Retaining the Thin Blue Line:
What Shapes Workers' Intentions not to Quit the Current Work Environment

Abstract

Purpose – This study investigates the relationship between workplace factors and the intentions of police officers' to quit their current department.

Design/methodology/approach –Data from a survey of Baltimore officers, designed to examine the relationship between police stress and domestic violence in police families. Using multivariate regression analysis, we focus on the officers stated intentions to look for alternative employment with proxies for social and workplace factors.

Findings – Higher levels of cooperation (trust), interactional justice and work-life-balance reduces police officers' intentions to quit. While high levels of physical and psychological strain and trauma are not correlated with intentions to quit.

Research limitations/implications - A discernible limitation of this study is the age of the data we have analyzed and that many changes have occurred in recent times (policing and social). It would be of great interest to repeat this study to gauge the true effect.

Practical implications - Policy implications for retention and recruitment, it may possible to decrease the ethnic and gender gaps, through identifying officers at risk and creating programs to hold existing minorities, recruit more, whilst maintain a strong, happy and healthy department.

Originality/value - This study examines the impact of workplace factors on quitting intention for police officers. Demonstrating that social capital, fairness and work-life balance are moderators for quitting, adding to the literature on worker retention as little research has been done using multivariate analysis on quitting intentions.

Keywords: Turnover Rates: Job Satisfaction; Stress; Police Officers; Work-Life Balance; Fairness**.**

Article Classification: Research Paper

Introduction

Individuals spend a large amount of their life-time working, which plays a central role in society (see, e.g., Hochschild, 1997). It has been well established that the circumstances of work are a key sources of individual well-being (Lane, 1998). In the last few decades a large amount of effort has been expended in attempting to discover how to recruit and retain good workers and generate higher levels of job satisfaction. This concept has raised interest across such diverse fields as: psychology, economics, industrial relations, and especially management as it highly correlates with job performance and thus is a crucial factor to firm success (Judge *et al*., 2001). Research has shown that low levels of job satisfaction can have negative effects upon the way an individual carries out duties and their performance in the workplace. This is important in a police setting as the levels of job satisfaction are directly correlated to the on-the-job officer performance (Hackman and Oldham, 1976). This viewpoint is supported by Skolnick and Fyfe (1994), who indicated that officer dissatisfaction translated into poor job performance, low effort (or "mailing it in") and in the breakdown in the relationship with the public and other officers (often as aggression).

The nature of police work creates a challenging working environment and as such it is unsurprising that retaining officers over the longer term is of great importance to both police departments and policy makers. These work environments are strategically important and essential for a well-functioning society, this is primarily due to any inefficiencies in police operations can induce large negative externalities for society. Thus, the conditions law enforcement agents are working in are not only characterized as being both physically and emotionally demanding, but it is generally seen as one of the most stressful vocations (Robertson and Cooper, 2004). Retention of experienced officers is vital for maximizing performance and successful outcomes, as it lowers the cost of training and recruitment. Some research has suggested that the high turnover rates are due in part to low levels of job satisfaction (Freeman, 1978), which makes it more difficult to attract and train new officers. Evidence for this link has been demonstrated through meta-studies of research findings into turnover rates (Griffeth *et al*., 2000). There are two major advantages in retaining experienced officers: firstly, it is costly and

time consuming to recruit new officers; and secondly, when older officers quit, they take away a large amount of job related human capital.

Even with the plethora of research in recent years, there has been relatively little investigation specifically conducted on *intentions to quit* or on job satisfaction among police officers. A detailed general analysis of the determinants of workers' quit intentions is missing, even though such a factor has been a sub-category of overall job satisfaction indices for some time (see, e.g., Caplan *et al.*, 1980; Mowday *et al.*, 1979). What are the advantages of focusing on workers' intentions to leave and not just the actual quitting behavior? First of all, employers and supervisors should be interested in having a "sensor" or "indicator" that helps to predict whether or not their employees are seeking to quit. Secondly, the high turnover rates are connected with the heavy transaction costs of as losing human capital stock as well as hiring and training costs, which can have a large effect on firm performance (Judge *et al.*, 2001). It would appear that it is the nature of law enforcement work, with its high stress and fluctuation in demands that are the root cause of high turnover. For this reason employers should have a natural interest in determining the root causes of workers' quitting intentions and the ability to identify workers who are considering quitting. From a policy and management perspective it is important to understand the incentive structure of current workers and not just those who have already left, as employers are still able to influence current workers' decisions and attitudes about whether or not to quit their current jobs. Moreover, generating feedback from individuals who have already left may generate noise and biases, as they may ex-post justify their quit decision and draw a biased picture of the prior work environment and its problems.

The existing literature on police officers has strongly focused on the demographic relationships underpinning job satisfaction, such as *education* (Carter and Sapp, 1990), *race* (Haarr and Morash, 1999), *gender* (Sullivan, 1993), *intelligence* (Ganzach, 1998), or job connected factors such as *experience* (Dantzker, 1994). It is important to have a stronger focus on the impact of the working conditions and environmental aspects, which should include stressors, strains and traumatic events. Within this work we follow the O'Driscoll and Dewe (2001) definitions:

stressors are characteristics of the work environment that cause strain and strains are the labels for the resulting physical or psychological impacts such as burnout or ill-health.

In the traditional models of job satisfaction (see, e.g., Herzberg, 1968; Locke, 1976) the work environment was included as important factor determining of job satisfaction. From a theoretical and empirical perspective it is important to analyze the labor force where individuals have a similar job profile, as many of the potential unobserved factors are common across a large group of individuals reducing noise. Although a lot of research has linked the initial motivations for joining the police force to job satisfaction and the possible role of expectation failure in decreasing levels of job satisfaction, this study does not pursue this line of investigation (see, e.g., Raganella and White, 2004; Skolnick and Fyfe, 1994; White *et al*., 2010). Rather, in this study we investigate stated intentions to look for another job outside the current job in the next 12 months and the impact of stress and trauma upon this decision. It is well understood that police officers suffering from high levels of strain through performing work that is both physically and emotionally draining (Brown and Campbell, 1990; Dick, 2000; Gershon, 2000; Gershon *et al*., 2009; Gudjonsson and Adlam, 1985; He *et al*., 2002; Morash *et al*., 2006; Stotland, 1991). However, the nature of the job itself is also able to derive positive job satisfaction (Zhao *et al*., 1999) and by working in this particular job, intrinsic feelings can be generated that produce positive attitudes about that duty (Tietjen and Myers, 1998). This concept is supported by Lane (1998), who stresses that for 'those *seeking* jobs, pay may be the most important consideration, but for the employed, the intrinsic feature of work not easily priced by the market, is more important' (Lane 1998: p. 478). Griffeth *et al*. (2000) supports the notion of satisfaction beyond payday, by demonstrating that while pay is a significant factor in turnover rates, it only accounts for 6 percent of the variance, whereas distributive justice is significant and has an almost eight fold larger impact.

The examination of the determinants of job satisfaction and, even more importantly, an analysis of workers' quitting intentions is therefore a relatively underexplored topic in both the police and general labor literature. Little has been done to determine the size or impact of environmental and organizational factors despite the usefulness of such an analysis being indicated some years

ago. Brown and Campbell (1990, p. 305), for example, stressed that "empirical evidence is somewhat scant in providing a systematic account of those aspects of a job which are stressful or the impact that these have on workers (police officers). In practical terms this makes designing successful interventions difficult in both identifying type of intervention and targeting appropriate recipients". Some of the factors we explore in this study are: physical, psychological strain and traumatic event stressors, as well as perceptions of workplace fairness and acceptance, work-life balance, and social capital. Additionally, we utilize common demographic control variables such as rank, experience, race or gender and show that such factors strongly contribute to individuals' willingness to keep working in the same work environment. Previous research has demonstrated a strong link between low levels of job satisfaction and work issues such as: high turnovers, absenteeism and lower work performance (Clark *et al*., 1998; Drago and Wooden, 1992; Freeman, 1978; Gordon and Denisi, 1995; Judge *et al*., 2001). Nevertheless, it is possible that the higher rate of observations for absenteeism and lower levels of work performance could be artifacts of a decision to quit having already been made by a worker (Griffeth *et al*., 2000).

Work attitudes have been identified as some of the best predictors of staff turnover (Griffeth *et al*., 2000). That is, workers that report low levels of job satisfaction and have low levels of job involvement are much more likely to be searching for an alternative employment. Furthermore, individuals who indicated they were actively searching for alternative employment were much more likely to quit. Quit intentions have been used for some time as a sub-factor in a job satisfaction index, but has less frequently been analyzed as a single factor (Hackman and Oldham, 1974; Meyer and Allen, 1997; Mowday *et al*., 1979). Meyer and Allen (1997) extend the intentions to quit by assessing the opinions of the employee to company loyalty, employee mobility and willingness to leave the current employment for better monetary incentives. We use the following question as a proxy measure of workers' quit intentions: "It is likely I will look for another full-time job outside this department within the next year". Possible answers ranged on a 5-point Likert scale (Likert, 1932) from "strongly agree" to "strongly disagree". About 65 percent of the people answered with "disagree" or "Strongly disagree", while approximately one third of the sample is not so sure about staying in the job, answering either with "strongly agree",

"agree" or "neither agree/disagree". While *Figure 1* shows that the distribution is skewed to right, it does give us sufficient variation to examine police officers' intentions to quit.

Figure 1: Distribution of the Dependent Variable
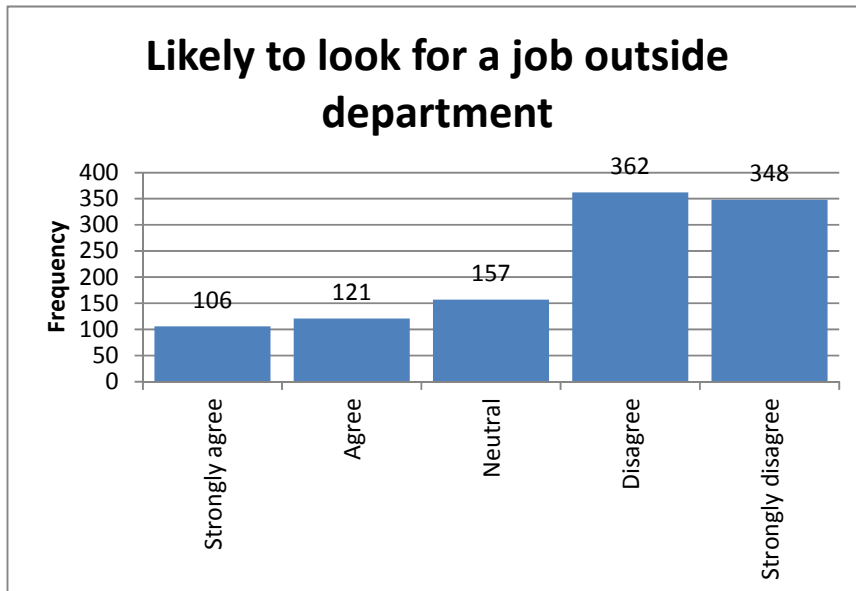
The study of work attitudes and job satisfaction has been a cornerstone of industrial psychology and relations for over 60 years, beginning with examinations of the link between work attitudes and performance in the Hawthorne studies (see e.g., Roethlisberger and Dickson, 1939). There has been a large volume of research studies intensively exploring the link between job satisfaction and productivity which have reported very mixed findings (see, e.g., Judge *et al*., 2001). In more recent times the study of job satisfaction has shifted away from the purely performance enhancing studies to focus on the increasingly costly area of employee retention. Low levels of job satisfaction have been linked to higher rates of quitting and high rates of absenteeism (Drago and Wooden, 1992; Freeman, 1978; Griffeth *et al*., 2000). The perception of job satisfaction for an individual is a complex construction. This induces an incentive to consider a large set of factors, going beyond the traditional socio-demographic determinants. Thus, in order to generate more suitable and valuable insights, we have to apply a multivariate approach which is better able to avoid omitted variable biases faced by earlier, single factor works. There is still a large set of studies that focuses on the impact of a single or a limited group of factors

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(e.g. *education*: (Buckley and Petrunik, 1995) *race or gender*: (Haarr, 1997) *rank*: (Dantzker, 1994) instead of a multivariate approach that includes a subset of independent variables to better isolate the effects of single factors. Towards these ends we have used the standard demographic variable identifiers, as well as constructed a set of 4 indices (social capital, fairness, trauma, strain) to determine their impact on quitting intentions.

Social capital

Social capital is, as it name implies, a form of currency (or wealth) which is earned and utilized within a social context (see Coleman, 1988; Grootaert, 2001; Paldam, 2000; Portes, 1998; Putnam, 1993). The transact-able nature of social capital is very similar to that of financial capital or a physical currency and can be used in similar ways, but its units are imprecise and not easily transferable to usable metrics. Social capital can be generated and held in account for the future use or used to trade for social objects such as favors or support. Support in this context would mean that individuals who experience difficult or traumatic job situations would be able to turn to friends or colleagues for advice, comfort, or material aid (Cullen *et al*., 1985). Putnam (1993) has argued that social capital is created between individuals when they share a sense of identity (such as belonging to a group or solidarity of purpose). It is through interaction and reciprocity (such as following of social norms and conventions) that individuals are able to create social capital, with the expectation that the assistance will be reciprocated in future when asked (purchased). Research has shown that higher levels of social capital can facilitate superior social outcome (Boix and Posner, 1998) through cooperation and informational exchange between colleagues. Coleman (1988: p. 598) indicates that social capital is able to work in both the horizontal (co-worker with same rank) and vertical (across ranks) directions. As such social capital can be used as a metric to describe aspects of social networks, relationships and trust (see, e.g., Coleman, 1988; Fukuyama, 2003; Portes, 1998; Woolcock and Narayan, 2000). Higher levels of social capital are able to facilitate better working environments for employees, by providing a foundation for effective social interaction and promoting both camaraderie and social identity (Coleman, 1988; Fukuyama, 2003). Social capital has other indirect benefits to workers such that as social capital increases coordination between groups improves which in turn reduces work stressors and engenders less opportunistic behaviors between co-workers (Dasgupta, 1999).

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Thus improvements to the working environment (Repetti, 1993) have the effect of increasing job satisfaction (Tietjen and Myers, 1998). Additionally, higher levels of social capital have been shown to reduce perceived stress levels and the negative health effects associated with high levels of stress (Fischer and Sousa-Poza, 2009; Gächter *et al.*, 2010; Gächter *et al.*, 2011b).

Social capital is not to be confused with the psychological concept of social support. Where "social support can be defined as support that effectively makes people feel supported by successfully alleviating strains … (or) social interactions that could be supportive (e.g., offering sympathy about a stressful problem, offering to help get a co-worker's work done, or even the mere presence of a colleague) …" (Beehr *et al.*, 2010: p. 46). Social support can be viewed as an outcome generated by social capital, such that high levels of social capital will result in higher levels of support and vice versa. Research shows that there exists a strong relationship between job satisfaction levels and quitting intentions, such that higher levels of job satisfaction correlate to lower actual turnovers and lower intention to quit levels (Clark *et al.*, 1998; Freeman, 1978; Gordon and Denisi, 1995; Griffeth *et al.*, 2000). It follows that through lower levels of stress, individuals may have a greater probability of achieving job satisfaction and be less likely to quit and it is through this mechanism that higher levels of social capital can be seen as reducing intentions to quit levels. However, problems arise when we attempt to measure social capital empirically. Paldam (2000) describes three families of social capital concepts: trust (cognitive social capital), cooperation (collective action) and networks. He points out that these conceptual families come together because "most people build *trust* in and *networks* to others and come to *cooperate* with them" (Paldam, 2000: pp. 629-630). Paldam's view is in line with the rationale of our first hypothesis: That more effective cooperation between units and a higher trust level in the work partner, leads to lower intentions to quit the department.

Fairness and Acceptance

One can assume that workers are "social animals", seeking to be accepted and valued by others (Cropanzano *et al.*, 2007) and it is this seeking that can generate friction and problems within a workforce. The process of gaining acceptance and being valued by others is not always simple, easy or straightforward, as the biases and beliefs of the group may not be obvious or may conflict

with the individual seeking acceptance. The theory of social comparison (see e.g., Festinger, 1954) and the theory of relative deprivation (Stouffer, 1949) show that the comparison with others is an important phenomenon. Relative deprivation theory investigates interpersonal and inter-group relations and comparisons. It stresses that a lower perception of one's own (group) status or one's own welfare in relation to another person (group) can be the source of hostility towards the other individuals or groups. A relative or perceived disadvantage can lead to frustration and in our case to an increased intention to quit the workforce (department). Previous studies have shown that a relative disadvantage can have motivational and behavioral consequences connected to frustration (Torgler and Schmidt, 2007; Torgler *et al.*, 2007). Research has shown that justice or fairness can have a direct effect on the levels of job satisfaction (Griffeth and Gaertner, 2001; Hom and Griffeth, 1995). This is well supported by Griffeth *et al.*'s (2000) meta-analysis of employee turnover, demonstrating that distributive justice has a very large, significant explanatory power on turnovers. Fairness can be described as "stressor (a suitably interpreted environmental event that evokes an averse response) … which takes place alongside others stressors such as workload or role conflict" (Cropanzano *et al.*, 2003: p. 66).

The concept of fairness and acceptance is closely related to social capital. Good effective managerial behavior is crucial to the formation of social capital in a workplace, such that a well-organized workplace fosters an environment of trust between all members of staff (Hodson, 2005). The study of fairness in psychology stems from Adams's work on equity theory (Adams, 1965) emphasizing distributive fairness, i.e. the perceived fairness of outcomes (see, e.g., Cohen-Charash and Spector, 2001). In line with equity theory which has a long history that can be traced back to Aristotle's Nicomachean Ethics, we are interested in how much output is generated relative to how much input is provided, anchoring the relationship to some standard (Cropanzano *et al.*, 2007). The theory suggests that a lack of equity in an exchange relationship creates a sense of distress, especially for the victim (loser). Tyler and Smith (1998) state that equity theory is important because it hypothesizes that satisfaction and behavior are linked not only to objective outcome levels, but also to what would be judged fair in relation to one's own outcome. Lacking equity creates a sense of distress; disadvantage creates anger, and advantage

feelings of guilt (see Adams, 1965; Homans, 1961). The perception of fairness has been shown to have links to quitting or voluntary turnover of staff (Griffeth and Gaertner, 2001; Hom and Griffeth, 1995). Employees who perceive inequitable treatment are more likely to voluntarily leave their current employment. Zohar's (1995) investigation of 213 nurses, which is another service orientated job, with many high stress-strain factors, demonstrates that lower levels of justice leads to higher experienced physical strain symptoms as well as higher turnover rates. A further link between fairness and job satisfaction comes from research on burnout (see, e.g., (Maslach, 1993; Maslach and Jackson, 1981; Maslach and Leiter, 1997), where higher levels of perceived unfairness correlate to higher rates of burnout and lower levels of job satisfaction.

A further aspect of fairness that must be accounted for is that of tokenism. Tokenism occurs when ever a there is identifiable minority with the workforce population and the police force has long been viewed as being dominated by white males. Thus in this environment, tokens have traditionally included: African-Americans, Asians, gays, Hispanics and women. Tokens can experience a range of hostility issues: from exclusion, jokes and social isolation (Alkus and Padesky, 1983; Kopel and Friedman, 1999; Wexler and Logan, 1983) and has also been linked to limiting of promotional opportunities for female officers (Archibold and Schulz, 2008). It is expected that the satisfaction or dissatisfaction levels of officers will have a direct effect on their willingness to quit. Krimmel and Gormley (2003) testing of Kanter's (1977) token theory using Yoder's (1994) 15% threshold found that tokens reported much lower levels of job satisfaction than non-tokens. These findings were empirically supported by Gustafson (2008), who found that tokens do experience more performance pressure and social isolation. This effect may be driven by low levels of social capital, but could also be from the belief that tokens suffer from lover levels of institutional and possibly procedural justice.

Moreover, one of the most important social psychological reasons for expecting cooperation is reciprocation (see Axelrod, 1984; Cialdini, 1984; Gouldner, 1960; Regan, 1971). We distinguish between positive and negative reciprocity. Positive reciprocity is the impulse to be kind to those who have been kind to us. An example of negative reciprocity would be the principal of *an eye for an eye, a tooth for a tooth* is (Fehr and Gächter, 1998). Thus, the importance of legitimacy

and allegiance to the department and people within the department becomes central. The way people are treated by the department (in general) and co-workers (in particular) affect the evaluations of department and job and the willingness to co-operate (see, e.g., Lind and Tyler, 1988; Tyler *et al*., 1989). On the other hand, positive actions within the department and among co-workers are intended to increase the positive attitudes and commitment to engage within the police force. The literature on organizational justice differentiates between distributive, procedural and interactional justice. While *distributive justice* considers perceptions of fairness of outcomes (equity, equality, need), *procedural justice* emphasizes the importance of fairness of the methods or procedures used (decision criteria, voice, control of the process) and *interactional justice* the perceived fairness of the interpersonal treatment received (sensitivity, dignity, respect) (Cohen-Charash and Spector, 2001). As the term implies interactional justice is what occurs in the dealings between individuals, in what Bies and Moag (1986) says reflects the communication process. Cropanzano *et al*. (2007) defines a person to be interactionally just if they share appropriate information, or informational justice, and avoid using rude or cruel remarks, or interpersonal justice (Cropanzano *et al*., 2007: p. 38). Sheppard *et al*. (1992) states that when faced with interactive injustice employees will react in four ways: Firstly, they can ignore it and continue as if it never happened; secondly they can modify their own behavior so as to minimize the injustice (such as reduce work effort, if they are not equitably rewarded); thirdly they can attempt to justify or rationalize it; finally employees can react with their feet, by quitting or transferring out of the department. This aspect takes on more significance when extending this discussion to include procedural justice, which generally "refers to the way in which outcomes are allocated, but not specifically to the outcomes themselves" (Cropanzano *et al*., 2007: p. 38). As Bies and Moag (1986) point out interactional justice is present in the way in which superiors treat their employees whilst enacting procedural justice. Thus, interactional and procedural justice are closely tied together. In this context one could suggest the way in which senior officers address their junior colleagues when punishing mistakes or when rewarding success is more important than the punishment or reward itself. This would suggest that interactional justice has a direct link to the willingness of an individual officer to quit the force. In sum, this allows to generate our second hypothesis: That a higher level of perceived fairness and

acceptance within the police unit decreases workers' intentions to quit (or lower levels of perceived fairness and acceptance within the unit increases intentions to quit).

Work-Life Balance

How an individual perceives their job, cannot be completely isolated from how an individual perceives life outside of work, or his/her life-satisfaction. It stands to reason that low levels of life satisfaction would impact upon the perception of job satisfaction (Warr, 2002). Investigations of job and life satisfaction have found large areas of overlap and significantly positive correlations (Tait *et al*., 1989). Robinson (2006) points out that in modern societies "the amount of time devoted to leisure – as opposed to work – is biased towards work because there is a fundamental flaw in the economic system, this means individuals are destroying work-life balance by voluntarily engaging in longer hours of work than would maximize their wellbeing" (Robinson 2006: p. 26). He extends this argument by stating that the 'flaw' is actually a market failure driven by the inability of individuals to negotiate for optimal working hours outcomes. (Ayree *et al*., 1999) investigated the cultural variations of the work-family relationship in both U.S. and Hong Kong workers. They demonstrated that while there were some cultural variations, predominately due to Confucian social structures, conflict and stress caused by integration of work and family results in higher turnover and loss of productivity. (Anderson *et al*., 2002) extended this analysis and concluded that the work-family conflict was clearly associated with lower levels of job satisfaction, higher job turnover and strain. Furthermore, they concluded that programs addressing these problems would not be successful unless workers also believed that if they took advantage of these programs, their career advancement would not be in jeopardy. Unsurprisingly, this indicates that individuals who are happier in their general life are much more likely to be happier in their jobs and report higher levels of job satisfaction. Research indicates that the amount of hours worked in the job has the largest spillover effect on the home satisfaction levels with considerable variation between genders. Excessive hours spent at work reduces the amount of time available for leisure and home duties, thus a balance of home and working life creates higher levels of job satisfaction (White *et al*., 2003). The balance between work and home life, leads to the formation of the third hypothesis: That a higher level of work-life-balance reduces individuals' intentions to quit the department.

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Strains

External stressors have shown to have a high impact on job satisfaction and the intentions to quit (Scott *et al*., 2006; Shields and Ward, 2001). Scott *et al*. (2006) investigated the relationship between job satisfaction and the intentions to quit of doctors, specifically GP's, and found a strong relationship between high stress levels, job satisfaction and willingness to quit. More recently, economists have become interested in examining the links between job satisfaction and negative health effects and between stress and health outcomes (Gächter *et al*., 2010). Furthermore, it has been shown that there is a positive link between job satisfaction and health, where employees who have higher levels of job satisfaction also feel healthier and are generally more satisfied with their health state (Fischer and Sousa-Poza, 2009). Civil service workers in the lowest level positions were up to 4 times more likely to die from a heart attack and more susceptible to cancers and gastrointestinal disorders compared to those of higher rank (Marmot *et al*., 1997). This suggests that low ranked workers are more prone to self-esteem issues and can suffer from anxiety and depression, due to little control and little responsibility (Gross, 1996) which generates the fourth hypothesis: That higher strain levels are correlated with a higher intention to quit the unit.

Hypotheses

We end up with four main hypotheses we wish to test in regards the relationship between willingness to quit and the workplace environment, these are as follows:

> *Hypothesis 1*: More effective cooperation between units and a higher trust in the work partner lead to lower intentions to quit the department.
>
> *Hypothesis 2*: Higher levels of perceived fairness and acceptance within the police unit decrease workers' intentions to quit.
>
> *Hypothesis 3*: Higher levels of work-life-balance reduce the individuals' intentions to quit the department.
>
> *Hypothesis 4*: Higher strain levels are correlated with a higher intention to quit the unit.

Methodology

Participants & measures

This paper makes use of the "Study to Help Identify Evaluate and Limit Department Stress" (SHIELDS) study, conducted by Gershon (1999) on officers of the Baltimore (MA) Police Department. The questionnaire was developed covering questions in the areas of stress, coping strategies and health outcomes as well as questions related to fairness and job satisfaction within the organization. While this dataset was first collected well over 12 years ago, its strength lies in the comprehensive nature of the survey, its demographic coverage and the response rates, which together form a highly representative sample of the workers and their work environment. Our study uses an underutilized portion of this survey, specifically the question relating to the intentions of employees to look for another job. The survey consists of a sample of 1,104 police officers and is highly representative (68% response rate of officers on duty with a 92% return rate) of the demographic characteristics of the department at that time. The department consisted of 2,636 males (86 per cent) and 425 females (14 per cent) same as the sample. 64% are Caucasian, 33% African-American and 1% Hispanic. The main position was officer (55%), followed by detective and sergeant (13% each), the survey covered approximately one third of the entire population. Thus, the very high response rate, excellent sampling strategies and the anonymous nature of the study provide us with high confidence that the data is highly representative and reliable.

To investigate the impact of social capital on an individual's willingness to quit we work with the following two questions from the survey: 1) "There is a good and effective cooperation between units" and 2) whether one "can trust his/her work partner" as proxies for social capital. The possible answers survey responses ranged from strongly agree (1) to strongly disagree (5). Trust is then often connected with the element of reciprocity or an interaction depending upon specific individual or group characteristics and it is this notion which is essential for our analysis, as we are exploring the work environment and its implication on an individual's intentions (not) to quit. Based on these two questions we build an index measuring social capital at work. For reasons of simplicity we reverse the index to facilitate a more intuitive interpretation of our

results. Thus, the index ranges from 2 to 10 with higher levels indicating a higher level of social capital. The level of internal consistency was moderate (Crombach's α=0.53). However, one should note that using the single factors leads to similar values.

As a measure of the impact of fairness and acceptance in the workplace on the willingness to quit, we create an index of four of the survey questions pertaining to this. This index includes questions such as "being more likely to be criticized for mistakes than peers (same rank)", "being less likely to get chosen for certain assignments because of race, gender etc.", "the frequency of gender related jokes in the department" and "being considered militant if questioning the way things are done." Possible answers ranged on a 5-point scale from "Strongly agree" to "Strongly disagree." Thus, the index ranges from 4 to 20 with higher levels indicating a higher degree of fairness in the department (α=0.65). However, unlike the previous two indexes we have utilized only one question from the survey as a proxy for work-life-balance. "There is not enough time at the beginning or end of the day for my chores at home" with possible answers ranging from "strongly agree" (1) to "strongly disagree" (5) again. Thus, higher levels of the variable indicate a higher level of work-life balance (ranging from 1 to 5).

To address the final hypothesis, we have created an index in line with Kurtz (2008), where we construct an index of perceived stress including both psychological and physical strain measures. We add the variables sequentially in the specification to better check the robustness of the results. In relation to the psychological strain, participants were asked if they experienced any of the following symptoms in the past 6 months: restlessness, feeling hopeless, panic attacks, irritability, withdrawal, depression, and emotional depletion. A four-point Likert scale (Likert, 1932) with possible answers ranging from never (1) to always (4) was used. Similarly, for physical strain indicators we used five questions, namely whether respondents had experienced nausea, trouble getting breath, a lump in the throat, pains or pounding in the chest, and faintness or dizziness in the 6 months prior to the survey. Finally, we combined the psychological and physical strain measures into a combined index, ranging from 12 to 48 (α=0.86) with increasing levels indicating higher (perceived) strain levels.

In addition to this, we created a further index, *trauma* (objective traumatic event) in order to examine the effect of perceived high impact traumatic events on the willingness to quit, in line with Swatt *et al*., (2007). This index is created using a nine-item negative work-related events scale based upon participant's responses from the SHIELD study, when asked if they have experienced certain traumatic events during their work and how much it emotionally affected them. The survey lists includes: a violent arrests, shooting someone, being the subject of an IID investigation, responding to a call related to a chemical spill, responding to a bloody crime scene, personally knowing the victim, being involved in a hostage situation, attending a police funeral and experiencing a needle stick injury or other exposure to blood and body fluids. For each event officers were asked if they ever experienced this event, and if so, how much it affected them. Possible answers ranged from "not experienced" (0), "not at all" (1), "a little" (2) to "very much" (3). From this we assume that experiencing an event, even if the officer states it had little emotional impact, was more stressful than not experiencing it at all. The resulting summative scale ranges from 0 to 27 with higher levels indicating more subjective strain (α=0.79).

Statistical Analysis

As our dependent variable for the intentions to quit is measured by a 5-point Likert scale (from (1) "strongly disagree" to (5) "strongly agree") we applied an ORDERED PROBIT model to take into account the ranking information of this scaled dependent variable. As the ORDERED PROBIT estimation has a nonlinear form, only the sign of the coefficient can be directly interpreted but not its size. Therefore we calculate the marginal effects at the multivariate point of means. The marginal effects are reported in rows three and four for each variable in Table 2 and 3. The first value describes the average percentage change in the explanatory variable when moving from "agree" (2) to "strongly agree" (1) to the question whether it is likely to look for another full-time job outside the department within the next year. Finally, the fourth row of each coefficient describes the average percentage change in the explanatory variable when moving from "disagree" (4) to "strongly disagree" (5). In other words, the means of the explanatory variables are compared between groups, where the marginal effect reports the average difference between groups when moving from one discrete outcome of the dependent variable to the next.

In the case of dummy variables (gender, race and marital status), the marginal effects reported indicate the discrete change of the dummy variable from 0 to 1.

To check the robustness of the model, we collapse the ORDERED PROBIT down into a binary variable along its natural cut-off point. It is possible to observe a strong naturally occurring variation in responses to quitting intentions between DISAGREE and STRONGLY DISAGREE and the other three options (*see Figure 1*). Thus we report findings using a PROBIT and an OLS model. Subsequently, we employed a PROBIT model with the same explanatory variables. In the OLS estimations we also report standardized beta coefficients to get a better idea which variables are more or less important. Standardized coefficients put everything into common metric, namely standard deviation units. In all regressions we used robust standard errors controlling for heteroskedasticity of unknown form. It should be noted that we recoded the variable in such a way that higher values are correlated with a lower willingness to quit the department.

We use several control variables, namely number of years working for the department (referred to as experience), current rank (ranging from (1) Officer Trainee to (6) Lieutenant or above), number of children (ranging from 0 to 7), as well as dummies for the ethnic group (1 if Caucasian), marital status (1 if married or live-in partner) and gender (1 if female and 0 otherwise). It is generally believed that as individuals age they become better able to mitigate the effects of stress (Lennings, 1997), through either acclimatization or through a quasi-natural form of stress inoculation training (Meichenbaum, 2007). Furthermore, we expect that AGE is strongly correlated with rank and should observe similar reductions in reported strain as seen with AGE. There is some possible selection bias here, as only those officers who are able to cope with the strain levels as junior officers are promoted to the higher ranks. Research has shown that family support has a positive effect for married men (He *et al*., 2002) however home-work imbalances and conflicts have also shown to have strong negative effects on job satisfaction for both women and men (He *et al*., 2002; Howard *et al*., 2004).

The meta-analysis of employee turnover rates by Griffeth *et al*. (2000) shows that turnover rates of female staff are similar to that for males. Similarly, job satisfaction in police officers has been

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shown not to differ across genders (Dantzker and Kubin, 1998). Research has shown that any type of racial harassment results in significantly lower levels of job satisfaction, and threatening racial incidents or career related discrimination increases the intention to voluntarily leave the current job. There does not appear to be a significant effect of racially offensive behavior on actual job change (Antecol and Cobb-Clark, 2009). This research would indicate that while racial discrimination has a direct effect on job satisfaction it does not have a significant effect on quitting intentions. This could be explained by the availability of other jobs or the prospects of these individuals to obtain work elsewhere. Research illustrates through surveys of African-American individuals that they were more satisfied with their jobs, but as (Bartel, 1981) points out this could have been due to lower aspirations of African-American individuals. While these individuals earn less and should be less satisfied, discrimination may have caused them to be satisfied with less. Antecol and Cobb-Clark's (2009) examination of intentions to quit found that better civilian opportunities, in respect to promotion, education and training increased intentions to quit military service. Given the possibility of lower alternative options available to non-Caucasians, being happy with the job they have makes economic and rational sense.

(Table 2 about here)

Empirical Results

First empirical results are reported in Table 2. As can be seen the results do not change when we apply other estimation methods (PROBIT and OLS). As expected, higher levels of social capital and a better work-life balance lead to increasing rates of job satisfaction, meaning a lower probability of leaving the department (both highly statistically significant). Thus, supportive measures that build up trust between employees as well as a better cooperation between units both promote lower intentions to quit the department. Moreover, a considerable balance between commitments at work and at home, as measured with our work-life balance variable is ceteris paribus conducive to reduce the willingness to quit. For example, equation (1) indicates that an increase in the social capital scale (*work-life balance*) by one unit from the average increases the probability of not looking for another full-time job outside the department within the next year by around 2 (*4*) percentage points. The same applies to our measure of fairness. Thus,

departments with a high level of interactional fairness tend to have workers with lower quit intentions in their current department. Looking at the beta coefficients we observe that the fairness variable has the strongest relative influence among the used independent variables. Thus, based on these results we can conclude that the first three hypotheses cannot be rejected, such that better cooperation and trust (Hypothesis 1), higher levels of fairness (Hypothesis 2) and higher levels of work-life balance (Hypothesis 3) significantly reduce quitting intentions.

Looking at the control variables we observe that experience (the number of years working for the department) has a negative effect on quit intentions increasing quitting intentions by 0.5% per year of experience, i.e. after 20 years on the job an individual is 10% more likely display quitting intentions. To test the robustness of the impact of experience, we also run regressions including both experience and age. Both had the expected negative signs; however the coefficients were not statistically significant due to the high correlation between the variables ($r=0.88$). Thus, we applied a Wald-test for joint significance of experience and age on intentions to quit and the results indicate that both factors are jointly statistically significant which supports the argument that experience and age matter. We also ran regressions including either of these variables separately. In the case of including rank, but excluding experience, the coefficient for the rank variable still was positive, but not statistically significant (also using an ORDERED PROBIT model). By excluding rank and including experience, the experience variable still was significantly negative, while their joint significance was also confirmed by a Wald F-Test. As the current rank was positively related to intentions not to quit (albeit not always significant) and experience, had a negative influence, we include both variables in our following regressions. Furthermore, we observed that females as well as Caucasians were more satisfied with their jobs. Additionally, being married has a statistically significant positive coefficient at the 10 percent level in equation (1) but not in the PROBIT and OLS estimations. Experience is always statistically significant with a negative sign, while rank is not anymore statistically significant in equation (2) and (3). Finally, we observe the coefficient for the number of children also has the expected positive sign, although it is not statistically significant.

To check the strength of our model, we run a test on omitted variables biases, by applying the Ramsey's RESET Test with our OLS model. More specifically, we include powers of the fitted values of the intentions not to quit into our regression, which were jointly not significant (F=0.42 with p=0.736). This means that the model has no omitted variables and the null hypothesis cannot be rejected by the Ramsey's RESET Test. This indicates that the regression is relatively well specified. In Table 3 we provide an extension testing hypothesis 4 (stress) and controlling whether the other hypotheses cannot be rejected in line with Table 2. As mentioned, we have two proxies for strain, namely a strain index and a trauma index based on traumatic events, as the nature of police work is such that police officers can get into extreme work situations. Further exploring hypothesis 3 is insofar interesting as trauma events are very common among police officers. In equation (4) we include the trauma index into the previous specification and in equation (5) the strain index covering both psychological as well as physical strains. In equation (6) we add both strain indexes jointly in the specification.

 (Table 3 about here)

Remarkably, the inclusion of the trauma index does not have a considerable effect on the results, meaning that traumatic events at work do not lead to higher quit intentions. Even perceived strain levels do not have any significant impact on individuals' intentions to quit. While our prior work has indicated that mental vs. physical strain has a long run effect on health, which manifests itself differently between male and female officers (Gächter *et al*., 2011a, b; Gächter *et al*., 2010), additional tests show that neither mental nor physical strain significantly affect individuals' intentions to quit the department, To control for specific effects of mental versus physical strain, we also split the variable into its two parts, including both or either of them in the regression (which are not shown). Thus, these results indicate that hypothesis 4 can be rejected. Stress seems not to be a significant cause of quitting from the department. It might be that police officers perceive strain to be a common and acceptable factor in their job description or in their work profile. It may be interesting to compare these results with other jobs that have similar or comparable stressors (e.g., military environment). For example, Bateman and Organ (1983) investigated the links between job satisfaction and social cohesiveness of military personnel,

finding that higher levels of satisfaction result in higher rates of cohesiveness. Additionally, Antecol and Cobb-Clark's (2009) investigation of racial harassment and intentions to quit of military personnel shows that while job satisfaction levels are reduced, intentions to quit are not affected. On the other hand, it is worthwhile to note that the results in Table 3 also support hypotheses 1 to 3. Our key measures for social capital, work-life balance and fairness still report highly statistically significant coefficients.

Conclusion and policy implications

The purpose of this study was to investigate the determinants of police officers' intentions to quit their current department. Law enforcement agents work in strategically important work environments that are not only characterized as physically and emotionally demanding but also as an essential part of a well-functioning society. Because of this important societal role any inefficiency in the police force can induce large negative externalities in other parts of society. Police officers, like many other services orientated public jobs, have high turnover rates and the costs associated with recruitment and training is of a considerable magnitude. Attracting and training new officers becomes more difficult when the perception of job satisfaction within the police force is low. The advantages of retaining experienced officers are two-fold: it is costly and time consuming to recruit new officers; and when older officers leave, they take a large amount of job related human capital with them. Thus, the low retention and high turnover rate in public workers like teachers, police officers and nurses, are demonstrative for a large and growing problem for public authorities around the world (see, e.g., Aiken *et al*., 2001; Buciuniene *et al*., 2005; Okpara *et al*., 2004).

While job satisfaction has become a major interdisciplinary research topic in the last few decades, relatively little investigation has been done on the links between quitting intentions and job satisfaction. Additionally, the intention to quit has been a sub-category within an index on job satisfaction, we contest that it is important to explore this factor separately. The analysis of which can help to generate an indication of current employees willingness to stay within their current workplace. In this study we control for the socio-demographic factors, focusing on the

working conditions and environmental aspects within the organization. In particular, we explore whether: 1) more effective cooperation between units and a higher trust in the work partner lowers police officers' intentions to quit the department; 2) a higher level of perceived fairness and acceptance within the police unit decreases workers' quitting intentions; 3) a higher level of work-life-balance reduces individuals' intentions to quit the department; and 4) higher strain levels are correlated with higher intentions to quit the unit. More specifically we contend that social capital, fairness and work-life balance are moderators for quitting intentions. Our results indicate that the factors 1) to 3) have a very strong and robust positive influence on police officers' intentions to not quit in their department. On the other hand, strain is ceteris paribus not correlated with individuals' intentions to quit. We explored strain based on traumatic events (trauma index) as well as an index that covered (perceived) psychological and physical strains. Surprisingly, in none of the cases did strain matter. It might be that police officers perceive stress to be an acceptable factor in their job description or in their work profile and does not unduly influence quitting intentions.

While our findings raise a question about whether they can be generalized to other job environments or whether similar results are observable when focusing on comparable job profiles (e.g., military service), respectively, they are of import to the police department and their officers. Many of the police circumstances are comparable to other working environments (e.g., shift work, excessive overtime, heavy workload, poor working conditions and strong interactions with the public). However, police officers also encounter many other situational events, such as physical or even life threatening danger and the exposure to disturbing events in general, which is uncommon for the majority of working environments. Such a job profile makes comparisons to other work environments more difficult. On the other hand, we observe that such stressors have no direct impact on workers' intentions to quit. Such a result is in line with a meta-study on employees' turnover (Griffeth *et al*., 2000). In addition, we observe that organizational or environmental factors are also extremely important in the police force environment. Thus, strengthening social capital, trust, fairness and cooperation in police departments are appropriate to combat the risk of losing valuable human capital. Our findings provide empirical support for

the works of seminal police researchers (for example, Crank and Caldero, 2000, Neiderhoffer, 1968; Skolnick, 1994) about the factors driving quitting intentions.

These findings imply important policy implications for not only retention programs but also for policy to work in tandem with recruitment drives. White *et al*. (2010) describes inducements to attract new recruits from minority groups, based upon a group's stated initial reasoning's for joining the police force. This approach would be highly beneficial for departments to pursue to bolster numbers. However, this strategy is only half the battle that needs to be waged. The far more difficult and expensive front involves retaining the officers already trained and heavily invested in. This policy, properly designed and implemented, may be able to utilize natural attrition as a method of increasing the ethnic and gender gaps clearly observed within the force. If retention programs are designed to satisfy all officers, but specifically target those of the minorities, then departments may be able to hold on the existing minority officers as well as recruit more. However, this must be approached with up most caution, as it would not be acceptable to provide anything short of full support and assistance for all officers regardless of ethnicity or gender. But if done correctly, then it would be possible to address these imbalances whilst maintain a strong, happy and healthy department. This process could address several of the major issues that have been difficult to solve, such as the link between under representation of racial groups and the racial tensions between police and that racial community (see, e.g., Skolnick and Fyfe, 1994). Reducing the effect of tokenism in the police force should have a positive impact on both retention and long term recruitment of officers. Kane and White (2009, p. 762) state that "As token groups grow, however, dominants become more accustomed to, and less suspicious of, the presence and performance of tokens. With additional growth, the new group loses its token status, gains organizational power and prestige, and begins to exert real influence on the formal and informal cultures of the organization. At the same time, the solidarity of the dominant group breaks down as the new groups assimilate into it".

A discernible limitation of our study is the age of the data. Given that the study is about police officers in America, one must understand that both policing and the national environment have undergone some drastic changes since the data was collected (9/11, wars in Iraq and Afghanistan

etc). These events may have had a large impact on the role and beliefs of police officers from an environmental standpoint. However departmental change is, as pointed out by Niederhoffer (1969), very slow and difficult and one would not expect any large scale institutional or behavioral changes in such a short period. One might expect some more tolerance and understanding from citizens for members of the service organizations after 9/11 (such as fire, police and paramedics) which could have an effect on stress levels, but this may just be limited to the greater New York region. It would be of great interest to explore the same questions in other countries, and across multiple US states and departments to gauge the true effect, especially given the difficulty in attracting large numbers of recruits to the police forces in most states (see, e.g., Nislow, 2000; Rook, 2003; United States Department of Justice, 2004). This could be seen as a valuable robustness check and would give insights whether we observe shifts over time and across nationalities.

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Tables

Table 1: Descriptive Statistics

Variable		count	%	n	Mean	σ²	Min	Max
Intentions To Quit	Strongly agree	106	9.69%	1,09				
	Agree	121	11.06%					
"It is likely I will look	Neither	157	14.35%					
for another full-time job	Disagree	362	33.09%					
outside this department	Strongly disagree	348	31.81%					
within the next year"								
Gender	Male	943	85.73%	1,10				
	Female	157	14.27%					
Ethnic Group	African-American	355	32.51%	1,09				
	Caucasian	696	63.74%					
	Hispanic	14	1.28%					
	Other	27	2.47%					
Current Rank	Officer Trainee	91	8.27%	1,10				
	Officer	601	54.64%					
	Agent	62	5.64%					
	Detective	144	13.09%					
	Sergeant	143	13.00%					
	Lieutenant or above	59	5.36%					
Marital status	Married	658	59.87%	1,09				
	Live-in partner	88	8.01%					
	Divorced/Separated	135	12.28%					
	Single	213	19.38%					
	Widowed	5	0.45%					

Variable	n	Mean	σ²	Min	Max
Experience	1,07	11.52	9.28	0	44
Children	1,09	1.18	1.16	0	7
Social Capital Index	1,07	7.19	1.60	2	10
Fairness Index	1,06	13.01	3.20	4	20
Trauma Index	1,07	11.98	5.79	0	27
Strain Index	1,06	17.18	4.36	12	48

Table 2: Baseline Model - *Willingness to Quit*

Method	Ordered PROBIT (1)	PROBIT (2)	OLS (3)
Social Capital Index	**0.052****	**0.059****	**0.059****
	2.110	*2.027*	*2.087*
	-0.008	0.021	0.072
	0.018		
Work-life Balance	**0.113*****	**0.180*****	**0.140*****
	3.401	4.470	3.868
	-0.017	0.065	0.120
	0.040		
Fairness Index	**0.092*****	**0.099*****	**0.101*****
	7.206	*6.715*	*7.447*
	-0.013	0.036	0.249
	0.032		
Children	**0.022**	**0.029**	**0.022**
	0.683	*0.737*	*0.596*
	-0.003	0.011	0.020
	0.008		
Rank	**0.058***	**0.005**	**0.046**
	1.828	*0.138*	*1.306*
	-0.009	0.002	0.050
	0.021		
Experience	**-0.014*****	**-0.013****	**-0.016*****
	-2.770	*-2.273*	*-2.832*
	0.002	-0.005	-0.114
	-0.005		
Dummy Female	**0.360*****	**0.408*****	**0.434*****
	3.768	*3.002*	*4.318*
	-0.044	0.137	0.115
	0.134		
Dummy Caucasian	**0.203*****	**0.198****	**0.233*****
	2.791	*2.125*	*2.847*
	-0.031	0.073	0.086
	0.071		
Dummy Married	**0.141***	**0.142**	**0.138**
	1.739	*1.397*	*1.514*
	-0.021	0.052	0.050
	0.049		
R-Squared			0.13
F			17.145***
Ramsey's Reset F p-value			0.736
Pseudo R-Squared	0.05	0.09	
Wald Chi-Squared	121.69***	114.16***	
Observations	1016	1016	1016

Notes: z-statistics Ordered Probit and Probit and t-statistics OLS in parentheses. Regressions with robust standard errors. Significance levels: * 0.05 < p < 0.10, ** 0.01< p < 0.05, *** p < 0.01. Marginal effects are reported in italic below. In the case of Ordered PROBIT, the first value reports the marginal effect for the least satisfied 1, the second for the most satisfied 5 employees. In the case of dummy variables, the marginal effects report the discrete change of the variable from 0 to 1. Standardized beta coefficients OLS are reported in bold italic.

Table 3: Extension Models ORDERED PROBIT - Willingness to Quit

	(4)	(5)	(6)
Social Capital Index	**0.052****	**0.044***	**0.044***
	2.066	*1.685*	*1.658*
	-0.008	-0.006	-0.006
	0.018	0.016	0.015
Work-life Balance	**0.107*****	**0.113*****	**0.108*****
	3.161	*3.252*	*3.090*
	-0.016	-0.017	-0.016
	0.038	0.040	0.038
Fairness Index	**0.092*****	**0.091*****	**0.091*****
	7.040	*6.907*	*6.853*
	-0.014	-0.013	-0.014
	0.032	0.032	0.032
Children	**0.022**	**0.016**	**0.015**
	0.670	*0.461*	*0.450*
	-0.003	-0.002	-0.002
	0.008	0.006	0.005
Rank	**0.060***	**0.053**	**0.054**
	1.819	*1.615*	*1.595*
	-0.009	-0.008	-0.008
	0.021	0.019	0.019
Experience	**-0.013****	**-0.013*****	**-0.013****
	-2.554	*-2.588*	*-2.449*
	0.002	0.002	0.002
	-0.005	-0.005	-0.004
Dummy Female	**0.362*****	**0.389*****	**0.393*****
	3.734	*3.853*	*3.851*
	-0.045	-0.047	-0.047
	0.135	0.146	0.147
Dummy Caucasian	**0.199*****	**0.220*****	**0.215*****
	2.694	*2.932*	*2.838*
	-0.031	-0.034	-0.033
	0.069	0.077	0.075
Dummy Married	**0.143***	**0.156***	**0.157***
	1.761	*1.889*	*1.905*
	-0.022	-0.024	-0.024
	0.050	0.054	0.055
Trauma Index	**-0.002**		**-0.001**
	-0.340		*-0.165*
	0.000		0.000
	-0.001		-0.000
Strain Index		**-0.005**	**-0.004**
		-0.587	*-0.427*
		0.001	0.001
		-0.002	-0.001
Wald Chi-squared	120.38***	120.98***	119.44***
Wald Chi-squared for joint significance rank, exp	7.05**	6.76**	6.26**
Observations	1002	985	973

Notes: z-statistics in parentheses. Significance levels: * $0.05 < p < 0.10$, ** $0.01 < p < 0.05$, *** $p < 0.01$. Marginal effects are reported in italic below, where the first value reports the marginal effect for the least satisfied 1, the second for the most satisfied 5 employees. In the case of dummy variables, the marginal effect reports the discrete change of the variable from 0 to 1.