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Determinants Of The Well-being Of Police Officers In The Turkish National Police

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DETERMINANTS OF THE WELL-BEING OF POLICE OFFICERS IN THE TURKISH NATIONAL POLICE

by

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ABSTRACT

This research evaluates the relationships of time balance, social relations, role conflict, perception of work environment, and fourteen control variables to police officers' well-being in Turkish National Police. Well-being is identified in the management literature as having a strong relationship with performance. Therefore, by finding the factors affecting well-being, this research seeks to identify intervention strategies, which can promote a healthy workforce and police performance. Such interventions, in addition, may improve police performance through improved well-being.

Individual police officers were analyzed to better understand the relationship between work environment on family life, social life, and the well-being of the police officers. A cross-sectional survey was conducted in the seven geographic regions of Turkey for all branches of Turkish National Police. Structural equation modeling (SEM) was used to validate the measurement of latent constructs and their relationships. A 45-item questionnaire collected demographic data and items associated with the latent constructs such as time balance, social relations, role conflict, perception of work environment, and the police officers' well-being. This 45-item questionnaire was based on two survey instruments that have been used by Eurofound in Europe for two decades. The response rate for the questionnaire in this dissertation was 47.14% with 495 respondents out of 1,050 subjects.

The analysis revealed statistically significant relationships between following latent constructs: time balance and well-being (an indirect effect via role conflict), time balance and

social relations, time balance and role conflict, social relations and role conflict, role conflict and well-being, and perception of work environment and well-being. In addition, six control variables (rank, department, optimism, isolation, income sufficiency, and working days per week) were statistically significantly related with well-being. No direct significant relationship was found between time balance and well-being, and social relations and well-being constructs. Eight control variables (gender, marital status, service time, extra work, confusion, region, work type, and working hours per day) had no significant relationship with well-being.

These findings support some commonly expressed complaints of police officers. These findings also suggest that attention should be paid to the effects of time balance, income sufficiency, work environment, and workdays on the well-being of the officers.

I dedicate this study to the people of my country, Turkey.

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LIST OF ACRONYMS/ABBREVIATIONS

AGFI	Adjusted Goodness of Fit Index
AMOS	Analysis of Moment Structure
CFA	Confirmatory Factor Analysis
CN	Hoelter's Critical N
C.R.	Critical Ratio
df	Degrees of Freedom
EQLS	European Quality of Life Survey
EU	European Union
EWCS	European Working Conditions Survey
GFI	Goodness of Fit Index
ILO	International Labor Organization
N or n	Number of subjects
NFI	Norma Fit Index
OECD	Organization for Economic Co-operation and Development
p	Probability
RMSEA	Root Mean Square Error of Approximation
S.E.	Standard Error
SEM	Structural Equation Model
S. R. W	Standardized Regression Weights
SPSS	Statistical Package for the Social Sciences
TLI	Tucker Lewis Index
TNP	Turkish National Police
U.R.W.	Unstandardized Regression Weights

I. INTRODUCTION

Worker motivations, perceptions, and job performance in the public and private sectors have been of interest to researchers from various disciplines for many decades. In this research, factors related to the well-being of police employees in relation to their job performance are the focus. The literature suggests a strong relationship between law enforcement personnel well-being and job performance; as well, higher individual police officer performance is also associated with enhanced organizational performance (Berry, 2004; Fuller, 2006, Hart et. al, 1995). By analyzing the factors affecting well-being, proper intervention strategies for improving the well-being and the performance of officers and thus the police organization overall, can be developed.

Specifically, this study examined the determinants of the well-being of the members of the Turkish National Police (TNP). It addressed, in a comprehensive fashion, the factors influencing perceptions of the work environment, working conditions, social life, family life and time balance; the relationships between all these factors; and the effects of these factors on the well-being of police officers. A series of control factors were also analyzed. The control variables included both personal and work related demographics and mindsets: gender, marital status, number of children, income sufficiency, rank, departments, geographic regions, service time, extra work, work shifts, working hours per day, working days per week, perceived optimism, perceived isolation, and perceived confusion. The effect of each control variable on well-being and other constructs was also examined.

1. Statement of the Problem

Since Turkey started the European Union (EU) aquis process, the TNP has undergone many organizational and philosophical reforms. The changes have engendered new issues and concerns. Thus, in recent years, researchers have focused on shifting aspects within the TNP. For example, Ozcan and Gultekin (2000) studied job promotions and political interference in the TNP. They surveyed chief inspectors and higher level personnel and reported several problems related to the promotions resulting from political pressure. One of the interesting findings of their study was that a sizeable percentage of officers had considered resigning. When participants were asked if they had ever thought of resigning from the job, 56% replied "yes". Ozcan and Gultekin (2000) emphasized that this fact was extremely important in any evaluation of the work environment in the police force. They identified unjust and unfair treatment in promotions as the source of significant dissatisfaction among officers.

In another study, Bastemur (2006) examined the relationship between police officers' satisfaction (life and job) and specific work related characteristics in the TNP while controlling for demographic factors. He reported that irregular work hours, extra assignments, and financial difficulties had negative effects on life and job satisfaction. Bastemur also studied differences among differing police departments (in this study dissertation, "department" refers to different police branches in the TNP such as traffic police or anti-smuggling units) in terms of working hours, incentives, and police activities and their interaction with job satisfaction. Bastemur's research further revealed a positive relationship between job and life satisfaction, suggesting that the factors increasing job satisfaction also affect life satisfaction.

Additionally, Buker (2007) investigated stress among police officers in the TNP. He summarized that "the nature of police work per se is not a significant source of stress. What makes policing a stressful job is better understood within the macro and micro level implications and relations within the department" (p. 305).

These studies suggest that even though the TNP has experienced several reforms in the last decade that have focused on improving the quality of police practices, relatively little attention has been given to improving the quality of life and the work environment factors affecting police officers' performances (Yildiz, 2007). This study will focus on these environmental factors.

2. Significance of the Study

As previous research shows, a significant relationship between police officers' well-being and job performance exists (see Chapter II for a review of the relevant literature). In addition, since there is a relationship between individual performance and organizational performance, the well-being of the officers has important implications for overall agency performance (Berte, 1989; Brough, 2005; Burke, 1998). This study is important in terms of the following issues:

1. Identifying sources of dissatisfaction to develop proper intervention strategies
2. Increasing individual officer well-being and performance via policies that address the findings of the study, and

3. Increasing organizational well-being and performance via increasing individual well-being and performance.

To achieve these goals, a comprehensive study of the interaction of the police environment and officers' sense of well being was undertaken. To identify the officers' sense of well-being, a series of questions were developed and administered that addressed officer satisfaction and environmental influences. By using 43 variables, five latent constructs (time balance, social relations, role conflict, perception of work environment, and well-being were developed to chart interactions between issues important in the well-being of officers.

This research differs from previous research in that it aimed not only to find the sources of job or life satisfaction, but also to measure the broader spectrum of variables affecting well-being. Variables analyzed included job satisfaction, family life satisfaction, social life satisfaction, and living standard satisfaction. Previous studies within the TNP context (Bastemur, 2006; Buker, 2007) focused on a more limited analysis of one or two items such as job satisfaction or life satisfaction. This research will provide a more comprehensive examination of the effects of the work environment on the overall satisfaction of police officers in the TNP. This study will enlarge the approach used by earlier research by more fully analyzing the work environment, and its effects on personal, social, and family life of the police officers in the TNP. Therefore, the more global nature of this study will distinguish it from prior efforts.

The findings from this in-depth examination should have immediate practical utility given the effects that continuing reforms have on the TNP environment. Durmaz (2007) states that "to change something, we need to understand it first" (p. 153). The reforms and new policies in policing should be developed based on scientific evidence, as evidence-based policy analysis

is key to problem solving (Bardach, 2005). This study will provide important information that can guide future policies. This research is directed to developing information that could be instrumental in enhancing individual police performance through improving individual and organizational well-being.

An important contribution to the general police studies literature should result from this research. While the methodology and findings of this study pertain to the TNP, the tools employed, such as Structural Equation Modeling (SEM), allow for the interplay between latent (unobserved, hard to measure) variables to be seen. Therefore, both the methodology and the findings can be relevant beyond the TNP.

This study also adapts previously validated instruments, both developed by Eurofound, the European Foundation for the Improvement of Living and Working Conditions (Eurofound, 2008), and employs them in tandem. By utilizing a blended survey instrument adapted from the *European Quality of Life Survey* and the *European Working Conditions Survey,* the findings and methodology of this research have the potential to be exploited in a number of other settings. For example, they could contribute to

1. A comparison of police officers with different occupations in Turkey,

2. A comparison of police officers with the non-police public in Turkey, and

3. A comparison of police officers with the public and with the police of EU member states.

Thus, even though these comparisons will not be made in the context of this immediate research, findings from this research may provide invaluable data for future studies. Similarly, the methodology developed for this research may also have broader applicability; in particular the statistical tools employed in the study. AMOS (Analysis of Moment Structure) software was

used to provide graphical representations of the findings, augmenting the comprehension of the results. The graphical presentations will not only increase the value of exploiting this study's findings, but may also be another important methodological contribution to the literature.

The greater likelihood that the findings are actually implemented may be because the researcher, as a member of the TNP, is in the position of understanding the implications and utility of the findings. In fact, the author was selected by the Turkish government in 2003 to study performance and career assessment of police officers while in the United States. Based on the long-term goal to improve police officer performance, the Turkish government envisioned developing and employing the knowledge base garnered by the selected TNP command staff in the course of their studies in pertinent areas. Finally, this study is also important since it fulfills a goal of the Turkish government, who sponsored the researcher's education.

3. Research Questions

Three research questions guide and frame the design of this study. They are:

1. Is there any effect of time balance, social relations, role conflict, and perception of work environment on the well-being of the police officers?

2. Is there any interrelationship between time balance, social relations, and role conflict?

3. Is there any relationship between selected control variables and the well-being of police officers?

4. Theoretical Framework

The literature review identifies several issues affecting well-being. Aspects identified in the literature relating to well being include work-related factors, social factors, and family life factors. In addition, several demographic characteristics were reported in the literature to have a relationship with well-being.

Given the large number of factors affecting well-being, the variables are grouped under the five latent constructs in this dissertation. These latent constructs are not directly observable, but may be measured by indicators.

The main endogenous latent construct is well-being. It comprises four indicators. These indicators are job satisfaction, social life satisfaction, family life satisfaction, and living standard satisfaction.

The first exogenous latent construct is time balance. It is measured by six indicators: time spent at work, time spent with family members, time spent with friends or neighbors, time spent on sleeping, time spent on leisure, and time spent on voluntary activities. The second exogenous latent construct is social relations, which is measured by three indicators. These indicators assess the contact levels of the officers with their children, parents, and friends or neighbors. The third exogenous latent construct is role conflict. This latent construct measures the conflicts in roles that are experienced in family life due to work life, or in work life due to family life. This construct is measured by three indicators. The fourth latent construct is the perception of work environment. It comprises 13 indicators, reflecting several aspects of the work environment. These indicators will be discussed in details in the methodology section.

Finally, 14 control variables identified as important in the literature were included in the study. These variables are: gender, rank, marital status, extra work, region, department, service time, work type, working hours per day, working days per week, income sufficiency, perceived optimism, perceived isolation, and perceived confusion. The reasons for the inclusion of these variables is discussed in detail in the methodology section (see Chapter III).

Utilizing these variables identified in the literature as associated with well-being, this research analyzes relationships between time balance and well-being, time balance and social relations, time balance and role conflict, the perception of work environment and well-being, social relations and role conflict, and finally each of the control variables and well-being.

5. Analytical Approach

A survey research instrument was used to assess the working conditions and the well-being of police officers. The questionnaire was constructed by adapting two surveys that have been used by Eurofound for two decades in 25 member countries of the EU. The variables identified as influential on well-being in previous studies conducted in the EU member countries were investigated with a sample of police officers in a national police organization (the TNP).

An online survey method was employed to gather the data. The reasons for the selection of this method are explained in the methodology section (see Chapter III). In analyzing the data, a number of descriptive statistics were used to provide statistical summaries of the findings. To identify the strength of relationships among the variables, correlation statistics were applied to examine the associations among the study's variables using the Statistical Package for the Social

Sciences (SPSS). Each of the measurement models developed for the five latent constructs was subjected to Confirmatory Factor Analysis (CFA) to validate the reliability and construct validity of each. Finally, Structural Equation Modeling (SEM) was conducted via AMOS 16.0 software. Based on the findings, recommendations were made for future studies and for policies to be developed.

6. Organization of the Study

Chapter I provided an overview of the background of the studies examining factors affecting well-being. The statement of the problem, the significance of the problem, the research questions, as well as the theoretical and analytical frameworks are also addressed in this chapter.

Chapter II presents a comprehensive literature review on well-being, job satisfaction, stress, role theory, social capital, and the studies on the TNP. This chapter concludes with a summary of the reviewed literature.

Chapter III identifies the theoretical framework of the study. The reasons for the inclusion of selected variables are explained in detail. In addition, all of the variables are discussed in terms of their expected effects in the study.

Chapter IV details the methodology of the study. Research questions, hypotheses, operationalization of study variables, sampling procedures, survey construction and administration processes, the analytical approach of the findings, and the protective measures for human subject participation are explained.

Chapter V illustrates the findings of the study. The results of the descriptive summary statistics, correlations, reliability analysis, confirmatory factor analysis, structural equation modeling, and hypotheses testing are reported and discussed in detail.

Chapter VI discusses issues related to the SEM model and the latent constructs. A second alternate model, which includes the relationships that were not hypothesized in the beginning of the study but discovered during the analyses, is also reviewed in this chapter. Expected implications of the study in terms of policy development and future studies are delineated. Finally, limitations of the study are reported.

Chapter VII summarizes the main findings of the study and provides conclusions and implications of the study. The references, permission letters, IRB approval letter, and research instrument are all found in the appendices section of the dissertation.

II. LITERATURE REVIEW

In the literature review section of this dissertation, five concepts (well-being, job satisfaction, stress, role theory, and social capital) are discussed in detail. In addition, prior studies of the TNP context are examined. Finally, a summary and discussion of the cited studies in the literature review are provided.

1. Well-being

In the literature, several studies have focused on the psychological construct of well-being, on the factors affecting this, and on its effects in police performance. Brough (2005) argues that "psychological well-being encompasses both short-term and long term mental functioning and includes both positive health (e.g., positive affectivity and morale) and negative health (e.g., anxiety, depression, and fatigue)" (p. 128). Positive and negative affectivity are two dimensions of psychological health (these terms will be discussed later). Brough (2005) further states that "an accurate evaluation of work-related psychological well-being should include a variety of characteristics from an individual's work and non-work life" (p. 128).

Among factors identified as influencing well-being are personal and professional conflicts. For example, the influence of work-family conflict in the prediction of psychological well-being has received growing attention in recent years. Greenhaus and Beutell (1985) define work-family conflict as

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[a] form of inter-role conflict in which the role pressures from the work and family domains are mutually incompatible in some respect. Participation in the work (or family) role is made more difficult by virtue of participation in the family (or work) role (p.77).

Given the impact of work-family conflict on the well-being of police officers, some researchers studying occupational stress and performance have focused on this concept.

Certain issues have been found to be related to conflicts in work and family life. Berte (1989) suggests that some police duties create conflict. He states that

police officers are required to protect the rights, property, and lives of individual citizens. Yet, in the name of social order, police officers are also required to deprive citizens of their freedom, their property, and sometimes to even take their lives (p.2).

Berte (1989) points out different roles that police need to play in their lives:

Police act as a buffering agent in insulating and protecting existing political and social structure from threats. As a result of serving such social functions, policing has become a multidimensional institution, rather than a simple profession. Police officers are now required to possess a disparate set of job skills, to perform a variety of functions, and to excel in many areas of expertise. They are obligated to be lawyers, paramedics, social workers, marriage counselors, athletes, human relations experts, automobile mechanics, photographers, racecar drivers, youth advisers, and much more (p.3).

Berte (1989) concludes that under the pressure of these demanding and conflicting roles, police officers experience anxiety, fear, violence, and social conflict. Such role conflicts occur for members of other occupations as well.

Brough (2005) quotes from the work of Judge and Church (2000) to point out that job satisfaction is another substantial predictor of psychological well-being. Intrinsic and extrinsic job satisfaction is associated with the well-being of the officers. The increased organizational work hassles such as long work hours, unexpected extra work, red tape paperwork, and missing meals all have significant relationships with decreased job performance and well-being (Brough, 2005). These factors lead to increased work-family conflict, according to Brough.

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Furthermore, greater work aggravations interact with certain personality variables. Higher negative affectivity (or neuroticism as used by Brough, 2005) is also associated with diminished well-being and satisfaction, and higher work-family conflict. In contrast, positive affectivity has the opposite effect of this relationship. According to Brough (2005), the current research indicates that increased concerns with work problems produce higher levels of work-family conflict, especially for police officers. Ortega, Brenner, and Leather (2006) report similar results. According to their findings, neuroticism is directly associated with perceived bureaucracy and politics and inter-personal conflicts. In addition, they report a significant relationship between "being prone to experiencing negative thoughts and emotional distress and poor job satisfaction" (p. 47).

Hart, Wearing, and Headey (1995) argue that, consistent with the literature suggesting that organizational factors are the main factors creating stress in police officers, "organizational, rather than operational, experiences are more important in determining the psychological well-being" (p.147). They add that police organizations can be beneficial as well as harmful to the well-being of police employers. They summarize the interrelations between the factors affecting well-being as follows:

> Strong empirical support was also found for the notion that personality characteristics, coping strategies, and police work experiences operate along two separate paths in determining the psychological well-being. These findings add to the growing body of literature suggesting that neuroticism, emotion-focused coping, adverse life-events, and psychological distress tend to correlate with each other, and that these correlations are independent of those typically found between extraversion, problem-focused coping, beneficial life events, and the well-being (p. 149).

Burke (1998) states that personal characteristics are important factors affecting well-being. Burke suggests that officers utilize different coping mechanisms against the conflicts they

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experience. He delineates two main dimensions of coping. One dimension is proactive and consists of such concepts as controlling, taking charge, being active, being attentive, being vigilant, and being ready for confrontation. The other dimension is reactive and consists of such concepts as being escapist, being palliative and emotional, and using avoidance. The first dimension is called *active coping*, the second one is called *escapist coping*. Active coping refers to mechanisms such as talking to others, problem solving, minimizing concerns, and engaging in physical exercise, while escapist coping mechanisms include the use of alcohol or drugs, withdrawal, sleeping, and experiencing anger-catharsis. Anger catharsis can be measured by the following variable: "I get mad at myself and tell myself I could have anticipated or avoided the situation" (Burke, 1998, p.355). Higher levels of escapist coping use are associated with higher levels of work-family conflict and higher psychosomatic symptoms. Employing more active coping mechanisms is associated with using fewer escapist coping mechanisms. Burke (1998) finds that police officers reporting more work stressors use higher amounts of escapist coping.

Burke (1998) also reports a weak correlation between work-family conflict and demographic characteristics, but a strong correlation with "work setting characteristics, levels of social support, levels of work and non-work stress and several outcome measures (including burnout)"(p.55). As a result, he states that work-family conflict has a direct relationship with two measures of well-being, which are job satisfaction and psychosomatic symptoms.

Scholars and practitioners in policing have also paid increasing attention to methods that improve officers' well-being. Brough (2005) comments that the New Zealand government, after declaring that employers are legally and morally responsible for their workers' psychological

health, has passed a new bill. According to this bill, employers are required to take necessary steps to prevent stress and improve the well-being of the employees.

Berry (2004) reports that new policies are being implemented in police departments in England to address problems with work-life balance, and to reduce the effects of shift work on sleep, nutrition, and physical activity. By introducing these new policies, they aim to improve officers' health, and consequently organizational performance.

Similarly, Fuller (2006) notes that thanks to a new anti-stress initiative ("Quality of Working Life") started in 2003 in London; significant improvements in work life balance, job satisfaction, staff morale, and the overall health of organizations have been achieved. Key points in this new policy are "a flexible working policy, employee communication reviews, and active performance management" (p. 2). According to the audit reports, the program increased job satisfaction, psychological and physical health, and commitment to work. The director of the program team, Professor Gary Cooper, stresses that "the well-being has now become a bottom-line issue for organizations. If they actively manage it, they can start to see the benefits" (p.1).

Hart et al. (1995) point out that

[p]olice departments should place greater emphasis on improving their organizational health. Although it is important to assist individual police officers whose psychological well-being is affected by their work (e.g., through critical incident debriefing programs), our findings strongly suggest that an organizational rather than an individual approach is more likely to benefit police officers overall, and result in reduced psychological distress and enhanced morale (p. 150).

In addition, they suggest that police departments should use both clinical and organizational psychologists to help reducing the negative effects of police work. Hart et al. (1995) conclude that

police officers' psychological well-being is determined by a complex system of variables and relationships. Each component of this system is important and must be taken into account, suggesting that there is no simple solution when trying to evaluate or improve the psychological well-being of police officers (p. 165).

In the following pages of this literature review, the components (job satisfaction, stress, role conflict, and social capital) identified as having important effects on well-being will be discussed in greater detail.

2. Job Satisfaction

a. Definition and Importance of Job Satisfaction

Job satisfaction is defined as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Locke, 1976, p. 1304). And, as Muchinsky (1987) insists, everyone has a right to have a rewarding and satisfying job. To that end, Zhao and Reiner (1999) comment that

> even among rigidly structured, hierarchical organizations such as police departments and military units, efforts to improve the work environment are ongoing because both the employees and the employers have a shared interest in making their organizations as effective and efficient as possible while recognizing the needs of the people whose efforts are required to produce the services or products of the agency in question (p. 5).

Other researchers agree. Buzawa (1984) maintains that studying job satisfaction is important since there is a relationship between job satisfaction and organizational performance. Jaramillo, Nixon, and Sams (2005) emphasize that "job satisfaction is the strongest predictor of organizational commitment" (p. 331). Similarly, Dantzker (1993) states that the levels of

officers' job satisfaction affect their performance, thereby affecting the performance of the organization. He also points out that job satisfaction can have an important impact in an organization on other issues such as employee turnover, productivity, absenteeism, and stress.

Indeed, in a seminal research study, Hackman and Oldham (1975) found that increased productivity, lower absenteeism, and lower employee turnover resulted in high job satisfaction. A generation later, Hoath, Schneider, and Starr (1998) determined that high job satisfaction reduces stress and its symptoms. They suggest two main sources affect job satisfaction: individual characteristics (e.g., career orientations and service time) and workplace characteristics (e.g., officers' assignments).

Workplace characteristics comprise a number of factors. For example, policing requires working in dangerous, strenuous, and tense situations; thus, stress associated with these situations has also been found to be an important factor affecting job satisfaction (Burke, 2005). In fact, law enforcement organizations are reported as one of the top five most stressful occupations worldwide (Dantzker, 1987).

Additionally, it has long been known that police organizations' administrative factors also have an effect on job satisfaction. Kroes, Margolis, and Hurrell (1974) explained that among the factors affecting job satisfaction, police officers frequently identify the organizational administration. According to these authors, "the policies concerning work assignments, procedures, personal conduct, and the support patrol officers receive from administration" (p. 150) are all different organizational features affecting job satisfaction. Similarly, Symonds (1970) stated that the nature of the job, unpredictable situations, and the organization itself are

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among the main factors affecting job satisfaction. Random or disagreeable job assignments impact officers' satisfaction negatively (Martelli, Waters, & Martelli, 1989).

Finally, the number of years on the job has also been examined in relation to overall job satisfaction. Interestingly, while, service time in the organization is found to have a high correlation with job satisfaction, there is no clear agreement in the direction of this correlation, as researchers have reported different results (Burke, 1998; Buzawa, Austin, & Bannon, 1994).

b. *Theories of Job Satisfaction*

The motivation literature shows that established paradigms such as the needs hierarchy (Maslow, 1943) or achievement motivation theory (McClelland, 1985) have been operationalized, adapted, or expanded to examine work environments in order to predict what motivates employees. In general, police administration research often employs Herzberg's (1968) two-factor theory of motivation to explain the effects of work environment on the job satisfaction of law enforcement personnel (Roberg, Kuykendall, & Novak, 2002; Whisenand, 2004). However, other theories offer views useful for determining the issues involved with job satisfaction and well-being. The most salient theories for this research study will be presented here.

1. *Motivator-Hygiene Theory*

A favored theoretical framework used when focusing on job satisfaction is Herzberg's (1968) two-factor theory of motivation, also called motivator-hygiene theory. Herzberg developed his theory from Maslow's well-known needs of human hierarchy. According to Herzberg (1968), there are two main groups of factors affecting job satisfaction: motivators and hygiene. Motivators focus on the relationship between the individual/demographic characteristics and job satisfaction. The second factor, hygiene, focuses on the employee's immediate work environment. Herzberg (1968) puts special emphasis on the work environment. The characteristics of the job environment include factors such as status, job security, salary, the importance of the work itself, the responsibility one has while doing the work, the recognition received from doing one's work, and other benefits. He suggests that job satisfaction is directly and largely affected by the work environment of the officers. If the work environment is perceived positively, than it produces higher job satisfaction. Job dissatisfaction, on the other hand, stems from insufficient working conditions, strict policies, overemphasis on rules, and poor inter-personal relationships.

Using the theories of Maslow and Herzberg as a foundation, Hackman and Oldham (1975) developed their theory of job characteristics by exploring job satisfaction. In their method, "experienced meaningfulness of the job, experienced responsibility for outcomes of work efforts and knowledge of the results of the work" (p. 25) are the key issues affecting job satisfaction. Job meaningfulness has three components: skill variety, task identity, and task significance. Skill variety means "the extent to which the job provides challenge through

requiring the use of a variety of skills" (p. 70). Task identity means "the extent to which a job is a whole piece of work with an identifiable beginning and end" (p. 70). And, task significance means "the extent to which the worker believes the job has a perceptible impact on the lives of other people" (p.70). According to Hackman and Oldham (1975), the responsibility experienced from work outcomes is associated with autonomy. Autonomy is the discretion level the officers have in scheduling and practicing their duties. Knowledge of the results of the work is derived from feedbacks from external and internal sources. The authors suggest that high satisfaction leads to high motivation, high performance, and low absenteeism.

2. *Dispositional Theory (Positive and Negative Affectivity)*

In the literature, consensus on the parameters of job satisfaction constructs has not yet been reached, though researchers have tried to develop comprehensive paradigms. Indeed, Kohan and O'Connor (2002) state that "[o]ur jobs are such an integral and defining aspects of our lives that there must surely be associations between job satisfaction and general well-being. A plethora of mixed findings have been reported demonstrating linkages between variables from these two domains" (p. 308).

Dispositional theory suggests that people's inherent dispositions result in tendencies towards certain levels of satisfaction regardless of the job. An individual's general perception of life, moods, and dispositional characteristics may each play an important role in job satisfaction. Related to disposition is the concept of affectivity. Dispositional affect refers to "a personality trait or overall tendency to respond to situations in stable, predictable ways" (Barsade & Gibson,

2007, p. 40). Positive affectivity and negative affectivity show the two dimensions of this tendency. Barsade and Gibson (2007) claim that "[p]eople with high positive affectivity tend to perceive things through "pink lenses" while people with high negative affectivity tend to perceive things through "black lenses" (p. 40).

Kohan and O'Connor (2002) state that these affective dimensions describe relatively temporary mood states, but they also have more enduring trait-like qualities. High positive affectivity is expressed via a zest for life, pleasurable engagement, excitement, social activity, and extraversion, while low positive affectivity is expressed via feelings of sluggishness, drowsiness, fatigue, lethargy, and sometimes loneliness. People with high positive affectivity report the occurrence of pleasant events more frequently, while people with low positive affectivity are less likely to report positive feelings (Watson, Clark, & Tellegen, 1988). High negative affectivity, on the other hand, is associated with feeling upset, adversely aroused, nervous, guilty, and tense, while low negative affectivity is associated with feeling peaceful and relaxed.

These two dimensions are independent, and not diametrically opposed. Indeed, it is possible to find people who experience both positive affectivity and negative affectivity. Kohan and O'Connor (2002) argue that "[m]ost job studies focused on aspects of stress or negative affectivity. Positive affectivity and the structure of the well-being have both been relatively neglected in job research" (p. 310). They analyzed the relationships between job-related variables (satisfaction, perceived stress, and intention to quit) and positive affectivity, negative affectivity, life satisfaction, self-esteem, and alcohol consumption among police officers. They found that "[j]ob satisfaction was primarily associated with positive affectivity, life satisfaction,

and self-esteem; job stress was primarily associated with negative affectivity and alcohol consumption; and finally, thoughts of quitting had moderate loadings on both factors" (p. 30). Prior to that, Duffy, Ganster, and Shaw (1998) note that "[i]n particular, interest in dispositions has heightened after several researchers provided evidence of a dispositional component of important organizational attitudes such as job satisfaction and organizational commitment" (p. 35), pointing out that exploring the interaction between positive affectivity, negative affectivity, and job satisfaction had become the focus of recent studies.

Studies investigating the relationship between positive affectivity and tenure suggest a significant effect on turnover behavior (Judge, 1993). As Duffy, Ganster, and Shaw (1998) reiterate, Judge (1993) argues that employees with positive affectivity would be more likely to leave if they feel dissatisfied with their jobs. Even earlier, Mobley (1977) suggested that employees with high positive affectivity act proactively to find more satisfying jobs in case of dissatisfaction with the current one. On the other hand, those who have low positive affectivity are sluggish and loathe to find another job since they do not have any proactive expectation. For example, they may think that their situation is just another annoyance in the already dissatisfying world.

Few studies in the literature specifically address the relationships between positive and negative affectivity and police job satisfaction. Of them, Duffy, Ganster, and Shaw (1998) report that the responses of police officers indicate that

> [a]t higher tenure levels, individuals with high positive affectivity appear to become increasingly frustrated with dissatisfying jobs, and begin to exhibit a variety of frustration-induced behaviors and symptoms. To the extent that a person with high positive affectivity is able to change his or her situation (e.g., by finding a new job), this frustration may lead to positive and proactive behaviors such as asking for a pay increase, or redefining aspects of the job. Individuals who feel trapped or unable to escape a job

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situation they find distasteful may begin to manifest physical problems and act-out at work by no longer performing at their level of capability or by deliberately sabotaging work" (p. 957).

Cropanzano, James, and Konovsky (1993) describe a direct relation between officer job satisfaction, commitment, turnover intentions, performance, and positive affectivity. They also argue that negative affectivity is related to turnover intentions and officers' low job performance. They further suggest that officers?/"[i]ndividuals with low positive affectivity are predicted to respond to unfavorable situations with listlessness and apathy" (p. 603).

Duffy, Ganster, and Shaw (1998) conclude that

it appears as though individuals with low positive affectivity may prefer a new job, have poorer health, and engage in counterproductive behaviors in a dissatisfying situation, but it is interesting to note that the relationships are quite similar for shorter and longer tenure individuals with low positive affectivity. (p. 958)

a. *Factors Affecting Job Satisfaction*

Zhao and Reiner (1999) state that there is also a lack of consensus on the main sources of job satisfaction in the literature. Management theories put emphasis on the immediate work environment, while recent studies show that demographic characteristics of officers are strongly predictive of job satisfaction. Additionally, it is not apparent if causal relationships among the work environment, demographic characteristics, and satisfaction exist. Zhao and Reiner (1999) suggest that this uncertainty applies not only to gender, race, age, and educational background, but also to the work assignment: "[t]his is because the assignment might have an indirect effect on job satisfaction through the particular work environment, and because employees have

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experienced and developed perceptions of it" (p.11). All variables may have an indirect effect on satisfaction; however, whether this relationship is causal is not clear.

Studies examining police organizations have usually indicated two major groups of factors affecting the levels of satisfaction among the police personnel (O'Leary-Kelly& Griffin, 1995): the demographic characteristics of the officers (Buckley & Petrunik, 1995; Griffin, Dunbar & McGill, 1978; Jacobs & Cohen, 1978; Lofkowitz, 1974), and the work environment characteristics of the organizations (Greene, 1989; Winfree and Taylor, 2004; Zhao, Thurman and He, 1999). Demographic backgrounds of the officers such as age, gender, ethnicity, education, rank, and job tenure have widely been assessed as potential sources of job satisfaction in policing studies (Buzawa, 1984; Lim and Teo, 1998). Some other organizational characteristics, such as location (serving in an urban or rural area), or the department size, have also been examined as potential sources of job satisfaction among police personnel (Dantzker, 1994; Winfree and Taylor, 2004).

Zhao, Thurman, and He (1999) maintain that the police agencies' work environment is a main source of job satisfaction. According to the authors, work environment attributes can contribute to understanding what makes working at a law enforcement agency more enjoyable. They emphasize that job satisfaction is multidimensional, which means that different types of job satisfaction can be explained by different variables. For example, "police officers' satisfaction with work is associated positively with their perceptions about the importance and significance of their work, the recognition they receive, their autonomy, and the capability to do their work. By comparison, officers' satisfaction with supervisors is correlated significantly with job autonomy and with feedback from supervisors. This noteworthy finding (feedback is significant

in predicting an officer's satisfaction with his or her immediate supervisor, but not satisfaction with the job or the people at work) strongly suggests that two-way communication is necessary for improving the police work environment" (p.165).

Dantzker (1994) explores the relationships between job satisfaction and age, gender, ethnicity, rank, years of service, education, department size, change, and offer. The construct of "change" examines if an officer would change agencies, given the current job characteristics. The construct "offer" quantifies the officer's willingness to leave the organization if receiving a better job offer. To address change, Dantzker asked officers, "If you knew when you started this job what you know now, would you have taken the job?" To measure the effect of a new job offer, he asked officers whether they would leave the agency if they could move to a new position and not lose pay or benefits. In particular, he wanted to see if the officers are satisfied with policing despite reporting low satisfaction stemming from the work environment, or if they are dissatisfied. Dantzker found that change and offer both had a strong negative relationship with job satisfaction: officers with lower satisfaction levels with the agency and its administration are more likely to leave or change the agency.

In her research of Detroit's and Oakland's police departments, Buzawa (1979) argues that background characteristics and job-related factors are important in determining job satisfaction. There is a positive relationship between years of education and years in service, according to her findings. She asserts that officers report that fulfillment from the job is more important than material rewards. One main source of job dissatisfaction is the lack of promotional opportunities. Even though the cities showed similar patterns, each variable had a different effect on overall satisfaction level in the two cities. Buzawa concludes that each department has its own

environment, and the variables may have a different impact on overall satisfaction in different cities.

The literature reports mixed finding from studies exploring officers' levels of education and job satisfaction. In general, the current body of research suggests a low positive correlation between education levels and job satisfaction (Forsyth and Copes, 1994). King, Murray, and Atkinson (1982), Buzawa (1979), and Jayaratne (1993) all found a positive relationship between education and job satisfaction. However, Dantzker (1993) determined that this positive relation was only valid for the officers who have fewer than five years of service and asserts that more experience and longer service time produces less satisfaction. In contrast, Winfree, Guiterman, and Mays (1997) argue that there is no significant relation between education of the officers and job satisfaction as well.

Age is commonly related negatively to job satisfaction; that is, the older the officer, the lower the satisfaction. Zhao and Reiner (1999) state that younger officers are more excited about their jobs than their senior officers are. However, results from Dantzker's (1993) and Burke's (1998) studies illustrate a more multifaceted pattern in the relationship between age and job satisfaction. According to their findings, the job satisfaction level is high among officers with little experience, and who are new to the service. Starting at the 5th year, and continuing through the 16th year of service, officers' satisfaction levels gradually drop. However, after this period, job satisfaction again rises among senior officers.

The literature provides conflicting results in terms of the relationship between gender and job satisfaction (Zhao and Reiner, 1999). Some studies report that being female is a positive attribute in terms of satisfaction, while others find the opposite. Grant, Garrison, and McCormick

(1990) found that police women who think they are afforded the same chances for special assignments and special training as are their male colleagues have significantly higher job satisfaction. The researchers suggest that to enhance job satisfaction among female police officers, departments should increase the range of employment options, and provide equal opportunities for special assignments and training.

In a later study, Winfree, Guiterman, and Mays (1997) explored many factors of job satisfaction, including gender, and reported no differences between male and female officers in terms of job satisfaction. They attribute this result to the dominance of male officers in large departments, which were studied in prior research. They also found a positive correlation between the rank of the officers and job satisfaction; the higher ranked (supervisory) participants were very satisfied with their jobs.

Another factor examined was the relationship between workload and job satisfaction. The authors initially assumed that greater amounts of policing work produce higher satisfaction levels; however, this assumption was not supported by the results. In fact, the more tasks officers performed, the less satisfaction they reported. Winfree and colleagues explained this finding as follows: "[p]erhaps the officers felt, "why should we do more for the same pay?" (1997, p. 425), or that much of what they do is not real police work. Indeed, the police literature supports this latter interpretation. In their study, officers were divided into two groups depending on task type: paperwork officers and actual law enforcement work officers. They found that officers doing paperwork and public safety activities showed low satisfaction, as expected. An interesting finding was that officers who performed high amounts of law enforcement activities also expressed negative perceptions of workplace and low satisfaction. They explained that "[i]t

would appear that the stressors which play a large part in the composition of the workplace perception scale – and the officers' actual workplace itself – contribute to their negative perceptions" (p. 438).

3. Stress

Jaramillo, Nixon, and Sams (2005) emphasize that "stress is unavoidable in our modern society" (p.325); its prevalence in workplaces has created a broad research base on stress. The relationship between stress and organizational commitment is important in studying job satisfaction as the three elements affect each other. Benkoff (1997) highlights the special attention given to the effects of stressors on organizational commitment in the literature. And the innate nature of police work and its effect on stress cannot be overlooked. As one practitioner notes, "much of the literature addressed that police work was more stressful than most other occupations, and that the stress was caused by inherent dangers of the job such as repeated encounters with violent people, the risk of being assaulted with a deadly weapon, and the possibility of being seriously injured, even killed" (Dempsey, 1994, p.109).

a. Definition of Stress

The construct of stress is difficult to operationalize as no one common definition of stress exists in the literature. Overall, it can be said that the concept of stress includes an individual's reaction to inner and outer claims. Earlier, Lawrence (1984) provided a general description of

stress as "a non-specific response of the body to any demand placed on it" (p. 250). Later, Harpold and Feemster (2002) delineated stress as "a response to different internal and external demands of life" (p. 5). Dempsey (1994), on the other hand, specified stress as "the body's reaction to internal and external stimuli that upset the body's normal state, in which the stimuli might be physical, mental, or emotional" (p.110).

Recently, Jaramillo, Nixon, and Sams (2005) define occupational stress research as the "field of inquiry that investigates relationships between job stressors and strains" (p. 325). They characterize stressors as "the antecedents or the stimuli of job strains can be conceived at the individual (e.g., role conflict and role ambiguity) and at the organizational levels (e.g., budgetary cuts, layoffs, mergers and acquisitions) (p. 327).

b. *Sources of Stress*

Clearly, policing is regarded as one of the most stressful occupations. Two decades ago, Dantzker (1987) ranked the law enforcement profession as among of the top five most stressful occupations in the world; this is still true today. Toch (2002) explains that one reason for this occurence is that police officers face the necessity to respect the integrity and individuality of others while trying to enforce the law. This is the conflict represented in the mission to "protect and serve the community": trying both to protect and to serve the community simultaneously. Jaramillo et al. (2005) emphasize that a "law enforcement work environment is more hazardous than other jobs, often life threatening. This makes policing more stressful than most other service

environments. Also, police officers work for organizations that have different objectives such as reducing crime and increasing public well-being rather than earning a profit." (p. 330).

Liberman et al. (2002) state that in studying job-related stress in law enforcement contexts, "researchers have explored both the dangerous or traumatic aspects of police work, as well as its routine aspects" (p. 423). Lawrence (1984) notes that "encounters with violent people, the risk of being assaulted with a deadly weapon, and the possibility of being seriously injured, even killed" (p. 251) are commonly perceived as main source of stress.

In terms of dangerous confrontations, the research studies of Weiss (2001) and Beaton (1998) suggest that police officers are challenged with a multiplicity of stressors: they are vulnerable to the effects of incidents experienced by military personnel and those encountered by emergency service workers. For example, police officers are confronted with dead bodies and victims of violent acts as emergency service workers are. At the same time, in the course of routine police duties, police officers may face dangerous situations or death as military personnel do. Weiss (2001) reported that the police officer participants encountered "25 recently dead bodies, 14 decaying corpses, 10 sexually assaulted children, colleagues being badly injured twice accidentally and once intentionally, and the officers themselves being seriously shot at once and injured more than once on average service time"(p. 5).

Malloy and Mays (1984) emphasize the distinctions made between assumptions about stress. They argue that it is an a priori assumption that the impending threat of physical harm and the involvement in violent situations are the major police stressors. They point out that according to their research, however, that additionally, the "helplessness and feelings of uncontrollability in the work environment may be a major source of stress for police officers" (p. 207). As Lawrence

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(1984) states, these findings do not suggest that policing is not a dangerous job, but they do suggest that main sources of stress are not from the danger of the job, but from the factors over which the officers have no personal control, such as bureaucratic practices. Similarly, Cullen et al. (1983) found that police officers perceive policing as more "potentially dangerous" than "actually dangerous" (p.460).

Over two decades ago, Spielberger et al. (1981) reported that the top three issues causing stress according to police officers were `` [having a] fellow officer killed in the line of duty, killing someone in the line of duty, and exposure to battered or dead children'' (p.45). Liberman et al. (2002) discuss why these dangerous situations are still cited as the main sources of stress by the police officers although the research indicates that routine activities are found to be more stressful than critical situation confrontations. They suggest several possible reasons: First, these critical incidents occur less frequently but are stunning when they do, so officers remember them on first thought. Second, officers believe encountering critical incidents to be inherent to police work, but think that many routine work stressors are unnecessarily stressful. Another reason is the perception of constant danger during the police job.

As the second major source of stress, police officers identify the routine aspects of the police work environment. According to Liberman et al. (2002): "a number of investigators have suggested that the routine administrative, bureaucratic, and organizational aspects of police work are at least as stressful as the inherent dangers of police work" (p. 150). This view was found in earlier research; Kroes, Margolis, and Hurrell (1974) reported that "the officers stated the courts, administrative policies and lack of support, inadequate equipment, community relations, and changing work shifts as stressors, but only one respondent spontaneously mentioned a crisis

situation" (p.148). Similarly, Graf (1986) argues that organizational factors are more stressful than inherent factors.

Violanti and Aron (1993) distinguish between the two types of stressors and define organizational practices as events that are carried out by the administration, and are inconvenient to the officers, while inherent factors are those events commonly happening in police work that could be harmful to the officers, like danger, violence, and crime. Storch and Panzarella (1996) further offer "the relationships with those who were not police officers, for example the public, the media, and the legal system" (p. 101) as another source of stress.

c. *Stress and Role Theory*

Two other factors long identified as increasing stress are role ambiguity and role conflicts. and Anderson, Swenson, and Clay (2002) echo Gaines and Jermier's (1983) earlier findings when they reiterate that "role ambiguity, role conflict, lack of supervisor support, lack of group cohesiveness, and lack of promotional opportunities" (p. 50) are all factors creating stress in law enforcement agencies.

As Ellison (2004) explains, role conflict happens in policing because police officers need to meet incompatible demands of individuals inside and outside the organization. Role ambiguity is likely if there are discrepancies between the job descriptions and the realities of actual work. Toch (2002) reports that the most frequent complaints from police officers are about the failure of the administration or organization to clearly delineate exact job expectations and about the continuous, conflicting interpretations of rules. These two situations result in increased role

ambiguity. Interestingly, the literature has long provided some suggestions for ameliorating this stress, though the suggestions have not always been put into practice. One example, in terms of role ambiguity, can be seen with Walker (1975), who emphasized the importance of the role of supervisors in reducing ambiguity level. According to Walker, supervisors can reduce the ambiguity experienced by the officers, and this leads to reduced role conflict.

d. Results of Stress

Over two decades ago, Territo and Vetter (1981) pointed out the effects of stress on the officer personality, health, job performance, and home life. According to their findings, long-term stress exposure results in "chronic depression, alienation, or alcoholism in one's personality; ulcers, high blood pressure, or diabetes in one's health; decreased productivity, job dissatisfaction, or slower reaction time in one's job performance; divorce, social isolation, or loss of friends in one's home life" (p. 198).

Violanti and Marshall (1983) further argued that stress results in becoming cynical and/or deviant. At the same time, Terry (1983) specified the main health problems reported due to stress by the police officers to be "digestive disorders, respiratory problems, and cardiovascular diseases" (p.159). Stress also has an impact on organizational commitment since organizational commitment and stress have a negative relationship according to Jaramillo et al. (2005). They comment that high stress results in low organizational commitment and high turnover rates.

e. *Demographic Characteristics and Stress*

Various demographic characteristics are also been reported in the literature as having a relationship to stress. For example, in regard to officer rank and stress, Norvell, Belles, and Hills (1988) argue that supervisors are open to more stress than rank and file officers, since they have responsibilities both to their managers and to their subordinates. These conflicting demands occur in addition to the other stressors that all police officers experience; creating even greater tension. Brown and Campbell (1994) find that the most stressful rank is the rank of sergeant because it requires both front-line police duties and front-line supervision and management.

In terms of service time and stress, Evans, Coman, and Stanley (1992) summarize their findings by commenting that "certain personality traits, such as suspiciousness, aloofness, cynicism, and authoritarianism did develop or become stronger over time as the officers became more skilled and experienced at dealing with their work duties and stressors" (p. 430).

When it comes to gender, Wexler and Logan (1983) and Kroes (1982) report that the main difference between the stress sources of male and female officers is the latter's fear of sexual harassment. This is in line with findings of gender and job satisfaction that indicate women as being less satisfied with their jobs as their male counter parts. It is possible that both findings may be related to the relative disparity of gender representation in the law enforcement profession, which remains predominately male. Male officers may also have another advantageous stress relief; Young (1984) suggests that the wives of police officers balance the occupational stress that their partners experience. However, in relation to the general effects of marriage on stress, Kirkcaldy, Brown, and Cooper (1998) state that being married and

particularly having children are factors helping to reduce the level of stress. Both factors also lead to increased job satisfaction. In explanation of this finding, they propose that "marriage and children may help to put the job of policing into some kind of perspective, providing the social support to cope with the job demands" (p. 98).

4. Role Theory

"Role Theory posits that human behavior is guided by expectations held both by the individual and by other people. The expectations correspond to different roles that individuals perform or enact in their daily lives" (Wikipedia, 2007). Role theory explains the relations between role conflict, role ambiguity, role transitions, role overload, and role balance. Role theory is a widespread model in the policing literature, since one of the most common problems that police officers experience is conflicting roles.

Individuals assume different roles simultaneously. Different social positions require individuals to play different roles. Robert Merton (1957), one of the originators of role conflict theory, explains that "each position is associated with a role set, an individual's range of role relationships that accompany any social status" (p. 50). A good example of this is a woman, as a mother, as a wife, as a child to her parents, and as a friend or colleague in her working environment. The interconnections between different roles in role sets are defined as "role clusters" (Lopata, 1991). The role of being a father is affected by the roles of that individual in its work environment. Different roles, different expectations, and responsibilities of these roles are all important elements affecting the level of stress and job satisfaction.

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Burr (1972) explains another key element in role theory, roles transitions. People take on and build up different roles at different stages of their lives. They keep some of these roles, and discard others. To replace those left behind, they may gain new roles. This is called "role transition." These transitions occur depending on timing and context, and they may happen easily or with some difficulty (Rodgers and White, 1993).

In this framework of role theory, role overload and role conflicts are important concepts. Role overload suggests that one role may not be carried out well due to limited allocations of energy and time, which may be spent on meeting requirements of other roles. When the expectations of one role are incompatible with other roles, role conflicts happen. Together with role overload, role conflicts may cause difficulties in meeting role expectations. This situation is known as "role strain" (Goode, 1960). Sometimes, a multiplicity of roles can be good for personal development if "role balance" is achieved. In this case, some studies report that people are more likely to have less stress, to be healthier, and to have higher self-esteem, as they have various channels to express and define themselves. However, Moen (1992) states that whether multiple roles are positive or negative for people depends upon many factors in their lives such as the conditions of their work, the conditions of their family roles, including the number and age of children, and, for women, the extent to which they view themselves as captives or committed to their work and family roles.

Some researchers have focused on role theory in policing. Over a generation ago, Fry and Greenfeld (1980) studied role conflicts and gender relationships in police work. They argued that "commitment to the organization and perceived levels of job-related stress, satisfaction, role conflict, and ambiguity are more a result of one's job in the organization than one's sex" (p. 123).

At the same time, Fry and Greenfeld also acknowledged the research of Hennig and Jardim (1976), and Standley and Soule (1974) which suggested that "in general, when a woman enters a male-dominated occupation, she is viewed as competent, hardworking, determined, single, childless, career-oriented, committed to the organization, and influenced by her father, who provides a strong role model"(p. 250). The authors stated that this portrayal of the "tough, strong woman" in a man's world is in conflict with the general perception of a woman in (1980s) society as a "warm expressive individual, sensitive to needs of others and placing family over job" (p.124). The authors suggested that the mental image of a woman trying to handle a male dominated job caused anxiety. They proposed different reasons for this anxiety, for example, the fear of success in competition with men, the feelings of isolation, the lack of support from male colleagues, loneliness, and sex discrimination.

Fry and Greenfeld (1980) reported no significant differences between the attitudes of males and females in terms of role conflicts. The authors noted that their findings supported Terborg's (1977) review of the literature that asserted that "women who pursue nontraditional careers reject sex role stereotypes and, once in those positions, they have needs, motives, and values similar to men who also are in those positions" (p. 125). They attributed this lack of significant differences to the similar task environments and organizational control systems that males and females face at the same time. This environment and control system is called the "bureaucratic paramilitary command model" in policing. The rigid levels of this hierarchical environment may result in a strict chain of command, reducing the potential for conflicting demands of lower-ranked personnel. According to authors, the more rigid the organization is, the less role conflict is expected.

In summary, the literature suggests that work environment characteristics are more important than demographic characteristics among the factors creating role conflicts.

5. Social Capital

Social capital is a construct extensively used in the literature focusing on relationships between individuals and the public. Coleman (1998) maintains that

> [s]ocial capital is defined by its function. It is not a single entity, but a variety of different entities having two characteristics in common: they all consist of some aspect of a social structure, and they facilitate certain actions of individuals who are within the structure. Like other forms of capital [human, financial, physical], social capital is productive, making possible the achievement of certain ends that would not be attainable in its absence …. Unlike other forms of capital, social capital inheres in the structure of relations between persons and among persons. It is lodged neither in individuals nor in physical implements of production (p. 302).

The political scientist Robert Putnam (1993) defines social capital as "the features of social organization, such as trust, norms, and networks that can improve the efficiency of society by facilitating coordinated actions" (p. 167). According to Coleman (1998), social capital includes "obligations and expectations (trustworthiness), information channels (interaction), and shared social norms" (p. 101). Putnam (1993) makes a distinction between "bonding social capital" and "bridging social capital." He states that "bridging social" capital is achieved through bonds of connectedness that are formed across diverse social groups, whereas "bonding social capital" is achieved via relationships in homogenous groups.

Nahapiet and Goshal, (1998) stress that "[a]t the individual level, social capital refers to the network an individual belongs to. Individuals derive benefits from knowing others with

whom they form networks of interconnected agents. The network enhances access to and exchange of information, enforcement of contracts, and focusing on a shared vision and collective goals" (p.245). Most recently, Jackson and Wade (2005) state that regardless of the definitions attributed to social capital, in all of the definitions provided, social capital refers to more or less dense interlocking networks of relationships between individuals and groups.

Social capital is seen as an important concept in building committed societies and keeping the social fabric healthy. To argue the significance of social capital, Putnam (2000) explains:

> Whereas physical capital refers to physical objects and human capital refers to the properties of individuals, social capital refers to connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them. In that sense, social capital is closely related to what some have called "civic virtue." The difference is that "social capital" calls attention to the fact that civic virtue is most powerful when embedded in a sense network of reciprocal social relations. A society of many virtuous but isolated individuals is not necessarily rich in social capital.
> In other words, interaction enables people to build communities, to commit themselves to each other, and to knit the social fabric. A sense of belonging and the concrete experience of social networks (and the relationships of trust and tolerance that can be involved) can, it is argued, bring great benefits to people. (p. 56)

Putnam points out that the "sense of belonging" that social capital creates can benefit the individual and the society. This sense of belonging is improved via social relations and social capital. In lights of these facts, it can be postulated that the level of social capital among police officers affect themselves and society as a whole.

In this dissertation, social capital will be employed to delineate the effects of the work environment on the social lives of police officers. Only a few studies have focused on social capital in the context of law enforcement (Jackson & Wade, 2005; MacDonald & Stokes, 2006;

Robinson, 2003; Scott, 2002). None of this research specifically examined/explored social capital and job satisfaction among police officers.

As widely acknowledged in the literature, policing is a stressful occupation. And, as discussed in the section reviewing the research on well-being, police officers use two different types of coping mechanisms to deal with the negative stressful effects of police work: The first one is active coping; the second one is escapist coping. Active coping includes talking to others, problem solving, minimizing concerns, and physical exercise, while escapist coping includes the use of alcohol or drugs, withdrawal, sleeping, and anger-catharsis. Higher levels of using escapist coping are associated with higher levels of work-family conflict and higher psychosomatic symptoms. Police officers reporting more work stressors also made greater use of escapist coping. Therefore, if bonding social capital is high among police officers, we may expect to see more utilization of active coping mechanisms. With active coping, less work or family conflict, less alcohol or drug use, and more job satisfaction should be achieved.

In this study, social relations and social capital built on social relations are assumed to have an impact on role conflicts and on the well-being of the officers. Therefore, a latent construct measuring the social relations of the subjects was included in the hypothesized study model.

6. Studies on the Turkish National Police

All of the studies cited in the literature review of this dissertation discuss police organizations that have structures that vary in some way from that of the national police

organization in Turkey, which is the main subject of this study. To understand these differences,

the configuration of the TNP needs to be delineated. The structure of the TNP is summarized by

Ozcan and Gultekin (2000) as follows:

> The Turkish police have a highly centralized structure. At the top of the structure, there is
> the Ministry of the Interior with the highest authority. The General Director of Security,
> head of the police organization, is appointed by and accountable to the Minister of the
> Interior. Under the control of the General Directorate and in harmony with national
> territorial divisions, there are 80 provinces, each of which is headed by a four-star
> director. Each province, in turn, has subdivisions in districts and small towns. Local
> police stations in the districts are the lowest level in the structure. More than 170,000
> police officers, spread all over the country, make up this huge national police force. In
> accordance with this centralized organizational structure, policies and decisions are made
> at the center, namely the General Directorate of Security. The main reason for adhering to
> such a system is the common belief that problems such as political unrest, terrorism, and
> drugs can be tackled more effectively by a centrally controlled police force (p. 5).

A centralized agency has both advantages and disadvantages. Buker (2007), the author of

one of the most recent studies on job satisfaction-related issues in the TNP, argues that

administrative practices are the most important factors in police stress, job satisfaction, or officer

dissatisfaction.

> We found the nature of police work per se is not a significant source of stress. What
> makes policing a stressful job is better understood within the macro and micro level
> implications and relations within the department. Administrators should put more
> emphasis on modern management methods that provide a relaxed environment for
> officers, and in turn, make them less stressed. More specifically, in any department,
> regardless of size, possible danger at work, demographic differences, and negative work
> characteristics, officers might be more or less stressed. This has many things to do with
> how officers perceive their intimate and greater work environment and less to do with the
> nature of police occupation, personal differences, or specific types of work
> characteristics. From a comparative perspective, our study supports the general argument
> in current police stress literature, which states the most important stressors in policing are
> rooted in administrative policies" (p.305).

According to Buker's (2007) findings, officers' satisfaction with the supervisors is top among the factors affecting stress. Satisfaction with the work and with the co-workers follows consecutively. Bureaucratic factors, such as excessive workload, inadequate staff, imprecise, non- specific policies/procedures, inadequate supervision/direction, and too much "red tape" within the department are all found to influence police stress and satisfaction. Buker (2007) emphasizes that bureaucratic and administrative practices are more important than other job satisfaction variables in Turkish National Police in terms of satisfaction and stress.

As Buker (2007) notes, administrative practices are another source of stress and dissatisfaction in the TNP. Frequent changes in managerial positions lead to the over-bureaucratization of the organization and thus to more administrative problems. One of the main reasons for frequent changes in managerial positions is political interference. Ozcan and Gultekin (2000) emphasize that this "[h]ighly centralized management style makes police vulnerable to political interventions. Along with political influence, the officers report media and human rights groups as sources of negative influence to the police. Officers ranked the politicians first with 69 percent in terms of their negative influence on the police, which was followed by human rights groups (17%) and the media (13%)" (p. 5). Political intervention in the police is seen clearly when changes take place in the government. "Whenever the government changes, there is a complete overhaul among the top police officers in the organization" (Ozcan and Gultekin, 2000, p. 3). In addition to being a problem itself, political intervention create other unexpected problems such as over-bureaucratization, reduced job satisfaction, and reduced police power.

Relative to the effects of these unexpected problems, Buker's (2007) "study supports the general argument in current police stress literature, which states the most important stressors in policing are rooted in administrative policies. The negative nature of police work is only valid when combined with unprofessional management in police departments. These negative aspects of police work, however, do not create stress for officers when several administrative policies and camaraderie in the workplace increases officers' job satisfaction levels" (p. 306).

In another Turkish study, Bastemur (2006) focuses on the relationship between job satisfaction and life satisfaction in the police department of Kayseri, a major city in Turkey. He finds a positive relation between job satisfaction and life satisfaction, but no significant relationship between job and life satisfaction and demographic characteristics such as age, education, period of time in the current section, number of children, and the spouse's work status. However, a significant relationship between job satisfaction and average work period, rank, marital status, and the police academy graduation exists. Interestingly though, these variables have no significant relationship with life satisfaction.

In terms of the job and life satisfaction levels of the officers in different police departments, Bastemur reports significant differences. The five departments that have the highest job satisfaction levels are the anti smuggling and organization crime department, the anti-terror department, the public order department, the safety department, and the forensic department. The five departments that have the lowest satisfaction are the anti-riot police, the special operations unit, the traffic control unit, the crime scene investigation unit, and the police stations. For life satisfaction, officers in the anti-terror department and the aviation department show the highest scores, while the special operations unit personnel have the lowest score.

Some possible explanations for high and low satisfying departments can be made. Anti-smuggling and organized crimes departments deal with offenses such as corruption, drug smuggling, and financial crimes. It is highly possible that criminals caught by this department will actually be tried and sentenced, which is regarded as the product or result of police effort. This leads to greater satisfaction with the job. In addition, police officers in these departments get more citations and awards than those who work in other departments due to traditions developed within these departments. More rewards increase job satisfaction. On the other hand, anti-riot department officers, the lowest scorers, work under heavy stress, in difficult working conditions, and under close scrutiny of the public and media. They also tend to experience extra duties more frequently than any other departments' officers do. These factors all reduce job satisfaction.

For Bastemur's (2006) participants, no significant relationship between rank and life satisfaction is seen. However, in terms of job satisfaction, the higher ranking officers express more job satisfaction. In his study, education, number of children, and age have no significant relationship with life satisfaction and job satisfaction. But, shift types have statistically significant relationships with levels of life and job satisfaction. Those who work 12 hours and rest for 36 hours show the highest satisfaction in both categories. On the other hand, those who work 12 hours and rest 12 hours report the lowest job and life satisfaction. Actually, this shift system (12/12) is one of the main problems that Turkish police officers face (Tercuman, 2006).

Bastemur (2006) reports an insignificant relationship between service time and life satisfaction. However, job satisfaction is significantly related to service time. Those who have worked for 16-20 years have the highest satisfaction level, parallel to Dantzker's (1993) and

Burke's (1998) research. In terms of gender, females express greater life and job satisfaction than males, though not at a statistically significant level. Similarly, married workers rate higher in both categories but not statistically significantly for life satisfaction. For job satisfaction, there is a significant relationship with marriage. Those who have a working spouse report more life and job satisfaction than those who do not, albeit not at statistically significant levels. Overall, Bastemur's (2006) research depicts a strong and statistically significant relationship between life and job satisfaction.

7. Summary of the Literature Review

All of the studies included in this literature review demonstrate that multiple factors affect the well-being, the stress, the role conflicts, the job satisfaction, and the life satisfaction of police officers. Organizational work hassles, neuroticism, and personal characteristics are identified as important factors impacting well-being (Burke, 1998; Ortega et al., 2006). In terms of well-being, two dimensions must be considered (Brough, 2005): positive health (e.g., positive affectivity and morale) and negative health (e.g., anxiety, depression, and fatigue). Greenhaus and Beutell (1985) emphasize the importance of work-family conflict in the prediction of the psychological well-being. Berte (1989) suggests the demanding and conflicting duties of police officers as sources of these conflicts for police officers; that is, trying to protect and simultaneously serve the community (Toch, 2002) engenders conflict.

Judge and Church (2000) point out that job satisfaction is another substantial predictor of psychological well-being. In terms of job satisfaction, Buzawa (1984), and Dantzker and Surette

(1996) reiterate that studying job satisfaction is important since there is a strong relationship between job satisfaction and organizational performance. Even though Zhao and Reiner (1999) state that there is a lack of consensus in the literature of the main sources of job satisfaction, individual characteristics and workplace characteristics are generally indentified as main factors affecting job satisfaction (Hoath, Schneider, & Starr, 1998).

Herzberg's (1968) two-factor theory of motivation and general dispositional theory are foundational to the theoretical paradigms of job satisfaction in police studies. The demographic aspects of the officers such as age, gender, ethnicity, education, rank, and job tenure have frequently been assessed as potential sources of job satisfaction in policing studies (Buzawa, 1984; Lim and Teo, 1998). Other organizational characteristics such as serving in an urban or rural area, assignment type, or department size are also routinely examined as potential sources of job satisfaction among police personnel (Dantzker, 1997; Winfree and Taylor, 2004).

The studies on stress have reported findings similar to those of job satisfaction studies. The results of stress affect officer personality, health, job performance, and home life (Territo and Vetter, 1981). Role ambiguity and role conflicts have been identified as two major factors creating stress (Gaines and Jermier, 1983). Indeed, one of the most common problems that police officers experience is role conflicts. However, if social bonding is high among police officers, a greater use of active coping mechanisms is seen. Active coping mechanisms provoke fewer work-family conflicts, lead to less alcohol or drug use, and create more job satisfaction.

Some scholars have examined the TNP in terms of officer job satisfaction, life satisfaction, and stress. Among them, Buker (2007) pinpoints administrative practices, and Ozcan and Gultekin (2000) delineate political interventions and over-bureaucratization as causes

of stress and dissatisfaction in the TNP. Bastemur (2006) found a positive relationship between job satisfaction and life satisfaction, and identified several organizational and individual characteristics affecting job and life satisfaction, which confirm the findings of previous research. These studies show that the factors identified as affecting the well-being of officers and the results of these effects are very similar for the members of the TNP and the members of other countries' police departments.

From the overall picture presented by the literature review, the interaction of the reported factors can be seen. Organizational hassles and individual characteristics affect job satisfaction and create stress. If these two factors have negative effects on the officers, they create stress. Stress impacts officer personality, health, job performance, and home life. Role conflicts are identified as both reasons for and results of stress. All of these factors interact to influence well-being.

Collectively, these findings provide empirical support upon which to base new policies. Bardach (2005) emphasizes the value of evidence-based policymaking. With empirical data on factors that affect officer well-being, proper policies and processes can be developed to improve the well-being and performance of the individuals and the organizations. Since it has been determined that organizational performance is dependent on individual performance, and individual performance is dependent on the well-being of the individuals, all of these factors determining well-being should be analyzed in-depth to identify problems and to generate appropriate intervention strategies. In fact, globally, a growing number of police departments have launched new programs to improve the well-being of their personnel. Comprehensive examples of new policies, which illustrate that police departments have been improving the well-

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being of the officers in order to ameliorate their organizational health, are provided by Berry (2004) and Fuller (2006) from England, and Brough (2005) from New Zealand. In the final sections of this study, based on the findings and the literature, a number of policy suggestions will be made for the TNP.

Findings without a theoretical underpinning are often of limited utility. To make this study's findings more useful, the next chapter will address the factors identified from the context of a theoretical framework based on the extensive literature review in this chapter.

III. THEORETICAL FRAMEWORK

As cited in Andrews (2006), Porter-O'Grady (2003) suggests that during most of the 20th century, the institutional model shaped the employee-employer relationship, meaning that employees defined themselves in terms of the institution employing them. Employees complied with the rules created by the employer. In exchange, the success of the organization contributed to the personal satisfaction and the well-being of the employee. However, as noted in the literature review, there is evidence that ignoring employees' needs has the potential to affect the performance of the parent organization negatively.

The preceding literature review suggests that four key dimensions have a significant influence upon the well-being of police officers. Considering the facts reported in the literature review section, the factors affecting well-being will, for the purposes of this study, be grouped under five dimensions: time balance, social relations, role conflict, perception of work environment, and control variables. It is difficult to observe the first four concepts with only one variable. Therefore, several indicators identified in the literature as having relationships with these latent constructs will be used to measure them. The relationships between these four constructs and their effects on the well-being will be analyzed by using the structural equation modeling method.

To support the development of hypotheses related to the proposed research questions, each latent construct will be examined in light of the relevant literature. The proposed theoretical framework for the study of police officers' well-being is provided in Figure 1. In addition, Figure

2 presents a hypothesized model of the five latent constructs and their indicator variables as suggested by the literature.
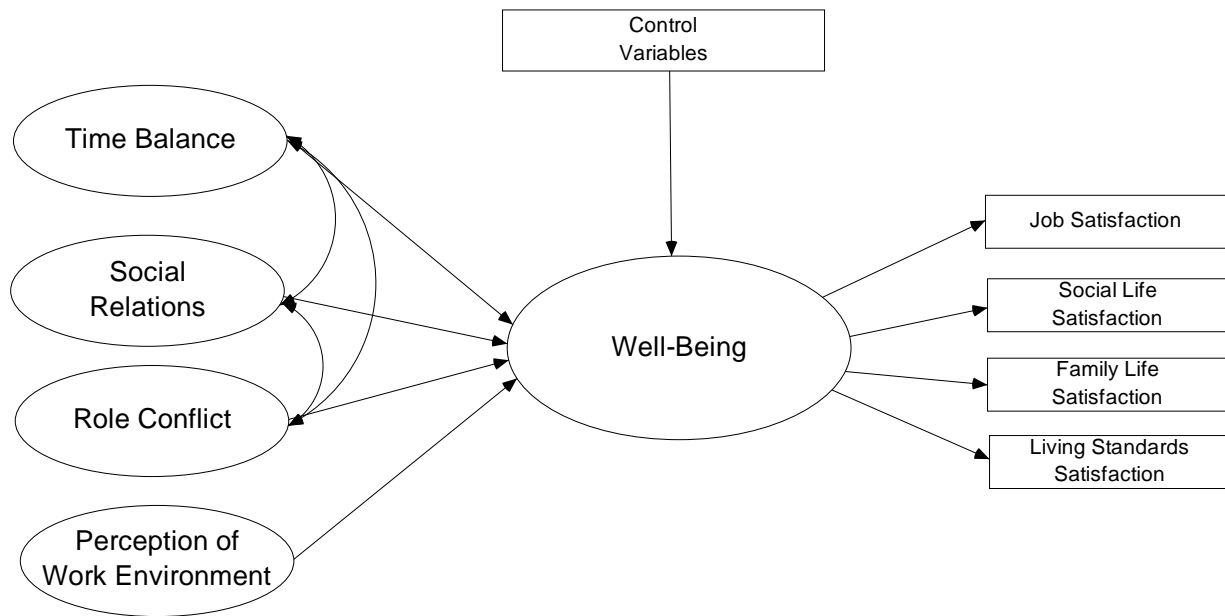
Figure 1. Theoretical Framework for the Study of Police Officers' Well-Being

1. Well-being

Well-being is the main endogenous latent construct in this research. As cited in Andrews (2006), Orem (2001) suggests that "well-being is a state of mental, intellectual, and psychological maturity. It is associated with experiences of contentment, pleasure, and kinds of happiness; by spiritual experiences; by movement toward fulfillment of one's self-idea; and by continuing personalization" (p. 186). In addition, life satisfaction is associated with job

satisfaction (Bastemur, 2006). Therefore, factors affecting job satisfaction, life satisfaction and the well-being will all be included in the theoretical framework.

In this study, four indicators are used to measure the well-being latent construct. In the survey, four questions addressed these four variables. These questions are as follows:

Can you tell how satisfied you are with each of the following items?

  a. *Your present job*

  b. *Your present standard of living*

  c. *Your family life*

  d. *Your social life*

These questions were developed to measure job satisfaction, living standards satisfaction, family life satisfaction, and social life satisfaction respectively. Reliability analysis of the well-being scale produced a Cronbach's alpha of .769, which shows a good reliability level. A combination of these four scores is assumed to render the well-being score. These indicators cover almost all of the factors discussed in the literature review section. The well-being score is assumed to show the real physical, physiological, and social status of police officers because it includes an indicator from each of these areas. Some specific observed factors that are assumed to have a direct effect on well-being will be included in the study as control variables.

2. Control Variables

Fourteen control variables are included in the study. Each of these variables is related to some theories referred in the literature review section.

1. Marital Status: What is your current marital status?

2. Gender: What is your gender?

3. Service: What is your service time?

4. Rank: What is your current rank?

5. Region: In which region do you work?

6. Department: In which department do you work?

7. Work Type: What is your working shift?

8. Work Week: How many days a week do you work?

9. Work Day: How many hours a day do you work?

10. Income sufficiency: Is your household able to make ends meet?

11. Extra work: In the past twelve months, have you been contacted, e.g. by email or telephone, regarding matters concerning your main paid job outside your normal working hours?

12. Optimism: I am optimistic about the future.

13. Isolation: I feel left out of society.

14. Confusion: Life has become so complicated today that I almost cannot find my way.

The first three variables ask for demographic characteristics. Theories of job satisfaction frequently argue that demographic characteristics are crucial factors. Therefore, it is hypothesized that there is a relationship between these demographic variables and well-being (Buckley & Petrunik, 1995; Griffin, Dunbar & McGill, 1978; Jacobs & Cohen, 1978; Lofkowitz, 1974).

For readers not directly involved in the TNP, some additional explanation of the *region* variable is needed. There are 81 provinces in Turkey. These provinces are grouped into seven main geographical areas, known as the Marmara, Aegean, Black Sea, Central Anatolia, East Anatolia, Southeast Anatolia, and Mediterranean areas. These areas are defined according to population, development level, and natural land shapes. The characteristics of these areas are very different. For example, Eastern and Southeastern Anatolia are underdeveloped in comparison with other areas. All of the police officers are required to work in these two areas for at least three years once or twice during their service time. Even though these areas are underdeveloped, the cost of living is lower than in other developed areas. Police officers may be happier in underdeveloped areas if they care primarily about the cost of living, or they may be happier in developed areas if they care primarily about social life, development level, and urban life in the first place. In light of these implications, the region variable was included in this study to chart differences that might occur among the different regions.

In terms of rank, it should be noted first that there are two main groups of police officer in the TNP: regular police officers and administrative officers (or police chiefs). Regular police officers graduate from police colleges, while police chiefs graduate from the Police Academy. Normally, regular officers complete their service without being promoted to the level of chief. Police chiefs begin their service at the lowest rank of chiefs, and are promoted based on years of service and performance. These two groups have different incomes, responsibilities, and duties. This research aims to analyze the differences between these two groups in terms of study variables.

Some differences among departments are also predicted. Workload, job characteristics, work-life balance, and salary vary among departments. Operational units such as police stations, narcotics, intelligence, anti-smuggling department, and anti-terrorism departments are known to provide more satisfaction, but can have a heavier more workload depending on the cities in which they operate. On the other hand, non-operational units like education and personnel affairs departments offer more stability and less workload; however, these posts may lead to less satisfaction (Table 1).

Finally, service time, marital status, and gender correlate highly with job satisfaction in some studies but have no significant relationship in some other studies (Burke, 1998; Buzawa, Austin and Bannon, 1994). This study will explore the relationships between these variables and well-being for TNP members.

The last three variables are intended to measure dispositional effect on well-being. As discussed in the previous section, dispositional theory assumes that the individual tendencies and dispositions of people may affect their perception of life (Kohan, O'Connor, & Brian, 2002). A person's general perception of life, mood, and dispositional characteristics may affect satisfaction. This theory of job satisfaction is called *dispositional theory*. By asking the three questions stated above, it will be measured whether personal psychological status has any direct relationship with well-being.

The income sufficiency variable is intended to examine whether subjects are experiencing any financial problems. In Herzberg's (1968) two-factor theory of motivation, salary is one of the factors affecting job satisfaction. In the Turkish National Police, police officers have reported that their salary is not sufficient to meet their living costs. This case is

worse in metropolitan areas. In large cities, the cost of living is higher than in small cities. Workload is another reason for officers not to choose large cities for assignments (Tercuman, 2006). To address this issue, a relationship between income sufficiency and well-being is hypothesized in this study.

The variable named *department* is included to find the assignment types of the subjects. Zhao and Reiner (1999) suggest that assignment types might have an indirect effect on job satisfaction through the particular work environment. Bastemur (2006) also reports a significant impact of department on job satisfaction in the TNP.

Martelli, Waters, and Martelli (1989) suggest that unpredicted or disagreeable job assignments affect satisfaction negatively. In this study, a variable named *extra work* is designated in order to see whether subjects face these kinds of assignments. Work type, working days per week, and working hours per day relate to time spent at work. In terms of work type, 12 hours on/12 hours off is the most-disliked work type (Tercuman, 2006). In this type of shift schedule, officers work for 12 hours, then rest for 12 hours. This type of shift schedule is used in areas with high crime rates, in crowded areas, or where there is a shortage of personnel. A regular government schedule consists of 9-hour shifts worked 5 days a week. This type of schedule is good for time balance and encourages a stable lifestyle (Bastemur, 2006). Twelve hours on followed by 36 hours off is the shift most liked among officers (Tercuman, 2006).

3. Time Balance

Four exogenous latent constructs are presumed to affect well-being. The first latent construct, time balance, is measured by six indicators. In the survey, six questions were asked to measure the time balance construct. These questions are as follows:

How much time do you spend on the following activities?

> *a. My job/paid work*
>
> *b. Contact with family members living in this household or elsewhere*
>
> *c. Other social contact (not family)*
>
> *d. Own hobbies/ interests*
>
> *e. Sleeping*
>
> *f. Taking part in voluntary work or political activities*

These indicators measure work time, family time, non-family time, leisure time, sleep time and volunteer time respectively. It is assumed that unbalanced time expenditure causes problems in social relations and results in role conflicts. In addition, a direct influence of time balance on well-being is presumed; Figure 2 shows this link with a unidirectional path arrow moving from time balance to well-being.

4. Social Relations

The Social Relations construct has three indicators. Three questions were designed to measure the level of social relations and contact with children, parents, and friends/neighbors of the subjects. The questions were as follows:

On average, thinking of people living outside your household, how often do you have direct (face-to-face) contact with

   a. Any of your children?

   b. Your mother or father?

   c. Any of your friends or neighbors?

In accordance with the theories of social capital discussed in the literature review section, it is assumed that the social relations construct is related with role conflict, well-being, and time balance. The relationship between the social relations construct and well-being is indicated by a single-headed arrow, because a direct influence of social relations on well-being is assumed. The relationships between both social relations and time balance and social relations and role conflict are assumed to be reciprocal, and are indicated by double-headed covariance arrows.

5. Role Conflict

As indicated in the literature review section, role conflict is a common problem in policing. As Ellison (2004) states, role conflict happens in policing because police officers need to meet the incompatible demands of individuals inside and outside the organization. In several

interviews between police officers and the mass media in Turkey, police officers reported that one of the main obstacles they faced was role conflict (Tercuman, 2006). A shortage of time to spend with family, extra assignments that extend work time, and arbitrary shift changes were reported as causes of role conflict. In this study, it is assumed that role conflict is related to time balance, well-being, and social relations.

In this study, the role conflict construct is measured by three indicators. Three questions were asked to assess the role conflict experienced in family life and work life. The questions are as follows:

How often has each of the following happened to you during the last year?

a. *I have come home from work too tired to do some of the household jobs that need to be done.*

b. *It has been difficult for me to fulfill my family responsibilities because of the amount of time I spend on the job.*

c. *I have found it difficult to concentrate at work because of my family responsibilities.*

The first two questions measured role conflict in family life stemming from the demands of work life. The third question measured role conflict in work life stemming from family life responsibilities.

6. Perception of Work Environment

In the literature review, the relationship between the work environment characteristics of organizations and job satisfaction was frequently studied and identified (Greene, 1989; Winfree & Taylor, 2004; Zhao, Thurman, & He, 1999). Kroes, Margolis and Hurrell (1974) explain that police officers mostly refer to organizational administration when discussing the factors affecting job satisfaction. According to the authors, "[t]he policies concerning work assignments; procedures; personal conduct; and the support patrol officers receive from administration" (p. 10) are some of the various organizational features affecting job satisfaction. As was explained by Herzberg's (1968) two-factor theory of motivation, demographic characteristics and immediate work environment are also important factors in job satisfaction.

For the TNP, Ozcan and Gultekin (2000) and Buker (2007) emphasized that administrative practices are the most important factors in police stress, satisfaction, or dissatisfaction.

Perception of work environment is the fifth construct in the study. It was measured with 13 questions. These questions aimed to measure several aspects of the work environment. Following are the questions:

For each of the following statements, please select the response which best describes your work situation.

>   1. *You can get assistance from colleagues if you ask for it.*
>
>   2. *You can get assistance from your superiors / boss if you ask for it.*
>
>   3. *You can get external assistance if you ask for it.*

4. You have influence over the choice of your working partners.

5. You can take your break when you wish.

6. You have enough time to get the job done.

7. You are free to decide when to take holidays or days off.

8. At work, you have the opportunity to do what you do best.

9. Your job gives you the feeling of work well done.

10. You are able to apply your own ideas in your work.

11. You have the feeling of doing useful work.

12. You find your job intellectually demanding.

13. You find your job emotionally demanding.

Questions 4-5-6-7-8 relate to the decision-making latitude of employees in the work environment. Karasek (1979) proposes that the interaction between job demands and employee latitude in decision making creates a dynamic with the potential to result in job-related mental strain. The consequences of this job-related strain include the expression of job dissatisfaction and increased absenteeism. Therefore, it is assumed that these variables have a relationship with well-being. This can occur in two ways: via perception of work environment, and via the score of job satisfaction. These relationships are addressed by a single-headed path arrow in the SEM model. Other questions address different aspects of the work environment.

IV. METHODOLOGY

The following methodology will guide this study. This methodology is based on the previous theoretical framework, which was developed according to the findings of previous studies.

1. Research Questions and Hypotheses

Well-being is identified as having a relationship with police performance in the literature. A review of the relevant literature offers theoretical support for the five latent constructs identified as influential on well-being. These constructs are time balance, social relations, role conflict, perception of work environment, and well-being itself. In addition, the literature has shown the selected control variables to have a relationship with well-being and performance. Based on previous discussions and explanations, the following research questions will guide the study.

a. Research Questions

1. Is there any relationship between time balance, social relations, and role conflict?
2. Is there any relationship between the selected control variables and the well-being of police officers?

3. Is there any effect of time balance, social relations, role conflict, and perception of work environment on the well-being of the police officers?

Based upon these research questions, the following research hypotheses are proposed. To test all these relationships, a hypothesized structural equation model was developed (Figure 2)

b. Major Hypotheses

H1: There is a positive relationship between time balance and well-being, holding demographic and organizational factors constant.

H2: There is a positive relationship between social relations and well-being, holding demographic and organizational factors constant.

H3: There is a negative relationship between role conflict and well-being, holding demographic and organizational factors constant.

H4: There is a positive relationship between perception of work environment and well-being, holding demographic and organizational factors constant.

H5: There is a positive relationship between time balance and social relations, holding demographic and organizational factors constant.

H6: There is a negative relationship between time balance and role conflict, holding demographic and organizational factors constant.

H7: There is a negative relationship between social relations and role conflict, holding demographic and organizational factors constant.
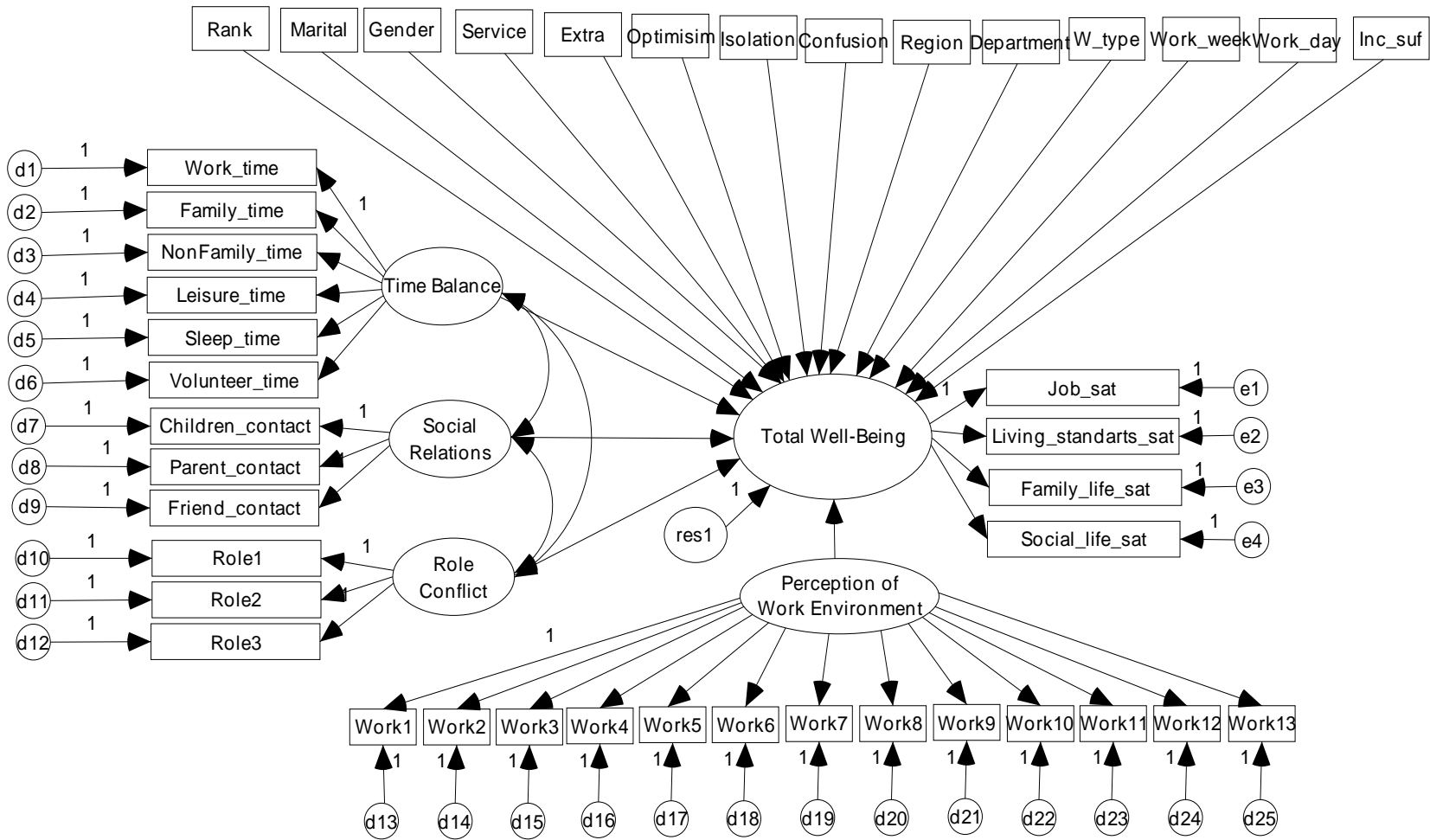
Figure 2: A Hypothesized SEM Model

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Table 1: Operationalization of Study Variables

VARIABLE	TYPE	ATTRIBUTE	ROLE	DEFINITION
Rank	Ordinal	Exogenous	Police Officer, Sergeant, Major, Superintendent, Police Chief	What is your rank?
Department	Categorical	Exogenous	Operational, Nonoperational, Police Stations	In which department do you work?
Region	Ordinal	Exogenous	Marmara, Aegean, Mediterranean, Central Anatolia, Black Sea, Eastern Anatolia, Southeastern Anatolia	In which region do you work?
Service time		Exogenous		How many years have you been working?
Gender		Exogenous	Male, Female	What is your gender?
Marital status		Exogenous	Married, Widow/Widower, Single	What is you marital status?
Income sufficiency	Ordinal	Exogenous	Very easily, Easily, Fairly easily, With some difficulty, With difficulty, With great difficulty	is your household able to make ends meet
Extra work	Ordinal	Exogenous	Every day, At least once a week, A couple of times a month, Less often, Never	In the past twelve months, have you been contacted, e.g. by email or telephone, in matters concerning your main paid job outside your normal working hours?
Optimism	Ordinal	Exogenous	Agree completely , Agree somewhat, Disagree somewhat, Disagree completely	I am optimistic about the future.
Isolation	Ordinal	Exogenous	Agree completely , Agree somewhat, Disagree somewhat, Disagree completely	I feel left out of society
Confusion	Ordinal	Exogenous	Agree completely , Agree somewhat, Disagree somewhat, Disagree completely	Life has become so complicated today that I almost can't find my way.
Work hour per day	Ordinal	Exogenous	1 to 24 scale	How many children do you have?
Work type	Ordinal	Exogenous	12-12, 12-24, 12-36, 8/5 or 9/6	Work Shifts
Work days per week	Scale	Exogenous	1 to 7 scale	How many days do you normally work per week?
ROLE CONFLICT (How often has each of the following happened to you during the last year?)				
Role1	Ordinal	Exogenous	Several times a week , Several times a month, Several times a year, Less often/ Rarely, Never	I have come home from work too tired to do some of the household jobs which need to be done
Role2				It has been difficult for me in fulfilling my family responsibilities because of the amount of time I spend on the job
Role3				I have found it difficult to concentrate at work because of my family responsibilities

TIME BALANCE (How much time you spend on following activities?)				
Work time	Ordinal	Exogenous	Too much, Just right , Too little	My job/paid work
Family time				Contact with family members living in this household or elsewhere
Non-Family time				Other social contact (not family)
Leisure time				Own hobbies/ interests
Sleep time				Sleeping
Volunteer time				Taking part in voluntary work or political activities
THE WELL-BEING (how satisfied you are with each of the following items)				
Job_sat	Scale	Endogenous	1 to 10 scale	Your present job
Living_standarts_sat				Your present standard of living
Family_life_sat				Your family life
Social_life_sat				Your social life
SOCIAL RELATIONS (On average, thinking of people living outside your household how often do you have direct (face-to-face contact with)				
Children_contact	Ordinal	Exogenous	More than once a day, Every day or almost , every day, At least once a week, Once or twice a month Several Times a year, Less often, No relatives, DK	Any of your children
Parent_contact				Your mother or father
Friend_contact				Any of your friends or neighbors
PERCEPTION OF WORK ENVIRONMENT (For each of the following statements, please select the response which best describes your work situation.)				
Work1	Ordinal	Exogenous	Almost always, Frequently, Sometimes, Rarely, Almost never	You can get assistance from colleagues if you ask for it
Work2				You can get assistance from your superiors / boss if you ask for it
Work3				You can get external assistance if you ask for it
Work4				You have influence over the choice of your working partners
Work5				You can take your break when you wish
Work6				You have enough time to get the job done
Work7				You are free to decide when to take holidays or days off
Work8				At work, you have the opportunity to do what you do best
Work9				Your job gives you the feeling of work well done
Work10				You are able to apply your own ideas in your work
Work11				You have the feeling of doing useful work
Work12				You find your job intellectually demanding
Work13				You find your job emotionally demanding

2. Study Variables

Forty-three variables were used in this study. The time balance construct was measured with six indicators, the social relations construct was measured with three indicators, the role conflict construct was measured by three variables, the perception of work environment construct was measured with thirteen variables, and the well-being construct was measured with four variables. Fourteen control variables were included as well. Table 1 provides the operationalization of the study variables.

3. Sampling

In this study, a non-experimental design with cross-sectional data was used. The unit of analysis of the study was police officers in the TNP. The Turkish National Police has approximately 180,000 employees. Police officers work in seven different geographical regions (Figure 3). There are 29 main departments of the Turkish National Police as seen in Table 2. Central units of these departments are located at the General Directorate of Security Headquarter in Ankara. All cities in Turkey have branches of these central units. These central units coordinate and administer all units in all cities as a central agency.

Eight of these 29 departments are grouped as Operational Units (Table 2). Operational Units have the right to decide and initiate operations on the issues under their responsibilities. They primarily do street policing, but also have units to deal with office work. For example, the Intelligence Department has squads operating outside to collect information, but it has also high-

tech surveillance units inside. Non-operational units mainly offer supportive, educational, and personnel-related works, and these departments generally operate inside. They do not initiate any operations, but provide support to operational units. Police stations are a branch of the Public Order Department. In each city, depending on the population and crime rate, there are twenty to fifty police stations. Police stations in cities are responsible for maintaining public order. They do the main street policing.

To be able to represent all of the regions, ranks, and departments in the study, a stratified random sampling method was used. To this end, in each region, for Group 1 and 2, 50 police officers were sampled randomly from the lists of personnel. Personnel list of these divisions constituted the sampling frame of the study. These lists include all employees from all departments in that group. For Group 3, two police stations were selected randomly from the list of police stations. Twenty-five employees from each police station were then selected randomly. In total, fifty subjects were sampled from police stations in each region. This selection was made for each of the regions. In total, 150 employees were sampled in each region. Since there are seven regions, 1050 employees were included in this research.

The secretariats of each sampled division were contacted via phone calls. The link of the survey was sent to the secretariats, and they forwarded the data instrument to the sampled officers in person, via e-mail or mail. Sampled employees were informed about the survey by the secretariats of each division. The subjects were asked to log on to a designated web site where the survey was administered.

Table 2: Grouping of Police Departments

DEPARTMENTS OF TURKISH NATIONAL POLICE

GROUP 1. OPERATIONAL UNITS
   1. Anti-Smuggling and Organized Crime Dept.
   2. Anti-Terror Department
   3. Bodyguard Department
   4. Intelligence Department
   5. Public Order Department
   6. Safety Department
   7. Special Operations Department
   8. Traffic Department

GROUP 2. NON-OPERATIONAL UNITS
   1. Safety Department
   2. Archives and Documentation Dept.
   3. Aviation Department
   4. Civil Defense Department
   5. Communication
   6. Computer and Network Dept.
   7. Construction Department
   8. Department Of Audit
   9. Department Of Law
  10. Education Department
  11. Foreign Relations Department
  12. Forensic Department
  13. Health Department
  14. Interpol
  15. Main Control and Order Department
  16. Managerial and Financial Affairs Dept.
  17. Personel Department
  18. Press and Public Relations Department
  19. Refuge and Border Protection Department
  20. Social Services Department
  21. Strategy Development Department
  22. Supply and Care Department

GROUP 3. OTHER   1. Police Stations

Figure 3: Map of Geographic Regions in Turkey

4. Survey Construction, Reliability and Validity of Surveys

This study used a web survey method for data collection for several reasons. The low cost of web surveys is their most attractive advantage. Dillman (2000) states that "[t]here is no other method of collecting survey data that offers so much potential for so little cost as web surveys" (p. 50). Zanutto (2001) lists the following additional advantages: "a faster response rate; easier to send reminders to participants; easier to process data since responses could be downloaded to a spreadsheet, data analysis package, or a database; dynamic error checking capability; option of putting questions in random order; the ability to make complex skip pattern questions easier to follow; the inclusion of pop-up instructions for selected questions; and the use of drop-down boxes" (p.1). These are the advantages of web surveys over paper surveys.

Couper (2000) points out the multimedia capability of web surveys as a real advantage, as well as the option to customize survey options for particular groups of respondents. Along

with these facts, Dillman, Tortora and Bowker (1998) suggest that plain web surveys get more responses than fancy surveys that include tables, graphics, and different colors.

One of the main concerns with web-based surveys is the possibility of a low response rate. Zanutto (2001) states that the sample is not a real random sample in web surveys. The security of data and the visual appearance of the surveys on different browsers are some other reported problems. Couper (2000) states some sources of error in any survey. These problems relate to sampling, coverage, non-response, and the validity of the surveys.

These concerns were taken into account while conducting the survey for this study. Some precautions were taken to eliminate these concerns. To reduce the *sampling bias* that Couper (2000) points out, a stratified simple random sampling strategy (detailed in the sampling section) was used. As stated in a report by Satmetrix (2001), although there were concerns and limitations with web-based surveys, these limitations are surmountable when data is collected from an identifiable, known population. In this study, the researcher was familiar with the population taking the survey.

While conducting the web-based survey, personal contacts were primarily used, and e-mail lists were used when needed to reach the subjects. The sampling was made randomly by using a personal list of police department branches. Web surveys provided ease of access for the subjects to participate in the surveys, and ease of delivery for the surveyor in the delivery of the surveys.

Couper (2000) calls the problem of access to the internet *coverage.* In this study, all of the samples are employees of the Turkish National Police (TNP). All of the branches in the TNP, from the largest to the smallest, have internet access. Therefore, access to an internet connection

was guaranteed for all of the sampled employees. For this reason, no coverage problem was expected in the study. Finally, to eliminate the non-response concern, the researcher reached out several times to the secretariats of the sampled departments. Participation in the survey was voluntary, but the research followed up actively with the participants.

Couper's final concern (2000) is related to the *validity* of the surveys. A combination of two surveys was used in this research. These surveys have been conducted by Eurofound for several years. Eurofound is defined by the institution itself as "a foundation which works in specialized areas of European Union policies. Specifically, it was set up by the European Council to contribute to the planning and design of better living and working conditions in Europe. Its role is to provide information, advice, and expertise—on living and working conditions, industrial relations, and managing change in Europe—for key actors in the field of EU social policy based on comparative information, research and analysis" (Eurofound, 2008).

One of the surveys is The European Quality of Life Survey (EQLS), which focuses on issues such as employment, income, education, housing, family, health, work-life balance, life satisfaction, and perceived quality of society. The other survey, the European Working Conditions Survey (EWCS) has been administered every five years since 1990. The Foundation explains this survey as follows: "[T]he survey provides an overview of the state of working conditions throughout Europe, and indicates the extent and type of changes affecting the workforce and the quality of work. The recurring nature of the survey gives a picture of trends in working conditions throughout Europe. Previous datasets have been used by third parties (2004, 2005, 2006, and 2007) for further research" (Eurofound, 2008).

In terms of survey creation methodology, Eurofound followed the following steps:

The questionnaire, in common with previous editions of the EWCS, was developed in close cooperation with the expert questionnaire development group. This group was composed of representatives of the national institutes that carry out this type of survey at national level, members of the tripartite Governing Board of the Foundation (employer associations, trade unions and governments), the European Commission and other EU bodies (Eurostat, the European Agency for Safety and Health at Work), international organizations (OECD, ILO), as well as leading European experts in the field of working conditions and survey methodology. While the priority was to retain trend questions in order to preserve and extend the time series, a certain number of new areas were identified where the survey's scope could be usefully extended (access to training, work engagement and commitment, job security, the collective dimension of work, the blurring boundaries of work and non-work life). New questions introduced were, where possible, based on existing questions already successfully used in other similar national surveys. In the case of certain background demographic variables, including highest completed education level, net monthly job income, and household composition, more extensive question formulations were developed in order to create richer future analytical possibilities. Out of the 63 questions contained in the questionnaire, 31 are unchanged, 26 are modified, and six are new.

The questionnaire was translated into 27 different languages, with nine of these used in more than one country. The translation process implemented for the survey was based on current good practice in the multilingual translation of international survey questionnaires: for trend questions, existing translations from previous surveys were retained except in a small number of cases where problems were identified and new revised translations introduced. For new and modified questions, the English master version was subject to parallel translation into the main target languages by independent translators familiar with survey research in the working conditions area. These parallel translations were merged into a final draft, which was then translated back into English to identify and resolve remaining problems or ambiguities. The majority of the translations were also subject to final vetting by national experts from the expert development questionnaire group, who assisted the Foundation in this task. In general, they rated positively the quality of the individual translations and in some cases proposed some important fine-tuning. (Fourth Working Conditions Survey Report, p. 94).

This methodology appears relatively rigorous, and the long-term use and support of numerous researchers suggests a reliable instrument. Therefore, in terms of reliability, no major threat was expected in the use of this instrument in this study.

The most recent survey on working conditions is the 2005 European Working Conditions Survey. Turkey was included in this survey. The overall response rate of the fourth survey was

0.48, which was a reasonable response rate for this type and size of survey. In most countries, the response rates are around the average of 0.5 or above, with eight countries below the 0.4 response rate (Belgium, Finland, Luxembourg, Netherlands, Poland, Slovenia, Switzerland and the United Kingdom). Turkey's cooperation rate was 88%, its contact rate was 78%, its refusal rate was 9%, and its response rate was 64%. "The cooperation rate is the proportion of completed interviews to all eligible units ever contacted. The contact rate measures the proportion of all contacted households to all households eligible, the response rate is calculated as the proportion of completed interviews to the total number of eligible cases. The refusal rate measures the proportion of refusals to the total number of potentially eligible cases" (Fourth Working Conditions Survey Report, p. 95-96).

5. Survey Administration

The design and administration of the survey was made according to Dillman's (2000) protocol. According to this protocol, the following steps were taken:

- The study survey was created by the approval of dissertation committee.
- According to the sampling methodology, preliminary contacts were made with the selected departments.
- The survey was uploaded to the www.surveymonkey.com website, and participants were informed about the survey link.
- Two weeks before starting the survey, a telephone call was made to inform the directors of sampled departments about the survey to encourage participation.

- An informed consent form was placed in the first page of survey to assure the human subjects' protection.

- Frequent phone calls to the selected departments were made to follow up and increase participation.

- At least a 50% response rate was expected in the study; 47.14% was achieved.

- After the end of survey answering process, cleaning of the data was conducted. Surveys improperly filled out (for example, surveys that had choice A or B selected for all questions, or had too many missing answers) were excluded from the final analysis. Ultimately, 475 surveys were included in the analysis. All of the responses were recorded as SPSS 16 files to analyze the data with AMOS and SPPS software.

6. Analysis

The original sample size of the study was 1050 officers. At the first stage of the analysis, measures of central tendency were utilized. Each item in the survey was analyzed to identify average responses for all employees that participated in the study. Cross-tabulations were used to compare cities, ranks, and departments.

Structural equation modeling was used to examine the determinants of police officers' well-being. AMOS software was employed to conduct the structural equation modeling. AMOS is ideally suited for modeling correlation and non-experimental data, as it can account for the measurement error that is inevitable when assessing latent psychological constructs (Arbuckle &

Wothke, 1997). The structural equation models reported in this paper employed the maximum likelihood method of estimation. SPSS 16.0 was used to run the analysis.

7. Human Subjects

Participation to this survey was voluntary and there was no coercion toward participation. The respondents were asked for their consent in participation by means of an informed consent form (Appendix A) placed at the beginning of the survey. This letter provided a written confirmation of consent.

No direct contact was made with the subjects during the survey's administration. One reason for this anonymity was that some questions addressing problems with the Turkish National Police might have raised concern among respondents. In addition, questions on personal matters might have received lower response rates. These issues might have reduced the participation level. To eliminate these concerns, a permission letter from the TNP was provided at the beginning of the survey (Appendix A), demonstrating that this project was conducted by the permission of the Turkish National Police. As the researcher is also a part of this organization, he is required to obey the rules of the TNP regarding the confidentiality of these records. The researcher clearly stated at the beginning of the survey that he would not declare any part of confidential records under any conditions, and that individual respondents would not be identified in reporting the results. These measures assured the participants that there would be no risk of undermining the confidentiality of their responses.

V. FINDINGS

1. Descriptive Statistics

The survey was conducted via an online service provider, *www.surveymonkey.com*. The survey started on Wednesday, November 7, 2007, at 9:38 a.m., and ended on Monday, January 21, 2008 at 4:57:44 a.m. During this period, 495 responses were received. The original sample size planned for the study included 1050 subjects. The 495 responses received constitute a 47.14% response rate, which is adequate for further analysis.

Twenty responses were eliminated from further analysis. There were some mis-submissions, which means that the subjects clicked twice unintentionally to the "submit survey" button. These responses were recognized by SPSS as missing values. If a response was missing more than 50% of its values, it was eliminated also. Ultimately, 475 responses were included in the analysis. All of the cases included in the final data have very limited missing values. When SPSS encountered missing values, it was instructed to replace these values with the mean of the variables for interval-level variables, and with the modes for categorical or nominal-level variables.

To make the survey distribution even among regions, ranks, and demographics, phone calls were made to the departments selected for the study. It was important for the survey analysis to receive responses from different regions, ranks, departments, and demographic characteristics, since one of the aims of the study was to find out whether these characteristics

had any effect on the study variables. As seen in Table 3, the survey received responses from 118 police officers (24.8% of the sample), 49 sergeants (10.3% of the sample), 160 captains (33.7 % of the sample), 112 superintendents (24.6% of the sample), and 31 police chiefs (6.5% of the sample). These response rates are consistent with the actual numbers of each rank in the Turkish National Police. The most populous rank is the captain rank and the next most populous is the superintendent rank, followed by the ranks of sergeant and chief consecutively. In other words, the mid-level ranks comprise the largest part of the TNP's workforce. The mean score (2.73) and the median score (3.0) show that the largest rank that participated in the survey was the captain rank. The number of responses from police stations was 81 (17.1%), from nonoperational departments 233 (49.1%) and from operational departments 161 (33.9%).

The number of responses from the geographical regions are as follows: Southeastern Anatolia 49 (10.3%), Eastern Anatolia 62 (13.1%), Black Sea 27 (5.7%), Central Anatolia 155 (32.6%), Mediterranean 25(5.3%), Aegean 34 (7.2%), Marmara 123 (25.9%). The Marmara region is the most populated region, and the Central Anatolia region has the highest per capita grouping of government officials, including police officers. Therefore, these regions had the highest numbers of responses. The other regions provided samples of sufficient size to make comparisons with other regions.

Of the 475 subjects who responded to the survey, 11 were female (2.3%), and 464 were male (97.7%). The actual number of females in the TNP is between 7and 8% of total employees. Four hundred seventeen (87.8%) subjects were married, 52 (10.9%) subjects were single, and 6 (1.3%) subjects were divorced. Work hours per day ranged from 7 to 24, with a mean of 11.61 hours and median of 12.00. Workdays per week ranged from 1 to 7, with a mean of 5.85 and a

median of 6.00. Service time was between 1 to 30 years, with a mean of 10.79 and a median score of 10.00. The variability within the data reflects a wide range of respondents and supports the external validity of the study.

As regards working hours, a mean of 12.61 work hours per day is relatively high. As analysis proceeds, it will be noted that many of the problems associated with policing in Turkey revolve around the balance of time between work life, social life, and family life, and the toll tgat irregular working hours take on this balance.

Even though time balance will be analyzed as a latent construct in the proposed model, the issue is also posed as a separate question. When the subjects were asked, "In general, do your working hours fit in with your family or social commitments outside work very well, well, not very well, or not at all well?" 204 (42.9%) of the respondents replied *does not fit very well*, 173 (36.4%) replied *does not fit at all well*, 91 (19.2%) replied *fits well,* and only 7 (1.5%) replied *fits very well.* When *does not fit very well* and *does not fit at all well* are combined, 79.3% of the subjects reported a lack of balance in time spent on work life, family life, and social life. Only 19.2% of the subjects reported a good balance. The researcher suggests that this situation negatively impacts job satisfaction, life satisfaction, family life satisfaction, and social life satisfaction. It is also assumed that poor time balance impacts social relations and role conflict. All of these assumptions are tested in the structural equation model developed for the study.

The subjects were asked to rate whether their income is sufficient for their living expenses. In response to the question, "Thinking of your household's total monthly income, is your household able to make ends meet?" 89 (18.7%) of the subjects reported *with great difficulty*, 113 (23.8%) of the subjects reported *with difficulty*, and 162 (34.1%) of the subjects

reported *with some difficulty*. In total, 76.6% of the subjects reported difficulty in meeting their financial obligations with their current income. Thirty-four (7.2%) of the subjects rated their ease in making ends meet as *fairly easily*, 66 (13.9%) subjects rated it as *fairly*, and only 11 (2.3%) subjects rated as *very easily.* In total, only 23.4% of the subjects reported that that their income is sufficient for their expenses.

Another source of complaints about working conditions in the TNP is extra work. In the survey, a question related to extra work, "In the past twelve months, have you been contacted, e.g. by email or telephone, in matters concerning your main paid job outside your normal working hours?" was asked of the subjects. Eighty (16.8%) of the subjects replied *yes, every day*, 146 (30.7) of the subjects replied *at least once a week*, 104 (21.9%) of the subjects replied *a couple of times a month*, 73 (13.4%) of the subjects replied *less often*, and finally 72 (15.2%) of the subjects replied *no, never* to this question. Of the subjects, 47.5%--almost half of the sample—reported facing extra work very frequently. A detailed analysis is required to see which departments experience the most frequent extra work demands and their reasons, along with the phenomenon's effects on well-being.

As pointed out in the literature review section, positive and negative affectivity may affect employees' perceptions regarding work life or social conditions. This is called *dispositional theory*. To see whether there is any effect of affectivity on well-being, three questions were asked of the subjects. A question regarding optimism was framed as, "I am optimistic about the future;" the question addressing isolation was framed as, "I feel left out of society;" and the question regarding confusion was framed as, "Life has become so complicated

today that I almost can't find my way." The subjects rated these questions as *agree completely,*

agree somewhat, disagree somewhat, and *disagree completely*.

Table 3: Descriptive Statistics for Control Variables

Variables	Mean	Median	Frequency	Percentage
1) **Rank**	2.78	3.00		
(a) *Officer*			118	24.8
(b) *Sergeant*			49	10.3
(c) *Captain*			160	33.7
(d) *Superintendent*			117	24.6
(e) *Police Chief*			31	6.5
2) **Department**	1.83	2.00		
(a) *Polis Stations*			81	17.1
(b) *Nonoperational*			233	49.1
(c) *Operational*			161	33.9
3) **Region**	3.65	4.00		
(a) *Southeastern Anatolia*			49	10.3
(b) *Eastern Anatolia*			62	13.1
(c) *Black Sea*			27	5.7
(d) *Central Anatolia*			155	32.6
(e) *Mediterranean*			25	5.3
(f) *Aegean*			34	7.2
(g) *Marmara*			123	25.9
4) **Service_time**	10.79	10.00		
5) **Gender**	1.02	1.00		
(a) *Male*			464	97.7
(b) *Female*			11	2.3
6) **Marital_status**	1.34	1.00		
(a) *Single*			52	10.9
(b) *Divorced*			6	1.3
(c) *Married*			417	87.8
7) **Work_hours_a_day**	11.61	12.00		
8) **Work_days_a_week**	5.85	6.00		
9) **Income_sufficiency**	4.19	4.00		
(a) *With great difficulty*			89	18.7
(b) *With difficulty*			113	23.8
(c) *With some difficulty*			162	34.1
(d) *Fairly easily*			34	7.2
(e) *Fairly*			66	13.9
(f) *Very easily*			11	2.3
10) **Extra_work**	3.19	3.00		
(a) *Every day*			80	16.8
(b) *At least once a week*			146	30.7
(c) *A couple of times a month*			104	21.9
(d) *Less often*			73	15.4
(e) *Never*			72	15.2

Variables		Mean	Median	Frequency	Percentage
11) Optimisim		2.99	3.00		
	(a) Strongly agree			157	33.1
	(b) Agree			186	39.2
	(c) Disagree			100	21.1
	(d) Strongly disagree			32	6.7
12) Isolation		2.86	3.00		
	(a) Strongly disagree			136	28.6
	(b) Disagree			186	39.2
	(c) Agree			103	21.7
	(d) Strongly agree			50	10.5
13) Confusion		2.41	2.00		
	(a) Strongly disagree			48	10.1
	(b) Disagree			170	35.8
	(c) Agree			185	38.9
	(d) Strongly agree			72	15.2
14) Work Type		2.75	3.00		
	(a) 12-12			131	27.6
	(b) 12-24			77	16.2
	(c) 12-36			49	10.3
	(d) 8-5/9-6			218	45.9

For optimism, the scores were 157 (33.1%), 186 (39.2%), 100 (21.1%), and 32 (6.7%) respectively. Of the subjects, 72.3% were optimistic about the future, while 27.7 were not. Regarding isolation, 322 (67.8%) of subjects reported disagreement with the statement. This result is consistent with optimism scores. The subjects of this study were neither pessimistic nor isolated in the majority. For confusion, the scores were 72 (15.2%), 185 (38.9%), 170 (35.8%), and 48 (10.1%) respectively. Subjects agreeing with the statement totaled 54.1% , while those who disagreed totaled 45.9% percent.

Even though the subjects reported being optimistic and not feeling isolated, these results show that some things in their lives make life confusing for them As will be analyzed in the SEM model, it is assumed that this confusion stems from time balance, role conflict, and perception of work environment. This analysis will be discussed in detail in the discussion section.

a. Measurement of Role Conflict

Three questions on a 5-point Likert Scale (*several times a week, several times a month, several times a year, less often/ rarely, never*) were asked to measure the role conflict experienced by police officers. For the Role 1 variable, the question asked was, "I have come home from work too tired to do some of the household jobs which need to be done." For Role 2, the question was, "It has been difficult for me to fulfill my family responsibilities because of the amount of time I spend on the job." For Role 3, the question was, "I have found it difficult to concentrate at work because of my family responsibilities." For Role 1, 55.8 percent of the subjects replied that they had to do household jobs when they come tired from the work a few times a week. This response shows the effect of work time on family life. 27.8 percent of the subjects experienced this situation a few times a month. In total, 83.6 percent of the employees felt this conflict.

The Role 2 item was asked in order to identify a more direct role conflict. "Having difficulty in fulfilling family responsibilities" due to the time spent on work was experienced by 58.9 % of the subjects a few times a week, and by 25.7 % of the subjects a few time a month. As might be seen in the Role 3 scores, identifying who was affected by this unfulfilled family responsibilities, 24.8% of the subjects experienced difficulty in concentrating on the job due to family responsibilities a few times a week, and 33.1% experienced difficulty a few times a month.

A correlation matrix was developed for the Role Conflict construct. Since the data was on an ordinal scale, Spearman's rho was used to calculate correlations. All correlations for role

conflict variables were significant (p ≤ .01). All correlations were in the positive direction. There

was a strong positive correlation between Role 2 and Role 3 by (rho=.516). Role 2 and Role 1

have a medium correlation by rho=.482, and Role 1 and Role 3 also have a medium correlation

by rho=.405. These findings suggest no overall issues of multicollinearity related to the scales.

Given the negative structure of the variables, a positive correlation means that if one type of role

conflict happens, then another role conflict is likely to happen. For example, while Role 2

increases by unit, Role 3 increases by .516.

Table 4: Descriptive Statistics for Role Conflict

Variables			*Never*		*Less often*		*A few times a year*		*A few times a month*		*A few times a week*	
	Mean	Median	N	%	N	%	N	%	N	%	N	%
Role1	1.76	1.00	*16*	*3.4*	*40*	*8.4*	*22*	*4.6*	*132*	*27.8*	*265*	*55.8*
Role2	1.69	1.00	*13*	*2.7*	*32*	*6.7*	*28*	*5.9*	*122*	*25.7*	*280*	*58.9*
Role3	2.58	2.00	*57*	*12.0*	*79*	*16.6*	*64*	*13.5*	*157*	*33.1*	*118*	*24.8*

Table 5: Correlations of Role Conflict Indicators

			Role1	Role2	Role3
Spearman's rho	Role1	Correlation Coefficient	1.000	.482[**]	.405[**]
		Sig. (2-tailed)	.	.000	.000
		N	475	475	475
	Role2	Correlation Coefficient	.482[**]	1.000	.516[**]
		Sig. (2-tailed)	.000	.	.000
		N	475	475	475
	Role3	Correlation Coefficient	.405[**]	.516[**]	1.000
		Sig. (2-tailed)	.000	.000	.
		N	475	475	475

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

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

b. *Measurement of Time Balance*

The subjects were asked to report their time spent on work, family, non-family (friends, neighbors, and so on), leisure, sleep, and volunteer activities on a 3-point Likert scale (*too much, just right, too little*). 49.6% (223 subjects) responded that they spend too much time on work, while 79 subjects (16.6%) responded *too little.* For time spent with family, 332 (69.9%) subjects responded *too little,* 139 (29.3%) *just right,* and only 4 (.8%) of subjects responded *too much*. 377 subjects (79.4%) reported that they spent *too little* time with non-family individuals. For sleep, 202 subjects (42.5%) responded *too little,* and for volunteer time, 432 (90.9%) responded *too much* time spent on those activities. These numbers clearly show that the subjects spend most of their time at work. The effects of this situation will be analyzed in the SEM model in the final model for the study.

A correlation matrix for the latent construct of time balance was developed (Table 7). Since the data was ordinal level, Spearman's rho was used to calculate the correlations. All the correlations were in the positive direction. The only strong correlation was between nonfamily time and family time, by rho=.516. The correlation between leisure time and nonfamily time followed it by rho= .491. Correlation scores varied between .093 and .516. The weakest correlation was between volunteer time and work time. These findings suggest no overall issues of multicollinearity related to the latent construct. All correlations were significant at $p \leq .01$ levels.

Table 6: Descriptive Statistics for Time Balance

Variables	Mean	Median	*Too little*		*Just right*		*Too much*	
			N	%	N	%	N	%
Work_time	2.32	2.00	79	16.6	173	36.4	223	46.9
Family_time	2.69	3.00	332	69.9	139	29.3	4	.8
NonFamily_time	2.79	3.00	377	79.4	94	19.8	4	.8
Leisure_time	2.85	3.00	404	85.1	69	14.5	2	.4
Sleep_time	2.40	2.00	202	42.5	259	54.5	14	2.9
Volunteer_time	2.90	3.00	432	90.9	38	8.0	5	1.1

Table 7: Correlations of Time Balance Indicators

			Work time	Family time	NonFamily time	Leisure time	Sleep time	Volunteer time
Spearman's rho	Work_time	Correlation Coefficient	1.000					
		Sig. (2-tailed)	.					
	Family_time	Correlation Coefficient	$.212^{**}$	1.000				
		Sig. (2-tailed)	.000	.				
	NonFamily_time	Correlation Coefficient	$.177^{**}$	$.516^{**}$	1.000			
		Sig. (2-tailed)	.000	.000	.			
	Leisure_time	Correlation Coefficient	$.161^{**}$	$.344^{**}$	$.491^{**}$	1.000		
		Sig. (2-tailed)	.000	.000	.000	.		
	Sleep_time	Correlation Coefficient	.036	$.418^{**}$	$.290^{**}$	$.307^{**}$	1.000	
		Sig. (2-tailed)	.438	.000	.000	.000	.	
	Volunteer_time	Correlation Coefficient	$.093^{*}$	$.162^{**}$	$.320^{**}$	$.348^{**}$	$.154^{**}$	1.000
		Sig. (2-tailed)	.042	.000	.000	.000	.001	.

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

c. Measurement of Social Relations

Time balance and role conflict are predicted to affect, and to be affected, by social relations. To measure the level of social relations with children, parents, and friends, subjects were asked to the answer the following question on an 8-point Likert Scale (*more than once a day, every day or almost every day, at least once a week, once or twice a month, several times a year, less often, no relatives, don't know*): "On average, thinking of people living outside your household, how often do you have direct (face-to-face) contact with them?" The highest scores for each choice reveal that the subjects meet with their children more than once a day (133 subjects, 28.0%), with their parents several times a year (206 subjects, 43.4%), and once or twice a month with their friends or neighbors (216 subjects, 45.5%). These numbers are consistent with the expectations of the researcher. However, the more important thing is to note these results' interactions with time balance, role conflict, work environment, and well-being.

Table 8: Descriptive Statistics for Social Relations

Variables	Children_contact		Parent_contact		Friend_contact	
	N	%	N	%	N	%
Don't Know	12	2.5	3	.6	1	.2
No relatives	75	15.8	17	3.6	2	.4
Less often	3	.6	133	28.0	20	4.2
Several Times a year	2	2.5	206	43.4	59	12.4
Once or twice a month	3	.6	39	8.2	216	45.5
At least once a week	12	23.6	4	9.3	29	27.2
Every day or almost every day	125	26.3	21	4.4	36	7.6
More than once a day	133	28.0	12	2.5	12	2.5
	Mean	Median	Mean	Median	Mean	Median
	3.01	2.00	4.87	5.00	3.73	4.00

Table 9: Correlations of Social Relations Indicators

			Children_contact	Parent_contact	Friend_contact
Spearman's rho	Children_contact	Correlation Coefficient	1.000		
		Sig. (2-tailed)	.		
	Parent_contact	Correlation Coefficient	.071	1.000	
		Sig. (2-tailed)	.123	.	
	Friend_contact	Correlation Coefficient	.135[**]	.215[**]	1.000
		Sig. (2-tailed)	.003	.000	.

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

A correlation matrix for the latent construct of Social Relations was developed (Table 9). Since the data was ordinal scale, Spearman's rho was used to calculate correlations. All of the correlations were in the positive direction but were weak. The highest correlation was between Parent contact and Friend contact, at rho=.215. Children contact and parent contact has the weakest correlation score, rho=.071. These findings suggest no overall issues of multicollinearity related to the latent construct.

d. *Measurement of Perception of Work Environment*

The key construct in this study is the perception of work environment. This study aims to explore the effects of the characteristics of work environment on social life, family life, and the well-being of police officers. For this reason, more questions were asked than for the other constructs, in order to measure the perception of work environment. Thirteen questions were

responded to on a 5-point Likert Scale (*almost never, rarely, sometimes, frequently, almost always*). The first question was, "Can you get assistance from colleagues if you ask for it?" 118 (24.8%) subjects replied *almost always*, 180 (37.9%) subjects replied *frequently,* and 138 (29.1%) subjects replied *sometimes*. These numbers demonstrate that the majority of the subjects receive assistance whenever needed.

The second question asked, "Can you get assistance from your superiors / boss if you ask for it?" 192 subjects (40.7%), the highest percentage, replied *sometimes*. This answer was followed by *frequently* with 109 (22.9%) subjects, and *rarely* with 84 (17.7%) subjects. The subjects receive assistance from their superiors at a lower rate than they receive it from their friends. Some bureaucratic or managerial decisions might play a role in this situation.

The third question asked whether external assistance is received when needed. The *sometimes* choice was selected by 163 (34.3%) subjects, and the *rarely* choice was selected by 184 (38.7%) subjects. As might be predicted, the level of assistance received decreases as the source moves from closest work friends to external contacts.

The fourth question was framed as, "Do you have influence over the choice of your working partners?" 127 (26.7%) subjects replied *almost never*, 143 (30.1%) subjects replied *rarely* and 107 (22.5%) subjects replied *sometimes*. Since policing has a hierarchical structure, team assignments are primarily dependent not on personal choices, but on managerial decisions. The relationship between this and other variables will be analyzed later.

The fifth question was, "Can you take your break when you wish?" 192 (40.4%) subjects replied *sometimes*, 92 (194%) subjects replied *rarely*, and 91 (19.2%) subjects replied *frequently*. The sixth question asked whether the subjects have enough time to get their job done. 159

(33.5%) subjects replied *sometimes*, 121 (25.5%) subjects replied *frequently*, and 105 (22.1%) subjects replied *rarely*. The seventh question asked was, "Are you free to decide when to take holidays or days off?" 147 (30.9%) subjects replied *almost never* and *rarely*. In total, 61.8% replied in the negative direction.

The eighth question was a little different from the previous ones. The question was, "At work, do you have the opportunity to do what you do best?" 174 (36.6%) subjects replied *sometimes*, and 112 (23.6%) subjects replied *rarely*. *Almost never* and *rarely* scores together totaled 40% of the subjects' responses. *Frequently* and *almost always* together totaled 19%. The subjects replied negatively to this question.

The ninth question was the key question for measuring the perception of police officers regarding their work, and their feelings about their work. The question was, "Does your job give you the feeling of work well done?" The combined score for the *almost always* and *frequently* choices totaled 263 (55.4%) subjects. The combined score for the *rarely* and *almost never* choices was 91 (19.2%). One hundred and twenty-one (25.5%) subjects replied *sometimes*. These results show that, treating the *sometimes* category as neutral, the subjects' negative perception is lower in frequency than their positive perception. The majority of the subjects think that they are doing a good job.

This attitude was double-checked with a similar question. The eleventh question was, "Do you have the feeling of doing useful work?" The combined score for *almost always* and *frequently* was 311 (65.5%), while the combined score for *rarely* and *almost never* was 59 (12.5%). One hundred five (22.1%) subjects replied as "sometimes." There was a nearly 10% shift from the negative side to positive side, and the range between negative and positive feeling

increased. To sum up, we can conclude that the subjects feel good about what they are doing at work.

The tenth question was, "Are you able to apply your own ideas in your work?" The negative end (*rarely* plus *almost never*) was 142 (29.9%), and the positive end (*frequently* plus *almost always*) was 160 (33.7%). One hundred seventy-three (36.4%) replied *sometimes*. These statistics show a balanced result. For further analysis, the relationship between this question and other control variables (departments, ranks, and so on) should be studied to see what factors are important in triggering these responses.

The twelfth and thirteenth questions were developed to see whether the subjects' work was intellectually and emotionally demanding. In the twelfth question, asking about intellectual demands, the negative end was 42 (8.8%), and the positive end was 357 (75.2%), showing that the subjects think their work requires intellectual effort. The situation was very similar for emotional demands. In the thirteenth question, asking about emotional demands, the negative end was 59 (12.4%), and the positive end was 310 (65.2%). In short, the majority of the subjects find their work both intellectually and emotionally demanding.

A correlation matrix for the latent construct of perception of work environment was developed (Table 11). Since the data was ordinal scale, Spearman's rho was used to calculate correlations. All of the correlations were in the positive direction, except for the correlation between Work12 and Work6 (rho=.-34).

Table 10: Descriptive Statistics for Perception of Work Environment

Variables	Mean	Median	Almost never		Rarely		Sometimes		Frequently		Almost Always	
Work1	2.22	2.00	6	1.3	33	6.9	138	29.1	180	37.9	118	24.8
Work2	2.83	3.00	31	6.5	84	17.7	192	40.4	109	22.9	59	12.4
Work3	3.56	4.00	77	16.2	184	38.7	163	34.3	31	6.5	20	4.2
Work4	3.56	4.00	127	26.7	143	30.1	107	22.5	66	13.9	32	6.7
Work5	3.04	3.00	54	11.4	92	19.4	192	40.4	91	19.2	46	9.7
Work6	2.92	3.00	39	8.2	105	22.1	159	33.5	121	25.5	51	10.7
Work7	3.70	4.00	147	30.9	147	30.9	91	19.2	72	15.2	18	3.8
Work8	3.27	3.00	78	16.4	112	23.6	174	36.6	82	17.3	29	6.1
Work9	2.51	2.00	27	5.7	64	13.5	121	25.5	176	37.1	87	18.3
Work10	2.98	3.00	46	9.7	96	20.2	173	36.4	123	25.9	37	7.8
Work11	2.24	2.00	16	3.4	43	9.1	105	22.1	187	39.4	124	26.1
Work12	2.07	2.00	22	4.6	20	4.2	76	16.0	207	43.6	150	31.6
Work13	2.24	2.00	26	5.5	33	6.9	106	22.3	175	36.8	135	28.4

Correlations varied between .687 and .011. The strongest correlation was between Work9 and Work11, at rho=.687. Work9 and Work10, and Work2 and Work1 have the second strongest correlation at rho=.592. Work8 and Work10 are correlated by rho=.547. Work8 and Work7 are correlated by rho=.533. Work11 and Work12 followed these correlations at rho=.531. The above are strong correlations, above .50 levels. The weakest correlation was between Work6 and Work13 at rho=.011

Table 11: Correlations of Perception of Work Environment Indicators

		Work1	Work2	Work3	Work4	Work5	Work6	Work7	Work8	Work9	Work10	Work11	Work12	Work13
Work1	Correlation Coefficient	1.000												
	Sig. (2-tailed)	.												
Work2	Correlation Coefficient	.592**	1.000											
	Sig. (2-tailed)	.000	.											
Work3	Correlation Coefficient	.332**	.447**	1.000										
	Sig. (2-tailed)	.000	.000	.										
Work4	Correlation Coefficient	.304**	.382**	.316**	1.000									
	Sig. (2-tailed)	.000	.000	.000	.									
Work5	Correlation Coefficient	.286**	.348**	.329**	.276**	1.000								
	Sig. (2-tailed)	.000	.000	.000	.000	.								
Work6	Correlation Coefficient	.177**	.244**	.220**	.122**	.479**	1.000							
	Sig. (2-tailed)	.000	.000	.000	.008	.000	.							
Work7	Correlation Coefficient	.312**	.438**	.337**	.250**	.439**	.375**	1.000						
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.						
Work8	Correlation Coefficient	.311**	.429**	.319**	.334**	.488**	.416**	.533**	1.000					
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.					
Work9	Correlation Coefficient	.338**	.351**	.236**	.264**	.326**	.298**	.295**	.464**	1.000				
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.				
Work10	Correlation Coefficient	.310**	.386**	.343**	.387**	.415**	.296**	.414**	.547**	.592**	1.000			
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.			
Work11	Correlation Coefficient	.290**	.279**	.182**	.267**	.228**	.232**	.181**	.311**	.687**	.485**	1.000		
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.		
Work12	Correlation Coefficient	.151**	.145**	.104*	.183**	.069	-.034	.043	.142**	.421**	.337**	.531**	1.000	
	Sig. (2-tailed)	.001	.002	.023	.000	.134	.464	.347	.002	.000	.000	.000	.	
Work13	Correlation Coefficient	.161**	.146**	.086	.071	.041	.011	.093*	.065	.316**	.243**	.336**	.460**	1.000
	Sig. (2-tailed)	.000	.001	.062	.123	.377	.804	.042	.157	.000	.000	.000	.000	.

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

e. *Measurement of Well-being*

The well-being construct includes four indicators. Job satisfaction, living standards satisfaction, family life satisfaction, and social life satisfaction were rated on a 1-to-10 scale, 1 indicating *very dissatisfied* and 10 indicating *very satisfied*. The mean score for job satisfaction was 6.36, and the median was 7.00. The number of scores ≤ 5 was 166 (34.9%), and the number of scores > 5 was 309 (65.1%). The majority of the scores were above 5. For living standards satisfaction, the mean score was 4.62, and median was 5.00. The number of scores ≤ 5 was 308 (64.8%), and the number of scores > 5 was 167 (35.2%). The ratios are nearly the opposite of the ratios for job satisfaction. For family life satisfaction, the mean was 7.31, and the median was 8.00. The number of scores ≤ 5 was 109 (22.9%), and the number of scores > 5 was 366 (77.1). For social life satisfaction, the mean was 4.00, and the median was 7.00. The number of scores ≤ 5 was 322 (67.8%), and the number of scores > 5 was 153 (32.2%). For the last two satisfaction scores, the ratios are almost opposite each other. Generally, most of the scores for job satisfaction and family life satisfaction are above 5; however, for living standards and social life satisfaction, most of the scores are below five. This is actually quite interesting and will be analyzed in detail in the following chapters. In a question that was included in the survey but not included in this dissertation, subjects were asked to rate their life satisfaction in general from 1 to 10. The mean was 6.04. The number of scores ≤ 5 was (39.2%), and the number of scores > 5 was 289 (60.8%). With all these numbers in mind, we can say that people may be happy at work

and at home, but a low level of satisfaction with social life and living standards decreases the total life satisfaction scores.

A correlation matrix for the latent construct of well-being was developed (Table 13). Since the data was interval scale, Pearson's r was used to calculate correlations. All the correlations were in the positive direction. The strongest correlation was between living standards satisfaction and social life satisfaction, at r=.615. Job satisfaction and living standards satisfaction are correlated by r=. 453. Social life satisfaction and job satisfaction are correlated by r=.454. The weakest correlation was between family life satisfaction and job satisfaction, at r=390. All these correlations are medium-level but not weak correlations. These scores show the interrelations between study variables and the reliability of the scale.

Table 12: Descriptive Statistics for Well-being

Variables	Mean	Median
Job_sat	6.36	7.00
Living_standarts_sat	4.62	5.00
Family_life_sat	7.31	8.00
Social_life_sat	4.00	4.00

Table 13: Correlations of Well-being Indicators

		Job_sat	Living_standarts_sat	Family_life_sat	Social_life_sat
Job_sat	Pearson Correlation	1			
	Sig. (2-tailed)				
Living_standarts_sat	Pearson Correlation	.453[**]	1		
	Sig. (2-tailed)	.000			
Family_life_sat	Pearson Correlation	.390[**]	.418[**]	1	
	Sig. (2-tailed)	.000	.000		
Social_life_sat	Pearson Correlation	.454[**]	.615[**]	.396[**]	1
	Sig. (2-tailed)	.000	.000	.000	

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

2. Reliability Analysis

Cronbach's alpha was calculated for all scales. The suggested value for Cronbach's alpha is .7 or higher. However, as Pallant (2004) states, this score may be lower if number of items in the scale is less than ten. Brigs and Cheek (1986) suggests reporting mean inter-item correlation for the items in this case. Suggested value for mean inter-item correlation is between .2 and .4. For the scale of social relations, mean inter-item correlation will be reported because the Cronbach's alpha score is below .5

Cronbach's alpha for Time Balance is .682, for Role Conflict .712, for Well-being .769, Perception of Work Environment .859 and for Social Relations .337. The mean inter-item correlation for Social Relations is .145.

The perception of work environment scale has thirteen items. Most of these items have medium or strong correlations, as was discussed in the descriptive analysis section. The

Cronbach's alpha is above the .7 level, which means that this scale is reliable. The well-being scale has four items that are strongly correlated. Even though it might have produced a lower Cronbach's alpha level due to the low item number, the high correlation between items gave a Cronbach's alpha score above the suggested .7 level. The time balance scale has six items, and the Cronbach's alpha is .682. This score is also very close to the .7 level, and shows that the scale is reliable. The role conflict scale's Cronbach's alpha is very good at .712, in spite of the fact that it might have produced a low alpha due to the low item number (only three). A high inter-item correlation produced a high Cronbach's alpha.

Cronbach's alpha for the social relations scale is low. This scale has only three items, which is one of main reasons for the low Cronbach's alpha. The mean inter-item correlation is .145. These values suggest adequate, though not excellent, reliability. Based on these results, the scale will not be excluded from the study.

3. Confirmatory Factor Analysis

a.   Time Balance

After verifying the reliability of each scale, it is necessary to confirm each of the measurement models for the latent constructs of time balance, social relations, role conflict, perception of work environment, and well-being. Time balance was conceptualized as a latent construct measured by six indicators. Work time, family time, non-family time, leisure time, sleep time, and volunteer time were the indicators of the time balance latent construct. Each item

was measured on a 3-point Likert scale. Higher levels of time balance were associated with higher levels of indicators. Work time value was recoded in order to be in the same direction with other five indicators. The model represented in Figure 4 was subjected to confirmatory factor analysis by using AMOS 16.0 (SPSS, 2007).

The critical ratios (CR) for all of the observed variables in the regression demonstrated significant relationships at the $p \leq .05$ (CR ≥ 1.96) level. Factor loadings from each indicator to time balance construct were high. Therefore, the theorized associations were preserved. To make a better-fitting model, measurement errors were correlated by using a modification index if goodness-of-fit statistics were elevated and the correlation was theoretically sound. The modified model is demonstrated in Figure 5. All critical ratios were statistically significant at $p \leq .05$ in the revised model, as in the generic model. Table 14 demonstrates the reported results.
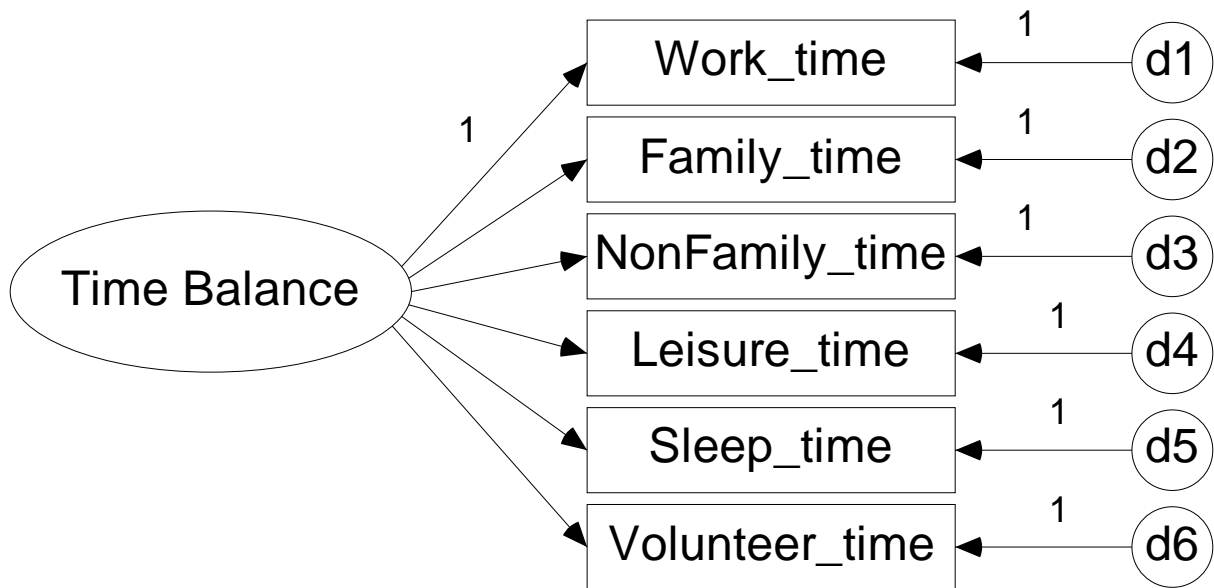
Figure 4: Measurement Model for Time Balance
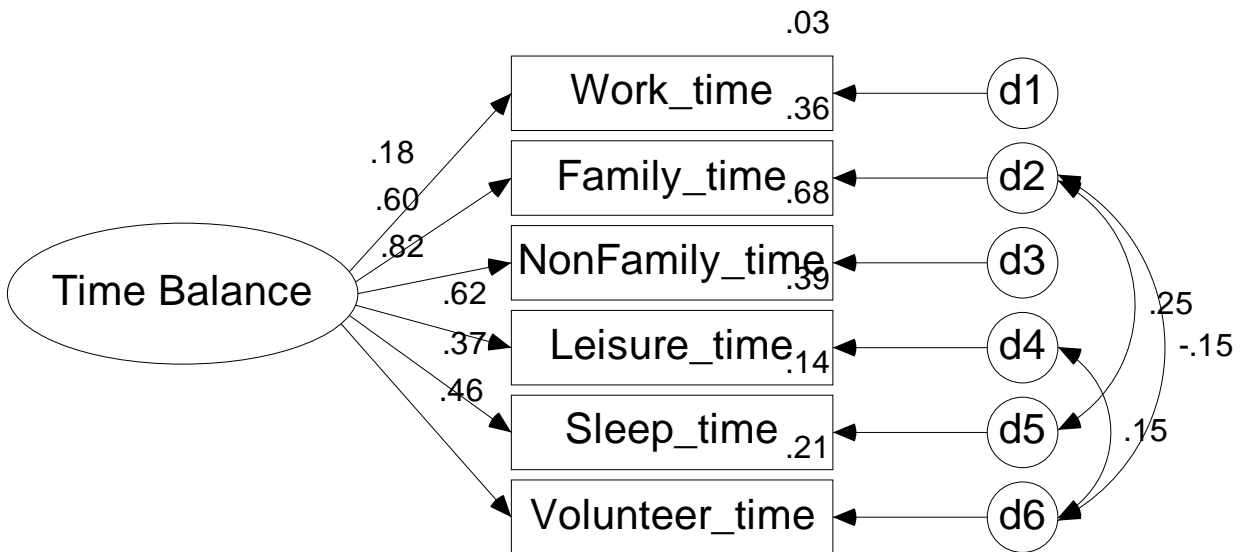
Figure 5: Revised Measurement Model for Time Balance

Table 14: Parameter Estimates for Time Balance

Indicator			Generic Model					Revised Model				
			U.F.L	S.F.L	S.E.	C.R.	P	U.F.L	S.F.L	S.E.	C.R.	P
Work_time	<---	Time Balance	1.000	.172				1.000	.176	.670	3.328	***
Family_time	<---	Time Balance	2.306	.610	.709	3.254	.001	2.230	.602	.816	3.355	***
NonFamily_time	<---	Time Balance	2.634	.777	.800	3.291	.001	2.740	.824	.538	3.338	***
Leisure_time	<---	Time Balance	1.957	.668	.598	3.273	.001	1.796	.625	.501	3.118	.002
Sleep_time	<---	Time Balance	1.898	.442	.603	3.147	.002	1.561	.370	.368	3.207	.001
Volunteer_time	<---	Time Balance	1.221	.464	.386	3.167	.002	1.179	.457	.073	7.219	***
d2	<-->	d5						.049	.252			
d2	<-->	d6						-.017	-.153	.011	4.458	***
d4	<-->	d6						.013	.153	.006	-2.924	.003
										.006	2.376	.017

Note: ***Correlation significant @ p ≤ .01

Note: U.F.L. = unstandardized factor loading; S.F.L. = standardized factor loading; S.E. = standard error C.R. = critical ratio

Goodness-of-fit statistics for both models are provided in Table 15. Fit statistics improved in the modified model, and the chi-square difference (ΔX^2) between the two models is computed at 15.8, which indicates an improvement of data fit in the revised model. Goodness-of-fit statistics for the modified model indicates an excellent fit of the measurement model to the data. A chi-square probability of 0.004 and root mean square of approximation (RMSEA) of 0.068 failed to meet fit criteria, but they were very close to suggested levels. This value of RMSEA is regarded as adequate fit in the literature.

Table 15: Goodness-of-Fit Estimates for Time Balance

Index	Criterion	Generic Model	Revised Model
Chi-square (x^2)	low	66.7	19.3
Degrees Of Freedom (df)	$\geq.0$	9	6
Probability	$\geq.05$	.000	.004
Likelihood Ratio (x^2/df)	<4	7.4	3.2
Goodness of Fit Index (GFI)	>.90	.957	.987
Adjusted GFI (AGFI)	>.90	.900	.955
Tucker Lewis Index (TLI)	>.90	.812	.935
Normed Fit Index (NFI)	>.90	.874	.963
Root Mean Square Error Of Approximation (RMSEA)	$\leq.05$	.116	.068
Probability(p or p-close)	$\geq.05$	.000	.160
Hoelter's Critical N (CN)	> 200	121	310

b.   *Social Relations*

The social relations construct was conceptualized to measure the level of contact with family, parents, and friends/neighbors. Each item was measured on an 8-point Likert-like scale. Children contact, parent contact, and friend/neighbor contact were the indicators for the social relations construct. High levels of contact showed a better social relation status. Study values were recoded to allow unidirectional interpretation with other constructs. The model represented in Figure 6 was subjected to confirmatory factor analysis by using AMOS 16.0 (SPSS, 2007). Since the social relations construct has only three indicators, the model was simply identified. There was no need for improvement because goodness-of-fit statistics shows an excellent fit of the data to the model.
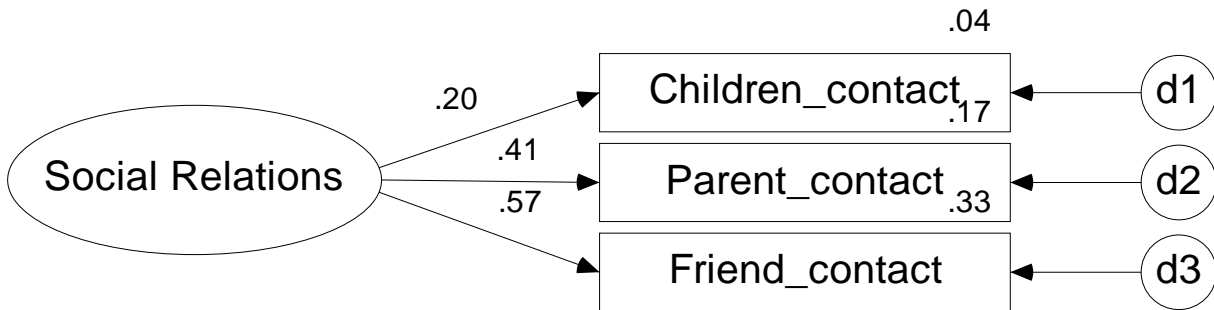
Figure 6: Measurement Model for Social Relations

Parameter estimates for the model are shown in Table 16. Friend contact has no

significant relationship with social relations contact; however, it was kept to make the model

identified.

Goodness-of-fit statistics are shown in Table 17. For a just identified model, chi square

and degrees of freedom are calculated as 0. The adjusted goodness-of-fit score is 1, and the

Normed Fit Index is 1, which indicates the fit of data to the model.

Table 16 : Parameter Estimates for Social Relations

			Generic Model				
Indicator			**U.F.L**	**S.F. L**	**S.E.**	**C.R.**	**P**
Children_contact	<---	Social Relations	1.000	.198			
Parent_contact	<---	Social Relations	1.269	.415	.550	2.307	.021
Friend_contact	<---	Social Relations	1.403	.575	.802	1.749	.080

Note: ***Correlation significant @ p ≤ .01
Note: U.F.L. = unstandardized factor loading; S.F.L. = standardized factor loading; S.E. = standard error   C.R. = critical ratio

Table 17: Goodness of Fit Estimates for Social Relations

Index	Criterion	Generic Model
Chi-square (x^2)	low	0.0
Degrees Of Freedom (df)	$\geq.0$	0
Probability	$\geq.05$	na
Likelihood Ratio (x^2/df)	<4	na
Goodness of Fit Index (GFI)	>.90	1
Adjusted GFI (AGFI)	>.90	na
Tucker Lewis Index (TLI)	>.90	na
Normed Fit Index (NFI)	>.90	1
Root Mean Square Error Of Approximation (RMSEA)	$\leq.05$	na
Probability(p or p-close)	$\geq.05$	.000
Hoelter's Critical N (CN)	> 200	.151

b. Role Conflict

The role conflict construct was conceptualized as a single factor measuring role conflicts experienced at family life and work life. Each item was measured on a 5-point Likert scale. Role1 (measuring conflict in family life), Role2 (measuring conflict in family life), and Role3 (measuring conflict in work life) are the indicators of role conflict construct. High levels of variables show high levels of role conflict. Therefore, low scores in role conflict indicators represent a positive situation. This directional issue becomes important while interpreting the relationships between role conflict and the other constructs. Study values were recoded to allow unidirectional interpretation with other constructs. The model represented in Figure 7 was subjected to confirmatory factor analysis by using AMOS 16.0 (SPSS, 2007). Since the role conflict construct has only three indicators, the model was just identified. There was no need to

improve the of proposed model because goodness-of-fit statistics show an excellent fit of the data to the model.
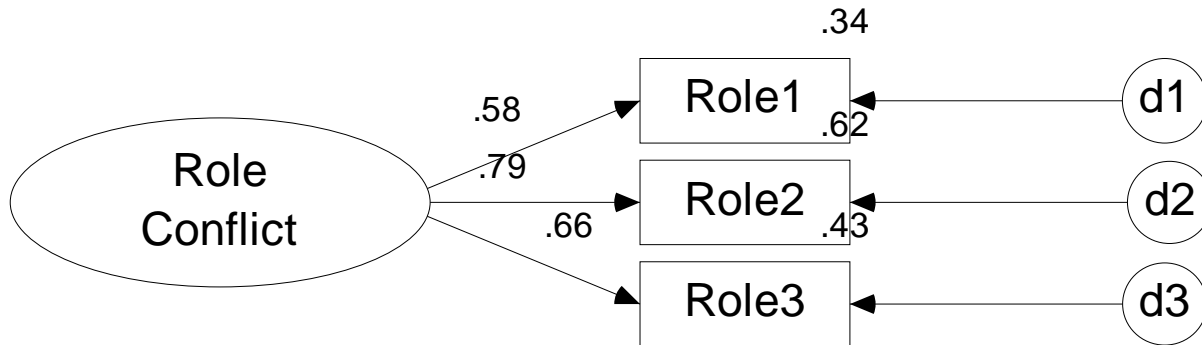
Figure 7: Measurement Model for Role Conflict

Parameter estimates for the model are shown in Table 18. All of the indicators have statistically significant relationships with the social relation construct. Goodness-of-fit statistics are shown in Table 19. For a just identified model, chi square and degrees of freedom are calculated as 0. The adjusted goodness-of-fit score is 1, and the Normed Fit Index is 1, which indicates the fit of data to the model.

Table 18: Parameter Estimates for Role Conflict

Indicator			Generic Model				
			U.F.L	S.F. L	S.E.	C.R.	P
Role1	<---	Role_Conflict	1.000	.580			
Role2	<---	Role_Conflict	1.287	.788	.145	8.885	***
Role3	<---	Role_Conflict	1.391	.656	.147	9.445	***

Note: ***Correlation significant @ $p \le .05$
Note: U.F.L. = unstandardized factor loading; S.F.L. = standardized factor loading; S.E. = standard error C.R. = critical ratio

Table 19: Goodness-of-Fit Estimates for Role Conflict

Index	Criterion	Generic Model
Chi-square (x^2)	Low	0.0
Degrees Of Freedom (df)	≥.0	0
Probability	≥.05	na
Likelihood Ratio (x^2/df)	<4	na
Goodness of Fit Index (GFI)	>.90	1
Adjusted GFI (AGFI)	>.90	na
Tucker Lewis Index (TLI)	>.90	na
Normed Fit Index (NFI)	>.90	1
Root Mean Square Error Of Approximation (RMSEA)	≤.05	.438
Probability(p or p-close)	≥ .05	.000
Hoelter's Critical N (CN)	> 200	na

c. Perception of Work Environment

The perception of work environment was conceptualized as a latent construct measured by thirteen indicators measuring the environment of work life. Work1 through Work13 were indicators of the perception of work environment latent construct. Each item was measured on a 5-point Likert scale. Higher levels of indicators were associated with higher levels of perception of work environment. Study values were recoded to allow unidirectional interpretation. The model represented in Figure 8 was subjected to confirmatory factor analysis by using AMOS 6 (SPSS, 2007).
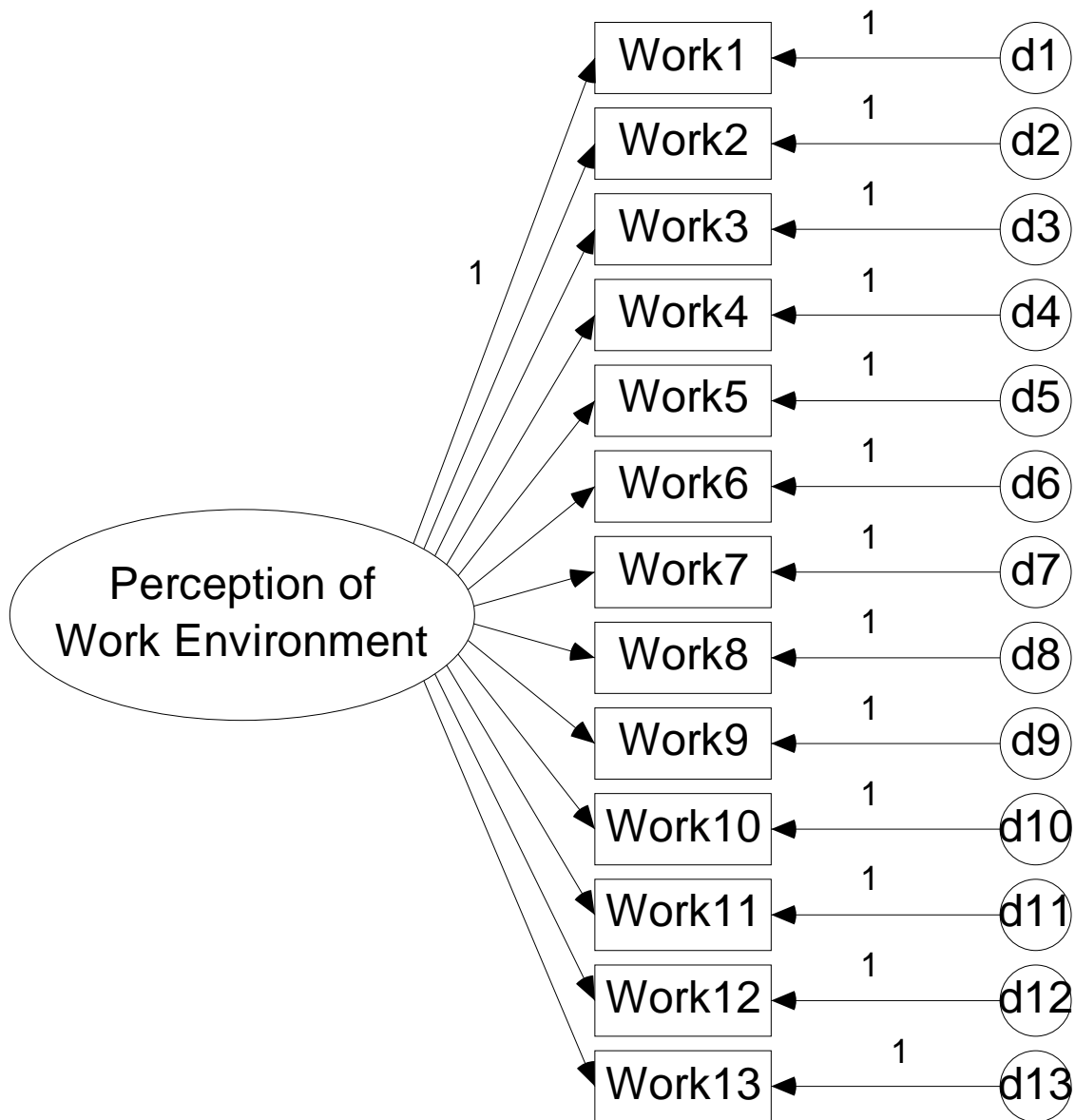
Figure 8: Measurement Model for Perception of Work Environment

The critical ratios (CR) for all of the observed variables in the regression showed significant relationships at $p \leq .001$ (CR ≥ 1.96). Factor loadings from each indicator to perception of work environment construct were high. Therefore, the theorized associations were

preserved. To make a better fit of the model, measurement errors were allowed to be correlated by using a modification index where goodness-of-fit statistics were elevated and the correlation was theoretically sound. The modified model is demonstrated in Figure 9. All critical ratios were statistically significant at $p \leq .001$ in the revised model, like the generic model. Table 20 demonstrates the results.

Figure 9: Revised Measurement Model for Perception of Work Environment

Table 20: Parameter Estimates for Generic and Revised Models of Perception of Work Enviroment

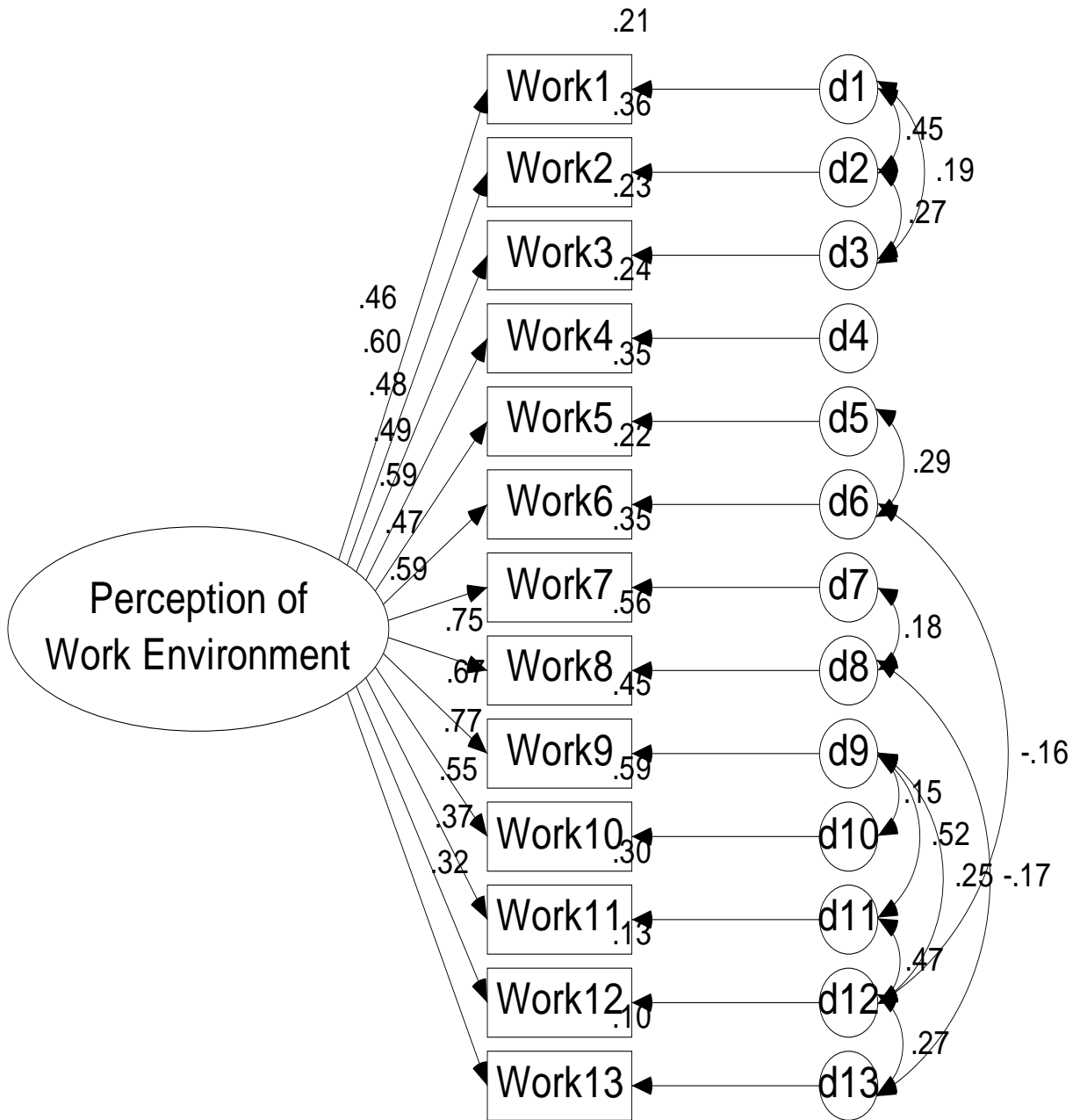| Indicator			Generic Model					Revised Model				
			U.F.L	S.F. L	S.E.	C.R.	P	U.F.L	S.F. L	S.E.	C.R.	P
Work1	<---	P.of Work Env.	1.000	.510				1.000	.457			
Work2	<---	P.of Work Env.	1.387	.624	.144	9.663	***	1.486	.598	.135	10.965	***
Work3	<---	P.of Work Env.	1.014	.498	.121	8.387	***	1.095	.481	.133	8.256	***
Work4	<---	P.of Work Env.	1.224	.485	.149	8.241	***	1.377	.488	.184	7.478	***
Work5	<---	P.of Work Env.	1.328	.575	.144	9.202	***	1.535	.595	.185	8.300	***
Work6	<---	P.of Work Env.	1.070	.463	.134	7.980	***	1.213	.471	.166	7.299	***
Work7	<---	P.of Work Env.	1.390	.571	.152	9.171	***	1.604	.590	.196	8.176	***
Work8	<---	P.of Work Env.	1.631	.703	.158	10.302	***	1.931	.745	.213	9.077	***
Work9	<---	P.of Work Env.	1.698	.735	.161	10.532	***	1.711	.667	.197	8.688	***
Work10	<---	P.of Work Env.	1.729	.770	.161	10.762	***	1.930	.769	.210	9.200	***
Work11	<---	P.of Work Env.	1.397	.642	.142	9.815	***	1.337	.549	.168	7.970	***
Work12	<---	P.of Work Env.	.955	.445	.123	7.756	***	.858	.365	.140	6.150	***
Work13	<---	P.of Work Env.	.775	.336	.124	6.243	***	.821	.320	.148	5.528	***
d1	<-->	d2						.318	.445	.040	8.034	***
d2	<-->	d3						.201	.275	.039	5.208	***
d1	<-->	d3						.137	.191	.036	3.818	***
d5	<-->	d6						.252	.291	.045	5.604	***
d7	<-->	d8						.126	.180	.042	2.993	.003
d9	<-->	d10						.082	.146	.029	2.808	.005
d11	<-->	d12						.380	.465	.042	9.016	***
d12	<-->	d13						.264	.270	.042	6.345	***
d9	<-->	d12						.192	.250	.037	5.197	***
d8	<-->	d13						-.129	-.167	.038	-3.424	***
d6	<-->	d12						-.149	-.163	.035	-4.272	***
d9	<-->	d11						.369	.516	.041	8.918	***

Note: ***Correlation significant @ p ≤ .05
Note: U.F.L. = unstandardized factor loading; S.F.L. = standardized factor loading; S.E. = standard error C.R. = critical ratio

Goodness-of-fit statistics for both models are provided in Table 21. Fit statistics improved in the modified model and the chi-square difference (ΔX^2) between the two models is computed at 42.25, which indicates an improvement of data fit in the revised model. Goodness-of-fit statistics for the modified model indicate an excellent fit of the measurement model to the data. Only the root mean square of approximation (RMSEA) of 0.06 fails to meet fit criteria, but

it is very close to suggested levels. This value of RMSEA is regarded as an adequate fit in the

literature.

Table 21: Goodness-of-Fit Statistics for Generic and Revised Models of Perception of Work Environment

Index	Criterion	Generic Model	Revised Model
Chi-square (x^2)	low	669.7	162.7
Degrees Of Freedom (df)	$\geq .0$	65	53
Probability	$\geq .05$	.000	.000
Likelihood Ratio (x^2/df)	<4	10.8	3.06
Goodness of Fit Index (GFI)	>.90	.775	.948
Adjusted GFI (AGFI)	>.90	.685	.910
Tucker Lewis Index (TLI)	>.90	.664	.929
Normed Fit Index (NFI)	>.90	.701	.931
Root Mean Square Error Of Approximation (RMSEA)	$\leq .05$	.144	.066
Probability (p or p-close)	$\geq .05$	.000	.011
Hoelter's Critical N (CN)	> 200	58	207

d. Well-being

Well-being was conceptualized as a construct measured by four indicators measuring the

satisfaction levels of job life, family life, social life, and living standards. Job satisfaction, family

life satisfaction, living standards satisfaction, and social life satisfaction were the indicators of

the time balance latent construct. Each item was measured on a 1-to-10 interval scale. 1

represents the lowest degree of satisfaction, while 10 represents the highest degree of

satisfaction. Higher indicator levels were associated with higher levels of well-being. All of the

study variable values were in the same direction. The model represented in Figure 10 was subjected to confirmatory factor analysis by using AMOS 6 (SPSS, 2007).
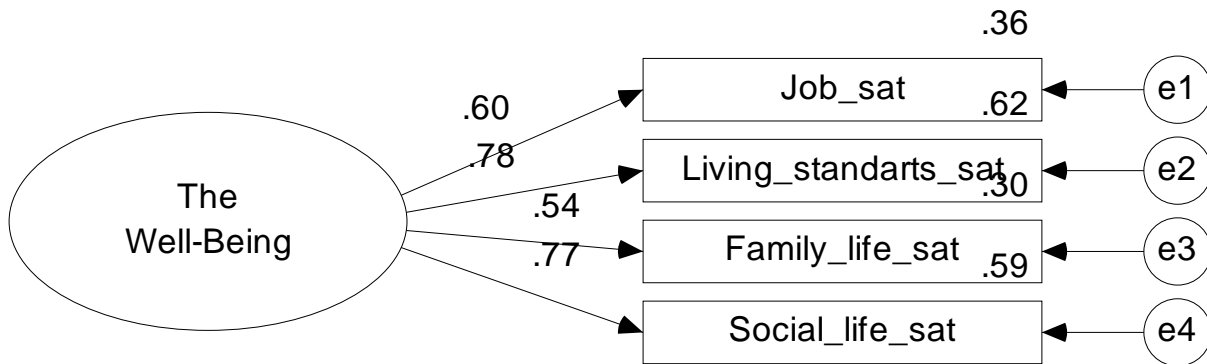
Figure 10: Measurement Model for Well-being

The critical ratios (CR) for all of the observed variables in the regression demonstrated significant relationships at $p \leq .05$ (CR ≥ 1.96). Factor loadings from each indicator to the well-being construct were high. Therefore, the theorized associations were preserved. When the goodness-of-fit statistics are analyzed the model is demonstrated to fit quite well to the data. The CMIN is 3.1, and GFI, AGFI, TLI, NFI are above the .9 level. The RMSEA is close to .05 (.66). Therefore, no modification of the measurement model was necessary.

Table 22: Parameter Estimates for Well-being

			U.F.L	S.F.L.	S.E.	C.R.	P
Job_sat	<---	The well-being	1.000	.600			
Living_standarts_sat	<---	The well-being	1.217	.784	.106	11.465	***
Family_life_sat	<---	The well-being	.890	.544	.096	9.274	***
Social_life_sat	<---	The well-being	1.263	.769	.110	11.431	***

Note: ***Correlation significant @ p ≤ .05
Note: U.F.L. = unstandardized factor loading; S.F.L. = standardized factor loading; S.E. = standard error C.R. = critical ratio

Table 23: Goodness-of-Fit Estimates for Well-being

Index	Criterion	Generic Model
Chi-square (x^2)	low	6.3
Degrees Of Freedom (df)	≥.0	2
Probability	≥.05	.044
Likelihood Ratio (x^2/df)	<4	3.1
Goodness of Fit Index (GFI)	>.90	.993
Adjusted GFI (AGFI)	>.90	.967
Tucker Lewis Index (TLI)	>.90	.974
Normed Fit Index (NFI)	>.90	.987
Root Mean Square Error Of Approximation (RMSEA)	≤.05	.067
Probability(p or p-close)	≥ .05	.243
Hoelter's Critical N (CN)	> 200	455

4. Structural Equation Model

The preceding analyses showed that all of the five measurement models could be used in the final SEM model. First, the hypothesized SEM model (Figure 2), including all five constructs and fourteen control variables, was subjected to structural equation modeling using AMOS 7.0

(SPSS, 2007). Using the modification index, an alternate generic model was developed (Figure 11).

According to the parameter estimates shown in Table 25, insignificant relationships were eliminated from the model. All estimates remained in the anticipated direction. Of the statistically significant findings, standardized regression coefficients ranged from .087 to .820.
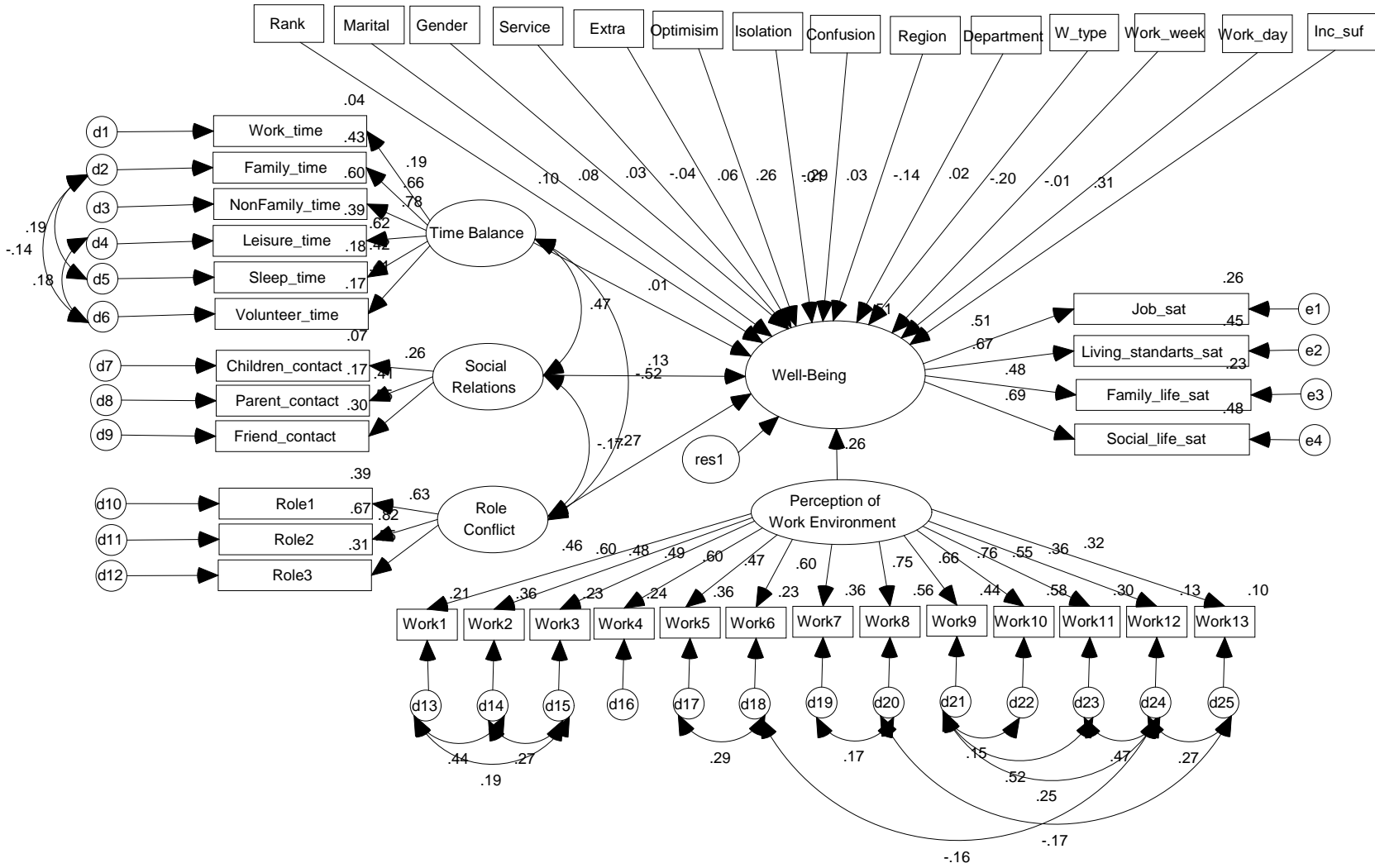
Figure 11: Alternate SEM Model with Regression Weights

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Only six of the control variables—Department, Rank, Income Sufficiency, Isolation, Work Week, and Optimism—had statistically significant relationships with well-being. The other eight control variables—Gender, Service Time, Extra Work, Confusion, Region, Marital Status, Work Type, and Work Day—were put in the model to test the hypotheses; however, none of these variables had a statistically significant relationship with well-being. Therefore, all of them were eliminated from the final model. In addition, the hypothesized relations between Time Balance and well-being, Social Relations and well-being, and Social Relations and Role Conflict were not statistically significant. All of these insignificant relationships were eliminated from the final model.

Table 24: Goodness-of-Fit Statistics for Alternate and Revised Alternate SEM Models

Index	Criterion	Generic Model	Revised Model
Chi-square (x^2)	Low	2895.9	1537.82
Degrees Of Freedom (df)	$\geq.0$	840	541
Probability	$\geq.05$	.000	.000
Likelihood Ratio (x^2/df)	<4	3.44	2.84
Goodness of Fit Index (GFI)	>.90	.727	.818
Adjusted GFI (AGFI)	>.90	.692	.788
Tucker Lewis Index (TLI)	>.90	.628	.776
Normed Fit Index (NFI)	>.90	.577	.720
Root Mean Square Error Of Approximation (RMSEA)	$\leq.05$	.072	.062
Probability(p or p-close)	$\geq.05$	.000	.000
Hoelter's Critical N (CN)	> 200	149	184

Goodness-of-fit statistics for both models are provided in Table 24. Fit statistics improved in the revised SEM model and the chi-square difference (Δ X^2) between the two models is computed at 5.45, which indicates an improvement of data fit in the revised model. Goodness-of-fit statistics for the modified model indicate an adequate fit of the measurement model to the data. A chi-square probability of 0.000 failed to meet the fit criterion. Other fit indices were all at adequate fit level. The likelihood ratio of 2.84 along with other goodness-of-fit statistics suggests that the model is adequately supported by the data.

Table 25: Parameter Estimates for Alternate SEM Model

			U.F.L.	S.F.L.	S.E.	C.R.	P
Well-being	<---	Social_Relations	.296	.134	.205	1.447	.148
Well-being	<---	Role_Conflict	-.487	-.274	.129	-3.783	***
Well-being	<---	Time Balance	.130	.014	.764	.170	.865
Well-being	<---	Rank	.098	.097	.046	2.122	.034
Well-being	<---	Marital	.307	.080	.174	1.762	.078
Well-being	<---	Gender	.235	.028	.376	.627	.531
Well-being	<---	Service	-.012	-.043	.012	-.948	.343
Well-being	<---	Extra_work	.056	.058	.043	1.280	.200
Well-being	<---	Optimisim	.359	.257	.070	5.160	***
Well-being	<---	W_type	.019	.020	.044	.438	.661
Well-being	<---	Work_week	-.306	-.203	.072	-4.231	***
Well-being	<---	Region	.161	.029	.253	.637	.524
Well-being	<---	Department	-.465	-.139	.155	-3.000	.003
Well-being	<---	Isolation	-.383	-.289	.068	-5.672	***
Well-being	<---	Confusion	.019	.013	.065	.297	.767
Well-being	<---	P.of Work Env.	.764	.261	.173	4.412	***
Well-being	<---	Work_day	-.006	-.014	.018	-.322	.747
Well-being	<---	Inc_suf	.296	.314	.049	6.032	***
Job_sat	<---	Well-being	1.000	.512			
Living_standarts_sat	<---	Well-being	1.156	.667	.129	8.966	***
Family_life_sat	<---	Well-being	.919	.475	.124	7.415	***
Social_life_sat	<---	Well-being	1.254	.689	.138	9.080	***
Work_time	<---	Time Balance	1.000	.191			
Family_time	<---	Time Balance	2.246	.658	.619	3.629	***
NonFamily_time	<---	Time Balance	2.381	.778	.650	3.664	***
Leisure_time	<---	Time Balance	1.649	.623	.456	3.615	***

			U.F.L.	S.F.L.	S.E.	C.R.	P
Sleep_time	<---	Time Balance	1.636	.421	.478	3.421	***
Volunteer_time	<---	Time Balance	.984	.415	.290	3.387	***
Friend_contact	<---	Social_Relations	1.000	.548			
Parent_contact	<---	Social_Relations	.945	.410	.221	4.267	***
Children_contact	<---	Social_Relations	1.000	.260			
Role3	<---	Role_Conflict	1.000	.552			
Role2	<---	Role_Conflict	1.189	.817	.102	11.709	***
Role1	<---	Role_Conflict	1.000	.627			
Work1	<---	P.of Work Env.	1.000	.457			
Work4	<---	P.of Work Env.	1.371	.487	.183	7.487	***
Work5	<---	P.of Work Env.	1.538	.597	.184	8.337	***
Work12	<---	P.of Work Env.	.845	.361	.138	6.105	***
Work6	<---	P.of Work Env.	1.221	.475	.166	7.353	***
Work3	<---	P.of Work Env.	1.093	.481	.132	8.271	***
Work2	<---	P.of Work Env.	1.485	.599	.135	10.995	***
Work7	<---	P.of Work Env.	1.621	.597	.197	8.247	***
Work8	<---	P.of Work Env.	1.941	.750	.213	9.126	***
Work9	<---	P.of Work Env.	1.697	.663	.195	8.697	***
Work10	<---	P.of Work Env.	1.913	.763	.208	9.213	***
Work13	<---	P.of Work Env.	.808	.315	.148	5.476	***
Work11	<---	P.of Work Env.	1.329	.547	.167	7.974	***
Time Balance	<-->	Social_Relations	.037	.467	.012	3.037	.002
Social_Relations	<-->	Role_Conflict	-.071	-.175	.034	-2.081	.037
Time Balance	<-->	Role_Conflict	-.052	-.520	.016	-3.338	***
d15	<-->	d13	.136	.191	.036	3.818	***
d14	<-->	d13	.317	.445	.039	8.036	***
d15	<-->	d14	.201	.275	.038	5.215	***
d18	<-->	d17	.249	.288	.045	5.553	***
d24	<-->	d18	-.148	-.163	.035	-4.252	***
d25	<-->	d20	-.128	-.167	.038	-3.409	***
d25	<-->	d24	.266	.271	.042	6.377	***
d24	<-->	d23	.383	.467	.042	9.066	***
d24	<-->	d21	.194	.252	.037	5.262	***
d2	<-->	d6	-.016	-.143	.006	-2.744	.006
d2	<-->	d5	.035	.194	.010	3.351	***
d4	<-->	d6	.016	.182	.005	3.129	.002
d23	<-->	d21	.372	.517	.041	8.995	***
d20	<-->	d19	.115	.167	.041	2.764	.006
d22	<-->	d21	.088	.154	.029	3.009	.003

Note: ***Correlation significant @ p ≤ .05

Note: U.F.L. = unstandardized factor loading; S.F.L. = standardized factor loading; S.E. = standard error   C.R. = critical ratio
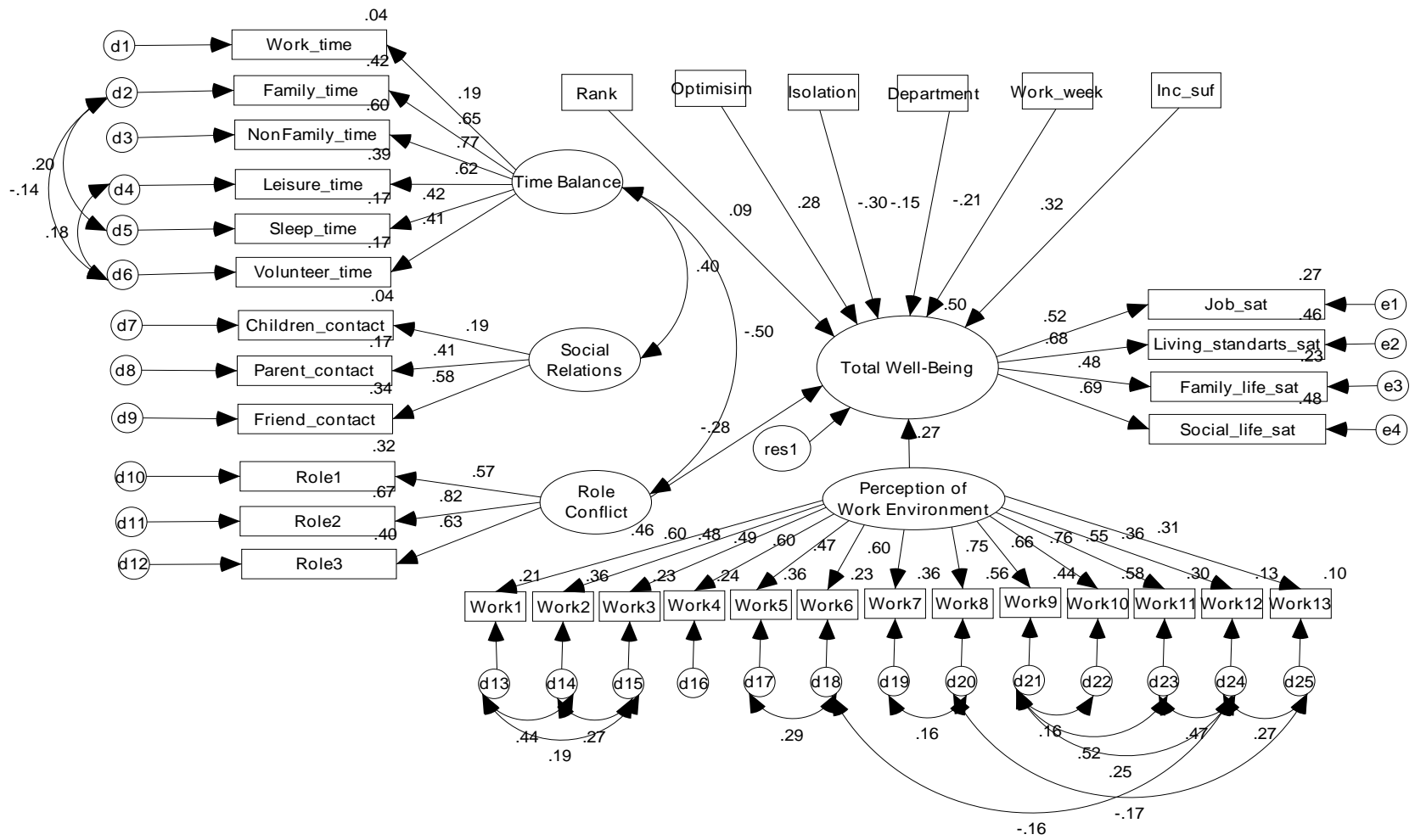
Figure 12: Revised Alternate SEM Model

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Table 26: Parameter Estimates for Revised Alternate SEM Model

			U.F.L.	S.F.L.	S.E.	C.R.	P
Well-being	<---	Rank	.093	.089	.047	1.979	.048
Well-being	<---	P.of Work Env.	.823	.274	.179	4.608	***
Well-being	<---	Optimisim	.403	.280	.072	5.606	***
Well-being	<---	Work_week	-.326	-.211	.074	-4.423	***
Well-being	<---	Inc_suf	.310	.320	.050	6.208	***
Well-being	<---	Role_Conflict	-.589	-.281	.125	-4.716	***
Well-being	<---	Department	-.530	-.154	.159	-3.332	***
Well-being	<---	Isolation	-.413	-.304	.069	-5.965	***
Job_sat	<---	Well-being	1.000	.524			
Living_standarts_sat	<---	Well-being	1.149	.676	.124	9.241	***
Family_life_sat	<---	Well-being	.906	.479	.120	7.579	***
Social_life_sat	<---	Well-being	1.237	.692	.133	9.325	***
Work_time	<---	Time Balance	1.000	.189			
Family_time	<---	Time Balance	2.230	.652	.621	3.588	***
NonFamily_time	<---	Time Balance	2.368	.773	.654	3.623	***
Leisure_time	<---	Time Balance	1.646	.621	.460	3.576	***
Sleep_time	<---	Time Balance	1.624	.416	.481	3.379	***
Volunteer_time	<---	Time Balance	.986	.413	.294	3.350	***
Friend_contact	<---	Social_Relations	1.492	.582	.611	2.441	.015
Parent_contact	<---	Social_Relations	1.331	.414	.527	2.527	.012
Children_contact	<---	Social_Relations	1.000	.188			
Role3	<---	Role_Conflict	1.378	.635	.143	9.607	***
Role2	<---	Role_Conflict	1.368	.817	.139	9.834	***
Role1	<---	Role_Conflict	1.000	.566			
Work1	<---	P.of Work Env.	1.000	.458			
Work4	<---	P.of Work Env.	1.368	.487	.182	7.499	***
Work5	<---	P.of Work Env.	1.536	.597	.184	8.358	***
Work12	<---	P.of Work Env.	.840	.360	.138	6.100	***
Work6	<---	P.of Work Env.	1.218	.475	.165	7.364	***
Work3	<---	P.of Work Env.	1.091	.481	.132	8.286	***
Work2	<---	P.of Work Env.	1.483	.599	.135	11.019	***
Work7	<---	P.of Work Env.	1.622	.599	.196	8.274	***
Work8	<---	P.of Work Env.	1.939	.751	.212	9.152	***
Work9	<---	P.of Work Env.	1.689	.662	.194	8.710	***
Work10	<---	P.of Work Env.	1.907	.762	.207	9.233	***
Work13	<---	P.of Work Env.	.804	.314	.147	5.470	***

			U.F.L.	S.F.L.	S.E.	C.R.	P
Work11	<---	P.of Work Env.	1.322	.546	.166	7.979	***
Time Balance	<-->	Social_Relations	.023	.396	.011	2.028	.043
Time Balance	<-->	Role_Conflict	-.043	-.496	.013	-3.244	.001
d15	<-->	d13	.136	.190	.036	3.803	***
d14	<-->	d13	.316	.444	.039	8.022	***
d15	<-->	d14	.200	.274	.038	5.203	***
d18	<-->	d17	.248	.288	.045	5.552	***
d24	<-->	d18	-.148	-.162	.035	-4.251	***
d25	<-->	d20	-.128	-.167	.038	-3.403	***
d25	<-->	d24	.266	.271	.042	6.381	***
d24	<-->	d23	.384	.467	.042	9.080	***
d24	<-->	d21	.195	.252	.037	5.281	***
d2	<-->	d6	-.016	-.145	.006	-2.772	.006
d2	<-->	d5	.035	.195	.010	3.368	***
d6	<-->	d4	.016	.178	.005	3.050	.002
d23	<-->	d21	.373	.518	.041	9.023	***
d20	<-->	d19	.112	.164	.041	2.713	.007
d22	<-->	d21	.089	.155	.029	3.049	.002

Note: ***Correlation significant @ p ≤ .05

Note: U.F.L. = unstandardized factor loading; S.F.L. = standardized factor loading; S.E. = standard error   C.R. = critical ratio

5. Hypothesis Testing

Seven main hypotheses were proposed in this study. According to the SEM analysis of the generic and revised models, the results detailed below were obtained:

The following hypotheses were *not supported*; therefore, the null hypotheses were *not rejected*, since there is *not a statistically significant relationship* between the following variables according to given values;

H1: Time Balance and Well-being   (the gamma coefficient = .014, p=. 865)

H2: Social Relations and Well-being   (the gamma coefficient =.134, p=. 148)

H7: Social Relations and Role Conflict   (the gamma coefficient = -.188, p=.027)

The following hypotheses were *supported*; therefore, the null hypotheses were *rejected*, since there is *a statistically significant relationship* between the following variables according to given values;

H3: There is a negative relationship between Role Conflict and Well-being

  (the gamma coefficient = -.281)

H4: There is a positive relationship between Perception of Work Environment and Well-being (the gamma coefficient =.274)

H5: There is a positive relationship between Time Balance and Social Relations

  (the gamma coefficient = .396, p=.043)

H6: There is a negative relationship between Time Balance and Role Conflict

  (the gamma coefficient = -.496)

After testing the relationships between the control variables and well-being, the following results were obtained:

The following hypotheses were *not supported*; therefore, the null hypotheses were *not rejected*, since there is *not a statistically significant relationship* between the following variables according to given values:

Marital Status and Well-being   (the gamma coefficient =.080, p=. 078)

Gender and Well-being   (the gamma coefficient = .028, p=. 531)

Service Time and Well-being   (the gamma coefficient = -.043, p=. 343)

Extra Work and Well-being   (the gamma coefficient = .058, p=. 200)

Confusion and Well-being   (the gamma coefficient = .013, p=.767)

Region and Well-being   (the gamma coefficient = .029, p=.524)

Work Type and Well-being.   (the gamma coefficient = .020, p=.661)

Working hours per day and Well-being   (the gamma coefficient = -.014, p=.747)

The following hypothesis were *supported*; therefore, the null hypothesis were *rejected*, since there is *a statistically significant relationship* between the following variables according to given values:

Rank and Well-being   (the gamma coefficient = .089, p=.48)

Optimism and Well-being   (the gamma coefficient =.280)

Isolation and Well-being   (the gamma coefficient = -.304)

Department and Well-being   (the gamma coefficient = -.154)

Working days per week and Well-being   (the gamma coefficient = -.211)

Income sufficiency and Well-being   (the gamma coefficient = .320)

VI. DISCUSSION, IMPLICATIONS, AND LIMITATIONS OF THE STUDY

1. Discussion

This research examined the effects of a broad range of variables that could potentially influence the well-being of police officers. The researcher sought a comprehensive examination of a wide range of variables in order to identify key factors influencing police life in the Turkish National Police. The researcher, a member of this organization, was particularly interested in identifying factors that could improve the well-being of officers, and as a result improve organizational effectiveness. Given this comprehensive approach, a wide array of hypotheses was addressed. Twenty-one hypotheses examined several presumed relationships among the study variables.

As expected, a number of hypotheses were rejected and a number of hypotheses were supported. These expectations and results will be discussed in detail in this chapter. It was anticipated that some control variables would not have significant relationships with the well-being. Previous studies (Bastemur, 2006; Buker, 2007) found similar results in terms of demographic characteristics and job satisfaction or life satisfaction. However, finding no direct effect of the exogenous latent variables of Time Balance and Social Relations on well-being proved unexpected.

a. Discussion of the Structural Equation Model

1. Time Balance, Social Relations, Role Conflict, Perception of Work Environment, and Well-being

The latent exogenous variables of time balance and social relations have failed to show a direct relationship with well-being, though these two variables demonstrated a significant relationship with role conflict. Role conflict, meanwhile, did have a significant relationship with well-being. The lack of significance between time balance and social relations and well-being may suggest that role conflict plays an intermediary role, exercising an indirect effect of time balance and social relations on well-being.

The relationship between time balance and well-being has a standardized regression weight of .014. This value is not significant at ($p \leq .05$), since the p score was .865. Therefore, we conclude that there was not a statistically significant relationship between time balance and well-being.

The relationship between social relations and the well-being also failed to reach the significance level. Standardized regression weight was .134 and p=.148 and this relationship was not statistically significant at ($p \leq .05$).

There was a statistically significant relationship between time balance and social relations with a standardized regression weight of .396, and p=.043. This was a medium-level association. This result means that a more positive time balance contributes to improved social relations—a relationship that makes eminent sense. The social relations construct measured the contact level

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of the subjects with children, parents, and friends/neighbors. If more time is available for these activities, then there is a probability that social relations would improve.

The role conflict construct measured whether the subjects had any problems in family life due to time spent at work, or in work life due to the time spent in family life. There was a statistically significant negative relationship between time balance and role conflict. The standardized regression weight for this relationship was (-) .50, and p=.001 at (p ≤ .05). This was the strongest relationship among latent constructs. A negative relationship suggests that if there is a higher time balance, then role conflict is lower. This relationship also moved in the expected direction.

However, after revising the alternate model by deleting insignificant relationships, the relationship between social relations and role conflict failed to reach significance level. Therefore, this correlation is not shown in the final model. The relationship between social relations and role conflict was not statistically significant when insignificant relationships were removed. The standardized regression weight for this relationship was (-) .19 at p= .078.

Role conflict has a significant relationship with well-being. This relationship is also negative as indicated by standardized regression weight of (-). 28 at p=.000. This is a strong association. Lower levels of role conflict are associated with higher levels of well-being.

Even though there is not a direct effect of time balance on well-being, an indirect effect via role conflict is found. We can calculate the standardized regression weight for this indirect effect by multiplying direct effects between time balance and role conflict, and role conflict and well-being.

R= (Time Balance and Role Conflict)*(Role Conflict and Well-being)

R= (-.50*.-28)

R= .14

This value suggests a positive relationship between time balance and well-being. There is no method to test the significance of this relationship in AMOS; however, we can postulate that a product of two significant relationships is also significant. This positive relationship suggests that if time balance increases, than well-being will increase. This relationship moved in the expected direction.

The relationship between perception of work environment and well-being was positive and statistically significant by a standardized regression weight of .27 and p=. 000. This relationship was in the expected direction. If the perception of work environment is positive, then the well-being score is higher. This finding was consistent with previous studies in this field.

2. Control Variables and Well-being

Fourteen control variables were included in this study. These variables reflect different aspects of the demographic characteristics, physiological status, work life, and financial status of the subjects. It was presumed that most of these variables have significant relationships with well-being.

Of those 14 variables, 6 variables have significant relationships with well-being and 8 variables do not. The R^2 value for the revised alternate SEM model is .50, meaning that variables included in this model explain 50% of the variance in the model—quite a good percentage,

according to Pallant (2005). This value shows that further analysis based on this model could be made safely.

Marital status, gender, service time, extra work, confusion score, region, work type, and working hours per day do not have a significant relationship with well-being.

Marital status has a correlation value of .08 at p=.078; gender has a correlation value of .28 at p=.531; service time has a correlation value of (-).43 at p=.343; extra work has a correlation score of .058 at p=.200; confusion has a correlation score of .013 at p= .767; region has a correlation score of .029 at p=.524; work type has a correlation score of .020 at p=.661; and working hours per day has a correlation score of (-).014 at p=747. They all failed to meet the level of significance at the p ≤ .05 level.

Six control variables have a significant relationship with well-being. Income sufficiency has a standardized regression weight of .32 at p=.000; working days per week has a correlation value of (-).211 at p=.000; department has a value of (-).154 at p=.000; isolation has a correlation value of (-).304 at p=.000; optimism has a correlation value of .28 at p=.000; and rank has a correlation value of .089 at p=.47.

Interestingly, while working hours per day does not have a significant relationship, working days per week does have a negative significant relationship. The number of workdays varies by the department and region of the subjects. Mostly, operational units and police stations work six days a week. Nonoperational units work on a routine during the workdays, from Monday to Friday. However, if there is a public event (sport games, riots, concerts etc.), there may be some extra work, and all of the units may be assigned to these events. These events generally occur on weekends, especially on Sundays. If a subject is assigned to these events

frequently, s/he loses his/her only opportunity to get a holiday or break once a week. Because of the working regulations, there is no way to offer a modified schedule in exchange for these extra hours. The subjects are required to be ready on the job the next day.

The events that occur during weekend nights are the most challenging for police officers. The length of assignments or duties is dependent on the length of events. Generally, these events finish very late at night, and it is after the end of the event that the real police work—securing the facility and assisting the public in exiting—begins for officers. Frequently, it takes far longer than the event itself to be sure that everybody is safe and the event area is secure.

Extra police duties are the most complained-about and reported cause of dissatisfaction with policing in the TNP. Several policy suggestions have been made to address extra police duties, but little has been accomplished. Changes in extra duty policy could significantly impact work days per week and overall department schedules. As previously developed, operational units and police stations are responsible for most extra duty assignments for events. Even though operational officers are used to staffing these events, these events can be troubling for them, especially when the scheduling demands leave them with little or no free time.

Nonoperational units are only infrequently sent to special events, but when it happens, it is much more troubling for them than it is for operational units and police stations. This is because it happens rarely, and it is something new and unexpected for which these non-operational officers are ill-prepared. The frequency of duties for the operational units and police stations and the infrequency of these duties for nonoperational units make these special event duties troubling for both sets of police officers. These factors most likely contribute to the significant relationship between working days per week and well-being.

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These explanations about workdays should be taken into account when we assess the relationship between department assignment and well-being. Several dummy variables were created for the analysis of the department variable. A significant relationship was noted when police stations were compared to other departments in the agency. This was especially clear with non-operational units, which face fewer extra assignments than other divisions. Fewer extra duty assignments appear to lead higher job, family life, and social life satisfaction.

On the other hand, operational units and police stations do real policing jobs such as fighting drugs, making arrests, or fulfilling anti-smuggling duties. Bastemur (2006) found a significant relationship between job satisfaction and department. He explains that operational units provide higher job satisfaction due to the nature of the crimes they deal with. Officers in these units feel that they are performing important duties, and these feelings produce higher satisfaction. This fact might be another reason for significant differences in well-being between departments. The differences between departments in terms of study variables require additional analysis.

There is a significant relationship between officers' ranks and well-being. However, this relation has a correlation value of .089 at the p=.47 level—actually a very weak correlation. Since the sample size is large in this study, the correlation score may meet the significance level, even though it is a small correlation; this is sometimes the case in statistical analyses with large sample sizes (Pallant, 2005). Another possible reason could be the fact that higher-level officials have more authority; as well, higher-level officers' higher salaries may provide higher well-being scores.

On the other hand, higher-level authorities face more accountability and responsibility at work, and lack time to spend outside of work, factors that may reduce their well-being scores. These conflicting facts may have been reflected in their responses, resulting in a significant score, but just barely.

Income sufficiency has a strong relationship with well-being. This relationship has a correlation value of .32 at the p=.000 level. For a single variable, this correlation level is relatively strong. Even though it was not included in the final SEM model, some further analyses showed that income sufficiency has significant relationships with job satisfaction, time balance, and optimism (Figure 12). A police officer makes $18,000 a year, while mid-level and high-level officials make $24,000. In addition, officers in some of the operational departments, such as intelligence, anti-terror and anti-smuggling, receive extra compensating payments. This study's initial analysis found that 76.6% of officers reported difficulty in making ends meet with their current income. The correlation score between income sufficiency and well-being underscores how the perceived insufficiency in salary can affect the perceived well-being of the respondents. As expected, a higher income is related to enhanced well-being.

The subjects were asked to report their perceived optimism, isolation, and confusion scores. These variables were included in the study to test the dispositional theory of job satisfaction (see Chapter 2). Details concerning these variables can be found in the descriptive analysis section. The confusion score does not have a significant relationship with well-being, as discussed earlier. Optimism score, however, has a strong and statistically significant relationship with the well-being. The relationship has a correlation value of .28 at p=.000 level. Higher optimism scores are associated with higher well-being scores.

Finally, the isolation score has a statistically significant and strong negative relationship with well-being. The correlation value is (-).304. Higher levels of isolation are associated with lower levels of well-being. Factors affecting isolation score should be analyzed in details for further studies. *One thing that should be noted here is that this score does not mean that the majority of subjects feel isolated.* In our initial analysis of the data, it was noted that 67.8% of the subjects reported feeling no isolation. Therefore, we may conclude that the minority of officers who feel isolated must be reporting a fairly low level of well-being.

b. Discussions Related to Latent Constructs

1. Well-being

The main endogenous latent construct in this study is well-being. All of the hypotheses are framed to measure the effect of each latent construct and control variable on well-being. It is comprised of four indicators: Job satisfaction, family life satisfaction, social life satisfaction, and living standards satisfaction. As is explained in the theoretical framework section, "Each of these variables was put in the model to see the effect of related indicators or constructs. For example, income sufficiency is related to living standards satisfaction. Perception of work environment is related to job satisfaction. On the other hand, social relations, time balance, and role conflict are related to all of the indicators of well-being. This model allows one to see the interplay of important factors in the life of police officers and their influence on police perception of well-being" (see Chapter 3).

Cronbach's alpha score was .679 for these indicators, meaning that the SEM model is reliable for measuring well-being. Social life satisfaction has the biggest impact on the model, with a correlation value of .692. It also explains 48% of the variance in the model. Job satisfaction made the lowest contribution to the model, explaining only 27% of the variance; however, it still provided a positive contribution. Family life satisfaction has the lowest correlation with the well-being score (.48), but it is still a medium-level association. All of the indicators provided significant contribution to the model; therefore, these variables were preserved in the final SEM model.

2. *Time Balance*

In this study, time balance measured the effects of time spent at work, family life, non-family life, non-family life, sleep, leisure, and volunteer activities. A Cronbach's alpha score of .682 showed that these indicators are reliable.

Evaluation of the data associated with the latent construct of time balance indicates that nonfamily time has the greatest impact on the model of time balance when we look at the standardized regression weights of each indicator on time balance: work time (.192), family time (.657), non-family time (.778), leisure time (.624), sleep time (.421), and volunteer time (.417).

The variable of nonfamily time explained 60% (the highest variance) of the variation in the latent variable of time balance, and work time explained 4% (the lowest) of the variance. Surprisingly, work time had low correlation and variance scores with well-being—an unusual finding, since most of the subjects reported spending too much time at work. Other variables

have similar or close frequencies in terms of variable choices, but work time has different frequencies from the others. The work time variable was re-coded to reflect a unidirectional relationship with time balance, in line with the other indicators. It is assumed that this is the reason for the reported low values.

3. Role Conflict

The role conflict variable measures whether subjects are experiencing any role conflicts in their family or work life due to the responsibilities and time spent at work or in family life. Cronbach's alpha score was .712, which demonstrates reliability.

When reviewing the correlation scores of each indicator with the latent variable of role conflict, Role2 has the biggest impact on the model. The associated question was, "*It has been difficult for me to fulfill my family responsibilities because of the amount of time I spend on the job.*" The correlation value was .817, which indicates a very strong correlation. The lowest correlation was between role conflict and Role3. The question of Role3 asked, "Do *you find it difficult to concentrate at work because of your family responsibilities?*" This question has a correlation value of .551. Even though this question has the lowest score among the indicators of role conflict, it still shows a strong correlation. These results suggest that most of the conflicts experienced in family life result from job-related factors.

All indicators contributed significantly to the measurement model. The variable of Role2 explained 67% (the highest variance) of the variation in the latent variable of role conflict, and Role3 explained 30% (the lowest variance) of the variation.

4. Social Relations

The social relations construct aimed to measure the level of contacts of the subjects with their children, parents, and friends or neighbors. The most influential indicator on the latent construct of social relations was friend contact, with a correlation value of .57—a strong correlation (Pallant, 2005) that explained the 33% of the variance in the model. The lowest correlation score was between children contact and social relations. Children contact explained only 4% of the variance in the model. Parent contact has a correlation value of .41, also showing a strong correlation. While the contribution of children contact was limited, other construct variables contributed more substantially to the measurement model. (The variability of the child variable was limited, hence its ability to co-vary, since most of the subjects reported frequent contact with their children (Table 8).

5. Perception of Work Environment

The perception of work environment construct was designed to identify the effects of work environment on well-being. The Cronbach's alpha score was .859. This value demonstrates a high reliability level for the model. The model included thirteen indicators. All individual variables have medium or strong relationships with the latent construct of perception of work environment. Correlation scores for each indicator are as follows: Work 1 (.458), Work4 (.487), Work5 (.597), Work12 (.360), Work6 (.475), Work3 (.481), Work2 (.599), Work7 (.599) Work8 (.751), Work9 (.662), Work10 (.762), Work13 (.314) Work11 (.546). All of the indicators have a

medium or strong correlation with the latent construct of the perception of work environment. Work10 made the highest impact to the model, with a correlation value of .762. The question for this variable was, "*Do you have the opportunity to do what you do best at work?*" Work13 made the lowest impact, with a correlation value of .314—still a medium-level association. The question was "*Do you find your job emotionally demanding?*" In compliance with this score, the variance explained by Work13 is only 10%. Work10 explains 58% of the variance in the final model. In general, all of the indicators make significant contributions to the model.

2. Second Alternate Model

Analysis of the study results provides a number of outcomes (relationships between variables) not anticipated in the study's initial set of hypotheses. This multiplicity of relationships can be explained by a number of variables provided by the research instruments. It would be almost impossible in the context of a single study to analyze all of the inter-correlations discovered during the data analysis. These "other" relationships are identified in a new model (Figure 13). These "other relationships" will be left for future studies. However, for this dissertation our full analysis will be limited to the first alternate SEM model using only the significant relationships that were initially hypothesized (Figure 12).

In the second alternate model, a direct causal path is assumed between time balance, social relations, and role conflict constructs. Goodness-of-fit statistics show that second model has an excellent fit to data (Table 27). In the first model, a correlation was assumed between these latent constructs, rather than a causal relation. There are some differences between first and

second alternate models. First, regression weights are higher in the second model than the first model for the relationships between time balance and social relations, and time balance and role conflict. This difference shows a higher association between variables in the second model.

Time Balance and Social Relations .48

Time Balance and Role Conflict (-) .58

Time Balance and Working days per week (-) .30

Time Balance and Income Sufficiency .26

In addition, the total variance explained in the first model was 50%. In the second model, the total variance explained rose to 60%. Other significant relationships are as follows:

Optimism and Income Sufficiency .23

Optimism and Isolation (-). 29

Time Balance and Optimism .33

Time Balance and Isolation (-) .26

Time Balance and Perception of Work Environment .45

Optimism and Perception of Work Environment .41

Isolation and Perception of Work Environment (-) .41

Income Sufficiency and Job Satisfaction (-) .30

Time balance and perception of work environment exhibit a strong correlation, with a regression value of .45. As expected, the relationship between optimism and perception of work environment, and isolation and perception of work environment are the exact opposite of each other. This makes considerable sense and underscores the reliability of the findings. Seventy-two percent of the subjects were optimistic about the future, and 67.8% of the subjects did not feel isolated. Both variables are closely aligned in response frequencies. As one would expect given these data patterns, correlations scores are very close. A further key relationship can be found between income sufficiency and job satisfaction, with a regression value of (-) .30.

These findings have policy implications. The implications of these findings should be more thoroughly studied with an eye toward policy development. A partial analysis of policy implications will be provided in the context of this study; however, for the secondary findings a more detailed analysis must await further studies.

Table 27: Goodness-of-Fit Statistics for Second Alternate SEM Model

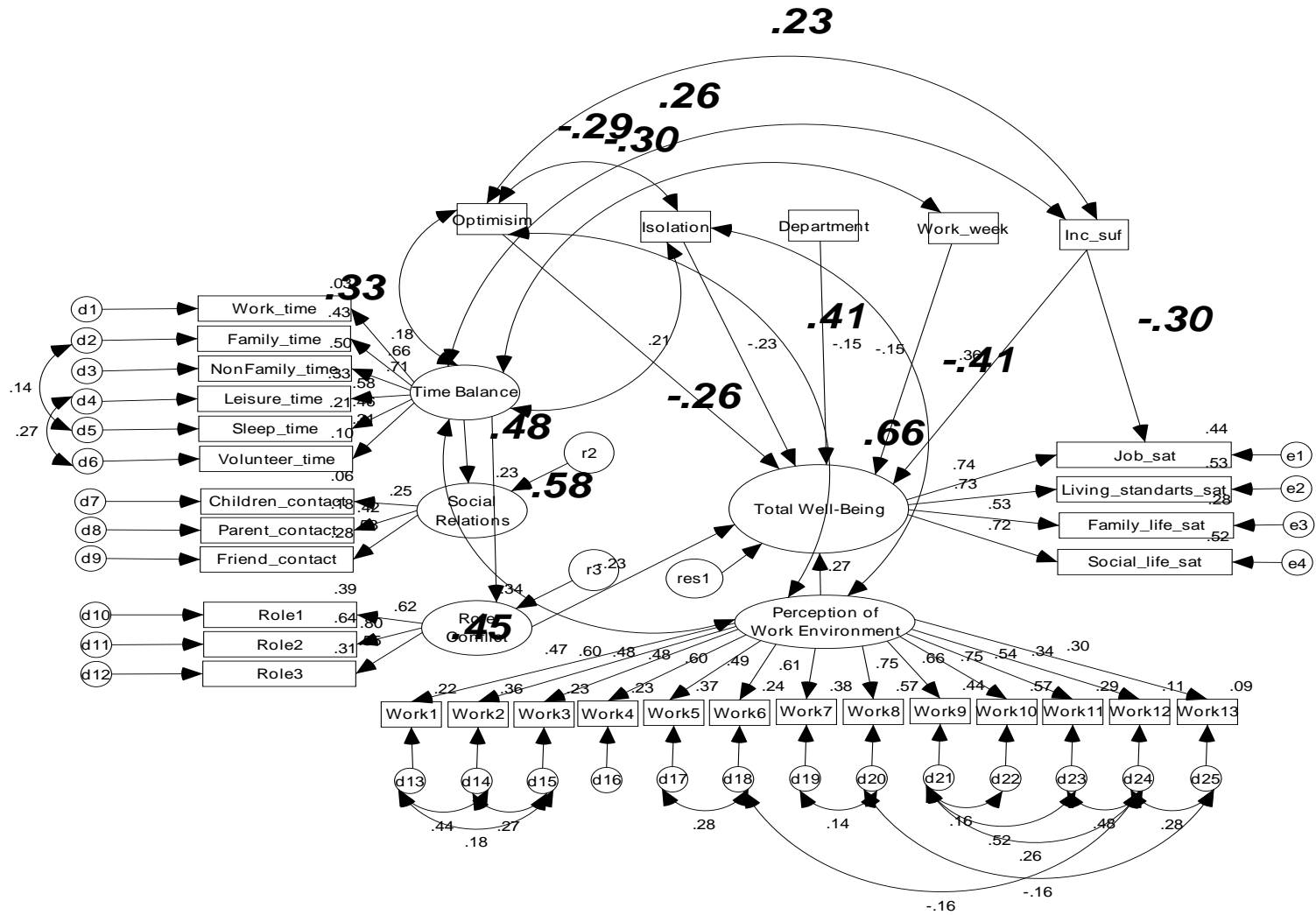| Index	Criterion	Generic Model
Chi-square (x^2)	low	1015.98
Degrees Of Freedom (df)	$\geq .0$	501
Probability	$\geq .05$	.000
Likelihood Ratio (x^2/df)	<4	2.02
Goodness of Fit Index (GFI)	>.90	.880
Adjusted GFI (AGFI)	>.90	.858
Tucker Lewis Index (TLI)	>.90	.880
Normed Fit Index (NFI)	>.90	.811
Root Mean Square Error Of Approximation (RMSEA)	$\leq .05$	.047
Probability(p or p-close)	$\geq .05$	.914
Hoelter's Critical N (CN)	> 200	259

Figure 13: A Second Alternate SEM Model

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3. Implications and Future Studies

This section of the dissertation discusses the implications of the research and provides some guidance for future research. The implications are drawn under three subheadings: policy implications, managerial implications, and theoretical implications. This section also briefly discusses the contributions of the study.

a. Implications

In this study, individual police officers were analyzed to understand better the effects of work environment and selected control variables on family life, social life, and the well-being of the officers. A comprehensive analysis of the factors affecting the well-being of the subjects was undertaken. The study included 14 control variables and 5 latent constructs. Including the indicators of the latent constructs, 43 variables were used in the study. Only those significant relations that were originally hypothesized have been discussed in detail in this study. Significant relationships discovered during analysis but not previously hypothesized were reported in the second alternate model (Figure 13); however, more detailed analyses of these other variables will await future study.

Previous literature on the TNP has not addressed the specific latent constructs addressed in this research. The literature on the TNP is relatively limited; of the few available studies on

the TNP, most focus simply on job satisfaction or life satisfaction (Bastemur, 2006; Buker, 2007; Ozcan & Gultekin, 2000).

Of concern is the fact that the previous research has not served as a vehicle to develop evidence-based policies. For example, Bastemur (2006) clearly showed the relationships between job and life satisfaction. He also addressed the relationships between life and job satisfaction and working hours, income sufficiency, extra assignments, and departmental differences. He made a number of suggestions based on his findings. Redesigning working-hour rules and extra assignments; giving more financial incentives or payoffs for extra duties (especially those carried during holidays or rest times such as Sundays); eliminating or reducing the differences between the departments in terms of work hours and rewards or payoffs; and increasing the number of rewards for dedicated and successful personnel while increasing disciplinary or financial sanctions on low performers were the most prominent among his suggestions (Bastemur, 2006).

On numerous occasions, policy makers have suggested policy changes to upgrade the salaries of TNP officers, but such policy changes have not been implemented until recently. Not a single policy has been developed to re-regulate working hours to eliminate the negative impacts on police performance. Reducing extra assignments has been discussed on several occasions, but on each occasion, it has failed to be implemented. Relative to inter-departmental differences, it is clear that it is impossible to make every department exactly the same in all ways, since the different tasks performed by departments require different working conditions. However, advances could be made in achieving equity across departments in terms of rewards, working hours, or financial support.

Several factors impede the implementation of new policies in the TNP. Ozcan and Gultekin (2000) made these factors very clear in their insightful article on the influence of politics on the police in Turkey. One of the main obstacles to the organizational improvement of the TNP is political interference with the TNP. Ozcan and Gultekin (2000) emphasize that most of the police organizations in the world encounter political interference; however, this situation is worse in developing countries like Turkey. Political interventions hinder the implementation of new policies in two ways. First, political interventions make assignment to the highest ranks, such as first-class police chief, highly dependent on political affiliation (Ozcan & Gultekin, 2000). Police administrators who are highly dependent on political support while occupied with maintaining political ties have little time to focus on structural problems in the police organization. Second, police administrators are dependent on political support; if they do focus on structural problems in the police organization, they are not free to implement the policies they feel are appropriate, because they must clear such policies through those that have appointed them. Lack of focus and lack of power to make new regulations are the main reasons for the TNP's long-preserved status quo.

However, while there are many reasons not to change, there are just as many reasons to make such changes. As Yildiz (2007) explained, there are several "drivers" in the Turkish National Police for change and improvement. He explains these sources in the context of institutional theory. Coercive factor (such as the European Union, mass media, and civil associations) and normative factors (such as well-educated, open-to-the-world, new mid-level officers) put pressure on the TNP to improve. In the last decade, since the beginning of the Turkey's process of gaining membership to the European Union, improvements have been

realized in police activities and practices affecting civilians, victims, criminals, and detained people (Delegation of the European Commission to Turkey, 2008). Little attention, however, has been paid to improving the well-being of the officers of the TNP. Despite the fact that it is clear that individual well-being affects organizational well-being, improvement projects have focused on the practices of the police rather than on the quality of policing and of police officers' lives in Turkey.

In spite of all these negative factors affecting police performance in Turkey, the police are highly successful in Turkey because of increased education, reforms, and increased technical capacity. According to a very recent survey (Metropoll, 2008), the police ranked second in the list of "most trusted" institutions in Turkey. In previous years, the police have ranked ninth or tenth, or did not even make the list. During the last six to seven years, the police have implemented new technologies that have proven successful in crime reduction (see MOBESE at http://mobese.iem.gov.tr/). The quality of police practices have improved significantly in recent years due to the pressures coming from the European Union as well as a number of other sources. The education levels of officers have risen with the requirement of two-year police school training for the regular officers, and eight years of training for supervisors. In some years, four-year university graduates are selected for regular police officer positions. The number of Ph.D. or master's degree-holding individuals among supervisors is much higher than in any other public or private institution in Turkey.

All of these facts reflect improvements in policing practices. However, the well-being of police officers continues to be largely neglected in policy changes. It is inconsistent to forget or ignore the improvement of the quality of life or well-being of the officers while improving the

quality of the practices. One does not need to be sacrificed at the expense of the other. Equal time should be spent on both improving policing practices and improving the well-being of the officers. This study identifies intervention points around which to structure new policies. This research supports the supposition that the variables of perception of work life, time balance, role conflicts experienced, income sufficiency, optimism, isolation, rank, department, and working days per week affect police officers' perception of well-being in the TNP. In addition, time balance, social relations, and role conflicts significantly interact with each other.

While this study does not measure the relationship between well-being and the performance of TNP officers, it is widely hypothesized (as developed in the literature review section) that a relationship exists between the well-being of the officers and their performance. In addition, the literature strongly supports a direct relationship between individual performance and organizational performance. This analysis completes the chain, identifying factors that affect perceptions of well-being. To show these interactions, the Structural Equation Model was preferred to regression analysis. The SEM model allows researchers to test several regression approaches on a hypothesized SEM model. This approach provides a broad range of information about factors affecting the well-being of the officers. If research findings could be applied through policies that reduce or eliminate job related factors shown to suppress well-being scores, then it is assumed that it would result in improved individual and organizational performance.

Clearly, significant relationships exist between the study variables; these relationships have policy implications. First, research findings suggest that work environment is the key factor impacting employee perceptions of well-being. The main exogenous variable was perception of work environment. Work-related issues affect all other variables. The correlation score between

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perception of the work environment and well-being was .27. All indicators of work environment were found to be significantly related to well-being. Having good relations with work colleagues and supporting each other (Work1, Work2, and Work3), autonomy at work (Work4, Work5, Work6, Work7, Work8, Work10), and meaningfulness of the job (Work9, Work11, Work12, Work13) were the key factors that framed the work environment concept.

As mentioned before, political influence on police is one of the main problems facing police in Turkey. Especially regarding promotions or assignments, political affiliations are important. Looking for and relying on external powers to get things done reduces the perceived need to rely on work colleagues. An environment in which the workers see each other as competitors and seek external power is not desirable in policing. Collaboration and teamwork is important in policing. Hierarchical structure may keep the organization working due to obligations to follow the orders; however, a more effective organization could be achieved based on mutual cooperation among workers. If external interferences can be reduced, employee participation increased, and the importance of collegiality increased, then the TNP can achieve an overall better work environment. As previously discussed, a better work environment will in turn influence the overall well-being of employees, enhancing their performance and the performance of the organization.

The impact of the European Union's initiatives upon TNP practices had been quite positive. There have been significant improvements in detainee rights, human rights, and the prevention of maltreatment. Yildiz (2007) detailed all of these positive results in a previous article. However, there have also been some unintended consequences of these new regulations. Increased detainee rights and strengthened requirements for convictions of suspects have resulted

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in decreases in arrests and convictions by police. Courts have been much more likely to reject police cases and release suspects due to insufficient evidence. Most of these decisions have not been well-accepted by police officers. It is believed by many officers that the new regulations protect the suspects more than the victims. The police officers who were used to working in "the old style" have experienced difficulties in meeting the new requirements. Sometimes, officer failure to comply with the new rules leads to criminal or civil lawsuits against officers. In many cases, officers became careless about "doing better policing," focusing instead on doing what is enough to get by while adding no value to the organization. Over time, this has resulted in the reduction of the meaningfulness of police officers' work.

To improve the meaningfulness of the work, the negative effects of these new regulations must first be eliminated. There are two ways to do this: Increasing the quality of officers to meet required standards, and addressing some of the procedures that frustrate officers. Current administrators in Turkey understand this problem. Administrators have developed additional regulations to enhance officer authority. In addition, advanced-level educational and training policies have been implemented to improve the quality of the officers (Yildiz, 2007). The findings of this study reinforce the necessity and correctness of such policies. Evidence from this research argues that even more should be done to improve the working conditions of officers.

Role conflict has a significant direct negative relationship with police well-being, with a correlation value of (-) 0.28. Most subjects reported having role conflicts at work due to excessive time spent at work. Since they come home quite tired after work, they have difficulty fulfilling family responsibilities. In turn, the problems created at home due to excessive time spent at work begin to affect an officer's performance at work.

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Supporting such an interpretation, working days per week was found to have a significant negative relationship with well-being, with a correlation value of (-) 0.21. In addition, the time balance latent construct was found to have a significant relationship with role conflict, with a correlation value of (-) 0.50. Even though a direct relationship was not found between time balance and well-being, an indirect significant positive correlation was found between these two with a correlation value of .15.

Time balance also has a significant relationship with the social relations latent construct, with a correlation value of .396. These findings suggest that time balance influences officer perception of the quality of their social and family lives.

As argued previously, these variables impact well-being, and the perception of well-being in turn affects police performance (Brough, 2005; Ortega et al., 2006; Burke, 1998; Berry, 2004; Fuller, 2006).

Probably the most urgent need for improvement lies in the area of working hours. As Bastemur (2006) emphasized, the differences in departments in terms of work hours should be reduced. If this is not possible, those who do extra work should be rewarded and more effectively motivated via financial or non-financial incentives. The findings of this study confirm Bastemur's assertions and add additional evidence to support his recommendations. Bastemur's study occurred two years ago; the findings of this study support the contention that little has changed in the last two years.

As the correlation values confirm, there are significant relationships between well-being and the optimism and isolation scores of the subjects (Optimism $r=.28$, Isolation= (-). 30). These two values reveal the psychological state of the subjects. It is clear that people with good mental

and physical health perform better (Burke, 1998). To improve the performance of policing in Turkey, one should reduce and, if possible, eliminate factors reducing optimism and increasing isolation.

Income sufficiency is a key to improving optimism and reducing isolation. Income sufficiency has a significant relationship to well-being, with a correlation value of .32; and with optimism, with a correlation value of .23. As stated earlier in the descriptive analysis section, most of the subjects—76.6%—reported having difficulty making ends meet at their current income. When combined with work hours, as explained before, the effect of income insufficiency increases. There is no need to develop any new and creative policies to fix this problem. There are already very good policies developed. All that is required is a commitment from the Ministry of Interior Affairs and politicians of ruling parties to improve income. Of course, income increases cannot come all at once, given the limited resources available to the Turkish economy. However, as much as the resources allow, some regulations should be implemented immediately. These findings suggest the immediacy of police officers' financial problems. Salary improvements will be key to ultimately improving police organizational performance.

b. Future Studies

This study used a combination of two surveys. These surveys have been conducted in all European Union member states for two decades and in all newly accepted and candidate states for six to seven years by Eurofound, a research institution of the European Union. The first

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survey is th eEuropean Working Conditions Survey (EWCS), and the second one is the European Quality of Life Survey (EQLS). In the EQLS, Turkey was included for the first time in 2003. In the EWCS, Turkey was included in 2001/02 and 2005. All of the information for the variables included in this study (excluding those unique to policing, such as rank and department) is available for all countries in Europe. In addition, this information is available to the non-police public in Turkey. In the surveys, the occupations of the subjects were asked, as well. With this available data, three important comparisons in terms of study variables should be addressed in future studies:

1. A comparison of police officers with different occupations in Turkey.

2. A comparison of police officers with the non-police public in Turkey.

3. A comparison of police officers with the public and police of European Union member states.

The first comparison will allow us to see whether the conditions of police work are different from that of other occupations. The second comparison will show us whether the police are independent from the society in which they operate. The third comparison will allow us to assess the differences between Turkey and Europe in terms of study variables.

In addition, all of the study variables should be examined in detail to see what other variables they affect, or by which other variables they are affected. In this study, several indicators were combined to create five latent constructs; however, each indicator might be analyzed separately. For example, the well-being latent construct is comprised of four indicators: job satisfaction, family life satisfaction, social life satisfaction, and living standards satisfaction.

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Each of these variables could be analyzed as a separate dependent variable to see which independent variables affect them.

4. Limitations

In this study, a cross-sectional design was used. The cross-sectional design might have limited the predictive value of the findings. In future research, a longitudinal design would be invaluable to chart changes over time in the rapidly changing culture of Turkey.

Access to respondents was always a concern for this research. Internet-based surveys are a valuable tool for gaining access. Precisely because of the easy access that an Internet survey provides, this approach was selected. Even though there are several advantages to internet surveys, this approach also presents disadvantages. Response rates are generally lower than paper-based surveys in internet survey (Couper, 2000). To improve response rates, extensive follow-ups were made to increase participation level. Numerous telephone calls were made to the secretariats of the several departments in each region. Since the researcher of this study is a member of the TNP, personal contacts were also used to reach and motivate the subject participation.

Because the study focused on the family life, social life, and work life of the subjects and on problems with the TNP, all potentially sensitive topics, respondents might have been unwilling to answer questions frankly. In organizations with a strong hierarchy, employees may not be willing to participate in sensitive research. This study's response rates suggest that most subjects were willing to answer questions about their private lives. To enhance response rates, assurances were given that respondent response would be kept confidential. In addition, no

personal identifiers were collected—no name, city name, or badge number was asked. The subjects were also advised by letter that the study was sanctioned by the TNP. Despite these efforts to increase participation and eliminate bias, it is probable that the survey instrument was not fully successful.

Finally, the findings might have been influenced by the selected analysis. In structural equation models, a model is tested using hypothesized associations deduced from the literature review and theoretical framework. While the data showed an excellent fit to the model proposed, it is possible that other significant unhypothesized and unpredicted associations may in fact be more predictive. In fact, as was previously discussed, some other nonpredicted relationships were discovered during the analysis (Figure 13).

Generally, though, SEM was used most appropriately as a confirmation tool. Post hoc models, such as the one suggested in Figure 13, may not be stable: they may not fit new data, having been created based on the uniqueness of an initial dataset.

VII.   CONCLUSION

Durmaz (2007), who studied "Officer Attitudes toward Organizational Change," concluded his study with the words of Kurt Levin: "If you want truly to understand something, try to change it." Durmaz reverses the saying as follows: "If you want truly to change something, try to understand it" (p. 200). I agree with Durmaz, and believe that to change something, we need to understand it first.

The significant relationships identified in this study offer invaluable information for an understanding of the TNP. This study addresses the lives of police officers in Turkey, focusing on the relationships between family life, social life, work life, and well-being. It is hoped that these findings will be used to develop evidence-based policies that will address officers' perceived and work-related problems. We can summarize the findings of the study as follows:

While the latent exogenous variables of time balance and social relations failed to show a direct relationship with well-being, these two variables did have a significant relationship with role conflict. Role Conflict, in turn, has a significant relationship with the well-being. This suggests that while there is not a direct effect of time balance on well-being, there is, in fact, an indirect effect of time balance on well-being mediated through role conflict. The relationship between social relations and role conflict was not statistically significant.

There was a statistically significant positive relationship between time balance and social relations, and negative relationships between time balance and role conflict, role conflict and well-being, and the perception of work environment and well-being.

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Six control variables (income sufficiency, working days per week, department, isolation, and rank) have significant relationship with well-being. Marital status, gender, service time, extra work, confusion score, region, work type, and working hours per day items do not have a significant relationship with well-being.

Several findings of this study confirm the findings of previous studies. In previous studies, there was no significant relationship between job satisfaction and demographic characteristics (marital status, gender, service time) (Bastemur, 2006; Buker, 2007). This study realized the same results. Department, income sufficiency, and rank were significant in previous studies, and the findings of this study found similar results.

Region, optimism, confusion, and isolation variables were initially included in this study. Of these variables, region and isolation were not found to be significant. Optimism, on the other hand, had a strong positive relationship with well-being. These findings were in the same direction as that hypothesized by the researcher. Interestingly, hypothesized relationships between work type, working hours per day, and extra work did not have a significant relationship with well-being. These were among the most common factors complained about by police officers (Tercuman, 2006). Extra work also has been posited as having a negative relationship with job satisfaction in the literature (Martelli, Waters, & Martelli, 1989). Work type was also seen as significant in terms of job and life satisfaction in the TNP (Bastemur, 2006). Working hours per day was also presumed to have negative relationship with the well-being. Since they all failed to reach the significance level, it is possible that some other factors in the SEM model are masking the true effects of these variables.

The work experience of the researcher (since he is a TNP member) suggests one possible explanation for the lack of significance of extra work. Respondents may have misinterpreted the question. Extra work was not clearly described in the questionnaire. If one officer's regular working hours and shifts are frequently changed for an operation, meeting, or patrol duty, it should be considered extra work.

Arbitrary changes in shifts and working hours are the factors often leading to complaints. Regulation of working hours, start and end times for work, dates for holidays or breaks, and assignments to secondary duties not related to the work mainly performed by the department officers, are all decided by department chiefs. Administrators may extend or shorten work hours based on their discretion. The duties performed in extended long hours might have been regarded as a continuation of regular duties by the officers, but not extra work.

However, these duties are, in reality, extra work. Most of the time, the duties that might be finished during regular work hours are completed after work. The question related to extra work was meant to measure this kind of extra work, but it seems that this meaning was not clearly understood by the respondents. In future studies, a reworded question will be needed to truly probe the relationship between well-being and extra work.

Work type and working hours per day also do not have a significant relationship—a finding contrary to the findings of previous studies. Work type was significant in terms of life and job satisfaction in previous studies (Bastemur, 2006). One possible explanation is that the well-being score is a combination of four different satisfaction scores—job, family life, living standards, and social life satisfaction. Studied control variables might have significant effects on each indicator of the well-being separately; however, when the combination of these values was

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used as a dependent variable, the significance level might decrease. One score might be affected significantly by one variable, but the addition of other scores might balance or reduce the significance level. For example, one can have low job satisfaction while having high family life satisfaction. Alternatively, one can have very good living standards satisfaction, but he/she might be not happy at work. This situation will be discussed in the limitations section, since it might have affected other relationships in the study.

Interestingly, while working hours per day does not have a significant relationship, working days per week has a significant negative relationship. As explained in the discussion section of this study, the differences in working hours and styles between departments might be a factor in generating these unusual findings.

This research contributes to the literature in several ways. First, this study is the first use of a statistical model of this sophistication (the SEM model) in the TNP. The validity and reliability of the model is supported by the excellent fit of the data to the model. The 50% explained variance also supports the validity of the model. With 50% of the variance remaining unexplained, there is also clear room for improvement for this model in future research.

SEM models are easy to interpret and offer a very reader-friendly method of presenting findings. While preparing official reports, it is important to summarize the findings effectively and adequately. The pictorial outputs make interpretation of results far easier to grasp.

As Porter-O'Grady (2003) stated, individuals and organizations are affected by each others' performance. It is clear that if the findings of this study are used effectively to fix the problems noted, it will result in increased officer and organizational performance.

The survey instrument was adapted from European Working Conditions Survey and European Quality of Life Survey. Since data for all the member states of the European Union and data for the general public in Turkey are available, the data used in this study are of great value for making further comparisons among TNP members, the public in Turkey, and the public in Europe. Therefore, this study is also very important as a reference for further studies.

The researcher will only regard this study as "completed" when he sees changes in TNP policies that parallel the findings of this and similar studies.

APPENDIX A: PERMISSION LETTERS

Informed Consent for an Adult in a Social Research Study

Researchers at the University of Central Florida (UCF) study many topics. To do this we need the help of people who agree to take part in a research study. You are being invited to take part in a research study which will include about **1050** people. You can ask questions about the research. You can read this form and agree to take part right now, or you can participate later. You have been asked to take part in this research study because you are a member of Turkish National Police. The person doing this research is Serdar Yildiz of UCF Public Affairs PhD program, is being guided by Dr. Kenneth Adams, a UCF faculty supervisor in the University of Central Florida.

Study title: A Comparative Study of Working Conditions and Social Life in Turkish National Police

Purpose of the research study: This research intends to examine working conditions and social life of the members of the Turkish National Police (TNP).

What you will be asked to do in the study: One survey titled "Working Conditions and Social Life in Turkish National Police Survey", a combination of two surveys (European Union Working conditions Survey and European Union Qality of life in Europe Survey) will be conducted.

Voluntary participation: You should take part in this study only because you want to. There is no penalty for not taking part, and you will not lose any benefits. You have the right to stop at any time. Participation will not affect their job status and your opinions will not be shared individually with their employers.

Location: Internet surveys will be used mainly. To this end, www.surveymonkey.com web site will be used. This web site reports that "Safe Harbor and EU Data Protection Requirements: We have met the Safe Harbor requirements on 11/29/2004 02:29:37 PM

http://web.ita.doc.gov/safeharbor/SHList.nsf/WebPages/Oregon

The researcher will meet with participants at their workplaces if needed.

Time required: 30 minutes

Funding for this study: This research will be funded by the researcher.

Risks: There are no expected risks for taking part in this study. You do not have to answer every question or complete every task. You do not have to answer any questions that make you feel uncomfortable.

Confidentiality: Your identity will be kept confidential. The researcher will make every effort to prevent anyone who is not on the research team from knowing that you gave us information, or what that information is. Your name will not be used in any report, so people will not know how you answered or what you did.

There are times when the researcher may have to show your information to other people. For example, the law may require the researcher to show your information to a court or to tell authorities if the researcher believes you have abused a child or are in danger to yourself or to someone else. Also, the researcher may have to show your identity to people who check to be

sure the research was done right. These may be people from the University of Central Florida or state, federal or local agencies.

Study contact for questions about the study or to report a problem: Serdar Yildiz, Graduate Student, PAF Program, College of Health and Public Affairs, (407) 823-0000 or Dr. Kenneth Adams, Faculty Supervisor, Department of Health Professions at (407) 823-3679 or by email at kenadams@mail.ucf.edu

IRB contact about your rights in the study or to report a complaint: Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research and Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901.

How to return this consent form to the researcher: After finishing the survey, your submission of a completed questionnaire constitutes your consent to participate. Return process will be made automatically via internet by your submission.

- I am older than 18   Yes   No

_____
    Date

T.C.
İÇİŞLERİ BAKANLIĞI
Emniyet Genel Müdürlüğü
Dışilişkiler Daire Başkanlığı

SAYI : B.05.1.EGM.0.76.04.02 / 2939
TARİH :07/06/2007

Faks No : 00 90 312 466 90 22
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KONU :Genel Akademik Araştırma Onayı.
İLGİ :a) 23.03.2007 tarih ve B.05.1.EGM.0.76.04.02.
(31004).871/1501 sayılı yazı.
b) 12.04.2007 tarih ve B.05.1.EGM.0.72.02.03-
857-1480 sayılı yazı.

GÖNDEREN : Dr. Recep GÜLTEKİN
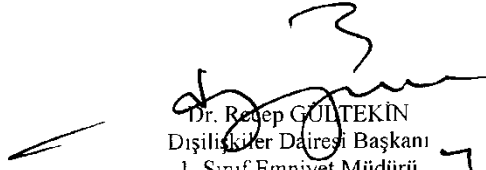Dışilişkiler Dairesi Başkanı
1. Sınıf Emniyet Müdürü

GİDECEĞİ YER : Samih TEYMUR (ABD), İsa ÇİFTÇİ (ALM), Fatih YAMAÇ (FR),
Fatih ÖZGÜL(İNG),Murat GÜLVER (BELÇİKA)

E-MAIL ADRESİ : tipscontact@gmail.com, yamacfatih@yahoo.fr,isaciftci@yahoo.com,
fatih.ozgul@gmail.com ve muratgulver@yahoo.com

İlgi (a) kayıtlı yazı ile mastır ve doktora yapmakta olan personelimizin eğitim gördüğü kendi alanlarıyla ilgili tez, akademik çalışma, makale gibi akademik araştırmalarda kullanmak üzere; Teşkilatımız bünyesindeki birimlerden gerekli istatistikî bilgilerin alınması ve bazı anket ve mülakat gibi akademik çalışmaların uygulanabilmesi için Emniyet Genel Müdürlüğü Makamından genel bir onay alınması Eğitim Daire Başkanlığı'ndan talep edilmiştir.

Adı geçen Daire Başkanlığı'ndan alınan ilgi (b) kayıtlı yazı ile "Yetiştirilmek Amacıyla Yurtdışına Gönderilecek Devlet Memurları Hakkındaki Yönetmelik" hükümleri çerçevesinde yurtdışındaki üniversitelere mastır ve doktora yapmak üzere gönderilen personelin Genel Müdürlüğümüze bağlı birimlerde ve taşra teşkilatında akademik çalışma yapma talebinde bulunması halinde tez çalışması yapabilmesi uygun görüldüğü belirtilmiş olup Genel Müdürlük Makam Onayın bir sureti ekte gönderilmiştir.

Bilgi ve gereğini rica ederim.

Dr. Recep GÜLTEKİN
Dışilişkiler Dairesi Başkanı
1. Sınıf Emniyet Müdürü

Ek:
İlgi (b) kayıtlı yazı. (2 sayfa)

University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901, 407-882-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

University of Central Florida

Notice of Expedited Initial Review and Approval

From : **UCF Institutional Review Board**
FWA00000351, Exp. 5/07/10, IRB00001138

To : **Serdar Yildiz**

Date : **November 30, 2007**

IRB Number: **SBE-07-05014**

Study Title: **A Comparative Study of Working Conditions and Social Life in the Turkish National Police**

Dear Researcher:

Your research protocol noted above was approved by **expedited** review by the UCF IRB Vice-Chair on 11/29/2007. **The expiration date is 11/28/2008.** Your study was determined to be minimal risk for human subjects and expeditable per federal regulations, 45 CFR 46.110. The category for which this study qualifies as expeditable research is as follows:

> 7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

The IRB has approved a **consent procedure which requires participants to sign consent forms.** Use of the approved, stamped consent document(s) is required. Only approved investigators (or other approved key study personnel) may solicit consent for research participation. Subjects or their representatives must receive a copy of the consent form(s).

All data, which may include signed consent form documents, must be retained in a locked file cabinet for a minimum of three years past the completion of this research. Any links to the identification of participants should be maintained on a password-protected computer if electronic information is used. Additional requirements may be imposed by your funding agency, your department, or other entities. Access to data is limited to authorized individuals listed as key study personnel.

To continue this research beyond the expiration date, a Continuing Review Form must be submitted 2 – 4 weeks prior to the expiration date. Advise the IRB if you receive a subpoena for the release of this information, or if a breach of confidentiality occurs. Also report any unanticipated problems or serious adverse events (within 5 working days). Do not make changes to the protocol methodology or consent form before obtaining IRB approval. Changes can be submitted for IRB review using the Addendum/Modification Request Form. An Addendum/Modification Request Form **cannot** be used to extend the approval period of a study. All forms may be completed and submitted online at http://iris.research.ucf.edu .

Failure to provide a continuing review report could lead to study suspension, a loss of funding and/or publication possibilities, or reporting of noncompliance to sponsors or funding agencies. The IRB maintains the authority under 45 CFR 46.110(e) to observe or have a third party observe the consent process and the research.

On behalf of Tracy Dietz, Ph.D., UCF IRB Chair, this letter is signed by:

Signature applied by Barbara Ward on 11/30/2007 05:34:11 PM EST

IRB Coordinator

APPENDIX B: RESEARCH INSTRUMENT

Working Conditions and Social Life In The Turkish National Police Survey

1. **What is your rank?**
    1. Police Officer
    2. Sergeant
    3. Major
    4. Superintendent
    5. Police Chief
2. **In which department do you work?**
    1. Operational
    2. Nonoperational
    3. Police Stations
3. **In which region do you work?**
    1. Marmara
    2. Aegean
    3. Mediterranean
    4. Central Anatolia
    5. Black Sea
    6. Eastern Anatolia
    7. Southeastern Anatolia
4. **What is your gender?**
    1. Male
    2. Female
5. **What is you marital status?**
    1. Married
    2. Divorced
    3. Widow/Widower
    4. Single
5. **How many children do you have?**
    0 to 9 scale
6. **Including yourself, can you please tell me how many people live in this household?**
7. **How many years have you been working?**
8. **How many hours do/did you normally work per week (in your main job), including any paid or unpaid overtime?**
9.   **How many days do you normally work per week?**
10. **How much do you agree or disagree with the following statements describing positive and negative aspects of your job?**

    (1) Strongly agree (2) Agree (3) Neither Disagree nor Agree (4) Disagree (5) Strongly disagree
    1.   My work is too demanding and stressful.   1 2 3 4 5
    2.   I am well paid.   1 2 3 4 5
    3.   I have a great deal of influence in deciding how to do my work. 1 2 3 4 5

4. My work is dull and boring.   1 2 3 4 5
5. My job offers good prospects for career advancement.   1 2 3 4 5
6. I constantly work to tight deadlines.   1 2 3 4 5
7. I work in dangerous or unhealthy conditions.   1 2 3 4 5

12. How often has each of the following happened to you during the last year?

(1) Several times a week   (2) Several times a month (3) Several times a year
(4) less often/ Rarely   (5) Never

d. I have come home from work too tired to do some of the
    household jobs which need to be done.   1 2 3 4 5
e. It has been difficult for me in fulfilling my family responsibilities
    because of the amount of time I spend on the job.   1 2 3 4 5
f. I have found it difficult to concentrate at work because of my family
    responsibilities.   1 2 3 4 5

13. In general, do your working hours fit in with your family or social commitments outside work?
1 - Very well 2 - Well   3 - Not very well 4 - Not at all well

14. Could you tell me if you think you spend too much, too little or just about the right amount of time in each area.

(1) Too much (2) Just right (3) Too little (4) DK (5) (Not applicable)

a. My job/paid work
b. Contact with family members living in this household or elsewhere
c. Other social contact (not family)
d. Own hobbies/ interests
e. Sleeping
f. Taking part in voluntary work or political activities

15. Could you please tell me on a scale of 1 to 10 how satisfied you are with each of the following items, where 1 means you are very dissatisfied and 10 means you are very satisfied?
a. Your education   _____
b. Your present job   _____
c. Your present standard of living _____
d. Your accommodation   _____
e. Your family life   _____
f. Your health   _____
g. Your social life   _____

16. Please tell me, using the same scale, does your main paid job involve ...?

A - Tiring or painful positions   1 2
B - Carrying or moving heavy loads   1 2
C - Lifting or moving people   1 2
D - Standing or walking (NEW)   1 2
E- Repetitive hand or arm movements   1 2
F - Working in places other than home or company/ organization premises, e.g.
 client's premises, on the road   1 2
G - Dealing directly with people who are not employees at your workplace such as
customers, passengers, pupils, patients, etc.   1 2
H - Working with computers: PCs, network, mainframe   1 2
I - Wearing personal protective clothing or equipment   1 2

17. A How does it affect your health?

A - Hearing problems   1 2
B - Problems with your vision   1 2
C - Skin problems   1 2
D- Backache   1 2
E - Headaches   1 2
F - Stomach ache   1 2
G - Muscular pains in shoulders, neck and/or upper/lower limbs   1 2
H - Respiratory difficulties   1 2
I - Heart disease   1 2
J - Injury(ies)   1 2
K - Stress   1 2
L - Overall fatigue   1 2
M - Sleeping problems   1 2
N - Allergies   1 2
O - Anxiety   1 2
P - Irritability   1 2
R – Other   1 2

18. A household may have different sources of income and more than one household member may contribute to it. Thinking of your household's total monthly income, is your household able to make ends meet….?

1- Very easily
2 - Easily
3 - Fairly easily
4 - With some difficulty
5 - With difficulty
6 - With great difficulty

19. Has your household been unable to pay as scheduled any of the following at any time during the past 12 months?

 (1) Yes (2) No

a. Rent or mortgage payments for accommodation
b. Utility bills, such as electricity, water, gas

20. In the past twelve months, have you been contacted, e.g. by email or telephone, in matters concerning your main paid job outside your normal working hours?
1 - Every day
2 - At least once a week
3 - A couple of times a month
4 - Less often
5 – Never

21. About how much time in total does it take you to get to and from work or school using your usual mode of transportation?
_____ minutes

22. Which of the following best describes your accommodation?
a. Own without mortgage (i.e. without any loans)
b. Own with mortgage
c. Rental
d. Police Apartments

23. Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people? Please tell me on a scale of 1 to 10, where 1 means you can't be too careful and 10 means that most people can be trusted.
_____

24. In all countries there sometimes exists tension between social groups. In your opinion, how much tension is there between each of the following groups in [this country]
(1) A lot of tension (2) Some tension (3) No tension

a. Poor and rich people
b. Management and workers
c. Men and women
d. Old people and young people
e. Different racial and ethnic groups

25. Please tell me whether you agree completely, agree somewhat, disagree somewhat or disagree completely with each statement.

(1) Agree completely
(2) Agree somewhat
(3) Disagree somewhat

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(4) Disagree completely

a. I am optimistic about the future.
b. In order to get ahead nowadays you are forced to do things that are not correct.
c. I feel left out of society.
d. Good luck is more important than hard work for success.
e. Life has become so complicated today that I almost can't find my way.

26. All things considered, how satisfied would you say you are with your life these days? Please tell me on a scale of 1 to 10, where 1 means very dissatisfied and 10 means very satisfied.
_____

27. On average, thinking of people living outside your household how often do you have direct (face-to-face) contact with…(if e.g. several children then answer for the one with which the respondent has the most contact)

(1) More than once a day (2) Every day or almost every day (3) At least once a week (4)Once or twice a month (5) Several Times a year (6) Less often (7) No relatives (8) DK

a. Any of your children
b. Your mother or father
c. Any of your friends or neighbors

28. From whom would you get support in each of the following situations?
For each situation, choose the most important person.

(1) Family member (2) Work colleague (3) Friend (4) Neighbor (5) Someone else (6) Nobody (7) (Don't know)

a. If you needed help around the house when ill
b. If you needed advice about a serious personal or family matter
c. If you were feeling a bit depressed and wanting someone to talk to
d. If you needed to urgently raise €1,000^3 to face an emergency

29. How safe do you think it is to walk around in your area at night? Do you think it is…
1 Very safe
2 Rather safe
3 Rather unsafe
4 Very unsafe

30. Normally, how many times a month do you work at night, for at least 2 hours between
10.00 pm and 05.00 am?

Number of nights per month:……………………

31. And how many times a month do you work in the evening, for at least 2 hours between 6.00 pm and 10.00 pm?
Number of evenings per month:……………………

32. And how many times a month do you work on Sundays?
Number of Sundays per month:……………………

33. Work shifts
1. 12-12
2. 12-24
3. 12-36
4. 8/5 or 9/6

34. And how many times a month do you work more than 10 hours a day?
Number of days

35. Do changes to your work schedule occur regularly? (IF YES) How long before are you informed about these changes?
1 - No
2 - Yes, the same day
3 - Yes, the day before
4 - Yes, several days in advance
5 - Yes, several weeks in advance

36. How often do you have to interrupt a task you are doing in order to take on an unforeseen task?
1 - Very often
2 - Fairly often
3 – Occasionally
4 - Never

37. For your work, are these interruptions...
1 - Disruptive
2 - Without consequences
3 – Positive

38. For each of the following statements, please select the response which best describes your work situation.

A - You can get assistance from colleagues if you ask for it	1 2 3 4 5
B - You can get assistance from your superiors / boss if you ask for it	1 2 3 4 5
C - You can get external assistance if you ask for it	1 2 3 4 5
D - You have influence over the choice of your working partners	1 2 3 4 5
E - You can take your break when you wish	1 2 3 4 5
F - You have enough time to get the job done	1 2 3 4 5

G - You are free to decide when to take holidays or days off   1 2 3 4 5
H - At work, you have the opportunity to do what you do best   1 2 3 4 5
I - Your job gives you the feeling of work well done   1 2 3 4 5
J - You are able to apply your own ideas in your work   1 2 3 4 5
K - You have the feeling of doing useful work   1 2 3 4 5
L - You find your job intellectually demanding   1 2 3 4 5
M - You find your job emotionally demanding   1 2 3 4 5

39. Over the past 12 months, have you undergone any of the following types of training toimprove your skills or not?

A - Training paid for or provided by your employer,
or by yourself if you are self-employed   1 2
B - Training paid for by yourself   1 2
C - On-the-job training (co-workers, supervisors)   1 2
D - Other forms of on-site training and learning
(e.g. self-learning, on-line tutorials etc)   1 2

40. Over the past 12 months, have you or have you not, personally been subjected at work to...?

A - threats of physical violence   1 2
B - physical violence from people from your workplace   1 2
C - physical violence from other people   1 2
D - bullying / harassment   1 2
E - sexual discrimination / discrimination linked to gender   1 2
F - unwanted sexual attention   1 2
G - age discrimination   1 2

41. Over the past 12 months, have you, or not…?

A - Had a frank discussion with your boss about your work performance?   1 2
B - Been consulted about changes in the organization of work and /or your working
conditions?   1 2
C - Been subject to regular formal assessment of your work performance? 1 2
D - Discussed work-related problems with your boss?   1 2

42. How many days were you absent due to the reasons below last year?

1. Accidents during work
2. Health problems caused by work

43. How much do you agree or disagree with the following statements describing some aspects of your job?

A - I might lose my job in the next 6 months   1 2 3 4 5
B - I am well paid for the work I do   1 2 3 4 5
C - My job offers good prospects for career advancement   1 2 3 4 5
D - I feel myself 'at home' in this organization   1 2 3 4 5

E - At work, I have opportunities to learn and grow   1 2 3 4 5
F - I have very good friends at work   1 2 3 4 5

44. What does your remuneration include?
    A - Basic fixed salary/wage   1 2
    B - Piece rate or productivity payments   1 2
    C - Extra payments for additional hours of work/overtime   1 2
    D - Extra payments compensating for bad or dangerous working conditions   1 2
    E - Extra payments compensating for Sunday work   1 2
    F - Other extra payments   1 2
45. Do you have any further comments?

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