half (44%) of all arrested Turkish Hezbollah members had such an association. The differences were statistically significant ( $p < .01$ ).

### Hypothesis 19

This hypothesis tested whether there was a difference in recruitment methods between the groups of arrested DHKP/C and Turkish Hezbollah members. As seen in Table 15, almost one-third of all arrested terrorists (33%) were recruited by a friend. There were some deviations from this figure across DHKP/C and Turkish Hezbollah. Accordingly, of the arrested DHKP/C more than one-fifth (23%) and of the Turkish Hezbollah almost two-fifth (40%) reported that they were recruited by a friend. Almost a half of all arrested terrorists (45%) reported that they were recruited by a relative. The deviations from this figure across the groups were even bigger. Accordingly, of all arrested DHKP/C members three-fifth (60%), while of all arrested Turkish Hezbollah members one-third (33%) reported that they were recruited by a relative. The differences were statistically significant ( $p < .05$ ).

Overall, there were significant differences between the groups of arrested DHKP/C and arrested Turkish Hezbollah members in terms of their education, work status, having a loss of a loved one, school dropout, having a family member who is associated with a terrorist organization, and recruitment methods. Next chapter addresses the conclusions and discussions of research findings.

Table 15: Education, Workstatus, Loss, Dropout, Familyassoc, Recruitment by Arrest

Variables	X <sup>2</sup> (df)	Arrested DHKP/C		Arrested Hezbollah		Total	
		N	%	N	%	N	%
<b>Education</b>	24.867(3)***						
Primary		4	7.8	16	25.8	20	17.7
Middle		9	17.6	9	14.5	18	15.9
High School		19	37.3	35	56.5	54	47.8
University		19	37.3	2	3.2	21	18.6
<b>Total</b>		51	100.0	62	100.0	113	100.0
<b>Workstatus</b>	11.365(2)***						
Unemployed		38	79.2	29	51.8	67	64.4
Part-time		5	10.4	5	8.9	10	9.6
Full-time		5	10.4	22	39.3	27	26.0
<b>Total</b>		48	100.0	56	100.0	104	100.0
<b>Loss</b>	13.504(1)***						
No		21	45.7	53	79.1	74	65.5
Yes		25	54.3	14	20.9	39	34.5
<b>Total</b>		46	100.0	67	100.0	113	100.0
<b>Dropout</b>	22.736(1)***						
No		23	45.1	54	87.1	77	68.1
Yes		28	54.9	8	12.9	36	31.9
<b>Total</b>		51	100.0	62	100.0	113	100.0
<b>Familyassoc</b>	8.913(1)***						
No		12	26.7	35	55.6	47	43.5
Yes		33	73.3	28	44.4	61	56.5
<b>Total</b>		45	100.0	63	100.0	108	100.0
<b>Recruitment</b>	8.252(1)***						
Friend		11	22.9	26	39.4	37	32.5
Relatives		29	60.4	22	33.3	51	44.7
Others		8	16.7	18	27.3	26	22.8
<b>Total</b>		48	100.0	66	100.0	114	100.0

Notes: \* $p < .1$  \*\* $p < .05$  \*\*\* $p < .01$

## CHAPTER V: DISCUSSIONS

### Introduction

The purpose of this study is two-fold: First, it explores the factors that may have an effect on the probability of arrest for DHKP/C and Turkish Hezbollah members. In other words, it examines whether terrorists' arrest probability changes in respect to their certain characteristics. Second, it examines the similarities and differences in certain characteristics between the groups of arrested DHKP/C and arrested Turkish Hezbollah members. In Chapter IV, 19 different hypotheses were tested to identify bivariate and multivariate relationships between certain characteristics of DHKP/C and Turkish Hezbollah terrorists and their involvement levels (*arrest*). Overall, the results confirmed that most of the key characteristics identified significantly predicted the involvement levels for DHKP/C terrorists, but not for Turkish Hezbollah terrorists. The results also suggested that variations in Turkish Hezbollah terrorists' arrest might be related to factors that were not in the dataset.

The following discussion links the research findings to the literature, theories, and policies. The findings of this study have some implications for theory. This is particularly important considering that terrorism study is yet to develop sound and empirically testable theories relevant to the behaviors and decision-making processes of individual terrorists. This chapter also identifies policy implications of the findings in an attempt to help revise the existing



counter-terrorism policies in Turkey. Finally, the findings have some implications for future studies.

## Discussions of Findings

### Hypothesis 1

*The probability of involvement in terrorist activities is negatively related to terrorists' social class levels.*

Hypothesis 1 tested whether there was a relationship between terrorists' involvement in terrorist activities and their social classes of origin. Contrary to the stated hypothesis, bivariate analysis of *arrest* and *socialclass* indicated that the probability of involvement in terrorist activities was not related to terrorists' social classes. In other words, DHKP/C terrorists' involvement in terrorist activities did not significantly change by their social class levels. As a result, the null hypothesis that there is no relationship between *arrest* and *socialclass* can be rejected.

Among the theoretical frameworks used in this study, social class of origin is relevant to relative deprivation. The concept of relative deprivation refers to a state of discontentment. Accordingly, individuals with discontentment make a comparison between the economic situations of their groups and other groups or between their current and past economic situations. Based on this assumption, one can assume that lower class members who come from the poorer sectors of society and have parents with low income and education are more likely to feel

relative deprivation than higher class members. However, individuals may not always make comparisons based on their respective classes. For instance, a person who comes from a lower class family may not feel relatively deprived if he is content with his current economic situation. Apparently, the social class of family or parents becomes less relevant to relative deprivation if the person is given adequate opportunities to achieve his expectations.

When terrorists' education level is tabulated against their social classes, it can clearly be seen that one-third of all DHKP/C members seemed to have an opportunity to attend a university regardless of their social class (Appendix M). This suggested that social class is not relevant to the involvement in terrorist activities. Considering that DHKP/C centers its recruitment effort in the slums of big cities (such as Istanbul, Ankara, Izmir, and Adana) where lower class people are concentrated, it can be assumed that having a lower social class level is relevant to one's recruitment into a terrorist organization. However, social class becomes more irrelevant as one becomes more dedicated to terrorism.

### Hypothesis 2

*The probability of involvement in terrorist activities is positively related to terrorists' education levels.*

Hypothesis 2 tested whether *arrest* is positively related to *education*. The results showed that the null hypothesis that there is no relationship between *arrest* and *education* can be rejected for DHKP/C members, but not for Turkish Hezbollah members. The findings for DHKP/C members indicated that as

educational level increased, the probability of involvement in terrorist activities also increased. If there is a significant relationship between education and arrest, then the question is “in what way is education relevant to arrest?”

As mentioned earlier, non-professional terrorists are assigned to carry out certain activities on behalf of a terrorist organization. These activities may not require militaristic skills but may require some intellectual capacity. For instance, organizing a public meeting and running a student association or a solidarity association are activities that demand certain communication skills. Therefore, DHKP/C members with higher education may have been purposively selected to carry out certain missions in the organization.

Hypothesis testing for Turkish Hezbollah members, on the other hand, showed that *arrest* was not related to *education*. This can be attributed to the difference in modus operandi between the DHKP/C and Turkish Hezbollah. As aforementioned, the Turkish Hezbollah has no legal extension. Missions in the organization may not require discrimination between the militants by their intellectual levels. Therefore, education levels may not account for the changes in the Turkish Hezbollah members' arrest.

### Hypothesis 3

*The probability of involvement in terrorist activities is positively related to terrorists' probability of being unemployed.*

This hypothesis tested whether *arrest* was related *workstatus*. The results showed that the null hypothesis that there is no relationship between *arrest* and

*workstatus* can be rejected for DHKP/C members, but not for Turkish Hezbollah members. Hypothesis testing for DHKP/C indicated that the probability of arrest for unemployed DHKP/C members was 31 percent higher than for DHKP/C members who were working both on part-time or full-time basis (81% vs. 50% and 50%). This can be explained by Toby's (1957) concept of "stake in conformity". In Toby's view, individuals with few or no stakes in conformity are more likely to be drawn into deviance (Toby, 1957)<sup>36</sup>. Accordingly, compared to unemployed DHKP/C members, part-time and full-time working DHKP/C members have a stake in conformity because they have a job to lose. Hypothesis testing for Turkish Hezbollah members, on the other hand, did not show a relationship between *arrest* and *workstatus*. Although there was a difference in the probabilities of arrest between full-time working and unemployed Hezbollah members (43% vs. 58%), these probabilities did not significantly deviate from the overall probability of arrest (50%).

#### Hypothesis 4

*The probability of involvement in terrorist activities is higher for those who have lost a loved one in a counter-terrorism operation than for those who have not.*

This hypothesis tested whether losing a loved one in a counter-terrorism operation (*loss*) increases the likelihood of participating in terrorist activities

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<sup>36</sup> Further details regarding Toby's concept of stake in conformity is provided in the section(s) on theoretical implications in this chapter.

(*arrest*). The results showed that the null hypothesis of no relationship can be rejected for DHKP/C, but not for Turkish Hezbollah members. Hypothesis testing for DHKP/C members indicated that terrorists who lost a loved one were 28 percent more likely to be arrested than terrorists who had no such loss (86% vs. 58%). The significant difference in the probabilities of arrest can be attributed to feelings of frustration and desire for revenge<sup>37</sup>. Such a rationalization is also consistent with the findings of previous studies (Berko & Erez, 2007).

Accordingly, terrorists who lost a loved one in a counter-terrorism operation may have a desire for revenge and therefore may participate in terrorist activities more than other terrorists who have no such loss. On the other hand, there was some evidence showing that loss may have an effect on Turkish Hezbollah members' arrest. The probability of arrest was 14 percent higher for those who had a loss than for those who had no loss (61% vs. 47%). However, these probabilities were not significantly different than the overall probability of arrest (50%).

#### Hypothesis 5

*The probability of involvement in terrorist activities is higher for those who have dropped out of school than for those who have not.*

Hypothesis 5 tested whether *arrest* is related to (school) *dropout*. The results indicated that the null hypothesis that arrest is not related to school

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<sup>37</sup> Revenge is a reasonable explanation given the findings of Berko and Erez (2007), who found that Palestinian women terrorists participate in terrorism to seek revenge for their personal losses.

dropout can be rejected for DHKP/C members but not for Turkish Hezbollah members. The analysis for DHKP/C showed that the probability of arrest for dropout terrorists was 24 percent higher than for non-dropout terrorists (85% vs. 61%). The difference can be attributed to feelings of frustration even though there is no finding in the literature showing such a relationship. To determine whether dropout is a frustration factor, one must first determine the reason for dropout. For DHKP/C members, reasons for dropout vary.

Some terrorists may have simply failed or had to leave school for economic or other reasons. This explanation might be true to some extent, but still dropout rate was fairly high that almost one half of all DHKP/C members (47%) dropped out of school at some level. According to OECD statistics, school dropout rate for high school and university students was 20 percent in 1995 in Turkey (OECD, 2006). Accordingly, dropout for DHKP/C members considerably deviated from the national average. Therefore, there might be some other reasons that may account for the high dropout rate for DHKP/C members. There are two more possible reasons. First, some terrorists may have chosen to dropout to carry out certain missions given by their leaders. Second, some terrorists may have been expelled or suspended from school due to the criminal or disciplinary sanctions imposed for participating in illegal activities inside or outside schools. Considering that terrorists in the dataset had no full membership

as of the date they dropped out, the first possibility was not likely<sup>38</sup>. Therefore, this study assumed that a considerable number of school dropout occurred due to the criminal or disciplinary sanctions. In both cases (expulsion or suspension), dropout occurs against the student's will. In other words, in expulsion or suspension, dropout does not reflect the individuals' own choice. Therefore, dropout can be considered a frustration factor<sup>39</sup>.

The analysis for Hezbollah members, on the other hand, indicated that arrest is not related to school dropout. The probability of arrest was 8 percent higher for dropouts than for non-dropouts (57% vs. 49%). The insignificant result can be attributed to Turkish Hezbollah's recruitment strategy. Accordingly, high schools and universities are not the primary recruitment grounds for Turkish Hezbollah. This, in turn, eliminates the possibility of participating in illegal activities in schools and, therefore, dropping out of school due to the criminal or disciplinary sanctions.

### Hypothesis 6

*The probability of involvement in terrorist activities is higher for those who have experienced a family arrest than for those who have not.*

This hypothesis tested whether arrest is related to family arrest. The results showed that the null hypothesis that arrest is not related to family arrest

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<sup>38</sup> Autobiographies are submitted to become a full member. Therefore, samples in the datasets were assumed to have no full membership.

<sup>39</sup> Factor analysis in Chapter III showed that dropout (*dropout*) is the component of the same dimension as family arrest (*familyarrest*) and loss of a loved one (*loss*)

can be rejected. The analysis for DHKP/C members indicated that the probability of arrest for those who had a family arrest were 24 percent higher than for those who did not have such an experience (80% vs. 56%).

The difference in the probability of arrest between these two groups can be attributed to feelings of frustration and desire for revenge. Based on the findings of previous researches on terrorist characteristics, family arrest can be considered a potential predictor of frustration (Berko & Erez, 2007; Florez-Morris, 2007; Soibelman, 2004; Weinberg, et al., 2003; Wells III & Horowitz, 2007; Yom & Saleh, 2004). These studies reported that terrorists seek revenge when they are frustrated against personal losses, police use of force, and government repression (Table 3). By engaging in terrorist activities, individuals may seek revenge for the family arrest.

If family arrest is a frustration factor, then the question is, “how does frustration lead other family members into recruitment and greater involvement in terrorist activities?” Family members of an arrested person are emotionally pulled into a situation, especially by leftist terrorist organizations including the DHKP/C, where they feel that they have to favor the actions of terrorists. For instance, arrested terrorists are provided legal attorneys by terrorist organizations. This does not only comfort the family financially, but cause them to feel grateful to the terrorist organization. In addition, the DHKP/C supports a legal association called the *Association for Solidarity with the Parents of Arrested and Convicted People* (TAYAD) to help families of arrested and convicted terrorists. Furthermore, the



family members of an arrested terrorist are shown great respect. The mother of an arrested terrorist is called “mother” by other terrorists. If the terrorist is dead, memorial ceremonies are organized every year by the terrorist organization. These are only some of the many tactics employed by the DHKP/C and other leftist terrorist organizations to win the hearts and minds of families of arrested terrorists. The goal is not only to help families but also to recruit new members.

### Hypothesis 7

*The probability of involvement in terrorist activities is higher for those who have a family member (father, mother, brother, and sister) associated with a terrorist group than for those who do not.*

This hypothesis tested whether arrest was related to family association with a terrorist group. The null hypothesis that these two variables are not related can be rejected for DHKP/C members, but not for Hezbollah members. The analysis for DHKP/C members indicated that the probability of arrest for those who had a family association with a terrorist organization was 28 percent higher than for those who had no such association (80% vs. 52%). This finding was consistent with the literature. Previous studies reported that most terrorists had family member(s) who had an affiliation with a terrorist group (Berko & Erez, 2007; Moghadam, 2003; Sageman, 2004; Weinberg & Eubank, 1987; Wells III & Horowitz, 2007).

The difference in the probability of arrest between these two groups can be attributed to the effect of social learning. A terrorist who grows up in a family

environment where the ideology of terrorism is favored is likely to have a greater involvement in terrorism than a terrorist who grows up in a traditional law-abiding family environment. This explanation is consistent with Sutherland's (1947) differential association theory of crime. Accordingly, a person becomes criminal when he or she is exposed to the excess of definitions favorable to the violation of law as opposed to the definitions unfavorable to the law. Individuals learn in intimate groups. The most important of these groups are families and friends (Sutherland, 1947).

The analysis for Turkish Hezbollah indicated that the probability of arrest for those who had a family association with a terrorist group was 10 percent more than for those who had no such association (55% vs. 45%). However, the difference was not statistically significant. The result showed that social learning does not account for the changes in the probability of arrest.

### Hypothesis 8

*The probability of involvement in terrorist activities is higher for those who have been first recruited by a family member, relative, or friend than for those who have been recruited by other means.*

This hypothesis tested whether arrest was related to recruitment methods. The result showed that the null hypothesis that arrest was not related to recruitment methods can be rejected for DHKP/C members, but not for Turkish Hezbollah members. The test for DHKP/C members indicated that the probability of arrest for DHKP/C members who were recruited by their relatives and family

members was 24 percent higher than for DHKP/C members who were recruited by friends and 28 percent higher than for those who were recruited in prisons, demonstrations, or by reading DHKP/C's publications (85% vs. 61% and 57%). This finding was consistent with Weinberg and Eubank's (1987) findings that families and relatives are the primary agents for one's recruitment into a terrorist organization.

The difference in the probability of arrests between these three groups can be attributed to the effect of social learning. As mentioned in the previous discussion, a terrorist who lives in a family environment where the terrorist ideology is favored may have a greater involvement in terrorist activities than a terrorist who lives in a conventional, law-abiding family environment where laws and rules are favored. Furthermore, the finding points out the relative importance of recruitment by family and relatives over recruitment by friends. This relates back to Sageman's (2004) argument on the importance of the bottom-up recruitment strategy for greater security. Sageman (2004) asserted that some terrorist organizations employ a bottom-up recruitment strategy by using reliable agents for security reasons. Accordingly, those who were recruited by family members and relatives may have given delicate assignments (due to their reliability) where they faced a greater risk of arrest.

For Turkish Hezbollah members, however, recruitment by friends seemed to be more effective than recruitment by family members and relatives (52% vs. 47%). However, these probabilities did not significantly deviate from the overall

probability of arrest (50%). The finding for Hezbollah members was consistent with Sageman's (2004) finding that friends were the primary agents for recruitment in the Salafi Mujahidin. Kinship, on the other hand, has a secondary importance when compared to friendship (Sageman, 2004, p. 112).

### Hypothesis 9

*Relative deprivation has a significant effect on the probability of involvement in terrorist activities controlling for social class, age, gender, and marital status.*

This hypothesis tested whether arrest is related to relative deprivation. The results showed that the null hypothesis that there is no relationship between arrest and relative deprivation can be rejected for DHKP/C members. Thus, the relative deprivation model significantly distinguished between arrested and non-arrested DHKP/C members. The individual effect of education showed that education increased the likelihood of arrest when the effect of work status was controlled (zero). This suggested that the resulting gap may have brought about a relative deprivation. Such an explanation is consistent with Gurr's (1970) concept of aspirational deprivation. As mentioned earlier, Gurr (1970) stated that merely increasing the educational level increases the likelihood of relative deprivation if the level of actual achievements remains the same.

The gap between education and work status can clearly be seen in descriptive statistics. When DHKP/C members' education was tabulated against their work status it was seen that there was a substantial gap between education

and work status (Appendix N). Accordingly, almost all (95.5%) of those who had some university education were unemployed. Likewise, almost three-fourths (74%) of those who had some high school education were unemployed. On the other hand, the (average) national unemployment rate was 29 percent for university graduates and 31 percent for high school graduates between 1990 and 1999 (TUIK, 2008)<sup>40</sup>. The above figures suggested that an average DHKP/C member with some university education was 3 times more likely to be unemployed than an average citizen in the same educational category. Similarly, an average DHKP/C member with some high school education was 2.5 times more likely to be unemployed than an average citizen in the same educational category. In short, there was some evidence showing that certain DHKP/C terrorists may have experienced relative deprivation due to the large discrepancy between their educational levels and work status.

On the other hand, the test for Turkish Hezbollah members showed that the arrest was not related to relative deprivation. Thus, the null hypothesis was rejected for Turkish Hezbollah members. Furthermore, education did not bring about a significant increase in the probability of arrest when the effect of work status was controlled (Table 11). Indeed, descriptive statistics suggested some evidence for relative deprivation for Hezbollah members. Accordingly, when work status was tabulated against the education level, it was clear that there was no

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<sup>40</sup> The above years represent a period of time when most autobiographies were submitted (Teymur, 2007). Therefore, the above national unemployment rate reflected a 10-year average. Furthermore, almost four-fifths (79%) of all DHKP/C members were between the ages of 14 and 25 as of the date they reported their autobiographies (Table 8). Therefore, national rates reflected the unemployment rate for those between the ages of 15 and 24.

unemployed person among those who had a university education (Appendix O). On the other hand, the unemployment rate for those who had some high school education was 57 percent. This was 26 percent higher than the (average) national unemployment rate of 31 percent for high school graduates and suggested that some Turkish Hezbollah members may have experienced a relative deprivation. However, the gap between education and work status, or relative deprivation, did not seem to have an impact on the probability of arrest.

Although the model for DHKP/C members was significant, the results should be taken with caution in several respects. First, there was no time order between dependent and independent variables. Whether unemployment preceded arrest or arrest preceded unemployment was not known. Thus, there was no way to establish a time order between cause and effect. Second, the model is incomplete in the sense that it might not be including all variables relevant to relative deprivation. For instance, it lacked information on the length of unemployment. Furthermore, people might feel relative deprivation at a different level depending on their own specific conditions<sup>41</sup>. For instance, an unemployed university graduate might still not feel relatively deprived if supported by his family. Likewise, relative deprivation might not affect a female terrorist as it affects a male terrorist. Third, variables lacked some quality. However, Sageman (2004)'s descriptive analysis of the Salafi Mujahidin

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<sup>41</sup> Social class, age, gender, and marital status were used as control variables to test whether the relationship between arrest versus education and work status still exist controlling for these variables.

measured relative deprivation based on a comparison between the type of education and occupational skills. Such a comparison might be more relevant to relative deprivation. However, both Sageman's (2004) and this study try to construct a psychological process (deprivation) using variables that are collected from secondary sources. This can be considered a threat to the validity of its construct. On the other hand, given the difficulties in data collection methods, terrorism researchers are constrained with the information available in secondary sources. This analysis is original in the sense that it attempted to measure Gurr's (1970) aspirational deprivation using terrorists' own accounts on their education levels and work status.

#### Hypothesis 10

*Frustration has a significant effect on the probability of involvement in terrorist activities controlling for age, gender, and marital status.*

This hypothesis examined the relationship between arrest and frustration. The result showed that the null hypothesis that arrest is not related to frustration can be rejected for DHKP/C members. The test for DHKP/C members showed that arrest is significantly related to the combined effect of *dropout*, *loss*, and *familyarrest* controlling for *age* and *maritalstatus*. This was not surprising given that almost one half of all DHKP/C members had at least one negative life experience in the form of loss of a loved one, school dropout, and family arrest (Table 8). This suggested that those who faced such an experience may have felt frustration against the authority blaming it for their suffering. According to the

model, only *dropout* significantly predicted arrest when other variables (including control variables) were held constant<sup>42</sup>. The individual effect of *loss* and *familyarrest* was not significant. Despite their statistical insignificance, the effect size for both *loss* and *familyarrest* was not small (Table 12).

Hypothesis testing for Hezbollah showed that there is a significant relationship between frustration factors and probability of arrest. Hence, the null hypothesis can also be rejected for Turkish Hezbollah members. However, *loss* and *dropout* combined only explained 5 percent of the changes in the probability of *arrest*, which was very small. This indicated that there was some evidence showing that Turkish Hezbollah members were frustrated. Yet, there might be some other variables that were not included in the model that may account for the rest of the variance in *arrest*.

Although there was no bivariate relationship between *loss* and *arrest* for Turkish Hezbollah members, the individual effect of *loss* on *arrest* was significant when it was controlled by *dropout* (along with *age* and *maritalstatus* as control variables) (Table 10). This can be attributable to what researchers call a suppressor effect. This occurs in a multivariate model when a variable increases the predictive capacity of another variable (MacKinnon, Krull, & Lockwood, 2000). In the frustration model for Turkish Hezbollah, the inclusion of *dropout*

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<sup>42</sup> The reason for the insignificant effect for *loss* and *familyarrest* can be attributable to the sensitivity of the Wald test to the small sample size. As mentioned in Chapter IV, although the sample size was acceptable, it was still at the margin to conduct a logistic regression analysis. When the sample size is small, the risk of running a large standard error is high. This in turn lowers the significance of the effect for some variables depending on their distribution across the categories of dependent variable.



seemed to increase the predictive capacity of *loss*. When *arrest* is tabulated against *loss* controlling for *dropout*, it was seen that the probability of arrest rose to 83 percent for non-dropout Hezbollah members who had a loss (Appendix P). For other categories such as non-dropouts who had no loss, dropouts who had no loss, and dropouts who had loss, the probability of arrest ranged between 45 to 60 percent. However, there was neither a prior assumption nor a theoretical explanation as to why probability of arrest was high for those non-dropout Turkish Hezbollah members who had a loss. If, however, the probability of arrest had been high for dropouts who had a loss, this would have been attributable to the cumulative effect of frustration. Therefore, the suppression effect here seems to be illusory (Pearl, 2000). In other words, the predictive capacity of *loss* was inflated when it was controlled by *dropout* in the same model. As a result, the significance of the frustration model for Turkish Hezbollah members was suspect.

As can be seen in the above discussion, the frustration model seems to have an adequate fit for the DHKP/C dataset but not for the Turkish Hezbollah dataset. Several factors might be responsible for the differences between model fits. First, in the Turkish Hezbollah dataset the data regarding the family arrest was missing. Second, as seen in descriptive statistics (Table 8), there were considerable differences between the DHKP/C and Turkish Hezbollah in the number of terrorists who had some negative life experiences. For instance, school dropouts accounted for 47 percent of all DHKP/C members but only 10 percent of all Turkish Hezbollah members. Those who had a loss in a counter-

terrorism operation accounted for 40 percent of all DHKP/C members but only 16 percent of all Turkish Hezbollah members. As a result, the model seemed to have a better fit for the arrest of DHKP/C members.

Although there was a good model fit for DHKP/C members, the results should be interpreted with caution in some respects. First, it is difficult to establish a causal relationship between frustration factors and arrest. The data reflects a cross-section of family arrest, school dropout, loss and arrest. As in the relative deprivation model, there was no time order between dependent and independent variables. Second, the reason for school dropout was uncertain even though the number of terrorists who dropped out of school accounted for almost half of all DHKP/C members. Third, this study assumes that frustration that instigates aggression and involvement in terrorist activities is a form of aggression. However, as Dollard et al. (1939) pointed out, aggression may be inhibited and frustration may result in covert aggression. In other words, the probability of involvement in terrorist activities may still be low for some terrorists although they had some negative life experiences. Finally, all three frustration factors lack the quality of showing the degree of frustration. Frustration is assumed based merely on the existence of any of these factors. On the other hand, as cited earlier, Miller et al. (1941) suggested that “simply occurrence or existence of a frustrating event” is a sufficient, if not a necessary, condition for aggression. As a result, the model explained some of the variance in arrest for

DHKP/C members. If only the sample size was large, the significance of the overall model and individual variables would be higher.

### Hypothesis 11

*Social learning has a significant effect on the probability of involvement in terrorist activities controlling for age, gender, and marital status.*

This hypothesis tested whether the probability of arrest is related to social learning. The result showed that the null hypothesis can be rejected for DHKP/C members. The analysis for DHKP/C indicated that the probability of involvement in terrorist activities is significantly related to the combined effect of social learning factors controlling for *age* and *gender*. This was expected given the facts that more than half of all DHKP/C members (56%) had a family member associated to a terrorist group and that more than two-thirds (69%) were recruited either by a friend or relative (Table 8). The significance of the overall model showed that social learning is possible for terrorists. Hypothesis testing concerning the individual effects of *familyassociation* and *recruitment* indicated that only recruitment by relatives significantly contributed to the model. On the other hand, the individual effects of family association with a terrorist group and recruitment by friends did not contribute to the model<sup>43</sup>. Indeed, the recruitment method was a more precise measurement of social learning than family

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<sup>43</sup>However, as mentioned earlier, *familyassociation* and *arrest* had a significant bivariate relationship. This relationship was probably controlled by *recruitment* (or by one of the categories of *recruitment*). Hypothesis testing for individual effects showed that much of the variance which is attributed to the social learning model is explained by *recruitment* rather than by *familyassociation*.

association with a terrorist group as it (recruitment by relatives) also implies family association. Further, when *familyassociation* was tabulated against *recruitment*, it was seen that of the DHKP/C members who reported that they were recruited by their relatives, almost all (94%) had a family association (Appendix R). This indicated that inclusion of *familyassociation* in the social learning model was redundant.

Hypothesis testing for Hezbollah showed that there is no significant relationship between social learning factors and probability of arrest. That is, the social learning model did not fit well with the behaviors of Hezbollah terrorists. Hypothesis tests concerning the individual effects of family association and recruitment were not conducted as the overall model was not statistically significant.

Overall, the social learning model, like the relative deprivation and frustration models, was able to explain some of the variation in the probability of arrest for DHKP/C members but not for Turkish Hezbollah members. This time, however, the difference between the model for DHKP/C and the model for Turkish Hezbollah cannot be attributable to the inadequate number of terrorists who had a family association with a terrorist group and who were recruited either by a friend or by a relative. As seen in Table 8, those who had a family association with a terrorist group accounted for 37 percent; those who were recruited by a friend accounted for 35 percent; and those who were recruited by a relative accounted for 34 percent of all Turkish Hezbollah members. As seen

by these figures, there was an adequate number of cases in each category. However, social learning, like relative deprivation and frustration, fell short in explaining the probability of arrest (or level of involvement) for Turkish Hezbollah members.

This was probably due to the differences between the DHKP/C and Turkish Hezbollah in their modus operandi. Compared to DHKP/C members, Turkish Hezbollah members act more clandestinely. This is because of the operational tactics adopted by the Turkish Hezbollah. As mentioned earlier, the Turkish Hezbollah has two operational units: military and political (Sevinc, 2008). Tactically, these units carry out their operations clandestinely and never engage in social activities. Contrary to the Turkish Hezbollah, the DHKP/C has three operational units: military, political, and legal. Tactically, military and political units carry out their operations clandestinely, while legal units engage in social activities.

These tactical differences between the Turkish Hezbollah and DHKP/C, in turn, determine the level of involvement in terrorist activities for individual terrorists. As the Turkish Hezbollah acts more clandestinely, its militants act more on a professional basis. In other words, Hezbollah terrorists have little room to act independently from their leaders. On the other hand, the DHKP/C does not entirely act clandestinely. It has a number of legal units in which members in such units act on a non-professional basis. Thus, DHKP/C terrorists, especially those acting on a non-professional basis, have larger room to make their own

decisions with respect to whether to act in specific situations or not. As a result, much of the variance in the probability of involvement in terrorist activities for Turkish Hezbollah members can probably be explained by organizational factors such as organizational status and task in the organization rather than by individual factors such as work and educational status.

### Hypothesis 12

*There was no difference in social class levels between the groups of arrested DHKP/C and arrested Turkish Hezbollah members.*

This hypothesis was constructed to test whether there was any difference in social class levels between arrested DHKP/C and arrested Turkish Hezbollah members. However, it could not be tested due to the unavailability of data concerning the social class of Turkish Hezbollah members.

### Hypothesis 13

*There was no difference in education levels between the groups of arrested DHKP/C and arrested Turkish Hezbollah members.*

This hypothesis tested whether there is a difference in education levels between the groups of arrested DHKP/C and arrested Turkish Hezbollah members. The result showed that the null hypothesis that there is no difference in education between these two groups can be rejected. As seen in Table 15, those who had some university education account for 37 percent of all arrested DHKP/C members, but only 3 percent of Turkish Hezbollah members.

The difference in educational level between these two groups of arrested terrorists can be attributed to the differences in the educational level of cities where DHKP/C and Turkish Hezbollah members mostly live. Accordingly, the DHKP/C usually operates in urban areas, such as Ankara, Istanbul, and Izmir. Compared to the general population, people living in these cities have higher educational levels. For instance, those who have a high school and/or university diploma account for 22 percent of the general population. However, those who have the same educational level account for 36 percent of the Ankara , 31 percent of the Istanbul, and 27 percent of the Izmir populations (TUIK, 2008). On the other hand, the Turkish Hezbollah mostly operates in the south-eastern part of Turkey, such as Diyarbakir, Van, Mardin, and Batman, where the educational levels of people are lower than those of the general Turkish population. Those who have a high school and/or university diploma account for 7.6 percent of the Diyarbakir, 10 percent of the Van, and 12 percent of both the Mardin and Batman populations (TUIK, 2008)<sup>44</sup>. These figures suggested that the difference in education between arrested DHKP/C and arrested Hezbollah members can be related to the overall education levels in cities where they mostly operate.

#### Hypothesis 14

*There was no difference in work status between the groups of arrested DHKP/C and arrested Turkish Hezbollah members.*

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<sup>44</sup> The above educational figures reflect the statistics for 2008. The statistics for the years between 1990 and 1999 were not available.

Hypothesis 14 tested whether there was a difference in work status between arrested DHKP/C and arrested Turkish Hezbollah members. The result indicated that the null hypothesis that there is no difference between these groups can be rejected. As seen in Table 15, the unemployment rate was 27 percent higher for arrested DHKP/C members than for arrested Turkish Hezbollah members (79% vs. 52%). On the other hand, the full-time working rate was 29 percent less for arrested DHKPC members than for Turkish Hezbollah members (10% vs. 39%).

The above figures suggested that the difference in unemployment rates in cities where these two groups mostly operate may account for the difference in unemployment rates of their members. Accordingly, the average unemployment rates for those who are between the ages of 14 and 25 was 12 percent in cities (Ankara, Istanbul, Izmir, and Adana) where DHKP/C members mostly live; whereas the average unemployment rate for the same age group was 14 percent in cities where Turkish Hezbollah members mostly live (Diyarbakir, Mardin, Van, and Batman)<sup>45</sup>. This suggested that city of residency does not account for the difference in unemployment rates between the groups of arrested DHKP/C and arrested Turkish Hezbollah members.

Alternatively, the unemployment rate by educational level may account for some of the differences in the unemployment rates between these two groups

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<sup>45</sup> As seen in the descriptive statistics (Table 8), on average, three-fourths of all DHKP/C (78%) and more than two-thirds of all Turkish Hezbollah (71%) members were between the ages of 14 and 24 at the time when they wrote their autobiographies. Therefore, the unemployment rates of cities were measured for this age group. In addition, the above unemployment statistics reflect the statistics for the years between 1990 and 1999.



because unemployment rates may vary by education levels. Accordingly, in cities where Turkish Hezbollah members mostly operate, the average unemployment rate was 22 percent for those who have a high school diploma; whereas in cities where DHKP/C mostly operates the average unemployment rate was 28 percent for the same educational level. These figures indicated that high school graduates are more likely to be unemployed in big cities where the DHKP/C mostly operates than high school graduates in cities where the Turkish Hezbollah mostly operates. Considering that most DHKP/C and Turkish Hezbollah members had a high school diploma, this may account for some of the differences in unemployment rates between these two groups. However, the difference was not that large as to account for all the difference in the unemployment rates between arrested DHKP/C and arrested Hezbollah members. On the other hand, the above two explanations are based on the assumption that employed terrorists seek job opportunities. However, DHKP/C members might be ignorant about their unemployment status. They might care more about the tasks given by the organization.

#### Hypothesis 15

*Arrested DHKP/C and arrested Turkish Hezbollah members were not different when compared in respect to having a loved one killed in a counter-terrorism operation.*

This hypothesis tested whether there was a difference between the groups of arrested DHKP/C and arrested Turkish Hezbollah members in terms of having

a loved one killed in a counter-terrorism operation. The results showed that the null hypothesis that there is no relationship can be rejected. As seen in Table 15, arrested DHKP/C members were 33 percent more likely to have a personal loss in a counter-terrorism terrorism operation than arrested Turkish Hezbollah members (54% vs. 21%). The difference between these two groups can be attributed to the difference in the number of terrorists killed from both sides. According to official statistics of the Turkish National Police, between 1994 and 2006, 186 DHKP/C members were killed as opposed to 22 Turkish Hezbollah members (TNP, 2006). These figures suggested that DHKP/C members are more likely to have a loved one killed in a counter-terrorism operation than Hezbollah members.

#### Hypothesis 16

*There was no difference in school dropout rates between the groups of arrested DHKP/C and arrested Turkish Hezbollah members.*

This hypothesis tested whether there was a difference in school dropout rates between the groups of arrested DHKP/C and arrested Turkish Hezbollah members. The results showed that the null hypothesis that there was no difference in school dropout rates between these two groups can be rejected. As seen in Table 15, the probability of school dropout for arrested DHKP/C members was 42 percent higher than for arrested Turkish Hezbollah members (55% vs. 13%). The difference can be attributable to the difference in recruitment strategies between the DHKP/C and Turkish Hezbollah. As aforementioned, high

schools and universities are not the primary recruitment grounds for the Turkish Hezbollah. Therefore, Hezbollah members do not carry out any political activities in schools. This, in turn, eliminates the probability of dropping out of school due to the expulsion or suspension for carrying out illegal political activities.

#### Hypothesis 17

*Arrested DHKP/C and arrested Turkish Hezbollah members were not different when compared with respect to having an arrested family member.*

This hypothesis was constructed to test whether there was a difference in family arrest between the groups of arrested DHKP/C and arrested Turkish Hezbollah members. However, it could not be tested due to the unavailability of data concerning the family arrest of Turkish Hezbollah members.

#### Hypothesis 18

*Arrested DHKP/C and arrested Turkish Hezbollah members were not different when compared with respect to having a family member associated with a terrorist group.*

Hypothesis 18 tested whether arrested DHKP/C and arrested Turkish Hezbollah members were different in terms of having a family association to a terrorist group. The results showed that the null hypothesis that there is no difference can be rejected. As seen in Table 15, of all the arrested DHKP/C members almost three-fourths (73%) had a family association, while of all the

arrested Turkish Hezbollah members less than a half (44%) had a family association with a terrorist group. The result can be attributed to the differential effects of social learning. In other words, social learning was not as effective in Turkish Hezbollah members' involvement in terrorist activities as it was in DHKP/C members' involvement. While a majority (56%) of DHKP/C members had a family association with a terrorist group, less than a majority (37%) of Turkish Hezbollah members had such an association (Table 8).

### Hypothesis 19

*There was no difference in recruitment methods between the groups of arrested DHKP/C and arrested Turkish Hezbollah members.*

This hypothesis tested whether there was a difference in recruitment methods between the groups of arrested DHKP/C and arrested Turkish Hezbollah members. The result showed that the null hypothesis that there was no difference between these two groups can be rejected. As seen in Table 15, a majority (60%) of the DHKP/C members was recruited by relatives or families. On the other hand, most (39%) of the Turkish Hezbollah members were recruited by friends.

The difference between the DHKP/C and Turkish Hezbollah in the relative importance of recruitment methods can be attributable to the difference in their recruitment strategies. As mentioned earlier, the DHKP/C is more active in terms of mobilizing the families and relatives of their recruits. The DHKP/C recruits families of their members to form a public opinion conducive to their desired

actions. For instance, the DHKP/C and other leftist terrorist groups once organized a campaign named “Saturday Mothers” to protest against the disappearances of their relatives by blaming the security forces for the responsibility. During this campaign, “Saturday Mothers” gathered on every Saturday at the same place holding the pictures of their missing relatives. The purpose was to draw domestic and international attention to their struggle with the Turkish government. This is only one of the many examples that show the DHKP/C’s ability to recruit the families and relatives of their members. The Turkish Hezbollah, however, has no such recruitment strategies. They do not choose to mobilize the families of their members because they do not have such concern to form a public opinion on their struggles. Unlike the DHKP/C, the Turkish Hezbollah is not involved in social activities. The modus operandi is based on illegal activities. As a result, for Turkish Hezbollah members, recruitment by family members and relatives is secondary when compared to recruitment by friends.

Table 16: Summary of Research Findings

Variables	Key Findings
<b>Social Class</b>	<ul style="list-style-type: none"> <li>• No significant difference in arrest between classes</li> </ul>
<b>Education</b>	<ul style="list-style-type: none"> <li>• Arrest increased as education increased for DHKP/C</li> <li>• No significant difference for Hezbollah members</li> </ul>
<b>Work status</b>	<ul style="list-style-type: none"> <li>• Arrest was higher for unemployed DHKP/C members</li> </ul>
<b>School Dropout</b>	<ul style="list-style-type: none"> <li>• No significant difference for Hezbollah members</li> <li>• Arrest was higher for dropout DHKP/C members</li> </ul>
<b>Loss of a Loved One</b>	<ul style="list-style-type: none"> <li>• Arrest was higher for DHKP/C member who lost loved one</li> </ul>
<b>Family Arrest</b>	<ul style="list-style-type: none"> <li>• No significant difference for Hezbollah members</li> <li>• Arrest was higher for DHKP/C member who had family arrest</li> </ul>
<b>Family Association</b>	<ul style="list-style-type: none"> <li>• No significant difference for Hezbollah members.</li> <li>• Arrest was higher for DHKP/C members who had a family association</li> </ul>
<b>Recruitment Method</b>	<ul style="list-style-type: none"> <li>• No significant difference for Hezbollah members</li> <li>• Arrest was higher for DHKP/C members who were recruited by families and relatives</li> </ul>
<b>Relative Deprivation</b>	<ul style="list-style-type: none"> <li>• No significant difference for Hezbollah members</li> <li>• Model fit to DHKP/C data. Relative deprivation accounts for 34% of the change in arrest</li> </ul>
<b>Frustration</b>	<ul style="list-style-type: none"> <li>• Model did not fit Hezbollah data</li> <li>• Model fit to DHKP/C data. Frustration accounts for 29% of the change in arrest</li> </ul>
<b>Social Learning</b>	<ul style="list-style-type: none"> <li>• The model did not fit Hezbollah data</li> <li>• Model fit to DHKP/C data. Social learning accounts for 23% of the change in arrest</li> </ul>
<b>Arrested DHKP/C vs. Arrested Hezbollah</b>	<ul style="list-style-type: none"> <li>• The model did not fit Hezbollah data.</li> <li>• Compared to arrested Hezbollah members, arrested DHKP/C members were <ul style="list-style-type: none"> <li>○ more educated;</li> <li>○ had a higher unemployment rate;</li> <li>○ had a higher dropout rate;</li> <li>○ had a higher rate of loss;</li> <li>○ had a higher rate of family association; and</li> <li>○ recruited by families and relatives as opposed to friends and other means</li> </ul> </li> </ul>

## Theoretical Implications

Terrorism studies suffer from lack of theoretical guidance that can help identify one's path to terrorism. Most of the theories applied to the field were adapted from other disciplines such as psychology or political science. This section aims to connect the findings of the current research to the theoretical explanations for involvement in terrorist activities. The findings support the following theories of human behaviors: Relative deprivation, stake in conformity, frustration-aggression, and social learning.

### *Relative Deprivation*

The results of Hypothesis 2, 3 and 9 (the relative deprivation model for DHKP/C members) were consistent with Gurr's (1970) aspirational deprivation. Accordingly, Gurr (1970) asserted that a person may feel relatively deprived if he has no means to attain increasing and intensifying expectations. In Gurr's (1970) opinion, traditional people's mere exposure to education increases their expectations. Such an increase in expectations may cause a relative deprivation if the level of achievement remains the same. The relative deprivation model for DHKP/C members showed that Gurr's aspirational deprivation can be tested as the difference between education and work (employment) status.

### *Stake in Conformity*

The results of Hypothesis 3 for DHKP/C members were consistent with Toby's stake in conformity theory. The difference in arrest rates of unemployed

DHKP/C members versus working-full-time and working part-time DHKP/C members implied that some of the DHKP/C members who had a job had a stake in conformity and they did not want to jeopardize their stakes by engaging in terrorist activities. Toby's stake in conformity theory asserts that those who have a lot to lose would have a fear of being arrested and therefore are less likely to engage in deviance. There are two components of stake in conformity: the individual's emotional attachment to traditional others and their actual and expected investment in the traditional society. If an individual has strong emotional ties to traditional others such as families and relatives or invests in socially valued objectives such as education and business, they have a lot to lose if they engage in crime. Tests for work status versus arrest indicated that stake in conformity is also possible for terrorists.

#### *Frustration-Aggression*

The findings from Hypothesis 4, 5, 6 and 10 were consistent with Dollard's et al.'s frustration-aggression hypothesis. The frustration-aggression hypothesis may explain why some terrorists have a lesser involvement as opposed to some others who have a greater involvement in terrorism. Some terrorists join a terrorist organization simply because they are politically discontented from the existing regime. Those who are politically discontented may prefer to keep a low profile and participate in less risky activities. Having political discontent only may be what Berkowitz (1962) calls as simple deprivation rather than frustration. A politically deprived person may prefer to overcome his deprivation by joining a



terrorist organization. However, he may not be willing to take this further especially if he has a stake in conformity such as having a regular job or education. In such a situation, the involvement level is expected to be low.

On the other hand, some terrorists are already ready for terrorist activities of all kinds when they are first recruited. Mostly, these terrorists inherit their motivations from their family, relatives, and associates. This group of terrorists can be categorized under two subgroups: (1) Those who are motivated positively by learning a terrorist ideology from their close associates; and (2) Those who are motivated negatively by experiencing a frustrating event in their life such as school dropout, death or arrest of a family member or a close associate. Those in the second group develop frustration against government if they are convinced that government has the primary responsibility for their suffering. When such individuals are recruited into a terrorist organization, they may prefer to keep a high profile and participate in more risky activities.

Bivariate analysis of arrest versus dropout, loss, and familyarrest for DHKP/C members indicated that each of these negative life experiences is a potential frustration factor. Likewise, multivariate analysis of the frustration model for DHKP/C members showed that the combined effect of dropout, loss, and familyarrest accounts for 28 percent of the changes in arrest. The significance of the combined effect supported the proposition that frustration develops cumulatively (Dollard, 1939).

### *Social Learning*

The finding that DHKP/C members who had a family association had a greater involvement in terrorist activities supported Sutherland's (1947) differential association theory. Sutherland (1947) asserted that criminal behaviors are learned in intimate groups. Accordingly, family and friends are the two prominent intimate groups in which a person learns criminal behaviors. The multivariate model of social learning for DHKP/C members explained 23 percent of the changes in arrest. The analysis showed that the recruitment method, as a variable, is a more direct measurement of learning than family association. This variable also significantly distinguished between the methods of recruitment. The results showed that the DHKP/C uses families and relatives more than friends in recruitment and that those who were recruited by families and relatives had a greater involvement level when compared to those who were recruited by friends and by other means (in prisons or by reading the organization's publications). This finding was also consistent with what Sageman (2004) defined as the bottom-up recruitment approach. In this method of recruitment, terrorists are recruited through reliable agents rather than those assigned for recruiting new members. On the other hand, recruitment by friends did not distinguish terrorists by their involvement level.

## Policy Implications

The results of this study have a number of policy implications for policy makers, security forces, and terrorism scholars regarding sources of deprivation, frustration, and learning for terrorists. Besides, the data also sheds light on some demographic characteristics of terrorists regarding their age, gender, marital status, education levels, and social class.

1. *Policy makers should consider integrating socially valued goals and means and redistribution of opportunities.*

Education is one of the factors that distinguish terrorists in terms of their involvement level in terrorist activities. A bivariate analysis of the relationship between involvement in terrorism and education, however, helps little to understand the origins of the problem. The relative deprivation model, on the other hand, suggested that education alone does not suffice to solve economic problems, but individuals should be given employment opportunities consistent with their education. The national statistics in Turkey showed that schooling ratio (ratio of the total number of students in a specific educational category to the population of their age group) in higher education alone doubled for the last decade (increased from 19% in 1997 to 38% in 2007) (TUIK, 2008). However, employment rates for people who had a university degree dropped by 3 percent for the same period (from 75.2% in 1997 to 71% in 2007) (TUIK, 2008). These figures indicated an increase in the number of unemployed people with a university degree. The increasing gap between the education level and

employment opportunities suggest that policy makers should focus on policies that would increase the employment opportunities for educated people.

Otherwise, merely providing an education level without providing employment opportunities would help to increase economic deprivation.

2. *Decisions regarding the expulsion or suspension of students who are charged with participating in illegal activities in or outside the school should be based on a court order rather than on administrative discretion.*

School dropout was another factor that distinguished between the terrorists in terms of their involvement in terrorist activities. Even though the reason was not known, high school dropout rate for DHKP/C members, which was well above the national average (47% vs. 20%), suggested that dropouts probably may have left the school due to expulsion or suspension for participating illegal activities in or outside the school. Prohibiting illegal activities is an important policy for school administrations to maintain educational discipline and keep students focused on their educational objectives. Further, expulsion or suspension of students who are involved in illegal activities can make school environment safer, but expelled and suspended students are likely to have greater involvement in illegal activities. Therefore, decision-making regarding the expulsion or suspension of a student should be based on a court order rather than on administrative discretion. Furthermore, individuals who dropped out of school at some point in their educational career should be given opportunities to complete their education.

3. *Counter-terrorism officers should be trained in communication skills to prevent traumatic implications of arrests that are made in the alleged terrorist's home.*

Another significant finding relates to the arrest of a family member. Arrests that are made in the alleged terrorist's home may have traumatic implications for family members especially for children. Although some socio-demographic factors such as family members' having a prior association with a terrorist organization negatively affect attitudes towards the police, officers' communication skills help reduce incomppliance and establish a positive relationship. Police officers should be trained in communicating with people with different backgrounds and attitudes and in minimizing violent response and excessive use of force in order to prevent collateral damage.

4. *Policies under which personal losses (death) occur should be revised.*

Loss of a loved one is another factor that had an effect on the probability of arrest of DHKP/C members. Even though there are no statistics showing the number of deaths or killed terrorists for specific reasons, it can be assumed that most deaths and killing occurred as a result of a police or military operation. In the past when technical surveillance capacity of the police was weaker than today, raiding terrorist cells was the only way to capture terrorists. Most of the time, terrorists would strike back and not surrender. Most of the casualties from both security forces and terrorists occurred in such police operations. Today the police have more technical capacity to intern terrorists outside their home. Unless

there is an urgent circumstance, police should consider arresting terrorists outside their cells. This would reduce the number of casualties of both police and terrorists. Overall, policies under which personal losses (death) occur should be revised.

### Suggestions for Future Studies

1. *Involvement in terrorist activities should be examined qualitatively to explore the qualitative values of terrorists.*

One of the contributions of this study to the field of terrorism would be to consider involvement in terrorism as a process in a terrorist's life. The study of terrorism, in general, does not distinguish between the different processes of a typical terrorist's life. Most studies centered their focus on who becomes a terrorist or who joins a terrorist organization. The literature review revealed that the process of joining a terrorist organization has long been studied. On the other hand, the process of involvement in terrorism has rarely attracted the attention of terrorism scholars. However, there are many terrorists who act on what this study calls a "non-professional" basis. These terrorists drift in and out of terrorism and maintain a regular lifestyle at the same time. This study revealed, at least for DHKP/C members, that there are some personal factors other than the organizational dynamics that may have an effect on a terrorist's decision to participate in a terrorist activity in which he or she has some freedom. This study extracted potential motivators (personal factors) from the terrorist autobiography

and categorized them under different theoretical frameworks based on the findings of literature and factor analysis.

Obviously, the quantitative nature of measurements provides limited understanding of the qualitative aspects of the motivations. Terrorism scholars should focus on what ways school dropout, family arrest, loss of a loved one and other factors increase the likelihood of participating in terrorist activities. In this sense, future studies should consider the qualitative analysis of the potential motivations of the involvement process. In other words, terrorism scholars should focus on understanding the mindset of a typical terrorist rather simply describing certain characteristics. This can be achieved through qualitative research methods such as field observations. Researchers should observe the culture in which individuals are exposed to the definitions that are favorable to terrorism.

*2. Theoretical models can be improved.*

Theoretical models used in this study can be improved. For relative deprivation, the categorical nature of work status and education may probably have caused a significant information loss. However, future studies can employ more reliable measures for education and work status. For instance, researchers can compute a relative deprivation score based on education and work status. If relative deprivation is the discrepancy between expectation and achievements, the difference between the values (scores) of education and work status should result in a relative deprivation value (score). Since these two variables are not measuring the same concept, mathematical subtraction should base the z-score

of each one. For frustration, another score can be computed by taking the cumulative scores of frustration measures. Alternatively, when testing a frustration model for a given outcome, frustration variables should be entered into analysis hierarchically. That way a researcher can measure the relative weight of each frustration variable.

3. *Quantitative findings should be interpreted through qualitative findings.*

This study lacks qualitative analysis. However, most of the findings warranted qualitative data for further clarification. Future studies should include actual statements of terrorists. These statements can be obtained from secondary sources such as biographies and autobiographies or primary sources such as interviews with terrorists. Qualitative analysis would help the researcher understand how relative deprivation, frustration, and social learning processes work in practice. Thus, a researcher can use more reliable theoretical models to understand how each of these processes develops and at what points alternative explanations can be used.

### Conclusions

The purpose of this study was two-fold. First, this study attempted to explore the factors that may have an effect on the probability of arrest. To achieve the first objective, 12 different hypotheses were developed. Each hypothesis was tested twice once for DHKP/C members and once for Turkish Hezbollah members. The first eight hypotheses were tested using crosstab analysis with a Pearson chi-square significance test. The results showed that



there were statistically significant differences in the probability of arrest for DHKP/C members in respect to their education, work status, school dropout rates, having a loss of a loved one in a counter-terrorism operation, family arrest records, family association with a terrorist organization, and recruitment methods. However, there were no statistically significant differences in the probability of arrest for Turkish Hezbollah members in respect to any of these variables. The next three hypotheses were designed to test whether the relative deprivation, frustration, and social learning concepts significantly predict the probability of arrest. These hypotheses were tested using logistic regression analysis. The results showed that the relative deprivation, frustration, and social learning model significantly predict the probability of arrest for DHKP/C members. On the other hand, none of these theoretical models significantly predicts the probability of arrest for Turkish Hezbollah members.

Second, this study also examined the similarities and differences between the groups of arrested DHKP/C and arrested Turkish Hezbollah members. To achieve this objective, 8 different hypotheses were developed. These hypotheses were tested using crosstab analysis with a Pearson chi-square significance test. The results showed that there were significant differences between these two groups in respect to their education, work status, school dropout rates, having a loss of a loved one in a counter terrorism operation, having a family association with a terrorist group, and recruitment methods. On the other hand, hypotheses

regarding differences in social class and family arrest could not be tested due to the unavailability of the data for Turkish Hezbollah.

This research has some implications for theory, policy, and future studies. First, the findings supported the relative deprivation, frustration-aggression, and social learning theories and indicated that relative deprivation, frustration, and social learning can be applicable to the behaviors of individual terrorists. Second, the findings suggested that policy makers focus on policies that would integrate social goals and means; revise educational policies concerning the expulsion and suspension of students at schools, train police officers in communication skills, and revise guidelines concerning counter-terrorism operations. Finally, the findings suggested that future research use qualitative research methods to understand the qualitative aspects of terrorists' motivations.

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## Appendices

## Appendix A

## Correlations

		Education	Dropout	Loss	Familyassoc	Familyarrest	Recruitment	Workstat
Education	Pearson Correlation	1	.300**	-.112	-.093	.035	.240	-.181
	Sig. (2-tailed)		.009	.362	.454	.792	.050	.137
	N	74	74	68	67	59	67	69
Dropout	Pearson Correlation	.300**	1	.317**	.058	.059	.272	-.107
	Sig. (2-tailed)	.009		.009	.641	.655	.026	.380
	N	74	74	68	67	59	67	69
Loss	Pearson Correlation	-.112	.317**	1	.329**	.360**	.210	-.098
	Sig. (2-tailed)	.362	.009		.010	.008	.101	.439
	N	68	68	68	61	54	62	64
Familyassoc	Pearson Correlation	-.093	.058	.329**	1	.821**	.240	-.159
	Sig. (2-tailed)	.454	.641	.010		.000	.063	.218
	N	67	67	61	67	54	61	62
Familyarrest	Pearson Correlation	.035	.059	.360**	.821**	1	.333	-.180
	Sig. (2-tailed)	.792	.655	.008	.000		.015	.189
	N	59	59	54	54	59	53	55
Recruitment	Pearson Correlation	.240	.272	.210	.240	.333	1	.050
	Sig. (2-tailed)	.050	.026	.101	.063	.015		.697
	N	67	67	62	61	53	68	63
Workstat	Pearson Correlation	-.181	-.107	-.098	-.159	-.180	.050	1
	Sig. (2-tailed)	.137	.380	.439	.218	.189	.697	
	N	69	69	64	62	55	63	70

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

## Appendix B

<b>Familyarrest * Familyassoc Crosstabulation</b>					
		Familyassoc			
		No	Yes	Total	
Familyarrest	No	Count	18	5	23
		% within Familyarrest	78.3%	21.7%	100.0%
	Yes	Count	0	31	31
		% within Familyarrest	.0%	100.0%	100.0%
Total		Count	18	36	54
		% within Familyarrest	33.3%	66.7%	100.0%

## Appendix C

<b>Outlier Statistics<sup>a</sup></b>			
		Case Number	Statistic
Mahal. Distance	1	60	18.061
	2	73	16.846
	3	75	14.920
	4	58	13.300
	5	57	11.335
	6	74	10.408
	7	59	10.362
	8	38	9.815
	9	31	9.755
	10	13	8.901

a. Dependent Variable: Arrest

## Appendix D

<b>KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.495
Bartlett's Test of Sphericity	Approx. Chi-Square	34.926
	df	15
	Sig.	.000

## Appendix E

## Correlations

		Education	Dropout	Loss	Familyassoc	Recruitment	Workstat
Education	Pearson Correlation	1	.237**	.019	.103	-.036	-.022
	Sig. (2-tailed)		.007	.836	.254	.693	.825
	N	129	129	127	124	125	101
Dropout	Pearson Correlation	.237**	1	.231**	.024	-.028	-.044
	Sig. (2-tailed)	.007		.009	.788	.753	.663
	N	129	129	127	124	125	101
Loss	Pearson Correlation	.019	.231**	1	-.066	-.065	.063
	Sig. (2-tailed)	.836	.009		.448	.450	.505
	N	127	127	141	133	137	114
Familyassoc	Pearson Correlation	.103	.024	-.066	1	-.068	-.084
	Sig. (2-tailed)	.254	.788	.448		.436	.388
	N	124	124	133	136	132	109
Recruitment	Pearson Correlation	-.036	-.028	-.065	-.068	1	.069
	Sig. (2-tailed)	.693	.753	.450	.436		.474
	N	125	125	137	132	139	111
Workstat	Pearson Correlation	-.022	-.044	.063	-.084	.069	1
	Sig. (2-tailed)	.825	.663	.505	.388	.474	
	N	101	101	114	109	111	115

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



## Appendix F

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.496
Bartlett's Test of Sphericity	Approx. Chi-Square	13.590
	df	15
	Sig.	.557

## Appendix G

**Univariate Statistics**

	N	Mean	Std. Deviation	Missing		No. of Extremes <sup>b</sup>	
				Count	Percent	Low	High
Arrest	72	.72	.451	3	4.0	0	0
Gender	75	.67	.475	0	.0	0	0
Age	75	23.43	5.875	0	.0	0	6
Education	74	2.85	1.016	1	1.3	0	0
Maritalstatus	75	.11	.311	0	.0	.	.
Socialclass	65	2.80	1.492	10	13.3	0	0
Dropout	74	.47	.503	1	1.3	0	0
Familyarrest	59	.58	.498	16	21.3	0	0
Loss	68	.44	.500	7	9.3	0	0
Familyassoc	67	.63	.487	8	10.7	0	0

a. . indicates that the inter-quartile range (IQR) is zero.

b. Number of cases outside the range (Q1 - 1.5\*IQR, Q3 + 1.5\*IQR).

## Appendix H

**EM Means<sup>a</sup>**

Arrest	Gender	Age	Education	Maritalstatus	Socialclass	Dropout	Familyarrest	Loss	Familyassoc
.72	.68	23.58	2.83	.10	2.73	.48	.55	.44	.64

a. Little's MCAR test: Chi-Square = 92.618, DF = 95, Sig. = .550

## Appendix I

Separate Variance t Tests<sup>a</sup>

	Arrest	Socialclass	Familyarrest	Loss	Familyassoc
t	.6	.	.4	-1.1	.3
df	8.3	.	9.0	8.8	7.2
P(2-tail)	.582	.	.672	.311	.778
Socialclass					
# Present	64	65	51	60	60
# Missing	8	0	8	8	7
Mean(Present)	.73	2.80	.59	.42	.63
Mean(Missing)	.63	.	.50	.63	.57
t	-6	-5	.	.7	1.3
df	20.9	19.8	.	20.5	17.2
P(2-tail)	.547	.592	.	.487	.211
Familyarrest					
# Present	58	51	59	54	54
# Missing	14	14	0	14	13
Mean(Present)	.71	2.75	.58	.46	.67
Mean(Missing)	.79	3.00	.	.36	.46
t	-1.0	.6	1.9	.	-.2
df	8.0	4.5	4.9	.	5.9
P(2-tail)	.359	.601	.109	.	.849
Loss					
# Present	65	60	54	68	61
# Missing	7	5	5	0	6
Mean(Present)	.71	2.83	.61	.44	.62
Mean(Missing)	.86	2.40	.20	.	.67
t	-1.2	-.3	-.1	-.7	.
df	10.2	4.8	4.6	7.3	.
P(2-tail)	.240	.757	.923	.514	.
Familyassoc					
# Present	64	60	54	61	67
# Missing	8	5	5	7	0
Mean(Present)	.70	2.78	.57	.43	.63

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Mean(Missing)	.87	3.00	.60	.57	.
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For each quantitative variable, pairs of groups are formed by indicator variables (present, missing).

a. Indicator variables with less than 5% missing are not displayed.

## Appendix J

### Univariate Statistics

	N	Mean	Std. Deviation	Missing		No. of Extremes <sup>b</sup>	
				Count	Percent	Low	High
Arrest	138	.49	.502	6	4.2	0	0
Gender	144	1.01	.083	0	.0	.	.
Age	132	19.08	5.154	12	8.3	0	3
Maritalstatus	140	.30	.460	4	2.8	0	0
Education	129	2.42	.966	15	10.4	0	0
Dropout	129	.11	.312	15	10.4	.	.
Loss	141	.16	.371	3	2.1	.	.
Familyassoc	136	.39	.489	8	5.6	0	0

a. . indicates that the inter-quartile range (IQR) is zero.

b. Number of cases outside the range (Q1 - 1.5\*IQR, Q3 + 1.5\*IQR).

## Appendix K

### EM Means<sup>a</sup>

Arrest	Gender	Age	Marital_rec	Educ_rec	Dropout	Loss	Familyasso c
.48	1.01	19.05	.30	2.41	.11	.16	.39

a. Little's MCAR test: Chi-Square = 93.165, DF = 82, Sig. = .188

## Appendix L

		Separate Variance t Tests <sup>a</sup>				
		Arrest	Age	Educ_rec	Dropout	Familyassoc
Age	t	1.6	.	.0	.0	.9
	df	12.1	.	9.1	9.1	12.0
	P(2-tail)	.143	.	.938	.981	.405
	# Present	127	132	120	120	125
	# Missing	11	0	9	9	11
	Mean(Present)	.50	19.08	2.42	.11	.40
	Mean(Missing)	.27	.	2.44	.11	.27
Education	t	1.0	-3.2	.	.	.4
	df	16.1	11.9	.	.	13.2
	P(2-tail)	.324	.007	.	.	.684
	# Present	124	120	129	129	124
	# Missing	14	12	0	0	12
	Mean(Present)	.50	18.45	2.42	.11	.40
	Mean(Missing)	.36	25.33	.	.	.33
Dropout	t	1.0	-3.2	.	.	.4
	df	16.1	11.9	.	.	13.2
	P(2-tail)	.324	.007	.	.	.684
	# Present	124	120	129	129	124
	# Missing	14	12	0	0	12
	Mean(Present)	.50	18.45	2.42	.11	.40
	Mean(Missing)	.36	25.33	.	.	.33
Familyassoc	t	-.4	-.4	.6	4.0	.
	df	6.6	6.6	4.4	123.0	.
	P(2-tail)	.676	.721	.583	.000	.
	# Present	131	125	124	124	136

# Missing	7	7	5	5	0
Mean(Present)	.48	19.03	2.43	.11	.39
Mean(Missing)	.57	19.86	2.20	.00	.

For each quantitative variable, pairs of groups are formed by indicator variables (present, missing).

a. Indicator variables with less than 5% missing are not displayed.

## Appendix M

### Education \* Socialclass Crosstabulation

		Socialclass					Total
		Under Class	Working Poor	Working class	Lower Middle Class	Upper Middle Class	
Education Primary School	Count	3	1	1	3	1	9
	% within Educ_rec	33.3%	11.1%	11.1%	33.3%	11.1%	100.0%
Middle School	Count	3	2	2	3	1	11
	% within Educ_rec	27.3%	18.2%	18.2%	27.3%	9.1%	100.0%
High School	Count	8	2	2	10	3	25
	% within Educ_rec	32.0%	8.0%	8.0%	40.0%	12.0%	100.0%
University	Count	7	2	5	2	4	20
	% within Educ_rec	35.0%	10.0%	25.0%	10.0%	20.0%	100.0%
Total	Count	21	7	10	18	9	65
	% within Educ_rec	32.3%	10.8%	15.4%	27.7%	13.8%	100.0%

## Appendix N

## Education \* workstatus Crosstabulation

		workstatus1				
		Unemployed	Working Part-time	Working Full-time	Total	
Education	Primary School	Count	8	1	1	10
		% within Education	80.0%	10.0%	10.0%	100.0%
	Middle School	Count	13	0	1	14
		% within Education	92.9%	.0%	7.1%	100.0%
	High School	Count	17	3	3	23
		% within Education	73.9%	13.0%	13.0%	100.0%
	University	Count	21	0	1	22
		% within Education	95.5%	.0%	4.5%	100.0%
Total		Count	59	4	6	69
		% within Education	85.5%	5.8%	8.7%	100.0%

## Appendix O

## Education \* workstat Crosstabulation

			workstat			
			Unemployed	Working Part-time	Working-Fulltime	Total
Education	Primary School	Count	11	3	12	26
		% within Education	42.3%	11.5%	46.2%	100.0%
	Middle School	Count	7	0	7	14
		% within Education	50.0%	.0%	50.0%	100.0%
	High School	Count	32	4	20	56
		% within Education	57.1%	7.1%	35.7%	100.0%
	University	Count	0	1	4	5
		% within Education	.0%	20.0%	80.0%	100.0%
Total		Count	50	8	43	101
		% within Education	49.5%	7.9%	42.6%	100.0%

## APPENDIX P

**Loss \* Arrest \* Dropout Crosstabulation**

Dropout			Arrest			
			No	Yes	Total	
0	Loss	No	Count	53	44	97
			% within Loss	54.6%	45.4%	100.0%
	Yes	Count	2	10	12	
		% within Loss	16.7%	83.3%	100.0%	
	Total	Count	55	54	109	
		% within Loss	50.5%	49.5%	100.0%	
1	Loss	No	Count	4	5	9
			% within Loss	44.4%	55.6%	100.0%
	Yes	Count	2	3	5	
		% within Loss	40.0%	60.0%	100.0%	
	Total	Count	6	8	14	
		% within Loss	42.9%	57.1%	100.0%	

## APPENDIX R

**Recruitment \* Familyassoc Crosstabulation**

Recruitment		Familyassoc		
		Yes	2	Total
Relative	Count	12	4	16
	% within Recruitment	75.0%	25.0%	100.0%
	Friend	Count	2	29
	% within Recruitment	6.5%	93.5%	100.0%
Others	Count	8	6	14
	% within Recruitment	57.1%	42.9%	100.0%
Total	Count	22	39	61
	% within Recruitment	36.1%	63.9%	100.0%



### Vita

Ismail Yilmaz was born in Turkey and is a Turkish citizen. He graduated from Police College, Istanbul, Turkey in 1991. He received his Bachelor of Arts in Criminal Justice from Turkish Police Academy, Ankara, Turkey in 1995 and subsequently assigned to the Ankara Police Department, Ankara, Turkey. After serving 8 years with the Ankara Police Department, he came to the United States for graduate studies. He received a Master of Science in Criminal Justice from University of North Texas in 2005. He taught "Public Policy" as an adjunct faculty at New College Institute (Martinsville, VA) and Virginia Commonwealth University for three semesters. Yilmaz has several publications and has presented at various conferences in the U.S. and abroad.