



The effects of education on police officer job satisfaction: The case of Turkish National Police

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Abstract

There has been an assumed relationship between police officer job satisfaction and education for many decades. There is small number of quantitative research to demonstrate the relationship between education and police officer job satisfaction. This study examines to what extent education is related to job satisfaction facets, including police officers' satisfaction with colleagues, supervisors, promotions and work. The population of this study consisted of police officers of all ranks from various departments of the Turkish National Police (TNP). This study specifically addresses the question of intrinsic job satisfaction and education for police officers. These findings should add to management literature on job satisfaction and provide some of the first findings of this type for a police population, because there are already some studies in general on the relationship between education and job satisfaction which are mentioned in the literature review. This study also contributes to the body of literature that exists on police officer satisfaction and education.

Key Words: Police, Turkey, Education, Job Satisfaction.

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Eğitimin polis memurlarının iş tatminlerine etkisi: Türk Polis Teşkilatı örneği

Özet

Son yıllarda polislerin iş tatminleri ile eğitim durumları arasında bir ilişkinin olduğu kabul edilmektedir, fakat bu ilişkiyi ortaya koyar mahiyette sayısal verilere dayalı çok fazla çalışma bulunmamaktadır. Bu çalışmada polis memurlarının eğitim durumlarının iş tatminlerine olan etkisi dört farklı kategoride ele alınarak değerlendirilmektedir. Bunlar; polis memurlarının çalışma arkadaşlarına, yöneticilerine, iş ortamlarına ve meslekte yükselmelerine yönelik olarak iş tatminleridir. Çalışma Türk Polis Teşkilatının çeşitli birimlerinde görev yapan ve her rütbedeki çalışanları içermektedir. Bu çalışma polis memurlarının eğitim durumları ile iş tatminlerini esas almaktadır. Çalışma sonucunda elde edilen bulgular iş tatmini konusunda literatüre katkı sağlayabilir. Literatürde belirtildiği üzere, genel manada eğitim ve iş tatmini arasındaki ilişkiyi konu alan çalışmalar mevcut olmasına rağmen bu yoğunluktaki bir polis organizasyonu için ilk çalışma özelliği taşımaktadır. Ayrıca polis memurlarının iş tatmini ve eğitimleri arasındaki ilişki noktasındaki literatüre katkı sağlayacak bir çalışma niteliğinde olacaktır.

Anahtar Kelimeler: Polis, Türkiye, Eğitim, İş tatmini.

Introduction

In recent years, job satisfaction has been decreasing -among the Turkish National Police (TNP) members who have lower education levels according to the survey results conducted Training Department after in service training programs. This problem started five years ago with the change of the recruitment policy for police officers at the TNP. Before the policy change, the TNP had been recruiting police officers with high school degrees, but later increased its recruitment requirements to at least a four year college degree. Present police officers did not get any benefit from this change, they even reacted negatively. After the new regulative change, less educated police officers started to work more hours than the more educated ones. While the former were working twelve hours a day and seven days a week, the latter were working eight hours a day and five days a week. More educated police officers were mostly doing desk work while the other less educated officers were tasked with the more traditional police patrolling assignments. Promotion on the job and getting benefits from social and cultural standing among the TNP members also gave more opportunities to the more educated police officers than the others.

The TNP has experienced a problem with officers' low job satisfaction after hiring more educated police officers for five years, but there is no research on the relevance between police officers education level and job satisfaction. Based on the problem statement, the following research question has been formulated: "*What is the relationship between level of education and job satisfaction for police officers in Turkey?*"

Prior research suggested that job satisfaction is an important management issue that may be correlated to reduce absenteeism and decrease turnover of workers (Neiderhoffer, 1967: 73). The former research studies also suggested a possible link between satisfaction with autonomy and worker productivity (Krimmel, 1996: 86). While there has been a considerable amount of research studies conducted in the respective areas of job satisfaction and higher education, there has been far less conclusive research done concerning job satisfaction as it relates to the police and few research on higher education and police job satisfaction. In the case of Turkey, there is no research on this issue. Studies that involve police populations have looked at higher education and cynicism (Neiderhoffer, 1967:89; Regoli, 1976:342), higher education, cynicism and work alienation (Regoli, Poole and Hewitt, 1979:337), higher education and work performance (Allen, 2002; Bostrom, 2003:1085; Carter and Sapp, 1989:156; Krimmel, 1996:90), higher education, belief systems

and performance (Roberg, 1978:342), higher education and organizational structure (Swanson, 1977:210), higher education and individual attitudes (Dalley, 1975:460), higher education and citizen's complaints (Wilson, 1999:210), level of education and job characteristics (Sherwood, 2000:193), and education on promotion and commendations (Dailey 2002:214). However, any consideration of the relationship between education and job satisfaction is peripheral.

There are some research studies on education and job satisfaction in general but no research studies focus on police officers' job satisfaction and its relationship with education, so it is not clear whether education level of the police officers is the core element of less job satisfaction. The study of job satisfaction is important to managers since research has shown that persons who are satisfied with their work will behave positive on the job than persons who are dissatisfied (Sherwood, 2000:195).

This study examines the relationship between the TNP members' education levels and their job satisfaction by measuring job satisfaction in four different facets that including colleagues, supervisors, work and promotion. This research should help to expand the knowledge base on job satisfaction of police officers and may be used to assist with organizational policy formulation.

1. Relationship between Education and Job Satisfaction

Much of the early research regarding satisfaction as it relates to intrinsic needs was performed by Herzberg et al. (1959:121). In their study of accountants and engineers, these researchers focused on the needs of the individuals as they related to work and sought to identify those variables most related to being able to satisfy individual needs. Some of the factors most often cited by the respondents were achievement, the work itself, responsibility and advancement. These were named motivators by the researchers. Each of the factors relates to the job itself. According to the authors, their presence in the work situation helped to satisfy and motivate the individual, contributing to greater self-actualization. In subsequent research, Herzberg (1966:92) suggested how organizational change might be related to the enhancement of motivators. Herzberg stated that the development of motivators could be increased through organizational actions, such as education and job enlargement.

In one of the more extensive studies on the relationship between education and jobs satisfaction, Berg (1970:18) recommended caution with using educational requirements as a screening device by managers. With respect to the question of job satisfaction, education is often an important factor, and in some jobs, accounts for some of the dissatisfaction that the worker feels. Berg further reported that educational backgrounds may be an important determinant of occupational expectations. Higher educational achievements may be related to higher job expectations. Better-educated people may expect to do better and when they are not meeting expectations and the inconsistency may cause dissatisfaction to increase.

Wood and Lebold (1970:175), citing deficiencies in the traditional explanations of job satisfaction, tested job satisfaction as a multivariate phenomenon. Using a national sample of engineering graduates, the researchers found support for the hypothesis that job satisfaction includes specific factors as well as a more global, one-dimensional component. This study also found a positive relationship between level of education and satisfaction with work.

In a study involving members of the American Society for Public Administration, Lynn and Vaden (1979:70) reported that level of education had an impact upon the feelings of satisfaction of the respondents. Those persons with doctorates were more satisfied than those holding bachelor's or master's degrees. The authors reported that those with doctorates were well matched for the more specialized positions that they held.

Other studies that were conducted in the 1980s reported conflicting findings. Generally speaking, the researchers found that, when measured from job satisfaction-related service criteria and from supervisors' evaluations of the job performance, college-educated officers, including those with baccalaureate and master's degrees, did not perform better than the officers who did not have any college education or degree (Kedia, 1985:84; Fischer et al., 1985:330). Fischer (1982:315) also found that for some agencies, possessing a college degree was not significantly related to performance and promotion where the proportion of police officers with degrees was somewhat constant across the ranks.

It is apparent that the relationship between level of education and job satisfaction has been found to vary with different work groups. The studies that have looked at the larger populations of workers over time, however, have found a positive relationship (Glenn and Weaver, 1982: 48). In addition, these studies suggest that the effect of education on job

satisfaction will be positive for persons who do a demanding and diverse job. Moreover, the job satisfaction – education relationship was examined by improved job performance, higher retention, lower turnover (Johnson and Johnson, 2000:540; Lopopolo, 2002:952; Spears and Parker, 2002:16) and even life satisfaction (P.C. Smith, 1992:58). The results show the positive relationship between level of education and job satisfaction.

In today's society, individuals base their self-worth on their work and increasingly find that their identity and satisfaction come from their profession (Mott, 2000:30). According to Mott (2000), education is becoming an increasingly important factor in people's lives, especially in the workplace. Rowden (2002:407) also studied the impact of workplace learning, and found that workplace learning contributes significantly to the aspect of job satisfaction.

2. Relationship between Education and Job Satisfaction for the Police

One of the earliest studies of police officers' feelings toward their jobs was conducted by Niederhoffer (1967:56) when he looked at officers from the New York City Police Department. He examined the phenomenon of cynicism, which he said consisted of feelings of hate, envy and hostility. The study found that feelings of cynicism were directed at people in general and at the criminal justice system. Further, Niederhoffer identified stages of cynicism in officers that were related to the number of years that the person had on the job.

Regoli (1976:342) built upon the Niederhoffer research by further examining the effect of higher education on police cynicism. This research used a sample of officers from nine police agencies in the Pacific Northwest in the USA. While the findings were not statistically strong, Regoli found that college-educated, lower-level personnel were more cynical than their less educated peers. He reasoned that these officers had obtained "professional qualifications" but that they were unable to practice this more autonomous "professionalism" due to the rigid regulations imposed on the lower level officers in the department. Regoli concludes that education did not bring about change in the police institution as rapidly as originally anticipated and those officers who became educated have now become frustrated and cynical. However, later research empirically tested the police cynicism and work alienation link and found only small support for its existence (Regoli, Poole and Hewitt, 1979:338).

Trojanowicz and Nicholson (1976:60) found that a college educated officer likes to have less directions from a supervisor and also likes a job that is more challenging. They suggest that one way to increase the satisfaction and retention of college educated officers is to give them duties that stimulate their thinking and imagination and to encourage duties that emphasize higher levels of communication, constructive feedback and participative decision-making.

Griffin, Dunbar and McGill (1978:12) surveyed a large southwestern police department in their study of factors associated with job satisfaction among police personnel. They found no significant differences in levels of satisfaction among educational levels of the participants. The findings also suggested that as level of education increases, sources of satisfaction may be more related to internal factors than to external factors. Officers with more education expressed job satisfaction as a reflection of the extent to which the officer was in control. Griffin at all, suggest that changes in education and the police organization are needed to foster higher levels of job satisfaction for college educated personnel. They recommend that structural changes should be implemented in police organizations to allow for more control for lower level officers.

Mottaz (1983:29) examined levels of work alienation among police officers. He collected data for state, suburban and city police officers as a part of larger research on the work attitudes of seven occupational groups. Mottaz defined work alienation, or self-estrangement, as a lack of intrinsic fulfillment in work. He hypothesized that feelings of powerlessness and meaninglessness are the prime determinants of self-estrangement. To attain self-fulfillment, officers must experience some degree of autonomy as well as a sense of purpose in the performance of tasks. If these conditions are not present, officers will feel that they do not use their abilities and will not experience a sense of accomplishment in work.

In a research study involving two large city police departments, Buzawa (1984:80) investigated determinants of job satisfaction for patrol officers. The results indicated that officers were generally satisfied with their jobs in an overall sense and with the opportunity for fulfillment and accomplishment in particular. In addition, a positive correlation was found between level of education and overall job satisfaction. Based on this finding, Buzawa suggested that opportunities for alternative employment may be an important factor in the turnover of college-educated officers.

In one study, Hunt and McCadden (1985:23) compiled data from approximately 1200 police officers throughout the United States. They found that demographic variables, including education, to be moderately important determinants of the variance in job satisfaction. In another study police officers were surveyed in three metropolitan areas, Worden (1990: 590) looked at the effect of higher education on attitudes among the police. While education was not found as strong determinant, college-educated officers did display a greater preference for autonomy.

Dantzker (1992:115) investigated the relationship between level of education and patrol officers' job satisfaction, specifically, whether college-educated officers are more likely than high school-educated officers to become dissatisfied with their jobs the longer they remain as patrol officers. He used a sample of five police agencies of various sizes in three Midwestern and western states and used both intrinsic and extrinsic job satisfaction measures. Dantzker found an overall positive relationship between higher education and job satisfaction for patrol officers. However, the positive relationship seemed to hold only for patrol officers with five years or less experience. The relationship became negative for officers with more than five years of experience.

In general, the early researchers who found college-educated officers to be less satisfied attempted to explain these findings by suggesting that police organizations had not changed their organizational structures to make good use of college officers (Miller and Fry, 1976:190; Trojanowicz and Nicholson, 1976:60; Griffin, Dunbar and McGill, 1978:25). One research team emphasizes that as the education reform movement progressed, the relationship between higher education and job satisfaction would change (Miller and Fry, 1976:192). Later studies suggest that some progress in meshing college officer needs with work may have occurred (Buzawa, 1984:79; Dantzker, 1992:116). This may be especially true in city departments where there is a more diverse work environment. Some other studies suggest that higher education expands police officers judgment, maturity, knowledge and work performance (Dailey, 2002:58; Kakar, 1998 and Allen, 2002:64).

Several conclusions are suggested by the literature on the relationship between level of education and job satisfaction. Education appears to cause an increase on worker's expectations regarding his or her job. Failure to meet these expectations can lower levels of job satisfaction. Persons who are more educated also seem to have greater sensitivity to job characteristics, especially with their need for accomplishment and autonomy with work.

Advancement also seems to increase a person's satisfaction with work. When this desire is unmet, the person will become more dissatisfied. In addition, the greatest impact of higher education on job satisfaction seems to come with obtaining a degree rather than just accumulating levels of education.

3. Methodology

In an effort to measure the association between the TNP members' job satisfaction and education level, descriptive survey data was collected. The collected data analyzed by using SPSS statistical charts to find any significant relationship between the level of education and job satisfaction among the TNP members.

3.1. Research Design

The research was accomplished by measuring job satisfaction in four different areas: colleagues, supervisors, work and promotion. The research question to be examined is “*What is the relationship between levels of education and job satisfaction for police officers in Turkey?*” Four job satisfaction areas have been identified that are related to job content, which are; satisfaction with work, supervisors, colleagues and promotion. The hypotheses consider the relationship between levels of education and satisfaction within each of these areas. For each area, it is hypothesized that a relationship will exist and that it will be in a positive direction. While some of the findings from earlier research suggested a negative relationship between education and job satisfaction (Niederhoffer, 1967:156; Regoli, 1976:343), more recent research studies have found a positive relationship between education and job satisfaction (Bostrom, 2003:1085; Buzawa, 1984:80; Dailey, 2002:460; Glenn and Weaver, 1982:50; Krimmel, 1996:90; Quinn and Baldi de Mandilovitch, 1980:109).

Hypothesis 1- There is a positive relationship between education level and satisfaction with work in the Turkish National Police members.

Hypothesis 2- There is a positive relationship between education level and satisfaction with supervisors in the Turkish National Police members.

Hypothesis 3- There is a positive relationship between education level and satisfaction with colleagues at work in the Turkish National Police members.

Hypothesis 4- There is a positive relationship between education level and satisfaction with promotions at work in the Turkish National Police members.

Most of the studies examining these two common factors relied on data derived from police organizations in the US, which are mostly local law enforcement agencies. On the contrary, this study selected its sample from the TNP members. The secondary data is used for this study which was collected in 2005 for any other research study on police work the purpose of measuring police stress at work.

3.2. Sample Characteristics

Because the Turkish National Police is a national centralized organization with multiple jurisdictions located around the country, the survey was administered in seven different jurisdictions. They include Ankara, Istanbul, Antalya, Polatlı, Beşiktaş, Menemen and Torbalı, all located in different geographical regions throughout the country. One thousand and fifteen (1,015) survey forms were given to the officers and 812 were filled out and returned appropriately, constituting an 80% response rate.

As shown in Table 1, each of these seven jurisdictions has differing population rates, crime rates and number of officers for the 2005 data. Two hundred twenty-two of the respondents (27% of the total number of respondents who completed the survey) were selected from Ankara and represent 1.25% of the total number (17,727) of officers employed in Ankara.

In Istanbul (which is the largest city in Turkey and employs 27,247 police officers) police officers completed slightly more than twelve percent (12.8%) of the surveys (Table 1). Polatlı, Beşiktaş, Menemen and Torbalı are smaller provinces, so the number of police officers is also much lower.

The population of Polatlı is 82,000, and employs only 165 police officers. Nearly seventeen percent (16.96%) of the police officers participated in the study by responding to the survey. Slightly more than fourteen percent (14.6%) of the sample participated in the

survey from the provinces of Menemen and Torbalı. These two provinces are similar to the characteristics of Polatlı's population and the number of police officers.

Although Torbalı has a lower population than Menemen, its crime rate (9.45%) is more than the crime rate of Menemen (8.87%). Even though Istanbul has the most reported crime (201,892), Beşiktaş has the highest crime rate per capita (34.73%) and number of crimes per officer (1057.3%) as given in Table 1.

Table 1: Description of the TNP Sample Jurisdictions

| | Number | % ¹ | Pop. ₂ | % ³ | N.Off. ₄ | % ⁵ | Crime ⁶ | C/Pop ₇ | C/Off ⁸ |
|----------------|--------|----------------|-------------------|----------------|---------------------|----------------|--------------------|--------------------|--------------------|
| Jurisdictions | | | | | | | | | |
| J-1 (Ankara) | 222 | 27.3 | 2897 | 0.00 7 | 17727 | 1.25 | 28643 | 9.8 | 165.8 |
| J-2 (Istanbul) | 104 | 12.8 | 1003 3 | 0.00 1 | 27247 | 0.38 | 201892 | 20.12 | 740.9 |
| J-3 (Antalya) | 273 | 33.6 | 603 | 0.04 5 | 1133 | 24.0 9 | 8639 | 14.32 | 762.5 |
| J-4 (Polatli) | 28 | 3.4 | 82 | 0.03 4 | 165 | 16.9 6 | 886 | 10.74 | 536 |
| J-5 (Besiktas) | 67 | 8.3 | 196 | 0.03 4 | 645 | 10.3 8 | 6820 | 34.73 | 1057.3 |
| J-6 (Menemen) | 63 | 7.8 | 93 | 0.06 7 | 153 | 41.1 7 | 827 | 8.87 | 540.52 |
| J-7 (Torbalı) | 55 | 6.8 | 55 | 0.1 | 121 | 45.4 5 | 521 | 9.45 | 430.58 |

3.3. Data Description

The survey data was used to measure the research question; this data includes the following variables: 1) education level, 2) job satisfaction with work, 3) job satisfaction with co-workers, 4) job satisfaction with supervisors, and 5) job satisfaction with promotion.

Education level was used as the independent variable to measure different facets of job satisfaction among the TNP members. Education level is divided into four categories;

¹ Ratio of the sample

² x 1000

³ Ratio of population to the sample

⁴ Number of officers

⁵ Ratio of the number of officers to the sample

⁶ Number of crimes

⁷ Crime number / population x 1000

⁸ Number of crime / Number of officer x 100

high school, associates degree, bachelor's degree and graduate degree. The respondents were asked to give their education level based on the degree they currently have.

Job satisfaction is the primary dependent variable in this study. In general, job satisfaction is measured in different formats. In the specific measurements, employees were asked about their satisfaction with different aspects of their job, such as work itself, supervision, colleagues, and promotion.

3.4. Data Analysis Procedures

In an effort to statistically test the hypotheses, gamma is most suited and commonly used to quantifiably determine relationship. Gamma tests the strength of association of the cross tabulations when both variables are measured at the ordinal level. It makes no adjustment for either table size or equivalent scores. Value range from -1 (100% negative association, or perfect inversion) to +1 (100% positive association, or perfect agreement). A value of zero indicates the absence of association. The Gamma statistic is preferable to Spearman R and Kendall Tau. In terms of the underlying assumptions, Gamma is equivalent to Spearman R or Kendall Tau; in terms of its interpretation and computation it is more similar to Kendall Tau than Spearman R. Gamma also predicts probability; specifically, it is computed as the difference between the probability that the rank ordering of the two variables agree minus the probability that they disagree, divided by 1 minus the probability of equal scores.

Gamma (g) is simply the number of concordant products minus the number of discordant products divided by the sum of the concordant and discordant products. The formula for gamma test is:

$$g = (N_c - N_d) / (N_c + N_d)$$

Gamma test is the way of measuring association between two ordinal variables. Gamma was used to assess the strength of relationship between education and job satisfaction among the TNP members. Gamma measures the differences between the number of concordant or consistently ordered pairs and the number of discordant or inconsistently ordered pairs in the cross-tabulation. These differences indicate the relative support in the contingency table for a positive as opposed to a negative relationship between two variables.

If the number of concordant pairs exceeds the discordant pairs, then, on balance, there is greater support for a positive relationship. In that case, the difference between them will be positive, and the gamma statistic will have this sign. On the other hand, if the number of concordant pairs is less than the number of discordant pairs, there is greater support for a negative relationship. The difference between them will be negative, and this will be reflected in the negative sign of gamma. Regardless of the direction of the relationship, the larger difference between the number of concordant and the number of discordant pairs, the greater the association between the two variables, the greater the magnitude of the gamma.

4. Findings

The overall purpose was to determine whether a relationship exists between educational level and job satisfaction among Turkish National Police members.

4.1. Descriptive Statistics of the Sample

In total, the results of 812 surveys from seven different jurisdictions of the TNP were examined. All descriptive statistics of the participants and the included variables are displayed in Table 2. As of August 2005 there were a total of 160,970 police officers working in the TNP in comparison to 8941 mid-level supervisors (sergeant and lieutenant) which constitutes a 1/18 ratio of supervisor to officer (TNP, 2005). In the sample, however, this ratio is 1/7 (97 / 690) which indicates an over sampling of supervisors.

Table 2: Descriptive Characteristics

| Variable | N | % | Mean | SD |
|-------------------------|----------|----------|-------------|-----------|
| <u>Gender</u> | | | .15 | .46 |
| Male (0) | 699 | 86.1 | | |
| Female (1) | 112 | 13.8 | | |
| <u>Marital Status</u> | | | 1.31 | .56 |
| Married (1) | 597 | 73.5 | | |
| Single (2) | 186 | 22.9 | | |
| Engaged (3) | 22 | 2.7 | | |
| Romantic relation (4) | 7 | .9 | | |
| <u>Years in the TNP</u> | | | 2.25 | 1.2 |
| 5 and below (1) | 309 | 38.1 | | |
| 6-10 (2) | 179 | 22 | | |
| 11-15 (3) | 181 | 22.3 | | |
| 16-20 (4) | 96 | 11.8 | | |
| 20 and above (5) | 47 | 5.8 | | |
| <u>Rank</u> | | | 2.13 | .49 |
| Civilian officer (1) | 24 | 3.0 | | |
| Line police officer (2) | 690 | 85 | | |
| Sergeant (3) | 70 | 8.6 | | |
| Lieutenant (4) | 27 | 3.3 | | |
| <u>Education Level</u> | | | 1.82 | .85 |
| High School (1) | 353 | 43.5 | | |
| Associates Degree (2) | 247 | 33.7 | | |
| Bachelor's Degree (3) | 161 | 19.8 | | |
| Graduate Degree (4) | 24 | 3.0 | | |

4.2. Data Analyses and Interpretations

Education level in this study refers to the educational status of the respondents. Education level was used as an independent variable while the job satisfaction variables were used as dependent ones, and all the variables which used for this study are ordinal level. Gamma is an appropriate bivariate measure of association for ordinal level variables.

Hypothesis 1- There is a positive relationship between education level and satisfaction with work in the Turkish National Police members.

The gamma statistics show whether there is a relationship between two ordinal variables, as is the case here. Gamma is -.065 (value), which is a little strong, but there is not

a statistical significance ($P=.077>.05$) between education level of police officers and their satisfaction level toward their work as shown in the Table 3. The sign (+/-) simply shows which way the correlation goes. Positive means that job satisfaction increases when the education level also increases.

Table 3: Education Level and Satisfaction with Work

| | | Value | Asymp. Std. Errors (a) | Approx. T(b) | Approx. Sig. |
|---|-------|-------|------------------------|--------------|--------------|
| Ordinal by Ordinal | Gamma | -.065 | .037 | -1.769 | .077 |
| Number of valid cases | | 812 | | | |
| (a) Not assuming the null hypothesis. | | | | | |
| (b) Using the asymptotic standard error assuming the null hypothesis. | | | | | |

(Negative means if education level increases then job satisfaction decreases. Since gamma is negative here, it means that job satisfaction decreases when the education level increases, if it was a significant value. Higher education may be related to higher job satisfaction (Berg, 1970), so it may be accepted that it should show a negative association between education level and job satisfaction with work).

Hypothesis 2- There is a positive relationship between education level and satisfaction with supervisors in the Turkish National Police members.

The association between the education level of police officers and their satisfaction level with supervisors is not significant ($P=.612>.05$). The gamma here is positive but close to zero (.020) which means there is nearly no association between education level and job satisfaction with supervisors as shown in Table 4. In this study, the variables used to measure the job satisfaction level with supervisors are more specific – intelligent, lazy, impolite – which may make this null-hypothesis. If more general variables were used, the results may change.

Table 4: Education Level and Satisfaction with Supervisors

| | | Value | Asymp. Std. Errors (a) | Approx. T(b) | Approx. Sig. |
|---|-------|-------|------------------------|--------------|--------------|
| Ordinal by Ordinal | Gamma | .020 | .039 | .508 | .612 |
| Number of valid cases | | 812 | | | |
| (a) Not assuming the null hypothesis. | | | | | |
| (b) Using the asymptotic standard error assuming the null hypothesis. | | | | | |

Hypothesis 3- There is a positive relationship between education level and satisfaction with colleagues at work in the TNP.

Table 5 shows that the association between education level of police officers and their satisfaction with co-workers is significant ($P=.013<.05$). The negative sign of gamma (-.094) reveals that there is a negative association between education and satisfaction with colleagues. Moving from the lower ends of the independent variable to the higher ends, the dependent variable experiences a monotonic decrease. It can be concluded that police officers who have lower levels of education are inclined to report higher levels of satisfaction with their co-workers as compared to police officers with higher levels of education.

Table 5: Education Level and Satisfaction with Co-Workers

| | | Value | Asymp. Std. Errors (a) | Approx. T(b) | Approx. Sig. |
|---|-------|-------|------------------------|--------------|--------------|
| Ordinal by Ordinal | Gamma | -.094 | .038 | -2.478 | .013 |
| Number of valid cases | | 812 | | | |
| (a) Not assuming the null hypothesis. | | | | | |
| (b) Using the asymptotic standard error assuming the null hypothesis. | | | | | |

Hypothesis 4- There is a positive relationship between education level and satisfaction with promotions at work in the TNP.

The association between education level of police officers and their satisfaction level in being promoted is significant ($P=.002<.05$). There is an association between these two ordinal variables, but this relationship has a negative direction. The gamma here is $-.130$ which is weak, and it is highly significant ($P=.002$) as shown in Table 6.

Table 6: Education Level and Satisfaction with Promotions

| | | Value | Asymp. Std. Errors (a) | Approx. T(b) | Approx. Sig. |
|---|-------|-------|------------------------|--------------|--------------|
| Ordinal by Ordinal | Gamma | -.130 | .042 | -3.075 | .002 |
| Number of valid cases | | 812 | | | |
| (a) Not assuming the null hypothesis. | | | | | |
| (b) Using the asymptotic standard error assuming the null hypothesis. | | | | | |

Gamma range, as noted in the method chapter, is always between $+1.0$ and -1.0 . Zero means that variables are independent of each other. In other words, there is no relationship between the variables. The higher absolute value of gamma (the closer to $+1.0$ or -1.0) means the relationship is stronger. Therefore, although the value of gamma is significant, the negative sign of gamma ($-.130$) reveals that there is a negative association between education and satisfaction with promotion. Its value is close to zero; therefore, the relationship between these two variables is weak. It can be concluded that police officers who have lower levels of education are inclined to report a higher level of satisfaction with their promotions compared to police officers with higher levels of education.

5. Summary of Results

This study sought to determine whether a relationship existed between education level and job satisfaction among the TNP members. The results of this study found that two out of four hypotheses are supported. Two of the hypotheses tested found no statistical significance between job satisfaction and education level. On the other hand, the results of this study showed that there is an association between education level and job satisfaction with promotion and co-workers but the association was in the negative direction. In other

words, police officers who have lower levels of education are inclined to rate higher levels of job satisfaction compared to police officers with higher levels of education.

Based on the findings, education level might not be the only indicator of job satisfaction. According to some research, education may in fact be a poor predictor of job satisfaction (Glisson and Durick, 1988:79; Mueller and Price, 1993:29). Further examination shows that there are many variables that may affect job satisfaction among workers, such as job conditions (Kedia, 1985:36) and people's lives (Smith, 1992:56). Smith's (1992:65) argument is that people's personal lives also affect their job satisfaction. Moreover, the population of the workers may also affect job satisfaction. Kedia (1985:42) argues that job satisfaction may differ because of the agencies' policy. Some agencies care for the worker's education level, while some others do not. Education level of the Turkish National Police members appears to be important, because they have been hiring more educated officers. In other words, it can be said that the Turkish National Police cares about its members' educational levels. In future research, it would be helpful to include additional variables such as age, marital status and/or years employed when measuring the relationship between education and job satisfaction. These control variables might provide a way to better understand the relationship between education and job satisfaction better.

As indicated in the problem statement, job satisfaction among the TNP members has decreased since hiring college educated police officers. However, it appears that there are many other reasons that affect these relationships. Work environment (Dailey, 2002: 460), for instance, is one of the indicators that might affect this relationship. As mentioned earlier, work position and people's personal lives may also affect the relationship between education level and job satisfaction. Officers' maturity (Travis, 1996:64), knowledge (Kakar, 1998:640) and work performance also affect this relationship. This study indicates that among the TNP members, education level is not a good predictor for job satisfaction, the association between them is weak and in a negative direction. In the case of the TNP, police officers have many problems that might affect their job satisfaction such as extra working hours, not getting extra salary for overtime and lack of economic and social activities.

Conclusion and Recommendations

The TNP has been hiring more educated police officers for five years with the expectation that more educated police officers would have positive effects on police work in Turkey. The expectations of more educated police officers, such as less working hours and getting better salary are getting higher, and not welcomed by the administration. This has caused decreased job satisfaction among the police officers according to the survey results applied by Training Department. According to some scholars there is a relationship between education level and job satisfaction, while some argue that there is no relationship. To better understand this relationship in the case of the TNP, it would be important to further analyze this implementation. Since police job satisfaction has been decreasing for years, even while the Turkish National Police has been hiring more educated people as police officers, researchers working on job satisfaction need to examine, other variables that could affect police job satisfaction in some degree. The number of police officers, crime rates of the jurisdiction, economic and social environment of the jurisdiction, working hours, sick-time, discipline rules, and family and child assistance could be important indicators for the police officers job satisfaction. More research is needed on this topic to analyze the degree of job satisfaction among the TNP members.

More research is indeed needed in terms of follow-up studies among the Turkish National Police members to show the relationship between education level and job satisfaction. Even though the statistical association analysis did not show a positive relationship between each satisfaction facet and education, different data or a different analytical process may provide significantly different results. Future studies should employ different methods with more sophisticated levels of data.

A further recommendation might be to change the current TNP policy for hiring new officers. The TNP should hire different qualified members and hire them in different jurisdictions, or each jurisdiction should have their own policy on hiring new officers for their interests and needs. That way, each jurisdiction determines their own regulations for their needs.

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