

Work Type, Personality Traits, and Selected Socio-demographic Factors as Determinants of
Organizational and Operational Police Stress in the Ethiopian Federal Police

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Tamirat Mulugeta Bekele

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Dissertation Supervisor: Dr. Teka Zewdie (Associate Professor)

Addis Ababa University**College of Education and Behavioral Studies****School of Psychology**

This is to certify that the thesis prepared by Tamirat Mulugeta Bekele titled: '*Work Type, Personality Traits, and Selected Socio-demographic Factors as Determinants of Organizational and Operational Police Stress in the Ethiopian Federal Police*' and submitted for the fulfillment of the requirements for the Degree of Doctor of Philosophy in Applied Social Psychology complies with the regulations of the University and meets the acceptable standards.

Signed by the examining committee:

_____	_____	_____
External Examiner	Signature	Date
_____	_____	_____
Internal Examiner	Signature	Date
_____	_____	_____
Dessertation Supervisor	Signature	Date
_____	_____	_____
School Head	Signature	Date

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Abstract

This study examined the relationship personality traits gender, work experience, police rank, marital status, and type of police duty have with police organizational and operational stress in the Ethiopian Federal Police Commission using a cross-sectional survey design. Using a stratified sampling technique, 401 (22.9% female) police personnel were selected and completed the survey. The findings revealed that officers in the Ethiopian Federal Police Commission experience a high level of occupational stress, with organizational stress ($M = 4.03$) found to be higher than operational stress ($M = 3.89$). Female police officers reported a higher level of operational stress than male police officers, though their organizational stress level did not significantly differ. Age and years of experience were found to have a negative association with the level of organizational stress ($r = -.408$ and $-.462$, respectively). A significant negative association was also reported between operational police stress and age and experience ($r = -.303$ and $-.297$, respectively). Concerning police rank beginners and lower-level leaders reported higher level of organizational and operational stress than high-ranked officers. Moreover single police personnel reported the highest organizational and operational stress compared to married, divorced, separated, and widowed categories. With personality traits, Neuroticism was found to have a significant positive correlation with organizational and operational police stress ($r = .163$ and $.196$) respectively. Similarly, significant positive relationship was observed between agreeableness and police organizational stress ($r = .316$) and police operational stress ($r = .226$). Conscientiousness was also found to have a significant positive association with organizational police stress ($.279$) and police operational stress ($.179$). Organizational police stress was also found to have a significant negative association with extroversion and openness ($r = -.137$ and $r = -.160$) respectively. Extroversion and openness did not have a significant association with operational police stress. The regression analysis showed that four of the personality traits (neuroticism, extroversion, agreeableness and conscientiousness) significantly predicted both police organizational and operational stress, but not openness. It can be concluded that personality traits were the significant predictors of police organizational and operational stress in the Ethiopian Federal Police hinting that, for increased performance and better public services police organizations should consider personality types on recruitment and task assignment.

Keywords: organizational stress, operational stress, personality traits

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Abbreviations

AAU	Addis Ababa University
ANOVA	Analysis of Variance
APA	American Psychological Association
BFF	Big Five Factor
DRIVE	Demands, Resources and Individual Effects
EFA	Exploratory Factor Analysis
EFPC	Ethiopian Federal Police Commission
NEO-FFI	Neuroticism-Extraversion-Openness Five-Factor Inventory
NIOSH	National Institute for Occupational Safety and Health
PCA	Principal component analysis
PSQ	Police Stress Questionnaire
PSQ-Op	Operational Police Stress Questionnaire
PSQ-Org	Organizational Police Stress Questionnaire
SPSS	Statistical Package of Social Sciences

Chapter One

1. Introduction

1.1. Background of the Study

Stress is usually indicated as a bio-social process, whereby ecological stimulus result in physiological, behavioral and cognitive strain on individuals and the effects are mediated by individual factors (Karasek & Theorell, 1990; Kim & Diamond, 2002; Theorell, 2004 & Chrousos, 2009). It can be said that environmental factors that a person reacts with and have significance in a person's life can induce stress, one of which is occupation. According to Sager, (1991), occupational stress is a bodily and psychological response of individuals to the load, demands, restraint, and opportunities related to occupation and that have essential but uncertain effects. Occupational stress is different from general stress in many ways. First it is mostly related to and emanates from job/work individuals are involved in (Chen & Silverthorne, 2008), second it demands intensive interaction with others (Ellison, 2004), third it demands employees deal policies and laws of organizations with organizational policies (Stinchcomb, 2004) and forth it demands employees deal with environmental circumstances (Miller, 2005). Occupation stress thus can be viewed as physiological and behavioral responses to work in general. (Kyriacou, 2001& Kinman, 2014)

Numerous studies in the field of police consistently indicate that police work is dangerous and highly stressful and leads to physiological, emotional, and social consequences (Anshel, 2000; Andersen, Papazoglou, Nyman, Koskelainen, & Gustafsberg, 2005; Marmar et al., 2006; Reynolds and Wagner, 2007; Lee, et. al., 2016 & Arble and Arnetz, 2017). Research also suggests that police officers show a higher level of occupational stress compared to other professionals (Russell, 2014; Yun et. al., 2013). In testifying this, a study by Johnson et al. (2005)

found that policing is one of the six professions that has a high level of stress. There are many factors that contribute to a high level of stress in the police force. First, policing is highly stressful because there are rigid and unresponsive organizational structures; second, it is required from police officers to function effectively in any kind of danger; third, they have to deal with any type of misery like child abuse, rape, instantaneous life or death decisions, and most importantly, dealing with the attitude and expectations of the public. In a nutshell, daily police work is full of challenges and risks, which result in a high level of stress.

Police stress is generally categorized into two classifications: organizational and operational (Shane, 2010). Organizational police stress refers to the stress that emanates from internal characteristics of the organization and relationships with others. These include job demands, job insecurity, reduced equipment, inadequate supervision, lack of support, insufficient pay, excessive paperwork, inactivity, bureaucracy, and the public's perception of police work (Kop, Euwema, & Schaufeli, 1999; Shane, 2010; Cordner, 2013; Shane, 2013 & Violanti et al., 2014). Operational stress on the other side is stress associated with inherent police work such as traumatic work exposures, use of force, making decisions in critical situations, risks to own safety and that of colleagues, attending the scenes of fatal accidents and injuries, exposure to suffering and violence, shift work, overtime hours, court appearances, danger, and interaction with the public while performing duties like crime prevention, crime investigations, patrol activities, traffic control, and community services (Kop, Euwema, & Schaufeli, 1999; Bonnar, 2000; Shane, 2010 & Violanti, 2014).

There are mixed findings on whether organizational or operational factors are more stressful. Researchers like Basińska & Wiciak (2013) and Kop & Euwema (2001) indicated that organizational factors are more prevalent and are the main sources of police stress compared to

operational factors. Other studies also revealed that factors related to organizational dimensions are most frequently reported by police officers (Abdollahi, 2002; Stinchcomb, 2004; Violanti et al., 2006; Prasad, 2012; Finney et al., 2013; Suresh et al., 2013; Nelson & Smith, 2016). On the other hand, a handful of researchers reported operational factors as being as stressful as organizational factors (Garcia et al., 2004; Berg, Hem, Lau, Håseth, & Ekeberg, 2005; Agolla, 2009; Arial, Gonik, Wild, & Danuser, 2010; Lucas et al., 2016; Violanti et al., 2016).

Considering the evidence in the literature, more evidence shows that organizational stressors are as stressful as or even more significantly stressful than operational stressors. While forwarding this claim, it is important to consider variations across policing contexts because these differences might be attributed to the country of origin, type of police work, and whether intensity or frequency is considered across organizational and operational categories.

There is evidence in the literature that shows a relationship between the Big Five personality traits and occupational stress, though it is limited in number (Costa, 1985; Ortega, Brenner & Leather, 2007 & Widhiastuti, 2014). Among the existing inventories and tests to assess personality traits, the big five personality model has been extensively studied, commonly used and regarded as one of the most efficient models (Costa, 1985; Digman 1990 & Kjellstrom et al., 2009). The big five personality traits are conventionally labeled as neuroticism, extroversion, openness to experience, agreeableness, and conscientiousness. In a very brief description, neuroticism is the tendency towards expressing anxiety, anger, depression, and other similar negative affects, whereas extraversion is manifested by sociability, vigor, and an optimistic state of mind. On the other hand, openness is characterized by objectivity, a need for variety, and curiosity, and agreeableness is a tendency towards humanity, conviction, and compassion. Finally, conscientiousness is characterized by self-discipline, order, consistency, and

insightfulness (McCrae & Costa, 1987; McCrae & Costa, 1991; Costa, McCrae & Kay, 1995; Costa & McCrae, 2000; Zellars et al., 2000 & Garbarino et al., 2013). Mills & Huebner (1998) found a significant relationship between stress, neuroticism, and introversion. Another study by Cano-Garcia et al. (2005) showed that stress has a significant association with neuroticism and extroversion. Additionally, high neuroticism has been found to have a higher risk of burnout and physical illness, whereas high extraversion, agreeableness, and conscientiousness have been found to have a lower risk of stress and burnout (Judge, Heller & Mount, 2002; Grant & Langan-Fox, 2007 & Alarcon, Eschleman ; Bowling 2009 & Garbarino et al., 2014).

Fewer studies are conducted to examine the role of the Big Five personality traits in police stress. For example, Madamet et al. (2018) suggested that the personality of police officers can affect the level of perceived stress. Further, in a study by Garbarino et al. (2014) it was found out that police officers with high levels of neuroticism are reported to have high levels of stress. In another piece of research, it is reported that police officers who score higher on neuroticism are vulnerable to stress because they perceive their work as dangerous and threatening (Barrick & Mount, 2005; Burbeck & Furnham, 1984; Garbarino, et. al., 2014). Furthermore, a study by Zellars et al. (2000) found that police officers who have a higher level of extraversion tend to avoid stressful situations and incidents. In all the presented cases, there is evidence that shows some patterns of personality as associated with police occupational stress. Kaur et al. (2013) tried to see the relationship of stress, personality, and coping on 150 police personnel of India (Andhra Pradesh) using Eysenck's Personality Questionnaire (EPQ) and General Health Questionnaire-28 (GHQ28) and found out that psychoticism, neuroticism, and extroversion have significant relationships with stress. In the same country, India/Goa, Narvekar & D'Cunha (2021) conducted a study on 130 police personnel using the Operational Police Stress Questionnaire and the

Adjustment-Neuroticism Dimensional Inventory. It was found out that operational stress and adjustment neuroticism had a significant positive correlation, i.e., officers with high neuroticism had a high level of operational stress. A similar study conducted on Norwegian police officers by Lau et al. (2006) showed that officers with low neuroticism reported a lower perceived stress level compared to others, whereas officers who scored low extraversion reported higher levels of perceived stress. Louw (2014) also studied how the Big Five personality traits and social support are related to burnout and vigor in 505 South African Police officers. The study found that neuroticism has a significant positive correlation with burnout, whereas agreeableness, conscientiousness, and openness to experience show a significant negative association with burnout. It is observed that there are very few studies that have tried to investigate the relationship between personality and occupational stress in a police context.

There are empirical evidences that showed a relationship between police officers' demographic factors like gender, work experience rank and type of work with stress. The evidence on gender differences in police stress is varied. Some studies revealed little or no difference between male and female police personnel on stress level (Lauferweiler-Dwyer & Dwyer, 2000; Garcia et al., 2004; McCarty, Zhao, & Garland, 2007; Bradway, 2009; Yoo & Franke, 2010). These studies argued that both male and female police officers experiences in relation to police work are more or less similar. On the other hand, some studies have revealed the existence of gender differences in police stress, though the studies have mixed results on whether male or female police officers experience a higher level of stress (Collins & Gibbs, 2003; Berg et al., 2005; He, Zhao, & Ren, 2005; Pinear & Rothman, 2006). According to He, Zhao, and Archbold (2002), organizational culture and the external work environment are much less favorable to female police officers, which makes female police officers experience a higher

level of stress than male officers. Studies that found a higher level of stress in female police officers suggest that duties that are specifically given to female police officers, like dealing with victims of domestic violence and sexual offenses, handling child abuse cases, the use of force, and confrontations with violence and danger, induce a higher level of stress in female officers than their male counterparts (Bartol, 1992; Brown et al., 1999; McCarty et al., 2007; Violanti et al., 2016).

Work experience was also found to have mixed findings on police stress. Some researchers found that less experience in the police was associated with a high level of stress (Mohanraj & Natesan, 2015; Narvekar & D’Cunha, 2021), while for some others, police stress increased with age (Narvekar & D’Cunha, 2021). One can understand from these findings that experience in the police force is associated with stress, either negatively or positively. These are not the only contradicting findings; for instance, one study reported that police officers’ military experience in terms of years was not related to the level of stress. Patterson (2002) and Ivie & Garland (2011) revealed that there was no significant difference between experienced and less experienced police officers in terms of perceived stress. In a relatively different finding, Chen (2009) revealed a curvilinear relationship between tenure and stress, where officers with 11–20 years of job experience reported more overall stress compared with those with fewer or more years of service.

Rank of police officers is also found to have a relationship with police stress, though such literature is scarce and with mixed findings. Some studies found that officers with high police rank experience low occupational stress compared to lower-ranked officers (Brown & Campbell, 1990; Chen, 2009). Further, Berg et al. (2005) and Kohan and Mazmanian (2003) revealed that lower-ranked officers experience a higher level of operational stress than higher-ranked officers.

This is attributed to lower-ranked officers' exposure to violent and hazardous incidents in their day-to-day duties. Other studies also found that sergeants (line and desk sergeants) and detectives scored higher on organizational factors than other ranks (Violanti & Aron, 1995; Laufersweiler-Dwyer and Dwyer, 2000). Those organizational factors that contributed to a higher level of stress on high ranked officers were complaints against subordinates, responsibility for public events, handling situations that are in conflict with personal duty, issues related to promotion, and public attitude toward police (Antoniou, 2009). There are also some studies that found no difference on stress level between the ranks of police officers (Morash, Haarr, & Kwak, 2006; Buker & Wiecko, 2007; Narvekar, D'Cunha 2021).

Though the literature that focuses on the relationship between marital statuses is rare, those who have investigated such relationships suggest that marital status is found to be a relevant factor in police occupational stress. For instance, a study by Umaru and Olawale (2020) showed that married police officers reported the highest occupational stress compared to single police officers and other marital status categories. On the contrary, a study by Odedokun (2015) also revealed that married police personnel reported a lower level of stress than single personnel. In their study of over 1000 police personnel, Zhao, J. S., et al. (2003) reported a marginal effect of marital status on police stress. In contrast, the police work environment, work-family conflict, and individual coping mechanisms are the most significant predictors of police stress. Marital status is also found to moderate job stress and occupational burnout. A study by Ogunbamila and Fajemirokun (2016) revealed that married police personnel reported higher occupational burnout due to the existence of stress. Work and family interference were also found to be strong predictors of occupational stress among police personnel (He et al., 2005).

Studies show that police officers who engage in crime prevention-related activities such as use of force, direct criminal contact, and foot patrols experience a high level of stress (Kop & Euwema, 2001; Manzoni & Eisner, 2006; Kurtz, 2008; Scott, Evans, & Verma, 2009). They also reveal that officers who perform duties related to conflict-prone police activities experience a high level of stress in general. Police officers working in Special Forces units like the Special Weapons and Tactics (SWAT) unit also reported a high level of stress (Garbarino et al., 2013; Corpas, 2018). Crime scene officers are reported to experience a higher level of stress than regular police officers because they encounter violent deaths regularly, handle the collection, documentation, analysis, and preservation of evidence from crime scenes (Gershon et al., 2002; Pavšič, 2016 & Sollie, Kop, & Euwema, 2017). Homicide investigators, detectives, and forensic experts are also reported to experience unique stress compared to other law enforcement officers because they are regularly encountered with death and violence, relatives of victims, an inconvenient criminal justice system, fatigue, and frustration (Sewell, 1994; Becker & Dale, 2003; Garcia et al., 2004). This work presents levels of organizational and operational stress and the relationship that personality, basic police demographic factors like gender, age, work experience, police rank, marital status, and type of police duty have with organizational and operational police stress.

1.2. Statement of the Problem

Occupational stress has generally been documented as a significant organizational concern over the years (Siu, 2003; Halkos and Bousinakis, 2010). Specifically, high level of stress in the law enforcement sector is associated with number of serious psychosocial problems like suicide ideation (Gerber et al., 2010; Violanti, 2012), anxiety disorders (Reichenberg & MacCabe, 2007; Wolfe-Clark, & Bryan, 2016; Wilkins Newman & Rucker-Reed, 2004),

depression (Berg, Hem, Lau, & Ekeberg, 2006; He, Zhao, & Ren, 2005; Reichenberg & MacCabe, 2007; Violanti & Samuels, 2007; Waters & Ussery, 2007), high staff turnover (Adams & Buck, 2010; Smith, Wareham, & Lambert, 2014), low job satisfaction and poor job performance (Cross & Ashley, 2004; Sheehan & Van Hasselt, 2003), problems related to sleep (Gerber, Hartmann, Brand, Holsboer-Trachsler, & Pühse, 2010; Violanti et al., 2007; Violanti & Samuels, 2007; Waters & Ussery, 2007) and issues related to anger management (Marshall, 2001). Thus, it is important to identify stress and associated factors among police officers to have a clear stress management mechanism and reduce stress-related issues.

There is a big argument in the literature on whether police stressors are organizational or operational. For example, the study by Suresh et al. (2013) on Indian armed and unarmed police officers showed that the major stressors are more organizational (like never being off duty, lack of time to spend with family, political pressure, low salary, and inadequate infrastructure) than operational issues (like the inability to deal with death, suffering, and exhaustion) for both armed and unarmed police officers. Again, in a study conducted by Prasad (2012), organizational stressors are more prevalent in police officers. In another study, it was found that organizational stressors (like a less demanding work environment, less opportunity for reward, independent decision-making, poor relationships between colleagues and superiors, and a demand for high commitment) are associated with higher levels of depressive symptoms (Garbarino et al., 2013). A cross-sectional survey conducted on 1206 United States county police officers found that organizational stressors (like demands of work impinging upon home life, lack of consultation and communication, lack of control over workload, inadequate support, and excess workload in general) were perceived as more stressful than operational issues (Collins & Gibbs, 2003).

On the other hand, a study conducted on Finnish patrol police officers reported that operational stressors (like injuries caused by physical violence) worsen psychological health, increasing the risk of distress, and are related to the high level of stress caused by organizational factors (Leino, 2013). Additionally, a study on violence and psychological distress among police officers and security guards revealed that operational factors like threats or assaults with deadly weapons had an independent association with greater distress. A study by Setti and Argentero (2013) compared the organizational and operational stressors in Italian police and found that the score on the operational stressor was slightly higher than the organizational stressor score. It can therefore be observed that there is no established fact on which one of the two stressors is prevalent. Besides, the studies are conducted more or less in organized and highly trained settings and might not reflect the situation in less organized and less equipped settings like Ethiopia.

Udih & Idubor (2016) conducted a study on 1000 police officers of the Nigeria Police Force, Edo State Police Command, to see whether operational or organizational factors contribute to police stress. The study found a moderately high level of stress, and organizational stressors were found to be higher than operational factors, though the difference was not statistically significant. This study used self-developed measures of stress, and the psychometric property of the measure was not indicated in the study. Wangui (2006) tried to see the prevalence of stress among Kenyan police, and the findings confirmed that Kenyan police reported a high level of occupational stress among officers, while both organizational and operational stressors were found to be prevalent. However, police officers involved in more operational work (like patrols, rescues, disasters, and mass demonstrations) reported a higher level of stress. Concerning the demographic factors, gender was found to have no difference in the level of stress, and highly

experienced and highly ranked officers reported a lower level of stress. This study used a tool that was developed by the researcher, and the psychometric properties of the test are not well established, though it rigorously listed and measured organizational and operational issues that can influence occupational stress.

In another study conducted by the South African Police Service by Pienaar and Rothmann (2006) to identify the frequency and intensity of occupational stressors and their relationship with demographic factors on 2,145 police officers, it was found that the most important stressors identified were related to organizational factors (other officers not doing their job, inadequate or poor-quality equipment, inadequate salaries, and seeing criminals go free). Demographically, female police officers experienced a lower level of stress than male officers, and constables reported a lower intensity of stress than other ranks. Constables (compared with other ranks) also less frequently experienced job demands, crime-related stressors, and a lack of support. Police officers with a rank of superintendent or above experienced a lower level of stress than inspectors and captains. This study used a psychometric tool to measure police stress that was developed by the researchers, and the psychometric properties of the measure are well established in the context. However, few demographic factors were studied in relation to police stress, and strong predictors like type of work and personality are missing. An ethnographic case study conducted on 79 Ugandan rangers also indicated that rangers have external, internal, and occupation-related personal strains (William, 2015). This study was qualitative, and standardized psychometric measures of stress were not used. It is observed that there are very few studies that have tried to investigate the relationship between personality and occupational stress in a police context. In Africa, specifically, such literature is very scarce.

In the Ethiopian context, there are very few studies that were conducted on police stress, to the best of the researcher's knowledge. One of the studies was conducted on the prevalence and predictors of stress among 281 Federal Police Bureau of Crime Investigation members by Zelalem (2019). He found out that 13.9% of police officers reported a high level of stress, 72.6% reported a moderate level of stress, and 13.5% reported a low stress level, while no statistically significant difference was reported between age, gender, marital status, educational level, years of service, and police rank. It is reported in this research that only 39.6% of the variation in stress level of the police officers was explained by these factors, and the remaining 60.4% variation was explained by other factors. The main gaps of this study are: first, it only focused on one department with a small sample size; second, the instruments used to assess stress and related factors are those used for general occupational stress; and third, the factors listed as stressors were a mixture of organizational and operational issues.

The other research was conducted by Kagnu (2016) on major sources of police job-related stress and its effects on police officers' familial relationships using a mixed-methods approach on 150 Addis Ababa Police crime prevention officers. The researcher found that police stress was predicted by problems related to the nature of work, resources, administration, income, and training. However, the instrument used to measure was developed by the researcher, and it didn't go through the rigors of the test development procedure, which means a standard instrument was not used in this study. Additionally, the focus was on a single department, and the issue was also multi-dimensional. There is also a qualitative study on job-induced stress among police officers in Sebeta Woreda, which reported major sources of stress among police officers as physical attack by criminals, lack of time with family, and low income (Abebe, 2020). This

research is also narrow in scope, used very few participants (15), and has problems with data collection mechanisms, data sources, and tools.

From all the evidence presented above, it is observed that there is inconsistency on whether organizational or operational factors are more stressful and on the existence and type of association with police stress. It is also observed that most of the studies conducted to assess the relationship between socio-demographic variables and personality were conducted in developed countries, and there are few studies done in other parts of the world. The studies that are conducted in developing countries have gaps related to using standard measurement tools, and most of them are descriptive in nature. Variables like type of work and personality are also not considered in these studies. Based on these gaps, the present research, however, focused on every available sector in the police service and used instruments specifically designed to measure police stress on a relatively large sample size in the Ethiopian Federal Police Force. To the best knowledge of the researchers, the relationship between personality traits and police stress was not studied in Ethiopia. Therefore, the current study aims to come up with a local perspective on the relationship between the Big Five personality traits and police operational and organizational stress in the Ethiopian Federal Police Commission. The study can also be used as a springboard for other researchers interested in investigating police stress and the relationship between personality traits and stress. The study specifically tried to answer the following questions:

Research Questions

- What is the level of organizational and operational police stress in Ethiopian Federal Police Commission?
- Do organizational and operational stress differ based on basic socio-demographic variables like gender, age, work experience, marital status, and work experience?

- Is there a relationship between types of police duty and organizational and operational stress?
- Are the Big Five personality traits (Neuroticism, Extraversion, Agreeableness, Openness to experience, and Conscientiousness) significantly associated with organizational and operational police stress?
- Which Big Five personality traits (Neuroticism, Extraversion, Agreeableness, Openness to experience, and Conscientiousness) significantly predict police organizational and operational police stress?

1.3. Objectives of the Study

The main objective of this study was to examine the relationship gender, work experience, marital status, police rank, department (type of work) and personality traits have with police stress in the case of Ethiopian Federal Police commission. More specifically the study intended:

- To describe police officer's level of organizational and operational stress
- To examine if organizational and operational stress differ based on basic socio-demographic variables like gender, age, work experience, marital status, and police rank.
- To assess the relationship that different types of police duties have with organizational and operational stress.
- To explore the association between personality traits (Neuroticism, Extraversion, Openness to experience, Agreeableness, Conscientiousness) and organizational and operational police stress.

1.4. Significance of the Study

This study intended to address the level of organizational and operational police stress and its relationship with personality, job context and other demographic factors in Ethiopia.

Therefore, the study firstly is believed to contribute to the scarce literature on police

occupational stress by exploring the nature of organizational and operational police stress and its relationship with personality, job context and other demographic factors. The findings from the study will also contribute to policy and practical approaches to improve the quality of life of police officers and design stress management strategies. Finally, though, the generalizability of this research is limited, defining relevant links and pathways rooted in the stress process can be used to inform further theoretical and methodological considerations.

1.5. Scope of the Study

This study focused on the Ethiopian Federal Police Commission. There are other police forces in the Country mainly in regional Police Commission (Afar, Amara, Oromia, Ethiopian Somali, Sidama, South Nations and Nationalities, Benishangul Gumuz and Gambela) and city administrations (Addis Ababa and Dire Dawa). However, this study only focuses on Ethiopian Federal Police Commission members and two departments of the commission were included in the study. Conceptually, organizational and operational police stress, the Big Five personality traits (Neuroticism, Extraversion, Openness to experience, Agreeableness, Conscientiousness), type of work (crime prevention, crime investigation, education and training, health service and human resource management), rank (from constable to commissioner general) were included.

1.6. Operational Definitions of the Study Variables

Organizational Police Stress: stressors related to the context of police work that include characteristics of the organization like bureaucracy, management, organizational capacity, training and behaviors of the people like co-worker relations, leadership and supervision and internal affairs.

Operational Police Stress: stressors related to inherent content of police work that include patrolling, dealing with violence, direct contact with crime, crime investigation and

related issues.

Occupational Stress: Occupational stress in this study is a mix of both organizational and operational stress in police context.

Personality traits: personality traits in this study incorporate the five elements which are neuroticism, extraversion, openness, agreeableness and conscientiousness.

Type of work/ Department: department refers to the section of the work that the police officers work. There are basically five departments (so called sectors by the commission), crime prevention, crime investigation (also called Federal Bureau of Investigation), Ethiopian Police University (the education and training sector), Human resource and technology expansion and Health directorate.

Police Rank: as it is indicated on the Proclamation No. 720/2011 Ethiopian Federal Police Commission Establishment Proclamation there are 16 ranks of police officers which are Constable, Assistant Sergeant, Deputy Sergeant, Sergeant, Chief Sergeant, Assistant Inspector, Deputy Inspector, Inspector, Chief Inspector, Deputy Commander, Commander, Assistant Commissioner, Deputy Commissioner, Commissioner, Deputy Commissioner General and Commissioner General. Except for constable, which is labeled as ordinary member, the ranks are divided in to four categories of leaders, namely beginners (from assistant sergeant to chief sergeant), middle level leaders (from assistant inspector to inspector), higher level leaders (from chief inspector to commander) and strategic leaders (from assistant commissioner to commissioner general).

Work Experience: is how long the police officers have been working in the Ethiopian Federal Police Commission.

Gender: Gender in this research is a biological state of maleness or femaleness of the police officers.

Chapter Two

2. Review of Related Literature

In this part of the paper, the theoretical perspective of occupational stress in general and empirical findings from police occupational stressors are presented. First, police occupational stress is presented alongside components of police organizational and operational stress, which are the major target variables of the study. Second, models of occupational stress, not all but related in some way to organizational and operational stress, are reviewed to shape a better understanding of occupational stress. Finally, determinants of police occupational stress as proposed by this research, like gender, work experience, police rank, work type, and personality traits, are presented.

2.1. Literature Search Strategy

Relevant literatures related to the objectives of this study are identified through electronic means using African Journal Online (AJOL), Google Scholar, PsychINFO, PubMed, ResearchGate, ScienceDirect, SCOPUS, and Web of Science and using print copies of books and articles. Manual searches using the reference lists of articles were also conducted. The major criteria for searching and selecting the documents are the type of journal (scholarly journal), using a mainly quantitative approach, using organizational and operational questionnaires, showing relationships between the sociodemographic variables that this research proposes, using the BFI, being most recent and conducted in developing countries if available. EndNote was used to store, organize, and cite references. While selecting the articles, the researcher read the attained abstracts, and an inspection was made of all articles believed to be relevant. There are some literature sources cited from the 1980s and 1990s. This is because mainly the original and first works of the researchers in specific areas must be addressed to further apprehend the reviewed phenomena.

2.2. Conceptualizing Occupational Stress

Occupational stress is a complex concept that requires first understanding its parent concept, known as stress. Stress was referred to as the interaction between a stimulus and the response processed by the interaction between individuals and their environment. This conceptualization of stress, however, developed over the years through the addition of more components than the stimulus-response proposition (Dewe, O'Driscoll, & Cooper, 2012). The role of psychological processes like cognition, emotion, and perception was later added to the conceptualization of stress, making the interaction between individuals and their environment a basis (Cox, 1993; Cox & Griffiths, 2010).

It is commonly argued that the term stress is complex to define and measure. Depending on this complexity, two approaches to conceptualizing stress are identified. The first is the transactional approach, which claims that the environmental demands on individuals and the way they respond to them are crucial in understanding stress. Hence, stress is an enduring transaction to balance the demands of the environment and the resources available to deal with those demands (Lazarus, 1999). The second approach used to conceptualize stress is the interactional approach. Stress is conceptualized as a relatively static interaction between the stimulus and response and the dynamic relationship between the individuals and their environment, while their coping mechanisms are given less emphasis (Cooper, Dewe, & O'Driscoll, 2001; Cox & Griffiths, 2010). Though there are various definitions based on these two approaches, this research used the one that is categorized under the transactional approach. The definition is one of the most dominant definitions in literature and was forwarded by Lazarus & Folkman (1984). They have defined stress as “a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or

her well-being” (p. 19). The researcher preferred a transactional conceptualization of occupational stress because the model suggests that a stress response is highly influenced by individual appraisal processes like cognitive, physiological, affective, psychological, and neurological patterns and his or her complex environment. The model also allows constructs to be operationalized specifically for a study population (Obbarius et al., 2021; Walinga, 2008). The authors of the model themselves evaluated the transactional model and confirmed the impact of personality factors, appraisals, and coping on psychological symptoms (Folkman et al., 1986).

Occupational stress is understood and conceptualized based on the inherent meaning and concept of stress. Beehr and Newman (1978, p. 669–670) defined occupational stress as "a condition arising from the interaction of people and their jobs and characterized by changes within people that force them to deviate from their normal functioning." Further, the National Institute for Occupational Safety and Health (NIOSH) stated job stress as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the workers. The APA Dictionary of Psychology also defines occupational stress as “a physiological and psychological response to events or conditions in the workplace that is detrimental to health and well-being. It is influenced by such factors as autonomy and independence, decision latitude, workload, level of responsibility, job security, physical environment and safety, the nature and pace of work, and relationships with coworkers and supervisors.” Therefore, occupational stress is understood as how individuals respond to work demands, work-related pressures, resources, and needs that do not match their capabilities and challenge their ability to cope.

2.3. Conceptualizing Police Occupational Stress

Employees in law enforcement, health care, teaching, and other sectors that demand dealing with other people's problems may be subject to a higher level of stress than other professions that demand less contact with people (Finn & Tomz, 1998). Policing, however, is typically considered one of the most difficult and dangerous professions. This is because police officers are exposed to both physically and mentally challenging tasks that can result in a high degree of anxiety and worry (Dick, 2000; He et al., 2005; Gershon et al., 2009). Police officers are generally expected to interact at different levels with criminals, community members, their colleagues, their supervisors, and other law enforcement professionals. They have to also deal with the dynamic organizational policies and laws.

According to Kolnick (1997), stress in law enforcement has to be given due attention and should be investigated due to its impact on individuals, institutions, and the community that law enforcement serves. Literature has revealed that occupational stress in law enforcement causes physical health problems and mental health issues like depression, anxiety, and chronic anger (Schaufeli & Enzmann 1998). Studies have found that work-related factors are the main source of stress for law enforcement personnel, and identifying and mitigating these factors can contribute to the success of law enforcement agencies (Harpold & Feemaster, 2002; O Toole, Vitello & Palmer, 2006).

Attempts to understand police stress date back to the 1970s, when Martin Symonds proposed perhaps the first model of police stress (Symonds, 1970). He classified police stress into two categories: stress related to the nature of police organizations and stress related to the nature of police work. Later, Kroes, Hurrel, and Margolis (1974) conducted probably the first empirical study on 100 US patrol officers. They have found administration, equipment,

manpower, relationships with the public, and courts to be major categories of stress. Then, Spielberg et al. (1981) came up with one of the most influential works by adopting a robust quantitative approach by developing the Police Stress Survey, which contains 60 standardized items and identified two-factor solutions: administrative and organizational pressure and physical and psychological threats. Further three factors of operational stress—death and disaster, violence and injury, and sexual crimes—were identified (Brown, Fielding, & Grover, 1999). Other researchers also tried to categorize police stressors using different measures. Among these, Laufersweiler-Dwyer and Dwyer (2000) used a broad custom-developed tool on police officers and found out eight factors: (1) policies and structures; (2) job security; (3) processes; (4) role ambiguity; (5) role conflict; (6) group conflict; (7) resource allocation; and (8) new job features.

Even though there have been attempts to classify police stress across the past years, two wide-ranging categories—organizational police stress and operational police stress—have prevailed in the police stress literature (Violanti and Aron, 1995; Storch & Panzarella, 1996; Zhao, 2002). Organizational stress refers to organizational aspects of police work like lack of confidence in management, regular organizational or policy change, and a lack of communication among organization members. And operational police stress is attributed to the nature of police work, like exposure to danger, physical threats, facing unpredictable incidents, and shift work (Stephens & Long, 2000). The two categories are presented below.

2.4. Organizational Police Stress

The organizational culture and work environment of law enforcement as a major source of stress have come to researchers' attention in the 1990s (Finn & Tomz, 1998). Earlier, the primary sources of the law enforcement sector were perceived to be external to the organizations (Jaramillo et al., 2005). Organizational stress is related to features of the organization and

characteristics of its employees that can induce stress in the employees. These factors can be related to perceived lack of support from supervisors and community members, long bureaucratic processes, absence or lack of promotion opportunities, inconsistent discipline procedures and management style, quickly changing policies and laws, and the relationship between an organization and the media (Violanti and Aron, 1995; Toch et al., 2002; Stinchcomb, 2004; Burke & Mikkelsen, 2006). The law enforcement agencies, by nature, have strict and long bureaucratic procedures, an extreme workload, and administrative duties in addition to the operational duties, which creates a stressful work environment (Violanti and Aron, 1995). Scholars further stated that favoritism, workplace environment, and inequality are important organizational stressors that affect the drive, morale, productivity, and overall wellbeing of employees in the law enforcement sector (Leck, Saunders, & Charbonneau, 1996; Stinchcomb, 2004; Klockars et al., 2006).

Organizational stressors and their potential effect on employee performance in law enforcement agencies are not given due attention or studied compared to many other sectors. (Jaramillo et al., 2005). According to McCaslin et al. (2006), failure to deal with organizational stress in law enforcement agencies can result in more severe consequences than in other professions. Failure to mitigate stress in law enforcement can result in inappropriate employees' behavior during interaction with the public.

Many studies in the police stress literature found that organizational factors cause a higher level of stress than operational factors (Crank & Caldero, 1991; Violanti & Aron, 1995; Zhao, 2002; Toch et al., 2002; Kohan & Mazmanian, 2003; Miller, 2005).

2.5. Operational Police Stress

A stress that is caused by the inherent nature of a police mission is stated as operational stress. Police officers are exposed to operational stressors like assaults, shootings, and murder while performing their daily duties. Additionally, dealing with perpetrators and victims (Violanti & Paton, 1999) and dealing with the strict criminal justice system and shift work can be categorized as operational stressors (Burke & Mikkelsen, 2006). According to Dowler and Arai (2008), boredom, consistent interaction with the public, public complaints, use of force, and working under the possibility of violence, hazardous events, and death are stressors that police officers face in their daily routine and are labeled as operational and can cause psychological distress and physical strain. Regular physical contacts with suspects and perpetrators and unpredictable violent incidents are also considered police operational stressors (He et al., 2002; Dowler, 2005). Additionally, dealing with the criminal justice system, dealing with the court, and the attention of the media on police are considered sources of operational stressors apart from the inherent work conditions (Finn and Tomz, 1997). Such incidents that police officers confront daily can negatively affect their emotional, physical, and psychological state if not managed well (Chapin et al., 2008).

There are mixed findings on whether organizational or operational factors are more prevalent. A number of studies have concluded that those organizational stressors are more worrisome than operational stressors (Biggam et al., 1997; Abdollahi, 2002; Stinchcomb, 2004; Nelson & Smith, 2016). Researchers like Stinchcombe (2004) argued that organizational stressors are more stressful because of the rigidity and extremely bureaucratic nature of the police organization and its refusal to adjust rules and management practices. On their review of organizational and operational stressors, Nelson & Smith (2016) reported that out of 33 studies

where intensity and frequency of police stressors were measured, fifteen cases reported high organizational stressors, four of them reported high operational stressors, and the rest fourteen cases reported mixed factors of both.

On the other hand, a handful of researchers reported operational factors as highly stressful (Garcia, Nesbary, & Gu, 2004; Berg, Hem, Lau, Håseth, & Ekeberg, 2005; Agolla, 2009; Arial, Gonik, Wild, & Danuser, 2010). Studies from the USA in particular revealed that police officers consistently rated operational stressors as the main source of their stress (Garcia et al., 2004; Lucas, Weidner, & Janisse, 2012; Violanti et al., 2016). These studies consistently indicated that stressors that induce potential harm or trauma, such as killing someone in the line of duty, a fellow officer being killed, exposure to assaulted children, and physical attack, are highly stressful to the police.

In conclusion, police stress literature shows organizational stressors being as stressful as or even more significantly stressful than operational stressors. While forwarding this claim, it is important to consider variations across policing contexts because these differences might be attributed to the country of origin, type of police work, or whether intensity or frequency is considered across organizational and operational categories.

2.6. Models of Occupational Stress

There are several models and theories of occupational stress. The discussion of each and every model and theory might not be appropriate and is not the purpose of this study. Therefore, some selected influential models in the literature of occupational stress are discussed. The models are reviewed and presented in a brief and informative manner. A model that this study used as a theoretical guide is also presented.

2.6.1. Transactional Model of Occupational Stress

Transactional theory underlines that stress is produced through a direct transaction between individuals and their environment that might affect their resources and wellbeing (Lazarus 1986; Lazarus and Folkman 1987). The term transaction infers that a relationship process is dynamic, mutually reciprocal, not static, and involves the ever-changing interaction between individuals and their environment. This model is viewed as one of the most influential models in the literature on stress and coping. Lazarus et al. (2001) later updated this model and suggested that the physiological and psychological mechanisms that fortify the overall course and experience of stress are better explained by an appraisal of this transaction. This explains why employees may evaluate any aspect of their work environment as stressful. In testifying to this, Ganster and Rosen (2013) revealed that individual perception and evaluation have a big impact on stressors. These individual perceptions and evaluations can be affected by many factors, including personality, coping skills, demands, past experiences, and any existing stress on the individual (Prem et al., 2017).

In explaining occupational stress, transactional theory states that stress is an association between exposure to particular workplace scenarios and an individual's appraisal of difficulty in coping. This experience comes along with attempts to cope with the existing problem and changes in psychological functioning, behavior, and emotion (Aspinwall & Taylor, 1997; Guppy & Weatherstone, 1997).

The major problem with this model is that appraisal is conceptualized in a very simplistic way and ignores individual characteristics like history, future, goals, and identities (Harris, Daniels, and Briner 2004). Lazarus himself later admitted that his transactional model of stress

failed to concede the outcomes associated with coping in specific social situations and during interpersonal relations (Lazarus, 2006).

2.6.2. Cox's Transactional Model of Occupational Stress

Cox's transactional model of occupational stress is tightly related in many ways, like stages and processes of stress, to Lazarus and Folkman's original work; however, Cox's transactional model specifically focuses largely on work environments like occupational health and individual differences (Cox, 1993). Stress is conceptualized in this model as a psychological state resulting from a mismatch between perceptions of the import of a demand and beliefs about one's ability to deal with this kind of mismatch (Cox, Griffiths, & Rial-Gonzalez, 2000; Mark & Smith, 2008). Occupational stress is therefore explained by how employees subjectively perceive the content of and context-related psychosocial hazards (Cox, Griffiths, & Rial-Gonzalez, 2000).

Cox & Griffiths (2010) outline five basic stages of this model. Stage one involves ancestral factors, like exposure to psychosocial work hazards. Stage two includes the cognitive processes that give rise to the emotional experiences of stress and is based on an individual's perceptions of existing demands and their available resources to cope with these demands. Stage three involves physiological, psychological, and behavioral determinants and responses to and coping with stress. Stage four represents the secondary effects of stress that might cause negative individual and organizational effects, and the fifth stage signifies environmental feedback reflecting how much effort to cope with stress is successful or not (Cox & Ferguson, 1991; Cox & Griffiths, 2010). This model further suggests that individual characteristics like hardiness, locus of control, and coping affect the appraisal process of the stress-health relationship (Cox & Ferguson, 1991).

The major criticism of this theory is that the process described by Cox is difficult to operationalize and measure empirically because the outlined process is complex (Mark & Smith, 2008). The models, like other transactional models, are therefore perceived as less practical in occupational stress research, where the primary goal is to identify and modify work factors that are likely to result in adverse individual and organizational outcomes (Dewe et al., 2012; Jones & Bright, 2001).

2.6.3. The Person-Environment Fit Model

The Person-Environment Fit model is one of the earliest and most frequently used approaches to stress. This model proposes that a misfit between an employee's situation (like skills, resources, and abilities) and the demands of the job brings about occupational stress (French, Caplan, & Van Harrison, 1982; Caplan, 1987; Cox, 1993). Interactions might happen between objective realities and subjective perceptions of employees and between environmental and organizational variables and individual variables.

The person-environment fit model is based on two central features of fit. The first fundamental feature is related to the extent to which the employees' abilities match the demands of the job, and the second is the extent to which the benefits or resources of the job meet the needs of the employees. Hence, a lack of fit in one or both of these domains can cause stress and threaten wellbeing (Cox, 1993; Dewe et al., 2012). This lack of fitness can induce physical problems like high blood pressure and high cholesterol levels and psychological problems like dissatisfaction, anxiety, dysphoria, smoking, and overeating (Cox, 1993; Edwards, Caplan, & Harrison, 1998).

The main problem with this model is that it assumes a lack of fit is always undesirable, and it is also too broad, with no clear description as to what features of the individual and

characteristics of the work environment would fit (Jones & Bright, 2001; Cox & Griffith, 2010). However, the model is perceived as significantly influential and paves the way for the development of other theories like the Effort-Reward Imbalance Model and the Job Demand-Control Model.

2.6.4. Effort-Reward Imbalance Model

The Effort-Reward-Imbalance Model was developed by Siegrist and colleagues in 1986. It suggests that stress depends on the mutual relationship between the efforts at work and the rewards of the work (Cox & Griffiths, 2010). In other words, effort at work is a psychological contract grounded in the norm of social reciprocity, where effort at work is rewarded with prizes and opportunities. According to this theory, when a high level of effort is followed by less reward (like money, esteem, or security or career opportunities), then the employees are more likely to be stressed and experience other forms of strain. (Siegrist, 1996; de Longe, Bosma, Peter, & Siegrist, 2000).

The major limitation of the effort-reward-Imbalance model is that it doesn't have a fully developed mechanism to address individual differences and fails to include subjective perceptions of the environment (Mark & Smith, 2008). There is, however, strong evidence for the predictive validity of the model on employee health (Notelaers, Törnroos, & Salin, 2019).

2.6.5. Job Demand-Control Model

The Job Demand-Control model was formulated by Karasek in 1979 and is cited as one of the most influential approaches in occupational stress literature. This theory suggests that the two main psychosocial work characteristics—demand and control—are central to predicting stress. (Cox & Griffiths, 2010). Job demand means workload in terms of volume, pace, and conflicts of work, while job control refers to decision-making freedom, autonomy, and skill

discretion or skill utilization. The most important predictor of stress is the interactive combination of demand and control, though both can independently influence stress (Dewe et al., 2012). According to this theory, employees who experience high demands paired with low control are more likely to experience work-related psychological distress and strain (Beehr et al., 2001).

The original job demand-control model was criticized for being too simplistic and ignorant of social support as a moderator for demand and control. Based on this, it was later expanded by including social support, describing how social support moderates high-demand situations (Johnson & Hall, 1988; Karasek & Theorell, 1990). The revised model was renamed the Demand-Control-Support model, suggesting that high job demands accompanied by low levels of control and low levels of social support produce work-related stress.

The inclusion of social support in the model has received considerable support from researchers in the field (Van der Doef & Maes, 1999; Häusser, Mojzisch, Niesel, & Schulz-Hardt, 2010). The major problem with this model lies in the measurement of the three dimensions. It is suggested that the way demand, control, and social support are needed might be different across different contexts and be specific to individual employees (Cox, 1993; Mark & Smith, 2008; Dewe et al., 2012). The model is also criticized for being mechanical in explaining the stress process and undermining individual differences in their perception of stress (Mark & Smith, 2008).

In summary, the above models focused on the interactional and structural characteristics of the stress process, suggesting the outcome of stress on different groups. The person-environment fit model and the demand-control-Support model focus on the cognitive processes and emotional reactions leading to person-environment relations. The Effort-Reward-Imbalance

Model, the Transactional Models of Lazarus and Folkman, and Cox and Mackay are more cognitive and focus on the dynamic interaction between individuals and their environment in terms of mental processes.

2.6.6. *Conservation of Resources Model*

The Conservation of Resources Model, unlike other models listed above, does not focus only on potential stressors concerning the workplace. First outlined by Hobfoll (1989), the Conservation of Resources Model states that individuals strive to gain, retain, foster, and protect things that they actually value, and people also have an evolutionary tendency to exaggerate resource loss and undermine resource gain (Hobfoll et al., 2018). Health and well-being, family, self-esteem, relationships, home, time, finances, and a sense of purpose and meaning in life are some of the central resources, though the way they are appraised differs culturally. These resources might also be related to objects or state conditions (Hobfoll, 1989).

According to Hobfoll et al. (2018), stress happens when three situations take place: (1) if what the individuals value as central resources are endangered with loss; (2) when these central resources are lost; or (3) if individuals fail to gain these central resources following a significant level of effort. This theory further states the principle that individual appraisal is secondary to what is essentially valued by individuals. Occupational stress in this model is explained by work-relationship conflicts, where resources such as time and energy are lost while trying to manage both roles efficiently (Hobfoll 2001). Trying to manage these roles can in turn decrease job satisfaction and create anxiety, though individual factors like self-esteem might moderate such stress (Hobfoll, 2002).

Principles and corollaries of the Conservation of Resources model (Hobfoll et al., 2018, p. 105).

Basic tenets of COR theory: Individuals (and groups) strive to obtain, retain, foster, and protect those things they centrally value.

Principle 1: Primacy of loss principle Resource loss is disproportionately more salient than resource gain.

Principle 2: resource investment principle People must invest resources in order to protect against resource loss, recover from losses, and gain resources.

Principle 3: The gain paradox principle Resource gain increases in salience in the context of resource loss. That is, when resource loss circumstances are high, resource gains become more important—they gain in value.

Principle 4: Desperation principle When people's resources are overstretched or exhausted, they enter a defensive mode to preserve themselves, which is often defensive and aggressive and may become irrational.

Resource caravans and resource caravan passageways principles:

Resource caravans: resources do not exist individually but travel in packs, or caravans, for both individuals and organizations.

Resource caravan passageways: People's resources exist in ecological conditions that either foster and nurture or limit and block resource creation and sustenance.

Corollaries

Corollary 1: Those with greater resources are less vulnerable to resource loss and more capable of resource gain. Conversely, individuals and organizations that lack resources are more vulnerable to resource loss and less capable of resource gain.

Corollary 2: Resource loss cycles Because resource loss is more powerful than resource gain, and because stress occurs when resources are lost, at each iteration of the stress spiral, individuals and organizations have fewer resources to offset resource loss, and these loss spirals gain momentum as well as magnitude.

Corollary 3: Resource gain spirals Because resource gain is both of less magnitude and slower than resource loss, resource gain spirals tend to be weak and develop slowly.

The central resources are categorized and listed by Halbesleben et al. (2014). The resources are job security, rewards, contingencies, and inducements, which are considered object- or condition-related resources; self-efficacy, self-esteem, locus of control, and conscientiousness are considered key resources; and decision-making, autonomy, skill development, participation, and professional development opportunities are considered constructive resources. Halbesleben et al. (2014) additionally mentioned social support, energies like leave from work, and recovery time as resources.

2.6.7. The Demands, Resources and Individual Effects (DRIVE) Model

The Demands, Resources, and Individual Effects (DRIVE) Model of Occupational Stress was forwarded by Mark and Smith (2008) in an attempt to find a balance among the existing stress models with their changing levels of complexity. The model has adopted various features of earlier models of stress; however, it mainly focuses on individual characteristics and personal resources. The model has adopted factors like attributional explanatory styles, coping behaviors, anxiety, depression, and job satisfaction from the Demand Control-Support model. Interestingly, the model was proposed as a general framework into which researchers could add relevant information while adopting it.

The simple DRIVE model suggested direct effects of the predictor variables on outcomes and moderation of the effects of demands by individual differences and resources. However, perceived stress and other interactive effects are added to the improved DRIVE model (Mark & Smith, 2011). The DRIVE model recognizes that a psychosocial stressor cannot affect outcomes if it is not perceived as stressful.

Recent studies have tried to add some components to the DRIVE model. The added components include the effects of psychosocial, occupational, and individual characteristics when the model is applied to different groups of workers like migrant workers, postgraduate students, and university staff (Galvin & Smith, 2015; Capasso, Zurlo & Smith, 2016; Smith, 2011).

One of the strengths of the DRIVE model is that cognitive appraisal link measurement, which is a difficult area for others, can be done simplistically using this model. Another major strength of this model is its flexibility. Mark and Smith (2008) suggested that variables that are believed by the researchers to be conditionally relevant to different contexts can be added. Therefore, this research considered this model as a leading theoretical framework to guide the dissertation.

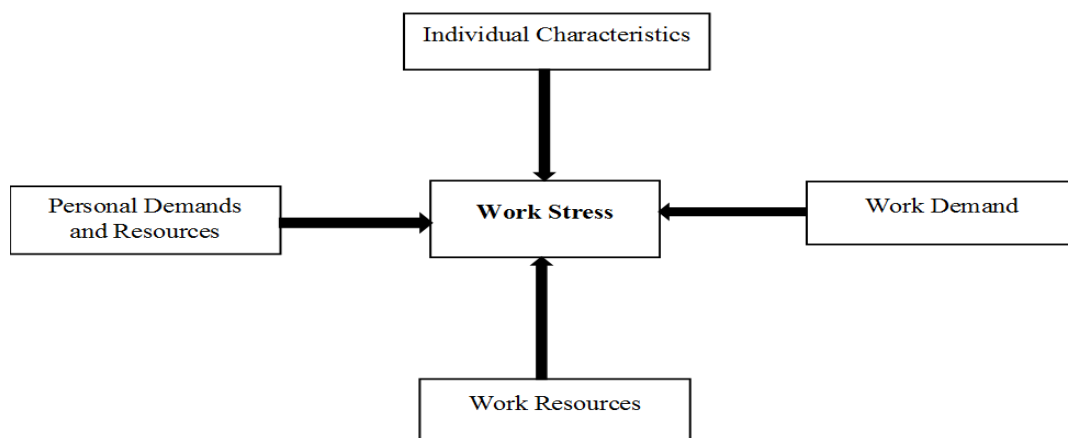


Figure 1. Contextually Adapted Demands, Resources, and Individual Differences (DRIVE) Model

In summary, the above-discussed models of occupational stress are regarded as contemporary models in the scientific literature of work-related stress. These models have been widely researched and have been used to guide intervention. The structural models explain the key variables and interactions among those variables in relation to outcomes of interest, whereas the process models describe relationships between the predecessor and outcome variables of stress. It is further noted that these models have shifted the understanding of occupational stress from only responding to a situation to a dynamic interaction between individuals and their environment, where psychological processes like perception, cognition, and emotion are recognized as central. These theories also highlight how individuals identify, experience, cope with, and are affected by stressful work-related situations. Because stress is a complex concept and involves a lot of gradations that are difficult to capture, bidding to produce a single and comprehensive model that covers all aspects of stress is difficult and unrealistic.

2.7. The Big Five Personality Traits

The Big Five model of personality, also called the Big Five Personality, was developed and advanced by the various researchers' contributions over the years. The first work is attributed to Allport and Odbert in 1936, when they first developed a list of 4,500 terms related to personality traits in 1936 (Vinney, 2018). Their contribution is regarded as a base for the other researchers who have come up with the idea of the Big Five personality traits, such as Eysenck, Cattell, and Goldberg.

In the Big Five personality traits model, the five dimensions of personality are regarded as comprehensive features of individual differences and allow for the organization of coherent and meaningful relationships between identified traits (McCrae & Costa, 2007). The model has

been translated into numerous languages and tested in many cultures, where it has established validity at the international level.

The five traits in the Big Five of personality are neuroticism, extraversion, agreeableness, openness to experience, and conscientiousness (McCrae & Costa, 2007). These traits explain the continuity and consistency of individual behavior, thoughts, and feelings connected to situations and experiences over time (Zhao & Seibert, 2006). The way individuals perceive and express themselves and respond to situations can be determined using these traits. Many researchers further provided evidence that a comprehensive taxonomy of personality can be provided using these five traits in this model (Costa & McCrae, 2000; Zhao & Seibert, 2006; Thalmayer, Saucier & Eigenhuis, 2011). The five traits are presented and discussed below.

Neuroticism

Neuroticism is associated with facets like low self-esteem, pessimistic attitudes, extreme self-consciousness, anxiety, and depression, which are regarded as negative by nature. It is not a feature of meanness but a trait showing comfort in one's own self (Morgan & de Bruin, 2010). The specific traits include, but are not limited to, anxiety, insecurity, moodiness, awkwardness, jealousy, fear, oversensitivity, testiness, nervousness, and instability. Individuals with a high neuroticism score are generally disposed to negative emotions, emotional instability, stress reaction anxiety, sadness, worry, and low self-esteem (Cano-Garcia, Padilla-Munoz, & Carrasco-Ortiz, 2005).

Extroversion

Researchers explain that extroversion is characterized by outgoing, sociable, exuberant, assertive, and warm behavior. Such individuals charge their energy through interaction with others (Storm & Rothman, 2003; Alarcon, Eschleman, & Bowling, 2009). Traits of extroversion

include assertiveness, sociability, outgoingness, talkativeness, energy, fun-lovingness, friendliness, and social confidence. Individuals with high extroversion utilize the opportunities for social interaction, create comfort with others, and are action-oriented (Lebowitz, 2016). They are also less likely to experience emotional exhaustion because they are optimistic about their situation and the future and are successful in enterprising sectors (Zhao & Seibert, 2006). Individuals with low extroversion are more likely to be people “of few words who are quiet, introspective, reserved, and thoughtful.

Agreeableness

The trait of agreeableness is concerned with individuals who generally interact with others. Specific traits include trust, humbleness, altruism, modesty, patience, politeness, kindness, loyalty, helpfulness, cheerfulness, and consideration. People high in agreeableness are respected, liked, sensitive to the needs of others, sympathetic, warm, supportive, and good-natured, and positive relationships and cooperativeness at work are what they value most (Swider & Zimmerman, 2010; Zhao & Seibert, 2006). Individuals with high agreeableness are less likely to suffer stress and its effects (Alarcon et al.; Storm & Rothman, 2003; Zhao & Seibert). According to Lebowitz (2016), low-scoring individuals on agreeableness are less liked and trusted by others because they tend to be cold-hearted, blunt, rude, ill-tempered, antagonistic, and sarcastic.

Openness to Experience

Openness to experience is related to the depth and complexity of a person's mentality, intellect, imagination, and experiences (Alarcon, Eschleman, & Bowling, 2009). It is also concerned with an individual's intention to try new things and think outside the box (McCrae & Costa, 2007). Intellect, insightfulness, imagination, originality, creativity, varied interests, cleverness, preference for variety, curiosity, complexity, and depth of perception are included in

this trait. Individuals with a high score in openness to experience enjoy learning, the arts, are creative, and like meeting new people (Lebowitz, 2016). Because such individuals display high levels of curiosity and are open-minded about their circumstances, they are less likely to get frustrated with situations at work, meaning they are less likely to suffer from occupational stress. On the contrary, individuals with a low score in openness do not prefer and enjoy abstract arts and entertainment, prefer routines, and stick to what they know.

Conscientiousness

Tendency to control impulses, acting in socially acceptable ways, and goal-directed behavior; being dependable, organized, responsible, and achievement-oriented are the major characterizing features of conscientiousness (John & Srivastava, 1999; Alarcon, Eschlemn, & Bowling, 2009). This trait is explained using ambition, thoroughness, persistence, self-discipline, consistency, reliability, hard work, energy, planning, problem solving, and coping (Storm & Rothman, 2003; Bakker, Van Der Zee, Lewig, & Dollard, 2006). Individuals with high conscientiousness are committed to finishing their tasks, less likely to underrate their accomplishments and perceive their work as unproductive, which can result in work-related stress successful in their careers, to outshine in management positions, and to persistently follow their goals with purpose (Bakker, Van Der Zee, Lewig, & Dollard, 2006; Zhao & Seibert, 2006). On the other hand, individuals with low conscientiousness are impetuous, impulsive, and unreliable procrastinators (Lebowitz, 2016). The big advantage of the Big Five is that each personality trait is a spectrum, unlike other trait theories that sort individuals into twofold groupings. It identifies that most individuals are somewhere in between, not on the polar ends of the spectrum.

2.8. Selected Demographic Factors and Police Stress

In studies conducted on police stress in general, the relationship between individual characteristics and stress has not been given due attention and studied well until recently. Response to and perception of stress cannot be the same for two individuals in any way. Responses to stress are most probably different on an individual level and across sub-groups of a population (Lazarus, 1999). Recent studies, however, have tried to investigate the relationship between socio-demographic variables, occupational characteristics, and police stress, though the role of these variables is found to be inconsistent in different studies. Following, the target variables of this study (gender, age, work experience, marital status, rank, type of work, and personality) in relation to police stress are presented.

2.8.1. Gender and Police Stress

Policing has been a highly male-dominated profession, and studies on police stress used to focus largely on male police officers. The increased number of female police officers in the profession, however, diverted the attention of the researcher to focus on gender differences in police stress, though conducting comparative research is still difficult due to the small number of female police officers (Karunanidi & Chitra, 2013).

Evidence on gender differences in police stress is varied. Some studies revealed little or no difference between male and female police officers on stress levels (Lauferweiler-Dwyer & Dwyer, 2000; Garcia et al., 2004; McCarty, Zhao, & Garland, 2007; Bradway, 2009). These studies argued that the experiences of both male and female police officers in relation to police work are more or less similar. These studies further emphasized that the different experiences that female police officers are forced to face in the police setting, like sexual harassment, discrimination, lack of support, and unequal opportunity in work-life balance issues, are

attributed to a higher level of stress than other factors related to the work and the organization (Lieberman et al., 2002; Burke & Mikkelsen, 2005; Antoniou, 2009; Violanti et al., 2016).

On the other hand, some studies have revealed the existence of gender differences in police stress, though the studies have inconsistencies on whether male or female police officers experience a higher level of stress (Collins & Gibbs, 2003; Berg et al., 2005; He, Zhao, & Ren, 2005; Pinear & Rothman, 2006). According to He, Zhao, and Archbold (2002), organizational culture and the external work environment are much less favorable to female police officers, which makes female police officers experience a higher level of stress than male officers. Studies that found a higher level of stress in female police officers suggest that duties that are specifically given to female police officers, like dealing with victims of domestic violence and sexual offenses, handling child abuse cases, using force, and confrontations with violence and danger, induce a higher level of stress on female officers than their male counterparts (Bartol, 1992; Brown et al., 1999; McCarty et al., 2007; Violanti et al., 2016).

2.8.2. *Police Rank and Stress*

Stress in police organizations are found to have a relationship with the rank of police officers, though such literature is scarce. However, the findings from the literature are inconsistent; while some found that lower-ranking police officers have a higher level of stress, few others reported otherwise. Some other studies also found no relationship between rank and level of stress. Some studies found that officers with high police ranks experience lower occupational stress compared to lower-ranking officers (Brown & Campbell, 1990; Chen, 2009). Further, Berg et al. (2005) and Kohan and Mazmanian (2003) revealed that lower-ranking officers experience a higher level of operational stress than higher-ranking officers. This is

attributed to lower-ranking officers' exposure to violent and hazardous incidents in their day-to-day duties.

On the other hand, Campbell (1990) indicated that higher-ranking officers report higher stress on organizational factors and lower stress on operational ones compared to lower-ranking officers. This is attributed to organizational factors like bureaucracy, excessive paperwork, poor communication, insufficient support, inadequate resources, workload, organizational processes, relationships with supervisors and partners, and organizational changes. Other studies also found that sergeants (line and desk sergeants) and detectives scored higher stress levels on organizational factors than other ranks (Violanti & Aron, 1995; Laufersweiler-Dwyer and Dwyer, 2000). Those organizational factors that contributed to a higher level of stress on high-ranking officers were complaints against subordinates, responsibility for public events, handling situations that are in conflict with personal duty, issues related to promotion, and public attitude toward police (Antoniou, 2009).

There are also some studies that found no difference on stress level in relation to rank of police officers (Perrott and Taylor, 1995; Morash, Haarr, & Kwak, 2006; Buker & Wiecko, 2007; Narvekar, D'Cunha 2021). In all these studies it can be observed that stressors differ for ranks due to the nature of task they are exposed to, meaning for lower-level officers operational stressors are prevalent because the lower level officers have to deal directly with crime related incidents and while for higher ranked officers organizational stressors are higher because they have to deal with administration issues. It can be said that rank is one of the characteristics which can contribute to differences on police occupation stress.

2.8.3. *Experience and Police Stress*

The length of time in the police service also tends to shape officers' perception and experience of job stress. There is some evidence to support this, but relationships are not always consistent, and findings vary depending on whether overall stress or job specific categories are considered. For instance, White and colleagues (1985) found that police officers in the latter part of their careers (i.e., over 16 years) were more likely to experience stress related to certain aspects of the job including inefficiencies in the courts and judicial system, negative press accounts and the organization's promotional system.

However, Stotland, Pendleton, and Schwartz (1989) found that stress and strain declined with job tenure, but only for police supervisors who were not patrol officers or detectives. On the other hand, there is some evidence to suggest that it is during the middle part of their careers that officers experience stress most acutely. For instance, Burke (1989) found that mid-career officers, that is, those with 6–15 years on the job, reported the most negative work experience, including the greatest level of stress, greater work alienation, greater psychological burnout, and the least job satisfaction. Chen (2009) also found a curvilinear relationship between tenure and stress, where officers with 11–20 years of job experience reported more overall stress compared with those with fewer or more years of service. Violanti and Aron (1995) found that police officers with 6–10 years of experience reported the highest levels of overall stress and organizational and operational stress compared to all other officers at different career stages. Officers with 21–25 years of service reported the lowest levels of stress on all three measures. Garcia et al. (2004) found that officers in the early (i.e., less than five years) and later stages (i.e., over 20 years) were least affected by organizational stressors, but were the most and least affected by operational stressors, respectively.

Officers with the most tenure (20 years or more), reported the least stress overall. Some researchers have offered explanations for the variations in perceived stress across career trajectories. For instance, earlier-career police officers may have a sense of enthusiasm and an idealistic view in the initial years of their careers, which might mask the effect of perceived stress (Violanti & Aron, 1995). As time passes, officers may then experience a “reality shock” when they realize the frustrations of the job. Midway into their careers, officers come to the realization that their job expectations are not being met and are frustrated with the bureaucratic administration and lack of support from the organization (Lauferweiler-Dwyer & Dwyer, 2000). However, as they move into later career stages, officers may be forced to develop advanced skills and better coping mechanisms, acquired over time through increased knowledge about and experience on the job (Gudjonsson & Adlam, 1985). For instance, research has found that years of experience in policing may have an influence on officers’ perceptions of their ability to cope with stressful situations (Anshel, Robertson & Caputi, 1997).

2.8.4. Type of Police Work and Stress

Though there are plenty of literature on stress in the law enforcement, very few researchers have conducted to show the difference between different missions of policing or that shows which police department (crime prevention, crime investigation, training) comparatively. Studies show that police officers who engage in crime prevention related activities such as use of force, direct criminal contact and foot patrols experience high level of stress (Kop & Euwema, 2001; Scott, Evans & Verma ,2009). Other researchers, for instance Kurtz (2008), reported that job requirements, making violent arrests, interactions with the public found to have a direct association with officer’s stress. Studies also show that patrol officers experience high level of stress because they usually witness death or injury of their fellow officers (Garcia et al., 2004).

Research by Manzoni & Eisner (2006) revealed that officers who perform duties related to conflict-prone police activities experience high level of stress in general.

Police officers working in special forces unit like Special Weapon and Tactics (SWAT) unit are reported to have a high level of stress (Garbarino et al., 2013; Corpas, 2018). Officers in this unit are assigned duties like responding to the most critical situations (terrorism, homicides, high profile crimes that endanger safety of citizens, high-speed pursuits) that entail specialized skills and equipment different from regular policing activities. Because such officer's takeover situations that regular police officers cannot handle, they experience higher level of stress (Corpas, 2018). Garbarino et al. (2013) further revealed that because special forces police officers perform subtle responsibilities, they are subject to mental health problems arising from high level of stress.

Other researches tried to investigate crime scene officers' experience of stress. Amongst these Gershon et al. (2002) and Pavšič (2016) reported that crime scene officers experience high level of stress than regular police officers because they encounter violent death regularly, handle collection, documentation, analysis and preservation of evidence from the crime scenes. For crime scene investigators, situations like long and irregular working hours, witnessing with human suffering, regular and sudden decision makings, and dirty and physically demanding situations at the crime scene are reported highly stressful (Sollie, Kop, & Euwema, 2017).

Elsewhere, it was reported that homicide investigators experience unique stress to other law enforcement officers because they regularly encounter with death and violence, relatives of victims, inconvenient criminal justice system, fatigues and frustration (Sewell, 1994). Garcia et al., 2004 also reported that detectives experience high level of stress because the nature of crime detection is subject to public criticism and intensive inquiry.

Police forensic experts are also found to have higher level of stress. For instance, study by James, Nordby & Bell (2009) showed that because police forensic experts are performing a very complex task that requires an extensive training and ongoing education, it is found to be highly stressful. Additionally, Becker & Dale (2003) found out that unique social, environmental and working circumstances of police forensic officers produce high levels of work stress.

In a nutshell, the above studies are independent studies on specific target groups that tried to show how different tasks or work types of the police experience stress. The findings in each case show that every task of police officer is stressful and studies that target comparing major tasks of police concerning stress are almost inexistent.

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2.8.5. Marital Status and Stress

Though the literature that focuses on the relationship between marital statuses is rare, those who have investigated such relationships suggest that marital status is found to be a relevant factor in police occupational stress. For instance, a study by Umaru and Olawale (2020) showed that married police officers reported the highest occupational stress compared to single police officers and other marital status categories. On the contrary, a study by Odedokun (2015) also revealed that married police personnel reported a lower level of stress than single personnel. In their study of over 1000 police personnel, Zhao, J. S., et al. (2003) reported a marginal effect of marital status on police stress. In contrast, the police work environment, work-family conflict, and individual coping mechanisms are the most significant predictors of police stress. Marital status is also found to moderate job stress and occupational burnout. A study by Ogungbamila and Fajemirokun (2016) revealed that married police personnel reported higher occupational burnout due to the existence of stress. Work and family interference were also found to be strong predictors of occupational stress among police personnel (He et al., 2005).

2.8.6. Personality and Police Stress

Certain personal dispositions have been associated with police officers and shown to influence perceived stress and wellbeing. Lawrence (1984) was one of the first to study the influence of personality factors on police officers' appraisals of stress in their work environment. In his study of 104 US-based police officers, he found that 61 percent of the variance in police stress was accounted for by personality factors. Higher stress levels were related to officers who were tense, expedient, threat-sensitive, and suspicious. He concluded that "police perception and response to job stressors are differential, explainable in large part by individual differences in personality" (p. 257). The Type A personality has frequently been associated with police officers (Evans, Coman, & Stanley, 1992). Individuals who display Type A behaviors are usually described as competitive, aggressive, intolerant, and easily irritated with others (Evans et al., 1992). However, it is unclear why police officers tend to exhibit this particular trait.

On the one hand, it is possible that Type A behaviors may be a reflection of recruitment and selection insofar as individuals who apply and succeed in being recruited also share related characteristics such as competitiveness and high achievement orientations (Collins & Gibbs, 2003; Evans et al., 1992). Alternately, the police culture in and of itself may positively encourage the development of these characteristics (Collins & Gibbs, 2003). It might even be argued that police officers develop these characteristics as a way of coping with the stressful aspects of their job (Evans et al., 1992). However, while acquiring these traits may facilitate officers remaining in the police service (Evans et al., 1992), research has shown that having a Type A personality can increase susceptibility to stress and have adverse consequences for police officers' health (Cooper, Kirkcaldy, & Brown, 1994; Richardsen, Burke, & Martinussen, 2006).

Researchers have also examined the role of other personality variables, including locus of control (Berg et al., 2005; Cooper et al., 1994), hardiness (Tang & Hammontree, 1992), and constructs of the five-factor model of personality (Berg et al., 2005; Brough, 2005; Hart & Cotton, 2002; Hart et al., 1995; Lau, Hem, Berg, Ekeberg & Torgersen, 2006; Ortega et al., 2007). These studies support the assertion that personal dispositions influence police officers' perceptions of job stress and their physical and psychological wellbeing. Considering locus of control, Berg et al. (2005) found that officers with an external locus of control reported more frequent exposure to a lack of social support, serious operational tasks, and work injuries. Officers with an external locus of control also perceived a lack of support more severely relative to those with an internal locus of control. Cooper et al. (1994) reported that the external locus of control was positively related to job stress and had an indirect (via job satisfaction) effect on psychosomatic health. Tang and Hammontree (1992) surveyed a small group of police officers in the US and found that hardiness may act as a buffer to reduce police officers' rates of absenteeism, but only when their level of stress is low. More recent research has converged on examining the role of the "Big Five" dimensions of personality, namely neuroticism, extraversion, agreeableness, conscientiousness, and openness, with a specific focus on the former two dimensions. That is, extraversion as a buffer to stress and neuroticism as exacerbating it. There is evidence to suggest that this is because these individuals' dispositions influence coping strategies, such that extraversion is related to more positive coping, whereas neuroticism is associated with more negative or emotion-focused strategies (Hart et al., 1995; Ortega et al., 2007; Wearing & Hart, 1996). In fact, it is suggested that personality characteristics, coping strategies, and situational variables operate along two independent subsystems, such that neuroticism, emotion-focused coping, and negative work experiences are correlated on the one

hand, while extraversion, problem-focused coping, and positive work experiences correlate on the other hand (Wearing & Hart, 1996).

Hart and colleagues (Hart & Cotton, 2002; Hart et al., 1994, 1995) in studying Australian police officers showed that neuroticism and extraversion were significant determinants of work experiences and wellbeing. Neuroticism strongly contributed to police officers' daily hassles and psychological distress, while extraversion was a contributor to positive experiences of the job (i.e., uplifts) and well-being. Other police studies have found support for the role of neuroticism and extraversion. For instance, Ortega et al. (2007) found that neuroticism was positively related to perceived sources of stress, specifically bureaucratic politics and interpersonal conflicts. Neuroticism was also positively associated with feeling tense, uptight, and exhausted, as well as cognitive confusion, and negatively associated with job satisfaction. Berg et al. (2005) found that Norwegian police officers with high scores on neuroticism traits appraised their work as more stressful than those with extroverted traits but experienced stressful events less frequently than other officers. Garbarino et al. (2013), in their study of Italian officers, reported that emotional stability (i.e., low neuroticism) was negatively associated with depression and anxiety, whereas extraversion (and agreeableness) was only related to anxiety.

Lau et al. (2006) studied police stress and personality types in Norwegian police officers. The researchers combined the three personality traits of neuroticism, conscientiousness, and extraversion to form eight unique personality typologies, each representing a different level of the three traits. They found that officers who had a combined personality typology with high neuroticism but low extraversion reported higher levels of perceived stress compared to the other types. Also, personality typologies representing high extraversion and low neuroticism had lower levels of perceived stress compared to the others. Cumulatively, these findings underline the

importance of personal dispositions in understanding police stress and the need for continued research in this area.

2.8.7. Conceptual Frame of the Research

Based on the research questions that this research aimed to answer and the evidence from the literature, the following conceptual frame work is developed.



Figure 2: Conceptual framework of the study

Chapter Summary

The literature review part provided a discussion of a number of topics, including the conceptualization of stress, an understanding of police stress, models of occupational stress, relationships between police stress and socio-demographic factors like gender, work experience, police rank, work type, and personality.

The police stress literature has primarily focused on identifying the primary sources of stress. Increasingly, stressors related to the organizational climate have emerged as the main source of stress for police officers relative to operational stressors, though this may vary across nations. Job characteristics within the police organization have also been strongly linked to poorer well-being outcomes. Though less assessed, individual differences are also likely to influence the stress-strain relationship, and their inclusion in multivariate stress models, as suggested by transactional theory, is likely to expand our understanding of police stress. Work-family conflict is also a growing area of police stress research but requires further exploration.

Most police occupational stress research is concentrated in developed countries, and few published studies have examined the experience of stress and its effects on police officers in less developed countries found in Asia and Africa, specifically in India and South Africa. It is always debatable whether findings can be extrapolated from one country to the next, and specifically, from more developed countries to less developed countries. With differences in culture, socio-economic contexts, crime levels and types, and firearm policies, care should be taken when making generalizations cross-nationally. Additional and more comprehensive research from other nations may help to determine how much can be generalized about work-related stress in policing as a whole.

In a nutshell, various gaps or aspects of police research that need further investigation have been noted in the literature. This study tried to add to the police stress literature by providing comprehensive approaches to understanding police organizational and operational stress and determinants of such stress in Ethiopia, which might be a big contribution to the literature from the developing countries side.

Chapter Three

3. Methodology

The purpose of this study was to investigate relationship some socio-demographic factors such as gender, work experience, police rank marital status and variables type of work and personality traits have with organizational and operational police stress, in Ethiopian Federal Police Commission (EFPC) members. This section contains the detailed presentation of the methodological approach used to achieve the stated aims.

3.1. Research Philosophy, Design and Approach

3.1.1. Research Philosophy

The term stress is commonly used in both academia and the scientific spheres to denote number of different processes that are related, but noticeably different. While stress refers to the actual life event or scenario, it is also used to refer to the cognitive, emotional, and biological responses to such events (Epel et al., 2018). Among frequently reported events that trigger stress, working environment is considered as a major one. According to the European Agency for Safety and Health at Work, (2002), Work-related stress or so-called occupational stress is experienced principally when the demands, challenges, and opportunities of the work environment outdo the workers' ability to deal with including a hostile working environment. While attempting to study and measure stress, it is expected to look for careful measurement of stress processes. To do so, sketching clear theoretical, philosophical and conceptual lens is essential.

Range of techniques have been used to measure emotions, cognitions, behaviors, and physiological responses instigated by the stressful stimuli. The most commonly used ways to measure stress are self-report measures, behavioral coding, and via physiological

measurements (Cohen et al., 2007; Crosswell & Lockwood, 2020). The mechanism of measuring stress in this research is chosen based on which type of stressor exposure is going to be measured (organizational and operational stressors in this case) what is most relevant to the study population (the police force), the specific relationship patters stated in the research questions, and the hypothesized mechanisms linking the determinants of stress (gender, experience, police rank, type of work and personality) to the outcome of interest (organizational and operational stress). As this study aims to investigate the type, direction and magnitude of relationship between variables (gender, work experience, police rank, type of work and personality, organizational and operational stress), it is based on the Positivist outlook.

From the Positivist stand point, reality exists, and can be known, independently of any personal view or interpretation (Creswell, 2009). Such personal interpretations are fundamentally objective and are deemed to be arrived at through inference and deductive logic. Positivism is preferred worldview for research, when a researcher aims to interpret the variables or observations in terms of facts or measurable entities. As the notion of this worldview is provision of explanations and to make predictions based on measurable outcomes, studies inclined towards this paradigm rely on deductive approach, formulation of hypotheses, testing those hypotheses, offering operational definitions and mathematical equations, calculations, extrapolations and expressions, to derive conclusions (Fadhel, 2002; Creswell, 2009, p. 7; Alise, & Teddlie, 2010; Kivunja & Kiwini, 2017). Positivist researchers therefor are expected to observe variations explaining relationships, identify causes which influence outcomes in a particular phenomenon they study, and be able to predict and generalize what they have found out by collecting verifiable empirical data (Cohen et al., 2007,

p. 8; Morgan, 2007; Creswell, 2009, p. 7; Scotland, 2012). Because of these assumptions, the Positivist view advocates the use of quantitative research approach as the foundation for researchers to be precise in the description of the parameters and coefficients in collected, analyzed and interpreted data.

3.1.2. Research Design

Research design is a structure used to guide the research project and reveals the refined elements of the techniques essential to structuring and solving the problems in order to get the expected confirmation (Malhotra, 2004). This research utilized a descriptive cross-sectional survey design, using quantitative approach to investigate the relationship between organizational and operational police stress and variables like gender, work experience, police rank, type of work (department) and personality traits, of Ethiopian Federal Police Commission members. Self-report questionnaires were used as the main tool to measure how gender, work experience, police rank, type of work (department) and personality traits are related to organizational and operational police stress in the case of Ethiopian Federal Police Commission.

This study used mix of descriptive cross-sectional survey and correlational study designs. If surveys are designed carefully, they can allow studying greater number of variables at a time (Lyon et al., 2017; Kleene, 2006). Surveys have been the dominant method for studying stress using large scale data (Carr & Umberson, 2013). In stress research, surveys with optimum sample size allow researchers to describe, explain and explore differences within subgroups considering specific differences in type, direction and degree of differences and relationships between various determinants of stress (George & Lynch, 2003). Most surveys in stress research are designed to study a wide range of topics and include health and

stress measures, and sociodemographic and economic characteristics that might have association with stress (Carr & Umberson, 2013). Researchers using survey data to study stress typically use multivariate statistical methods and models that reveal the type, direction and magnitude of relationship between stress and related factors, identify the joint effects of two co-occurring stressors (organizational and operational stressors in this study) and to compare the effect of a particular stressor on two or more different subgroups (gender, work experience, police rank, type of work/department and personality traits in this study) (Massoglia, 2008; Carr & Umberson, 2013). A correlational research design was also used because it is the best way to investigate the relationship between two or more variables, while a cross-sectional method was employed to study participants and collect data at the same time.

3.1.3. Research Approach

Quantitative study approach was used in this study. Quantitative research deals with numbers, statistics and facts, uses physical or statistical controls, holding a Positivist world view and often used in analyzing responses with a view to identify significant outcomes and ensure replicability through surveys and experiments (Guthrie, 2010; Graziano & Rauling; 2012; Rahi, 2017). Quantitative approaches are often used by analyzing responses with a view to identifying significant results as indicated in the objectives and research questions of a research (Lyon et al., 2017; Kleene, 2006). In this study, all variables (organizational and operational police stress, gender, work experience, police rank, type of work/department and personality traits) were measured quantitatively and their relationships were also assessed using quantitative ways.

Quantitative approach has several advantages. One of the big advantages of this approach is that the objectivity of the researcher will not be compromised and this, most

importantly can guarantee respondent anonymity (Litchman, 2006, p8; Creswell, 2009, p4). Additionally, it can allow replication to get similar results and the use of rigor data collection and analysis method makes generalization possible (Shank & Brown, 2007, p27), data can be collected and analyzed using compared application which can reduce error and save resource (Gorard, 2001, p3; Connolly, 2007, p2-34).

3.2. Population

The population for this study were the entire police officers in the Ethiopian Federal Police Commission, working in crime prevention and crime investigation sectors. According to Ethiopian Federal Police Commission Establishment Proclamation No. 720/2011, police officer means a member of the Ethiopian Federal Police Commission who has received basic training in the police profession and is employed by the Commission. Officers working in the five departments of the commission (also called sectors by the commission); crime prevention, crime investigation (Federal Bureau of Investigation), Ethiopian Police University, Human Resource and Technology Expansion and Health Directorate (the Police Referral Hospital) were unit of the population in this study.

According to proclamation No. 720/2011, EFPC was established with the aim of upholding and ensuring the peace and security of the public and the state by respecting and ensuring compliance with the Constitution, the constitutional order and other laws of the country and by engaging the public to prevent and investigate crime. The proclamation has listed forty duties to be carried out by the commission. The duties fall under four major categories crime prevention, crime investigation, training and education and other supporting tasks.

Under crime prevention and investigation, the Commission is responsible to safeguard

institutions of the federal government prevent and investigate any threat and acts of crime against the Constitution and the constitutional order, security of the government and the state and human rights, work in collaboration with the Ministry of Justice and other relevant organs with respect to crime investigation, maintain peace and security in the case of emergency situations due to the occurrence of natural or man-made disasters, prevent and investigate crimes falling under the jurisdiction of federal courts, prevent and investigate crimes relating to counterfeiting currencies and payment instruments, investigate crimes relating to information network and computer system, prevent and investigate crimes relating to human trafficking, abduction, trafficking in narcotic and psychotropic substances, hijacking of aircraft or ship, organized robbery, terrorism and violence, prevent criminal offences relating to the violation of customs and tax laws, investigate crimes committed in foreign countries against the interests of the country based on mutual agreements entered into between the states, conduct forensic investigation and submit its findings and provide expert witness to court or the requesting organ, stop and search vehicles and pedestrians found in the suspected area; arrest suspects and seize materials and carry out investigation. The police officers are categorically expected to be assigned and work in these activities.

Under tasks related to education and training the Commission is responsible for tasks like issuing national standards on police recruitment and employment, education and training, ranks, wearing of uniform, equipment and other related matters, establishing police training centers, facilitating domestic and foreign continuing education and training for police officers, conducting and implementing studies that may contribute to the proper accomplishment of its mission improving the professional competence and services of the Police, providing educational, services and training, technical and advisory support to regional police

commissions with emphasis on regions that need affirmative support.

Other tasks carried out by the Commission are, executing orders and decisions given by courts, providing security protection to higher officials of the federal government and dignitaries and diplomats of foreign countries and working in collaboration with the concerned government organs, charities and associations in providing assistance to victims during emergencies, centrally organizing and keeping criminal records of individuals, issuing certificates to individuals with no criminal record, collecting, analyzing and disseminating to the concerned organs country wide information on causes of crimes and traffic accidents, issuing permits for firearms possession, use, import, sale and repair of weapons and explosives and controlling their movement; destroying any weapon or explosive which should be eliminated, issuing certificates of competence to private institutions wishing to engage in providing security service, exercising the powers and duties given to the Federal Police by the provisions of other laws, entered into contracts to own property, sue and be sued in its own name.

3.3. Samples and Sampling Method

Currently there are estimated 35,000 members in EFPC. This number is an estimate because the exact figure of police force is a classified matter due to security reasons. Particularly during conflicts and wars, where the number of armies is directly affected by death and injury, it is difficult to get definite number. Since the researcher is an active employee of EFPC, there are considerations made in estimating the number. From the five sectors of the population, around 70% of the human resource belongs to the crime prevention sector, which shows that majority of the tasks of EFPC, is related to preventing crimes before they happen. Crime investigation sector and education and training sector take estimated 10% share each.

Human resource development sectors' estimated proportion is 7%, while the health sector has estimated proportion of 3%.

This study employed quantitative methods and quantitative studies usually involve larger number of participants, allowing a higher degree of generalizability of the results. Probability sampling was employed in this research. Probability sampling is the type of sampling that makes every individual in the population equally likely to be a subject (Creswell, 2003).

Stratified sampling method was used in this study, where stratified random sampling and simple random sampling are used as two sampling methods within the multistage sampling techniques. First, the police officers were stratified by their respective work unit (sector). There are 5 work units in EFPC namely crime prevention, crime investigation also called Federal Bureau of Investigation, Police University (the education and training sector), human resource development and health directorate. Among these five sectors, the two main operational sectors, namely crime prevention and crime investigation sectors were selected, because one of the dependent variables, which is operational stress, applies only for crime prevention and crime investigation activities. Simple random sampling was employed to select police officers as samples from the two work units (stratum).

Specifically, disproportionate stratified sampling was used in this study. According to Daniel (2012, p 133-136), disproportionate stratified sampling is a stratified sampling procedure in which the number of elements sampled from each stratum is not proportional to their representation in the total population. Disproportionate stratified random samples are also selected if some strata are too small or too large or if additional variability is suspected within a certain stratum. More specifically the researcher used disproportionate allocation for

between-strata analyses. This specific type of disproportionate sampling is useful for studies seeking to compare strata to each other. For such a study, equal allocation also stated to as balanced allocation or factorial sampling may be appropriate (Lavrakas, 2008; Arnab, 2017). Hence based on the formula forwarded by Krejcie & Morgan (1970), the sample size to be selected was 380.

$$s = \frac{X^2 NP(1 - P)}{d^2 (N - 1) + X^2 P (1 - P)}$$

s = Required sample size.

X^2 = The table value of chi-square for degree of freedom at the desired confidence level

N = The population size

P = The population proportion

d = The degree of accuracy expressed as proportion (0.05).

The researcher planned to equally distribute the number of samples between the sectors. However, during the data collection the estimated number of active crime investigations officers was around 120 (this figure might not be exact figure as most of the things in relation to human resource are classified), therefor 120 questionnaires were distributed in the crime investigation sector and 300 questionnaires were distributed to crime preventions officers. Meaning, total of 420 questionnaires were distributed. The questionnaires were self-administered ones, while the questionnaires were distributed and collected on the spot. The enumerators have assisted those who had difficulties in understanding Amharic and those who have difficulties in understanding the psychological terminologies and expressions.

3.4. Instruments

The survey instrument that was used had four parts, 1) the basic socio-demographic variables that are considered as determinants in this research, 2) Neo-Five Factor Personality Inventory (NEO-FFI) 3) Police Organizational Stress Questionnaire (PSQ-org) and Police Operational Stress Questionnaire (PSQ-op) and 4)

Demographic Variables

The demographic variables were used to collect basic information about the police officers and were used to see their relationship with police stress as indicated on the conceptual description of this study. Gender, age, rank, work experience and department (type of work) were the variables used here. These variables are commonly used in most studies on police stress (Violanti & Aron, 1995).

Gender: This refers to female or male police officers and was measured by nominal scale. The relationship gender of the police officers has with organizational and operational police stress was examined.

Police Rank: Rank refers to the positions that the participant police officers assume. Constables are those ordinary members who do not have any police rank while the starting rank is assistant sergeant and the maximum possible police rank is commissioner general. Police rank was measured on ordinal scale, 0 being constable and 17 being assigned for Commissioner General.

Work Experience: this is the number of years that the police officers worked in EFPC. It was measured on interval scale.

Marital Status: this is whether the personnel is not married, married, divorced, widowed, or separated. It was measured on nominal scale.

Type of work/ Department: department refers to the type of work that the officers are assigned in. Crime prevention, crime investigation, education and training, human resource development and health sector are the available department police officers are assigned to. Only crime investigation and crime prevention departments were considered in this study. It was measured on nominal scale.

Personality Measure

Police personality was measured using the Revised NEO Personality Inventory so called NEO Five-Factor Inventory (NEO-FFI). NEO-FFI is a psychological personality inventory developed by Costa and McCrae (1989). The 60-item NEO-FFI was developed to provide a concise measure of the five basic personality factors: neuroticism, extraversion, openness to experience, agreeableness and conscientiousness using self-report. The 60 items in the inventory are equally divided for the five major personality traits, meaning each trait is measured using 12 items. In the original measure, items 1, 6, 11, 16, 21, 26, 31, 36, 41, 46, 51, 56 measure neuroticism, items 2, 7, 12, 17, 22, 27, 32, 37, 42, 47, 52, 57 measure extraversion, items 4, 9, 14, 19, 24, 29, 34, 39, 44, 49, 54, 59 measure agreeableness, items 3, 8, 13, 18, 23, 28, 33, 38, 43, 48, 53, 58, measure openness whereas items 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60 measure conscientiousness. Reverse scoring items are 1, 3, 8, 9, 12, 14, 15, 16, 18, 23, 24, 27, 29, 30, 31, 33, 38, 39, 42, 44, 45, 46, 48, 54, 55, 57 and 59. However, after validation only 40 items were retained and there were 9 items for neuroticism, 6 items for extroversion, 8 items for openness to experience, 9 items for agreeableness, and 8 items conscientiousness (details are presented on the validation part, see section 4.1.4). For the main study, nine items (items 4, 9, 12, 15, 20, 22, 30, 33, 37) measured neuroticism, six items (items 1, 5, 16, 23, 34, 38) measured extroversion, eight items (items 6, 10, 17, 24, 26, 29, 35, 39) measured openness to experience, nine items (items 2,

7, 11, 13,18,21,27,31,40) measured agreeableness and eight items (items 3,8,14,19,25,28,32,36) measured conscientiousness.

NEO-FFI is rated using a five-point Likert scale; strongly disagree, disagree, neutral, agree and strongly agree, while the highest score means the individual has a high level of that specific trait. Its reliability is uniformly high, ranging from 0.86 to 0.90 for the five scales (Robins, Fraley, Roberts, & Trzesniewski, 2001), while the internal consistency of NEO-FFI ranges from 0.68 to 0.86 (Costa & McCrae, 1992). It is one of the most powerful and widely studied models used to investigate personality these days (De Raad & Mlacic, 2015; McCrae, 2011). Many academicians, psychologists and researchers have widely accepted and use it commonly, since it is the basic personality test that has been used for over 20 years with a high validity and reliability coefficient.

NEO FFI was used to measure personality of police officers in relation occupational stress previously. For example, Khizar (2017) used this inventory to assess the relation between police personality, police stress and job satisfaction of Pakistan Police for his PhD dissertation. Additionally, Petasis & Economides (2020) used this inventory to assess how big five personality impacts occupational stress and job satisfaction of Cyprus police.

Table 1: Reliability of NEO-FFI

	Joshi & Thingujam (2009)	Sherry, et al., (2019)	Rabadi & Rabadi (2021)	Pilot	Validation	Main
Neuroticism	.61	.79	.77	.79	.712	.687
Extroversion	.63	.79	.73	.73	.726	.659
Agreeableness	.51	.75	.81	.71	.659	.509
Openness	.49	.80	.74	.72	.711	.721
Conscientiousness	.71	.83	.76	.64	.790	.858

Police Stress Questionnaire

Organizational Police Stress Questionnaire (PSQ-Org) and Operational Police Stress Questionnaire (PSQ-Op) are developed by McCreary and Thompson (2006). The tools were developed after four consecutive studies on the Canadian Police, where the officers categorized in their response stressors into operational and organizational stressors. The original PSQ-Op was found to be highly reliable (alphas $> .90$; corrected item-total correlations between .40 and .60) and positively correlated ($r = .50$ or less) with the other general stress measures whereas the PSQ-Org was found to be reliable and demonstrated higher construct validity (correlations between perceived stress and frequency), discriminant validity (compared with general life stressors), and concurrent validity (compared with job satisfaction measures) with reliability of .89 Cronbach alpha score. There are 20 items in each of the scales to be scored on 7-point Likert scale where 1 is scored as no stress at all and 7 is scored as a lot of stress. The scales can be used either separately or together. After the validation, all the 20 items from the PSQ-Org and 18 items from the PSQ-Op were retained for this study.

Police stress questionnaire not only measures police stress, but also psychometrically measures stresses associated with policing. The organizational police stress questionnaire (PSQ-Org) relates to organizational stress factors such as lack of resources, behavior of supervisors, and lack of training and changes in laws and legislation. The operational police stress questionnaire (PSQ-Op) is associated with actual police operation related activities such as shift work, paper work, feelings about the job and traumatic events. The PSQ op-org is considered as most suitable tool to measure police officers' level of and organizational and operational stress by many researchers.

Police Stress Questionnaire was previously used in various studies, both academic

dissertations and journal articles. To mention some: Summerlin et al. (2010) studied disparate levels of stress in police and correctional officers, Trombka, et al. (2018) studied, protocol of a multicenter randomized controlled trial of mindfulness training to reduce burnout and promote quality of life in police officers, Maran et al. (2015) studied occupational stress, anxiety and coping strategies in police officers and Bergman et al. (2016) studied changes in facets of mindfulness predict stress and anger outcomes for police officers using PSQ. Additionally, Khizar (2017) used this inventory to assess the relation between police personality, police stress and job satisfaction of Pakistan Police for his PhD dissertation, Petasis & Economides (2020) used PSQ to assess how big five personality impacts occupational stress and job satisfaction of Cyprus Police and Sedat (2011) used PSQ for his study on occupational stress and wellbeing of Turkish National Police for his PhD dissertation.

This study used PSQ because it was specially designed for police officers rather than using other occupational stress questionnaires that measure general stresses and are applicable to different jobs. PSQ is found to have a very high reliability in different settings concerning police stress study.

Table 2: *Reliability of PSQ*

	Pilot	Original	Validation	Main
PSQ-Org	.83	.89	.839	.834
PSQ-Op	.90	.92	.855	.845

Table 3: Reliability and normality measures of the extracted scales

Scale	No of items	Cronbach's α	Skewness	Kurtosis	Normality (Shapiro-Wilk)	
					Statistics (df=400)	Sig.
Neuroticism	9	.687	.373	-.246	.981	.000
Extroversion	6	.659	-.811	.977	.951	.000
Openness	8	.509	.430	.715	.974	.000
Agreeableness	9	.721	.389	-.267	.980	.000
Conscientiousness	8	.858	-.289	.696	.964	.000
PSQ-Org	20	.834	.339	-.488	.969	.000
PSQ-Op	18	.845	.430	.715	.969	.000

The internal consistency of the extracted NOE-FFI and PSQ scales were tested alongside with the assumptions of normality. The Cronbach alpha for every scale is found to be acceptable. As it can be seen from the above table, all the five personality traits Cronbach alpha is found to very good, except for openness scale which scored Cronbach's alpha of .509. The Cronbach's alpha for scales in PSQ is found to be greater than $\alpha > .80$, (PSQ-Org $\alpha = .834$; PSQ-Op $\alpha = .845$).

3.5. Data Collection Procedure

The English version of the questionnaire was translated into Amharic language before the actual data collection for the pilot study. The questionnaire was given to two fellow psychologists, whose mother tongue is Amharic. Then the translated Amharic version was given to another fellow PhD candidate for back translation. After both sides of the translations were completed, the psychologists who translated the tools and the researcher had a panel session to discuss on the differences on the way the scales were translated. The discussion was done on

item-by-item basis and the finally agreed Amharic version of the questionnaire was duplicated for the pilot study. Self-report questionnaire of the Amharic items was used primarily to collect data for this study. In occupational stress research, self-report methods, specifically questionnaires have been the primary means of collecting data about participants' personal and environmental characteristics, responses to their environment and about their mental and physical health status (Razavi, 2001). Self-reports are one of the most efficient ways of defining the subjective experiences of research participants. They are relatively quick and easy to administer and are less expensive compared to other methods.

After getting a letter from AAU, School of Psychology, the researcher communicated the Commissionaire General's office for further report. A memo was written to crime investigation and crime investigation sectors for cooperation. As it was difficult to get the full name list of the members in the two sectors due to security reasons, I was given the identity number (usually called FP number), that is basically given for every officer. I have requested the list to be arranged based on rank or years of service, so that it can be suitable for sampling process. I have requested lists of officers that are working only in Addis Ababa and Finife Areas Liyu zone (towns around Addis Ababa).

As the EFPC's head office is located in Addis Ababa, most of the departments and sectors are also stationed in Addis. The crime prevention sector's command station is located at the head office of the Commission, while the other directorates are also stationed at different parts of the city. Because of the current recurring wars and conflicts in the country, considerable number of police crime prevention officers are engaging in the war and preventing conflicts in different parts of the country, yet many crime prevention officers are found in Addis Ababa engaging in crime prevention activities, VIP protection, diplomatic protection and in institutional

safeguarding. Crime prevention police officers in Addis Ababa and surrounding towns were included in the sample as traveling to conflict area is not affordable at least at this stage. The crime investigation sector (Bureau of Crime Investigation), is also located at Addis Ababa.

After the list was obtained, SPSS random number generator was used to select participants. The commission arranged the data collection process, while the researcher deployed four assistant researchers, who are active members of EFPC and who have Masters of Arts degree in Psychology for the data collection. A half day data collection procedure training was provided for the enumerators by the researcher. In addition, the researcher himself participated in the data collection process.

For crime investigation sector, the data collection was relatively not challenging as most of the crime investigation officers and leaders are found in one compound (office). However, finding officers for crime prevention was challenging as they are divided in to various departments and the departments are scattered throughout the city. Throughout the data collection, at the times when the selected participant was not found due to different reasons, personnel with similar characteristics with the initially selected sample were made to fill the questionnaire.

The piloted questionnaires were validated on 354 participants. The data collection for the main study took place after the validation is presented and approved by board on assigned examiners from the School of Psychology. The findings of the validation report are presented in the result section (see section 4.1).

3.6. Data Analysis Methods

Frequency tables from scores of the study variables using number of observations and percentages were used to describe the demographic characteristics and intensity of organizational

and operational police stress. T-test was used to assess the differences between the genders and departments on their level of organizational and operational stress. To assess the difference among the police ranks on their level of stress and ANOVA was used, while Tukey's HSD post hoc test was employed to see which groups significantly differ. Pearson's Product Moment correlation coefficient was used to see the association between demographic characteristics specifically age and work experience as well as the personality traits with police organizational and operational stress. Multiple linear regression analysis was used to examine the predictive power of the explanatory variables, specifically the personality traits. Partial Eta Squared was used to estimate effect size in this study. Literature suggests that partial eta squared is more appropriate effect size estimator for one way ANOVA. Partial eta squared indicates how large of an effect the factors is on the dependent variable (Levine & Hullett, 2002). Cohen (1988), suggested that conventionaly eta squared less than .01 is negligible, at .06 small, at .14 medium and eta squared greater than .14 is regarded as large effect.

3.7. Pilot study

As part of the validation process, a pilot study is an initial and very relevant step of a research protocol and used for planning and modification of the main study (Arnold et al., 2009). In large-scale studies, pilot studies are often used to test reliability and validity and are believed to lead to quality outcomes. Analyzing feasibility of a given study prior to performing the main study can be very beneficial for this purpose (Thabane et al, 2010). The instruments that are used in this study, namely Neo Five Factor Inventory (NEO-FFI), Organizational Police Stress Questionnaire (PSQ-Org) and Operational Police Stress Questionnaire (PSQ-Op) are used in many studies and have well established psychometric properties. The instruments are chosen for

this study because they are reported to have a commendable validity and reliability in multicultural settings.

One of the things to be checked in the pilot study is whether the instruments are valid. According to Leary (2004) and Nunnally and Bernstein (1994) the two major validity measures that are recommended to be used at piloting phase in behavioral sciences are content validity and construct validity. Content validity, also referred to as logical validity and definition validity (Newman, Lim & Pineda, 2013), is used to check if the selected items can reflect the variables of the construct in the measure. It addresses the extent to which items of an instrument sufficiently represent the content domain. Additionally, it answers the question that to what extent the instrument items are a comprehensive sample of the content (Rubio et al., 2003; Polit & Beck, 2003; Creswell, 2005).

Content validity usually depends on the judgment of experts in the field. The unclear and obscure questions can be amended, and the ineffective and nonfunctioning questions can be discarded by the advice of the reviewers (Thatcher, 2010). Experts suggest that one should pass through series of procedures to effectively evaluate content validity. For instance, Crocker and Algina (2010) suggest that researchers must first identify and outline the domain of interest then gather resident domain experts, develop consistent matching methodology, and finally analyze results from the matching task.

Based on the above explained logic, the researcher distributed the original English version and translated Amharic version of the tools with the revised proposal among three senior police officers and two senior psychologists. One of the senior police officer is a PhD candidate in Peace and Security Studies with law and policing background, the other senior police officers is also a PhD candidate in Human Rights with law and policing background while the third

senior police officer is a currently retired officer with law, policing, management background. Additionally, the instruments were handed to two senior psychologists, one is highly experienced in psychotherapy, training and personality assessment and the other is also a highly experienced professional who has a PhD in education with counseling psychology background. The feedbacks of the experts on the general look, design, content, language and applicability of the tools were seriously considered. One of the major issues raised by the senior police officers was the applicability of the PSQ-Op to other sectors of the commission rather than Crime Prevention and Crime Investigation sectors of EFPC, since the items were entirely designed to measure operational activities. There were also feedbacks on the language usage and editorial issues which were addressed by the researcher.

In order to check the reliability of the tools, a pilot study was conducted on 50 police officers. An opportunistic sampling technique was used to select the participants for the pilot study. In opportunistic sampling technique, individuals are selected as sample on the basis of their availability because they are easy to access (Creswell, 2003). The questionnaires were distributed to 50 police officers who were attending an orientation for an upcoming mission. Three of the questionnaires were discarded due to incomplete responses and the 47 were analyzed. Reliability, specifically internal consistency of instruments was checked using Cronbach's alpha. Higher Cronbach's alpha coefficient values demonstrate that the items in the construct have high reliability. Cronbach's alphas of 0.7, 0.8 and 0.9 are recommended to conduct a basic issue-based study (Nunnally, 1978), while the minimum satisfactory level of Cronbach's alpha coefficient is suggested to be 0.6 for any construct to retain a standard reliability (Hair et al., 2010).

In the pilot study, the Cronbach's alpha of NOE-FFI for the 60 items is found to be .76, while for the specific scales Cronbach's alpha for Neuroticism was .79, for Extroversion .73, for Agreeableness .71, for Openness .72 and for Conscientiousness .64. For Police Stress Questionnaire, Cronbach's alpha for PSQ-Org was .83 and for PSQ-Op it was .90. Comparison of the Cronbach's alpha of the instruments and scales used with established psychometric properties are presented in table 1 and table 2 of this paper.

3.8. Validation Method

3.8.1. Questionnaires

The questionnaire used had three parts. The first part asked about the basic socio-demographic variables, which are gender, age, police rank, work experience, and department. The second part contains 20 items that are designed to measure organizational stress (PSQ-Org), and another 20 items that assess police operational stress (PSQ-Op), whereas the third part contains Revised NEO Personality Inventory so called NEO Five-Factor Inventory (NEO-FFI). A self-report questionnaire in the Amharic version of the questionnaire is used to collect data for the validation study. During the data collection, the officers were asked for their verbal consent to participate in the study, and the researchers explained the purpose of the study and related ethical issues in addition to what was written on the questionnaire. The data was collected from Ethiopian Federal Police officers working in Addis Ababa, the capital of Ethiopia, and peripheral towns around Addis Ababa.

3.8.2. Data Reduction

Statistical Package for Social Sciences (IBM SPSS) version 26 was used for the data reduction in this study. In order to identify the factor structures of Organizational and Operational Police Stress Questionnaires, Exploratory Factor Analysis (EFA) was used.

According to Nunnally, Bernstein, and Berge (1967), EFA is applied to test a scale and determine the main constructs and dimensions of a particular scale. Additionally, EFA can be used to discover complex patterns by exploring the dataset, testing predictions, and discovering the number of factors influencing variables (Child, 2006; DeCoster, 1998). EFA was chosen because PSQ was not used in the Ethiopian situation (to the best knowledge of the researchers) and the researchers wanted to explore the factor structure of the questionnaire in the current setting.

To determine the number of factors to be extracted, Parallel Analysis was run using IBM SPSS version 26, utilizing the rawpar.sps script developed by O'Connor (2000), which is available at <https://oconnor-psych.ok.ubc.ca/nfactors/nfactors.html>. Statistical Package for Social Sciences (IBM SPSS) version 26 was used to analyze the data in this study. In order to identify the factor structures of Organizational and Operational Police Stress Questionnaires, Exploratory factor analysis (EFA) was used. According to Nunnally, Bernstein, and Berge (1967), an exploratory factor analysis is applied to test a scale and determine the main constructs and dimensions of a particular scale. Additionally, EFA can be used to discover complex patterns by exploring the dataset, testing predictions, and discovering the number of factors influencing variables (Child, 2006; DeCoster, 1998). EFA was chosen because PSQ was not used in the Ethiopian situation (to the best knowledge of the researcher) and the researchers wanted to explore the factor structure of the questionnaire in the current setting. Parallel Analysis, which has been widely used in recent years, is an approach used to determine the number of factors in addition to the traditional methods like eigenvalues greater than 1 (commonly referred to as the Kaiser-Guttman rule) and examining the scree plot. Numerous studies have revealed that Parallel Analysis gives good results (Wang, 2002; Reilly & Eaves, 2000; Velicer, Eaton, & Fava, 2000). Additionally, Montanelli and Humphreys (1976) and Humphreys and Ilgen (1969) found that the

Parallel Analysis method is effective in determining the number of factors. In the present study, after the number of factors was first determined by this method, EFA was performed. EFA was run following Principal Axis Factoring extraction with Direct Oblimin rotation. According to Yong & Pearce (2013), Oblimin rotation can be used if there is theoretical evidence that claims the factors are correlated. Because it is theoretically expected that organizational and operational stressors are correlated, Oblimin rotation was used.

According to Tabachnick & Fidell (2007), factor loading needs to be at least .32 for a 300 and larger sample size to be statistically meaningful at alpha .01. However, they suggest that the choice of cut-off may depend on the simplicity of interpretation and how complex variables are handled. In this validation, items that have factor loading greater than .32 have been retained for PSQ-Org, PSQ-Op and NEO-FFI.

Research Ethics

This study was methodically and ethically approved by the Addis Ababa University School of Psychology Research Ethics Committee. A self-report questionnaire in the Amharic version of the questionnaire is used to collect data for this study. During the data collection, the officers were asked for their verbal consent to participate in the study, and the researchers explained the purpose of the study and related ethical issues in addition to what was written on the questionnaire.

Chapter Four

4. Results

This chapter presents answers to the main research questions using the collected data. There are two parts of the finding. In the first part findings of the validation study are presented. On the second part of this section, demographic characteristics and the intensity of the stress types is presented. Additionally, the difference between the studied demographic characteristics on the organizational and operational stress levels is discussed. Finally, the relationship among demographic characteristics and police stress; and the relationship among personality traits (neuroticism, extraversion, openness, agreeableness, conscientiousness) and stress is presented.

4.1. Findings of the Validation Study

A total of 354 police officers from the Ethiopian Federal Police Commission participated in the validation study. They were selected using systematic random sampling. Among the participants, 277 (78.2%) were males and 77 (21.8%) were females. The mean age of the participants was found to be 36.29 years ($SD = 7.88$), and the mean service years of the participants was found to be 15.51 years ($SD = 7.43$). Regarding work type or police department, 221 (62.4%) participants were from the crime prevention department, which is the majority, while the remaining 133 (37.6%) were from the crime investigation sector/department. Rank-wise, 124 (35.0%) of the participants were low-rank officers (Assistant Sergeant up to Chief Sergeant), 112 (31.6%) were middle-ranked officers (Assistant Inspectors up to Inspectors), 69 (19.5%) were higher-ranked officers (Chief Inspectors up to Commanders), and 49 (13.8%) were officers with no rank (Constables).

4.1.1. Descriptive Statistics and Reliability

The mean values of PSQ-Org and PSQ-Op of the Ethiopian Federal Police are found to be 4.51 (SD = 2.13) and 4.14 (SD = 2.19), respectively. This shows that Ethiopian Federal Police Officers reported a high level of organizational and operational stress. As shown in tables 1 and 2, both PSQ-Org and PSQ-Op have strong internal consistencies considering the dropping of individual items. The Kolmogorov-Smirnov test showed that the data for both questionnaires were not normally distributed. It is also observed that most of the items in the questionnaires are negatively skewed, revealing that most participants rated the items higher.

Table 4: Descriptive and reliability statistics of the PSQ-Org

Items	Mean	SD	Skew.	Kurt.	K-S	Cronbach's α if item dropped
Inconsistent leadership style	5.42	1.93	-0.89	-0.43	.299	.832
Lack of resources	5.40	1.94	-0.82	-0.59	.315	.830
The feeling that different rules apply to different people (e.g. favoritism)	5.36	1.98	-0.83	-0.55	.307	.831
Bureaucratic red tape	5.36	2.00	-0.90	-0.44	.297	.830
Unequal sharing of work responsibilities	5.24	2.01	-0.78	-0.56	.290	.832
Staff shortages	5.12	2.06	-0.69	-0.78	.268	.829
Constant changes in policy / legislation	5.09	2.17	-0.70	-0.92	.274	.832
Lack of training on new equipment	4.92	2.02	-0.61	-0.73	.201	.831
Inadequate equipment	4.64	2.27	-0.37	-1.29	.246	.830
Leaders over-emphasize the negatives (e.g. supervisor evaluations, public complaints)	4.45	2.35	-0.35	-1.37	.197	.832
Excessive administrative duties	4.33	2.21	-0.19	-1.25	.183	.832
Dealing with supervisors	4.18	2.29	-0.17	-1.38	.174	.831
Feeling like you always have to prove yourself to the organization	4.14	2.16	-0.03	-1.21	.165	.835
Perceived pressure to volunteer free time	3.92	2.18	0.02	-1.21	.170	.833
Too much computer work	3.84	2.13	-0.06	-1.27	.181	.836
The need to be accountable for doing your job	3.81	2.37	0.11	-1.49	.204	.835
Internal investigations	3.72	2.23	0.06	-1.37	.211	.834
Dealing the court system	3.60	2.21	0.19	-1.31	.199	.830
Dealing with co-workers	3.17	2.17	0.54	-1.04	.228	.841

Internal Consistency. The internal consistency of the PSQ-Org and PSQ-Op was assessed using Cronbach's alpha. The reliability of the Ethiopian version of the 20-item PSQ-Org was found to be .841 (Mean = 4.53, SD = 2.14). On the other hand, the reliability of the Ethiopian version of the 20-item PSQ-Op was found to be Cronbach's alpha .855 (Mean = 4.11, SD = 2.19). The reliability indices for both PSQ-Org and PSQ-Op did not show significant changes even when the individual items were dropped. Very high reliability indices were also recorded for both questionnaires. The Cronbach's alpha of PSQ-Org ranges from .829 to .841, while for PSQ-Op, the indices range from .844 to .859 when individual items are dropped.

Table 5: Descriptive and reliability statistics of the PSQ-Op

Items	Mean	SD	Skew.	Kurt.	K-S	Cronbach's α if item dropped
Traumatic events (e.g. MVA, domestics, death, injury)	5.45	2.04	-1.07	-0.17	.310	.847
Not enough time available to spend with friends and family	4.85	2.02	-0.45	-0.93	.226	.850
Managing your social life outside of work	4.71	2.14	-0.42	-1.09	.205	.847
Occupation-related health issues (e.g. back pain)	4.70	2.26	-0.44	-1.23	.235	.845
Negative comments from the public	4.69	2.16	-0.46	-1.01	.218	.849
Risk of being injured on the job	4.65	2.33	-0.43	-1.32	.233	.853
Friends / family feel the effects of the stigma associated with your job	4.60	2.08	-0.27	-1.13	.198	.859
Lack of understanding from family and friends about your work	4.54	2.27	-0.33	-1.31	.217	.849
Upholding a "higher image" in public	4.49	2.23	-0.38	-1.20	.180	.848
Eating healthy at work	4.14	2.36	-0.10	-1.51	.173	.849
Working alone at night	3.94	2.20	0.03	-1.26	.163	.851
Over-time demands	3.88	2.26	0.00	-1.39	.189	.851
Limitations to your social life (e.g. who your friends are, where you socialize)	3.54	2.21	0.24	-1.25	.211	.849
Making friends outside the job	3.49	2.27	0.29	-1.32	.222	.844
Feeling like you are always on the job	3.47	2.09	0.22	-1.15	.201	.846
Work related activities on days off (e.g. court, community events)	3.44	2.33	0.30	-1.44	.242	.849
Paperwork	3.29	2.18	0.42	-1.13	.229	.847
Shift work	2.66	2.06	0.91	-0.51	.298	.851

4.1.2. Factor Structure of the PSQ

To determine the number of factors using Parallel Analysis, the eigenvalues of the actual data are compared to those of the simulative data (Horn, 1965). According to Ledesma & Mora (2007), and Franklin et al., (1995), the number of factors at the point where the eigenvalue in the simulative data is greater than that of the actual data is considered significant, and factors whose eigenvalue in the raw data is higher than that of eigenvalue of the simulative data are considered. As indicated in table 6, the eigenvalues of the actual data for PSQ-Org are found to be greater than the eigenvalues of the simulative data on four factors, while the eigenvalues of the actual data for PSQ-Op are found to be greater than the eigenvalues of the simulative data on three factors. Based on the results, only four factors for PSQ-Org and three factors for PSQ-Op were retained for further analysis.

Table 6: Parallel Analysis results of the PSQ-Org and PSQ-Op

Factors	PSQ-Org		Factors	PSQ-Op	
	Eigen values of the actual data	Eigen values of the simulative data		Eigen values of the actual data	Eigen values of the simulative data
1	5.069	1.528	1	5.479	1.519
2	2.294	1.416	2	2.462	1.423
3	1.523	1.351	3	1.532	1.350
4	1.287	1.287	4	1.137	1.292
5	1.138	1.240	5	1.068	1.242
6	1.033	1.194			

Based on the number of factors suggested from the Parallel Analysis, EFA was run using Principal Axis Factoring with Direct Oblimin rotation. There are basic assumptions that must be checked before conducting EFA. The first assumption to run EFA is related to Bartlett's test of Sphericity (measure of correlation among variables) and Kaiser-Meyer-Olkin's (KMO) measure

of sampling adequacy (MSA), which were tested. To run EFA, it is generally expected for KMO to be greater than .5 (between .5 and 1) and Bartlett's test of Sphericity to be less than .005.

Accordingly, KMO for PSQ-Org and PSQ-Op is found to be .778 and .809 respectively, with Bartlett's test of Sphericity less than .001 for both measures, which fulfill the assumptions to run EFA. Additionally, linearity, multicollinearity, normality, homoscedasticity, and other features of the measure were examined. Items that have factor loading of .32 or above are retained. In all cases, the data fulfilled the assumptions needed to run EFA.

Table 7: Factor structure of the PSQ-Org

Extracted Factors	Factor Loading				Communalities
	1	2	3	4	
Lack of resource and bureaucracy					
Bureaucratic red tape	.700				.532
Inadequate equipment	.609				.411
The feeling that different rules apply to different people (e.g. favoritism)	.545				.420
Lack of training on new equipment	.454				.294
Lack of resources	.416				.303
Dealing with supervisors and workload					
The need to be accountable for doing your job		.670			.473
Dealing with co-workers		.533			.322
Dealing with supervisors		.512			.345
Too much computer work		.508			.269
Excessive administrative duties		.486			.352
Perceived pressure to volunteer free time		.442			.283
Feeling like you always have to prove yourself to the organization		.406			.255
Internal investigation and evaluation					
Leaders over-emphasize the negatives (e.g. supervisor evaluations, public complaints)			-.815		.706
Internal investigations			-.477		.333
Dealing with the court system			-.423		.336
If you are sick or injured your co-workers seem to look down on you			-.374		.322

Extracted Factors	Factor Loading				Communalities
Leadership and Policy					
Inconsistent leadership style				.743	.597
Unequal sharing of work responsibilities				.708	.602
Staff shortages				.634	.496
Constant changes in policy/legislation				.397	.381
Eigenvalue	5.07	2.29	1.52	1.28	
% of Total Variance	22.45	8.49	5.10	3.62	
Total Variance				39.70	
Kaiser–Meyer–Olkin				.778	
Number of items	5	7	4	4	
Cronbach α	.732	.735	.675	.769	

Four factors were extracted from PSQ-Org with very good sampling adequacy (Kaiser-Meyer-Olkin-KMO = .778) and significant Bartlett's Test of Sphericity ($\chi^2 = 2138.8$, $p < .001$), explaining 39.7% of the variance. The first factor is extracted with five items and named 'lack of resource and bureaucracy'; the second factor, which is named 'dealing with supervisors and workload' has seven items; the third factor, 'internal investigation and evaluation' has four items; and the fourth factor, 'leadership and policy' has also four items.

Table 8: Factor structure of the PSQ-Op

Extracted Factors	Factor Loading			Communalities
	1	2	3	
Managing social life				
Managing your social life outside of work	.692			.502
Making friends outside the job	.640			.503
Limitations to your social life (e.g. who your friends are, where you socialize)	.514			.297
Upholding a "higher image" in public	.429			.309
Fatigue (e.g. shift work, over-time)	.390			.382

Extracted Factors	Factor Loading			Communalities
	1	2	3	
Risk of injury and family relationship				
Traumatic events (e.g. MVA, domestics, death, injury)		.713		.529
Not enough time available to spend with friends and family		.689		.511
Risk of being injured on the job		.553		.344
Lack of understanding from family and friends about your work		.540		.452
Eating healthy at work		.467		.299
Negative comments from the public		.447		.371
Occupation-related health issues (e.g. back pain)		.408		.347
Nature of the work				
Work related activities on days off (e.g. court, community events)			.664	.566
Shift work			.572	.423
Over-time demands			.552	.353
Working alone at night			.482	.296
Paperwork			.456	.368
Feeling like you are always on the job			.436	.443
Eigenvalue	5.239	2.277	1.516	
% of Total Variance	25.84	9.62	5.06	
Total Variance			40.52	
Kaiser–Meyer–Olkin			.809	
Number of items	5	7	6	
Cronbach α	.753	.781	.772	

From the PSQ-Op, three factors were extracted from 18 items. The sampling adequacy was found to be very good (KMO = .809), with a significant Bartlett's Test of Sphericity ($\chi^2 = 2116.73, p < .001$), the three factors explained 40.52% of the variance. The first factor, which is labeled 'managing social life', has five items; the second factor, 'risk of injury and family relationship', has seven items; and the third factor, 'nature of the work', has six items. Two items, namely 'Finding time to stay in good physical condition' and 'Friends/family feel the effects of the stigma associated with your job', were removed from PSQ-Op because they have

commonalities of .211 and .198 respectively. As suggested by Beavers et al. (2019) and Eaton et al. (2019) commonalities between 0.25 and 0.4 can be acceptable cutoff values, and Child (2006) suggests that items with commonalities of less than .20 must be removed

4.1.3. Factor Structure of NEO Five-Factor Inventory (NEO-FFI)

Table 9. Factor Structure of Five-Factor Inventory

Items	Scales	Factors					Communality
		N	E	O	A	C	
Neurotism							
NE6	Sometimes, I feel completely worthless.	.755					.594
NE5	I often feel tense and jittery	.644					.417
NE11	I often feel helpless and want someone else to solve my problems.	.572					.358
NE3	When I'm under a great deal of stress, sometimes I feel like a I'm going to pieces.	.548					.319
NE7	I rarely feel fearful or anxious	.511					.262
NE10	I am seldom sad or depressed	.501					.251
NE2	I often feel inferior to others	.486					.320
NE4	I rarely feel lonely or blue	.448					.284
NE12	At times I have been so ashamed I just wanted to hide.	.425					.202
Extroversion							
EX11	I am a very active person.		.940				.923
EX1	I like to have a lot of people around me.		.909				.929
EX7	I often feel as if I am bursting with energy.		.844				.827
EX2	I laugh easily		.692				.482
EX5	I like to be where the action is.		.690				.721
EX12	I would rather go my own way than be a leader of others		.672				.531
Openness							
OP11	I have a lot of intellectual curiosity			.926			.870
OP9	Sometimes, when I am reading poetry or looking at a work of art, I feel a chill or wave of excitement			.923			.859
OP2	Once I find the right way to do something, I stick to it.			.645			.469
OP3	I am intrigued by the patterns I find art and nature.			.633			.416

Items	Scales	Factors					Communality
		N	E	O	A	C	
OP7	I seldom notice the moods or feelings that different environments produce			.532			.295
OP12	I often enjoy playing with theories of abstract ideas.			.514			.424
OP5	Poetry has little or no effect on me.			.490			.244
OP8	I believe we would look to our religious authorities for decision on moral issues			.472			.238
Aggreableness							
AG12	If necessary, I am willing to manipulate people to get what I want.				.835		.721
AG8	Some people think of me as cold and calculating.				.808		.667
AG1	I try to be courteous to everyone I meet.				.791		.643
AG10	I generally try to be thoughtful and considerate.				.780		
AG4	I would rather cooperative with others than compete with them.				.707		.517
AG3	Some people think that I'm selfish and egoistic person				.653		.479
AG6	I believe that most people will take advantage of you if you let them.				.530		.348
AG2	I often get into arguments with my family and co-workers.				.509		.522
AG5	I tend to be cynical and skeptical of others' intentions.				.488		.240
Conscientiousness							
CO10	I am a productive person who always gets the job done.				.939		.881
CO5	I have a clear set of goals and work towards them in an orderly fashion.				.927		.860
CO8	When I make a commitment, I can always be counted on to follow through.				.855		.730
CO11	I never seem to be able to get organized.				.793		.628
CO1	I keep my belongings neat and clean				.767		.588
CO7	I work hard to accomplish my goals.				.690		.476
CO4	I try to perform all the tasks assigned to me consciously.				.624		.389
CO2	I'm pretty good about pacing myself so as to get things done on lime.				.605		.366
	% of Total Variance	33.22	44.69	42.20	52.82	61.48	
	Kaiser–Meyer–Olkin	.743	.729	.580	.749	.918	
	Number of items	9	6	8	9	8	

Items	Scales	Factors					Communality
		N	E	O	A	C	
Cronbach α		.701	.721	.474	.778	.924	

Bartlett's Test of Sphericity<.001

N = Neuroticism, E = Extraversion, O = Openness, A = Agreeableness, C = Conscientiousness

Factor structures of NEO Five-Factor Inventory (NEO-FFI) were also examined using Exploratory Factor Analysis (EFA), using Principal Axis factoring varimax rotation. Fabrigar et al. (1999) suggest that when the data violets the assumption of multivariate normality, Principal Axis Factoring would be the best method to run EFA, but if the assumptions of normality are met maximum likelihood extraction would be the best extraction method. Among the five factors only the Agreeableness scale met the criteria of multilinear normality tested using the Shapiro-Wilk test (.994, $p=.176$), the other four factors did not meet the criteria of multilinear normality (Neuroticism =.978, $p<.001$; Extroversion=.944, $p<.001$; Openness=.950, $p<.001$ and Conscientiousness=.950, $p<.001$). Therefore, Principal Axis Factoring with varimax rotation is used for these scales. Items that have factor loading of less than .30 were removed. Additionally, as suggested by Child. D (2006) items that have communality below 0.2 were removed.

Of the twelve items that measure neuroticism only nine items were retained, while three items were NE1(I am not a warrior), NE8 (I often get angry at the way people treat me), and NE9 (Too often, when things go wrong, I get discouraged and feel like giving up) were removed because they had factor loading less than .30. Only six items were extracted from Extroversion scale, while from the removed scales, 4 of them EX3 (I don't consider myself especially "light-hearted"), EX4 (I really enjoy talking to people), EX6 (I usually prefer to do things alone), EX10 (My life is fast-paced) were removed because they had factor loading less than .30. The other two items, item EX8 (I am a cheerful and high-spirited person), EX9 (I am not a cheerful optimist) were removed because they had communality < .20.

Among the items that measured Openness, 8 of the items were retained and 4 of them were removed. Among the removed items three of them (OP4, OP6, OP10) were removed because they had factor loading $< .30$, and one item (OP1) was removed because it has communality of $< .20$. For Agreeableness three items (AG5, AG7, AG9, AG11) were removed because they all had factor loading of $< .30$ and communality $< .20$. Finally, from the items that are used to measure Conscientiousness 8 items were retained and 4 items were removed because they had communality of $< .20$. The removed items were CO3, CO6, CO9, and CO12.

4.2. Findings of the Main Study

4.2.1. Demographic Characteristics of Study Participants

Table 10: Demographic Description Participants

Variable (<i>n</i> =401)	<i>n</i>	%
Gender		
Male	309	77.1
Female	92	22.9
Age		
18-25	77	19.2
26-35	138	34.4
36-45	140	34.9
Above 45	46	11.5
Marital Status		
Single/not married	130	32.4
Married	146	36.4
Divorced	45	11.2
Separated	43	10.7
Widowed	37	9.2
Service Years		
Less than 5 years	84	20.9
6-15 years	159	39.7
16-25 years	146	36.4
Above 25 years	12	3.0
Work Type		
Crime Prevention	294	73.3
Crime Investigation	107	26.7
Rank		
Constables	60	15.0
Lower-level leaders (Assistant Sergeant up to Chief Sergeant)	117	29.2
Middle-level leaders (Assistant Inspectors up to Inspectors)	131	32.7
Higher Level Leaders (Chief Inspectors up to Commanders)	93	23.2

Among the 401 participants, 309 (71.1%) were males and 92 (22.9%) were females. The mean age of the participants was found to be 34.58 years ($SD = 8.49$), and the mean service years of the participants was found to be 13.44 years ($SD = 7.72$). Married personnel took the highest proportion with 36.4%, followed by single or not married personnel, who were 32.4%. Concerning work type or police department, 294 (73.3%) participants were from the crime prevention department, which was the majority, while the remaining 107 (26.7%) were from the crime investigation sector or department. Rank-wise, 131 (32.7%) were middle-ranked officers (Assistant Inspectors up to Inspectors), 117 (29.2%) of the participants were low-rank personnel (Assistant Sergeant up to Chief Sergeant), 93 (23.2%) were high-ranked personnel (Chief Inspectors up to Commanders), and 60 (15%) were personnel with no rank (Constables).

4.2.2. Intensity and Level of Police Stress

Table 11: Descriptive Summary of the level of Organizational Stress

Scales ($N=401$)	Mean	SD
Lack of resource and bureaucracy		
The feeling that different rules apply to different people (e.g. favoritism)	4.73	1.92
Lack of resources	4.49	2.10
Lack of training on new equipment	4.41	1.87
Inadequate equipment	4.35	1.99
Bureaucratic red tape	4.29	2.28
Total	4.45	2.03
Dealing with Supervisors and workload		
Excessive administrative duties	4.18	1.92
Feeling like you always have to prove yourself to the organization	4.09	1.76
Dealing with Supervisors	3.66	2.14
Too much computer work	3.57	1.98
The need to be accountable for doing your job	3.52	2.12
Perceived pressure to volunteer free time	3.47	1.96
Dealing with co-workers	2.71	1.78
Total	3.6	1.95
Internal investigation and evaluation		
If you are sick or injured your co-workers seem to look down on you	4.94	2.08
Leaders over-emphasize the negatives (e.g. supervisor evaluations, public complaints)	4.28	2.02
Dealing the court system	3.57	1.92
Internal investigations	3.26	2.08

Scales (<i>N</i> =401)	Mean	SD
Total	4.01	2.02
Leadership and Policy		
Inconsistent leadership style	4.55	2.11
Unequal sharing of work responsibilities	4.4	2.14
Staff shortages	4.26	2.06
Constant changes in policy/legislation	4.02	2.4
Total	4.30	1.17
PSQ-Org Total	4.03	2.03

The mean value of the total organizational stress was found to be 4.03, with a standard deviation of 2.03, which was rated as a high level of stress. Though a high level of stress was reported on all four subscales of organizational stress, their intensity was found to vary. Amongst the subscales, lack of resource and bureaucracy was found to be the highest, with a mean value of 4.45 and a standard deviation of 2.03, followed by leadership and policy ($M=4.30$, $SD=1.17$), internal investigation and evaluation ($M=4.01$, $SD=2.02$) and dealing with supervisors and workload ($M=3.60$, $SD=1.95$).

Concerning individual component of organizational stressors, item that measured concern on coworkers look down those sick or injured was found to be the most stressful ($M=4.94$, $SD=2.08$), followed by the feeling that different rules apply to different people (e.g., favoritism) ($M = 4.73$, $SD = 1.92$), and inconsistent leadership style ($M = 4.55$, $SD = 2.11$). Lack of resources ($M = 4.49$, $SD = 2.10$) and lack of training on new equipment were also found to be highly stressful for the police personnel ($M = 5.35$, $SD = 1.99$, $M = 4.41$, $SD = 1.87$, respectively). Additionally, unequal sharing of work responsibilities ($M = 4.40$, $SD = 2.14$), inadequate equipment ($M = 4.35$, $SD = 1.99$), and bureaucratic red tape ($M = 4.29$, $SD = 2.28$) were among the most stressful organizational factors.

The relatively least rated organizational stressors were perceived pressure to volunteer free time ($M = 3.47$, $SD = 1.96$), internal investigations ($M = 3.26$, $SD = 2.08$), and dealing with co-workers ($M = 2.71$, $SD = 1.78$).

Table 12: Descriptive Summary of the Level of Operational Stress

Scales ($N=401$)	Mean	SD
Managing social life		
Fatigue (e.g. shift work, over-time)	4.34	2.17
Managing your social life outside of work	4.04	2.09
Upholding a "higher image" in public	3.72	2.16
Making friends outside the job	3.69	1.89
Limitations to your social life (e.g. who your friends are, where you socialize)	3.61	1.94
Total	3.88	2.05
Risk of injury and family relationship		
Traumatic events (e.g. MVA, domestics, death, injury)	4.92	1.91
Lack of understanding from family and friends about your work	4.47	1.92
Negative comments from the public	4.44	1.89
Occupation-related health issues (e.g. back pain)	4.39	1.94
Risk of being injured on the job	4.21	2.07
Not enough time available to spend with friends and family	4.17	2.08
Eating healthy at work	3.79	2.10
Total	4.34	1.98
Nature of the work		
Over-time demands	3.89	1.88
Feeling like you are always on the job	3.68	1.87
Paperwork	3.58	1.92
Working alone at night	3.50	2.09
Work related activities on days off (e.g. court, community events)	3.20	2.12
Shift work	2.45	1.87
Total	3.38	1.95
PSQ-Op Total	3.89	1.99

According to the cut-off value of PSQ-Op set by McCreary et al. (2017), a mean score of ≤ 2.0 is considered a low-stress level, a mean score of 2.1–3.4 is considered a moderate-stress level, and a mean score of ≥ 3.5 is considered a high-stress level. In this study, the mean score for the PSQ-Op was found to be 3.89 with a standard deviation of 1.99, which, based on the cut value, is interpreted as Ethiopian Federal Police Personnel experiencing a high level of

operational stress. The subscales of PSQ-Op were also found to be highly stressful, though they differ in intensity. Accordingly, among the subscales, risk of injury and family relationships was found to be most stressful ($M=4.34$, $SD=1.98$), followed by managing social life ($M=3.88$, $SD=2.05$) and nature of the work ($M=3.38$, $SD=1.95$).

The mean score for individual components for operational stress ranged from a maximum score of 4.92 for traumatic events like accidents, domestics, death, and injury to a minimum of 2.45 for shift work. Among the 18 items, 9 of them were above the mean score, and these nine factors were reported to be highly stressful. The highest mean score was obtained on the item that measured traumatic events like accidents, domestic violence, death, and injury ($M = 4.92$, $SD = 1.91$). Additionally, lack of understanding from family and friends about your work ($M = 4.47$, $SD = 1.92$), negative comments from the public ($M = 4.44$, $SD = 1.89$), and not enough time available to spend with friends and family ($M = 4.17$, $SD = 2.08$) were also found to have high scores, showing that social aspects of the job are reported to be highly stressful. Physical health-related issues were also found to have a high mean score. For instance, the mean score for the item that measured occupation-related health issues (e.g., back pain) was ($M = 4.39$, $SD = 1.94$), and the risk of being injured on the job was ($M = 4.21$, $SD = 2.07$). Items ranked as inducing moderate stress are Working alone at night ($M = 3.50$, $SD = 2.09$), work-related activities on days off (e.g., court, community events) ($M = 3.20$, $SD = 2.12$), and shift work ($M = 2.45$, $SD = 1.87$).

4.2.3. Gender Difference on Stress Level

Table 13: Gender Difference in Police Organizational and Operational Stress

Variable (N=401)	Male		Female		<i>t</i> (399)	p
	M	SD	M	SD		
Lack of Resource and Bureaucracy	21.89	7.22	23.54	7.42	-1.91	.056
Dealing with Supervisors and Workload	25.05	7.98	25.74	8.44	-.722	.471
Internal evaluation and Investigation	19.95	7.13	21.52	8.86	-1.75	.080
Leadership and Policy	16.93	6.88	18.23	7.52	-1.55	.120
Total PSQ-Org	80.24	20.54	82.49	23.01	-.896	.371
Managing Social Life	19.20	6.53	21.33	7.54	-2.46	.014
Risk of injury and Family relationships	16.93	6.88	18.23	7.52	-1.48	.140
Nature of the work	30.15	8.64	31.11	10.48	-.886	.376
Total PSQ-Op	69.11	16.93	73.35	23.42	-1.91	.045

An Independent *t*-test was computed to see if there was a statistically significant difference between male and female police personnel on their level of organizational and operational stress. Female police personnel ($M = 73.35$, $SD = 23.42$), compared to male police personnel ($M = 69.11$, $SD = 16.93$), reported a significantly higher level of operational stress, $t(399) = -1.91$, $p = .045$. This means that female police personnel of the Ethiopian Federal Police Force experience a significantly higher level of operational stress than their male counterparts. Concerning the subscales of PSQ-Op statistically significant difference on gender was found only in managing social life $t(399) = -2.46$, $p = .014$, showing managing social life was significantly more stressful for female police personnel than the males at EFPC. No statistically

significant difference between the genders were found on the other subscales, namely risk of injury and nature of the work.

There was no significant difference between male and female police personnel, $t(399) = -.896, p = .371$, where male police personnel reported an almost similar stress level ($M = 80.24, SD = 20.54$) to that of female police personnel ($M = 82.49, SD = 23.01$) on their organizational stress level. None of the scales (lack of resource and bureaucracy, dealing with supervisors and workload, internal evaluation and investigation, leadership and policy) showed statistically significant difference between the genders.

Table 14: Work Type Difference between Police Organizational and Operational Stress

Variable	Crime Prevention		Crime Investigation		$t(399)$	P
	M	SD	M	SD		
Organizational Stress	79.94	20.31	82.99	23.17	-1.27	.202
Operational Stress	69.20	17.84	72.51	20.70	-1.57	.116

No statistically significant difference was obtained on the levels of both organizational and operational stress levels between personnel in crime prevention and crime investigation sectors, $t(399) = -1.27, p = .202$ and, $t(399) = -1.57, p = .116$ respectively; though police personnel in crime investigation sector reported a higher level of organizational stress ($M=82.99, SD=23.17$) than personnel in crime prevention sector ($M=79.94, SD=20.31$). Police personnel in crime investigation sector also reported a higher level of operational stress ($M=72.51, SD=20.70$) than personnel in crime prevention sector ($M=69.20, SD=17.84$). Similarly, no statistically significant difference was observed on any of the organizational and operational scales in relation to type of work or police department.

4.2.4. Difference among Police Ranks on Stress Level

Table 15: Summary of ANOVA for Organizational Stress by Police Rank

	Rank	N	M	SD	<i>F</i> (396)	<i>p</i>	η_p^2
PSQ-Org Total	Constables	60	83.85	18.60	16.36	.000	.110
	Lower-level leaders ^a	117	82.14	21.73			
	Middle-level leaders ^b	131	74.20	21.55			
	High Level Leaders ^c	93	64.95	11.19			
Lack of Resource and Bureaucracy	Constables	60	25.12	6.44	16.49	.000	.111
	Lower-level leaders	117	24.19	7.55			
	Middle-level leaders	131	22.03	7.60			
	High Level Leaders	93	18.34	5.06			
Dealing with Supervisors and Workload	Constables	60	27.25	9.50	6.48	.000	.047
	Lower-level leaders	117	26.71	9.19			
	Middle-level leaders	131	24.86	7.54			
	High Level Leaders	93	22.48	5.11			
Internal evaluation and Investigation	Constables	60	21.85	8.08	1.37	.250	-
	Lower-level leaders	117	20.23	8.24			
	Middle-level leaders	131	20.37	9.27			
	High Level Leaders	93	19.31	7.70			
Leadership and Policy	Constables	60	19.43	3.41	19.22	.000	.127
	Lower-level leaders	117	20.08	7.38			
	Middle-level leaders	131	16.13	6.56			
	High Level Leaders	93	13.76	7.13			

^a Lower-level leaders are ranks that include Assistant Sergeants, Deputy Sergeants, Sergeants, and Chief Sergeants

^b Middle-level leaders are Assistant Inspectors, Deputy Inspectors, and Inspectors

^c Higher-level leaders are Chief Inspectors, Deputy Commanders, and Commanders

A one-way between-subject ANOVA was computed to see if organizational police stress have a significant difference among the categorized police ranks (Constables, Lower-level leaders, Middle-level leaders, and Higher-Level Leaders). There was a significant difference among the ranks on their level of organizational stress $F(4, 396) = 17.88, p < .001, \eta_p^2 = .110$. Tukey HSD post hoc test was computed to see which of the ranks differ in their level of organizational police stress. Accordingly, the mean score of constables on organizational police stress ($M=83.85, SD=18.60$) was found to be significantly higher than the mean score of middle level leaders (Assistant Inspectors, Deputy Inspectors, and Inspectors), ($M=74.20, SD=21.55$) and high-level leaders ($M=64.95, SD=11.19$), meaning constables (beginners) experienced high level of organizational stress than the middle level and high level police personnel. Additionally, the mean score of organizational police stress of lower-level leaders (sergeants) ($M=82.14, SD=21.73$) was found to be significantly higher than the mean score of middle level leaders ($M=74.20, SD=21.55$) higher-level leaders ($M=64.95, SD=11.19$) showing sergeants experienced high level of organizational police stress than middle and high-level police leaders. Similarly middle level leaders reported significantly higher level of organizational stress than high level leaders. No significant mean difference was found between constables and lower-level leaders. It is observed that constables reported the significantly highest level of stress than all other ranks, except for lower level leaders while high ranked personnel reported significantly lowest level of organizational stress.

Similarly, a one-way ANOVA was computed to see if the subscales of organizational police stress have a significant difference among the police ranks. Accordingly, a statistically significant difference was obtained among the ranks and lack of resource and bureaucracy $F(4, 396) = 16.49, p < .001, \eta_p^2 = .111$. Tukey HSD post hoc test showed that the stress level of

constables on lack of resource and bureaucracy ($M=25.12$, $SD=6.44$) is significantly higher than that of middle-level leaders ($M=22.03$, $SD=7.60$) and higher level leaders ($M=18.34$, $SD=5.06$). Additional lower level leaders ($M=24.19$, $SD=7.55$) and middle-level leaders ($M=22.03$, $SD=7.60$) stress level on this scale was found to be significantly higher than those of higher-level leaders ($M=18.34$, $SD=5.06$). No statistically significant difference was observed between constables and lower-level leaders and lower-level leaders and middle-level leaders.

The scale dealing with supervisors and work load is also found to be statistically significant in relation to police rank $F(4, 396) = 6.48$, $p < .001$, $\eta_p^2 = .047$. The post hoc test (Tukey) revealed that only the stress level of higher-level leaders ($M=22.48$, $SD=5.11$) was found to be significantly higher than the stress level of constables ($M=27.25$, $SD=9.50$) and lower-level leaders ($M=26.71$, $SD=9.19$) concerning supervisors and work load. The difference among the other rank categories was found to be non-significant.

The third scale of PSQ-Org, leadership and policy, was also found to have a statistically significant difference across the police ranks $F(4, 396) = 19.22$, $p < .001$, $\eta_p^2 = .127$. Here, constables' level of stress ($M=19.43$, $SD=3.41$) was found to be significantly higher than the middle level ($M=16.53$, $SD=6.56$) and higher level leaders ($M=13.76$, $SD=7.13$). Similarly, lower-level leaders' stress level ($M=20.08$, $SD=7.38$), was found to be higher than the stress level of middle- and higher-level leaders, while the stress level of middle-level leaders was found to be significantly higher than that of higher-level leaders on this scale. Here it can be observed that, though the stress level was high, issues related to policy and leadership are significantly less stressful for higher-level leaders than other rank categories. No statistically significant difference was obtained among the ranks and internal investigation and evaluation scale $F(4, 397) = 1.37$, $p = .250$.

Table 16: Summary of ANOVA for Operational Stress by Police Rank

	Rank	N	M	SD	<i>F</i> (396)	P	η_p^2
Operational Stress	Constables	60	76.38	18.06	7.40	.000	.053
	Lower-level leaders	117	71.38	20.35			
	Middle-level leaders	131	70.34	19.52			
	High Level Leaders	93	62.63	8.99			
Managing Social Life	Constables	60	22.39	7.57	7.05	.000	.057
	Lower-level leaders	117	20.61	7.60			
	Middle-level leaders	131	19.15	6.68			
	High Level Leaders	93	17.47	4.37			
Risk of injury and Family relationships	Constables	60	19.43	7.38	19.22	.000	.127
	Lower-level leaders	117	20.08	6.56			
	Middle-level leaders	131	16.13	7.13			
	High Level Leaders	93	13.76	5.22			
Nature of the work	Constables	60	33.18	9.14	8.38	.000	.060
	Lower-level leaders	117	30.99	9.93			
	Middle-level leaders	131	31.24	9.72			
	High Level Leaders	93	26.56	5.14			

One way ANOVA was also computed to test if the police ranks statistically differed on their level of operational stress. Here, a statistically significant difference was observed among the ranks of police personnel on their level of operational stress $F(4, 396) = 8.20$, $p < .001$, $\eta_p^2 = .053$. The Tukey HSD post hoc test shows that the mean score of high-level leaders ($M = 62.63$, $SD = 8.99$) was found to be significantly lower than the mean score of middle-level leaders ($M = 70.64$, $SD = 19.52$) lower-level leaders ($M = 71.38$, $SD = 20.35$), and constables ($M = 76.38$, $SD = 18.06$) (beginners). This shows that high-level leaders experienced the lowest level of

operational stress compared to police personnel in lower-ranking categories. No significant difference was observed among other ranks on operational police stress.

A one-way ANOVA was also computed for the subscales of PSQ-Op. All three subscales are found to have a statistically significant difference by rank; $F(4, 396) = 7.05, p < .001, \eta_p^2 = .057$, for managing social life, $F(4, 396) = 19.22, p < .001, \eta_p^2 = .127$ for risk of injury and family relationships; and $F(4, 396) = 8.38, p < .001, \eta_p^2 = .060$ for nature of the work. For managing social life scale Tukey HSD post hoc test showed that the mean score of constables ($M=22.39, SD=7.57$) was significantly higher than that of middle-level leaders ($M=19.25, SD=6.68$) and higher level leaders ($M=17.47, SD=4.37$), showing constables are significantly stressful on managing social life, while lower-level leaders are also reported significantly higher level of stress on this scale ($M=20.61, SD=7.60$) than higher-level leaders ($M=17.47, SD=4.37$).

Concerning risk of injury and family relationships subscale, results of Tukey HSD post hoc test showed that the mean score of constables ($M=19.43, SD=7.38$) was significantly higher than that of lower-level leaders ($M=20.08, SD=6.56$), middle level leaders ($M=16.13, SD=7.13$) and higher-level leaders ($M=13.76, SD=5.22$), showing that the risk of injury significantly stresses constables compared to leaders in other categories. Lower-level leaders also reported a significantly higher level of stress on this scale ($M=20.08, SD=6.56$) than middle-level leaders ($M=13.76, SD=5.22$), whereas the stress level of middle-level leaders ($M=16.13, SD=7.13$) was found to be significantly higher than that of higher-level leaders ($M=13.76, SD=5.22$). Finally, for the subscale nature of the work, the results of the Tukey HSD post hoc test revealed that constables reported a significantly higher level of stress related to the nature of the work ($M=33.18, SD=9.14$) than higher-level leaders ($M=26.56, SD=5.14$), whereas lower-level leaders

($M=30.99$, $SD=9.93$) and middle-level leaders ($M=31.24$, $SD=9.72$) reported a significantly higher level of stress than higher-level leaders on this scale.

4.2.5. Difference among Marital Status on Police Stress Levels

Table 17: Summary of ANOVA for Organizational Police Stress by Marital Status

	Marital Status	N	M	SD	$F(396)$	P	η_p^2
Organizational Stress Total	Single/not married	130	83.24	20.85	13.62	.000	.118
	Married	146	77.38	20.02			
	Divorced	45	67.13	15.91			
	Separated	43	69.40	20.06			
	Widowed	37	61.57	11.20			
Lack of Resource and Bureaucracy	Single/not married	130	25.10	7.55	16.51	.000	.143
	Married	146	22.98	7.05			
	Divorced	45	19.16	5.54			
	Separated	43	19.19	6.52			
	Widowed	37	16.86	3.82			
Dealing with Supervisors and Workload	Single/not married	130	25.98	9.13	1.65	.161	-
	Married	146	25.72	8.29			
	Divorced	45	23.82	5.92			
	Separated	43	24.63	8.02			
	Widowed	37	22.81	4.58			
Internal evaluation and Investigation	Single/not married	130	20.43	8.83	1.02	.392	-
	Married	146	21.09	7.83			
	Divorced	45	19.33	5.15			
	Separated	43	19.53	6.74			
	Widowed	37	18.86	4.54			
Leadership and Policy	Single/not married	130	20.60	6.90	19.65	.000	.116
	Married	146	17.34	6.65			
	Divorced	45	13.93	6.21			
	Separated	43	14.65	6.29			
	Widowed	37	11.95	4.26			

A statistically significant difference on police organizational stress in relation to marital status was observed $F(4, 396) = 13.62, p < .001, \eta_p^2 = .118$. Tukey HSD post hoc test showed single police personnel reported significantly highest level of organizational police stress ($M=83.24, SD=20.85$) compared to divorced ($M=67.13, SD=15.91$), separated ($M=69.40, SD=20.06$) and widowed ($M=61.57, SD=11.20$), while married personnel level of organizational stress ($M=77.38, SD=20.02$) did not differ significantly from single personnel.

A one-way ANOVA was computed to see if a statistically significant difference on subscales of organizational stress exists among the marital statuses. Accordingly, a statistically significant difference was observed among the marital statuses in terms of lack of resource and bureaucracy $F(4, 396) = 16.51, p < .001, \eta_p^2 = .143$. The computed Tukey's HSD post hoc test showed that single police personnel's stress level of lack of resource and bureaucracy ($M=25.10, SD=7.55$) was found to be significantly higher than that of married ($M=22.98, SD=7.05$), divorced ($M=19.56, SD=5.54$), separated ($M=19.19, SD=6.52$), and widowed personnel ($M=16.86, SD=3.82$). Similarly, the stress level of married personnel on this scale was significantly higher than that of divorced, separated, and widowed personnel. No significant difference was observed among the other categories on this scale.

A statistically significant difference was also observed on dealing with leadership and policy subscale across marital statuses. Accordingly, $F(4, 396) = 19.65, p < .001, \eta_p^2 = .116$. The computed post hoc test showed that the stress level of single police personnel ($M=20.60, SD=6.90$) was found to be significantly higher the married ($M=27.34, SD=6.65$), divorced ($M=13.93, SD=6.21$), separated ($M=14.65, SD=6.29$), and widowed personnel ($M=11.95, SD=4.26$) on policy and leadership. Married personnel's stress level was also found to be

statistically higher than the stress level of divorced and widowed personnel. No statistically significant difference was observed among the other categories.

On the other subscales, no statistically significant difference was obtained among the marital status and dealing with supervisors and workload subscale $F(4, 396) = 1.65, p = .161$ and marital status and internal investigation and evaluation subscale $F(4, 396) = 1.02, p = .392$.

Table 18: Summary of ANOVA for Operational Police Stress by Marital Status

	Marital Status	N	M	SD	$F(396)$	P	η_p^2
Operational Stress Total	Single/not married	130	75.81	20.43	6.93	.000	.056
	Married	146	73.97	20.08			
	Divorced	45	71.54	18.31			
	Separated	43	64.93	12.93			
	Widowed	37	64.70	15.99			
Managing Social Life	Single/not married	130	21.47	7.83	6.15	.000	.066
	Married	146	20.20	6.88			
	Divorced	45	16.79	4.75			
	Separated	43	18.67	5.39			
	Widowed	37	16.86	4.44			
	Single/not married	130	20.60	6.90			
Risk of injury and Family relationships	Married	146	17.34	6.65	7.39	.000	.070
	Divorced	45	13.93	6.21			
	Separated	43	14.65	6.29			
	Widowed	37	11.95	4.26			
	Single/not married	130	32.75	10.14			
Nature of the work	Married	146	31.02	8.80	7.39	.000	.070
	Divorced	45	28.38	8.08			
	Separated	43	27.37	7.30			
	Widowed	37	25.35	5.61			

A statistically significant difference was observed on police operational stress in relation to marital status. $F(4, 396) = 6.93, p < .001, \eta_p^2 = .056$. Tukey HSD post hoc test showed that like that of police organizational stress single police personnel reported significantly highest level of operational police stress ($M=73.97, SD=20.08$) compared to divorced ($M=64.93, SD=12.93$), separated ($M=64.70, SD=15.99$) and widowed ($M=59.73, SD=11.28$). No statistically significant difference was observed between single and married personnel ($M=71.54, SD=18.31$), though both categories reported highest level of stress among all. It can be said that for both types of police stress, single and married personnel at Ethiopian Federal Police Commission experience highest level of stress.

A one-way ANOVA was also computed to test if a significant difference exists among the marital statuses on subscales of operational police stress. Statistically significant differences were observed for all the three subscales. The subscale managing social life was significant at $F(4, 396) = 6.15, p < .001, \eta_p^2 = .066$. Tukey's HSD post hoc test revealed that single police personnel's stress level regarding managing social life ($M=21.47, SD=7.83$) was found to be significantly higher than that of divorced ($M=16.79, SD=4.75$), and the widowed ($M=16.86, SD=4.44$), while the stress level of the married ($M=20.20, SD=6.88$) was found to be significantly higher than that of divorced. The difference among the other categories was found to be non-significant. For risk of injury and family relationships subscale, the difference among the marital statuses was statistically significant $F(4, 396) = 19.65, p < .001, \eta_p^2 = .166$. The similar post hoc test computed showed that the stress level of single police personnel on risk of injury and family relationships was found to be significantly the highest ($M=20.60, SD=6.90$), compared to married ($M=17.34, SD=6.65$), divorced ($M=16.93, SD=6.21$), separated ($M=14.65, SD=6.29$), and widowed ($M=11.95, SD=4.26$). Additionally, the stress level of the married on

this subscale was found to be significantly higher than that of the divorced and widowed. No other significant difference was observed on this subscale. Finally, the difference among the marital statuses on nature of the work was significant at $F(4, 396) = 7.39, p < .001, \eta_p^2 = .070$. From the computed post hoc test, it is observed that nature of the work was found to be the most stressful for single police personnel ($M=32.75, SD=10.14$) compared to divorced ($M=28.38, SD=8.08$), separated ($M=27.37, SD=7.30$) and widowed ($M=25.35, SD=5.61$).

4.2.6. Relationship among Demographic Variables and Police Stress

The association among the basic demographic characteristics of the police personnel and police organizational and operational stress was assessed, the following section presents the findings of these associations.

Table 19: Relationship among Age and Service Years with Police Organizational Stress

Variables (N=401)	Mean	SD	1	2	3	4	5	6	7
1. Age	34.58	8.49	-						
2. Police Service years	13.44	7.73	.953**	-					
3. Lack of Resource and Bureaucracy	22.27	7.29	-.472**	-.457**	-				
4. Dealing with Supervisors and Workload	25.20	8.08	-.239**	-.241**	.425**	-			
5. Internal evaluation and Investigation	20.31	7.58	-.123*	-.127*	.265**	.628**	-		
6. Leadership and Policy	17.23	7.04	-.541**	-.506**	.629**	.318**	.205**	-	
7. PSQ- Org total	75.81	21.30	-.480**	-.462**	.842**	.740**	.491**	.766**	-

** $P < .01$, * $P < .05$,

Pearson's Product Moment correlation was computed to see if age and years of experience have a significant association with organizational and operational police stress. Accordingly, both age and service years were found to have a significant negative correlation with police organizational stress, $r(401) = -.480, p < .001$, and $r(401) = -.462, p < .001$, respectively. This shows that young and less experienced personnel experience an increased level of

organizational stress. The subscales of organizational police stress were also found to have a significant association with age and service years. A relatively stronger negative correlation was obtained between age and leadership and policy, which is $r(401) = -.541, p < .001$, while service years was found to have $r(401) = -.506, p < .001$. Another scale that was found to have a strong and significant negative association with these variables is lack of resource and bureaucracy, where $r(401) = -.472, p < .001$, and $r(401) = -.457, p < .001$ were recorded for age and service years, respectively. Dealing with supervisors and work was also found to have a significant association with age $r(401) = -.239, p < .001$ and service years $r(401) = -.241, p < .001$. Finally, internal evaluation and investigation was found to have a significant negative association with age, $r(401) = -.123, p = .005$ and service years $r(401) = -.127, p = .005$. It can be observed that aged and experienced police personnel at the EFPC experience a low level of stress related to leadership and policy, lack of resources, and work load.

Table 20: Relationship among Age and Service Years with Police Operational Stress

Variables (N=401)	Mean	SD	1	2	3	4	5
1. Age	34.58	8.49	-				
2. Police Service years	13.44	7.73	.953**	-			
3. Managing Social Life	19.67	6.81	-.259**	-.258**	-		
4. Risk of injury and Family relationships	17.23	7.04	-.541**	-.506**	.248**	-	
5. Nature of the work	30.37	9.09	-.295**	-.278**	.489**	.492**	-
6. PSQ-Op Total	69.76	22.70	-.303**	-.297**	.771**	.451**	.835**

**P<.01

Age and police service years were found to have a significant negative association with operational police stress; $r(401) = -.303, p < .001$, and, $r(401) = -.297, p < .001$ respectively, indicating operational stress is high among young and less experienced police personnel. Among the subscales of operational police stress, risk of injury and family relationships had a stronger

negative association with age $r(401) = -.541, p < .001$) and service years $r(401) = -.506, p < .001$).

Nature of the work was also found to have a significant negative association with age and service years, $r(401) = -.295, p < .001$, and $r(401) = -.278, p < .001$, respectively. Similarly, managing social life was observed to have a significant negative association with age, $r(401) = -.259, p < .001$ and service years $r(401) = -.258, p < .001$. It can be said that among the subscales, risk of injury and family relationships is less stressful for aged and experienced police personnel.

In conclusion, demographic factors like gender, age, service years, marital status and police rank were found to be relevant factors in organizational and operational police stress, while duty type was not found to have a significant relationship with police organizational and operational stress.

4.2.7. Relationship among Personality Traits and Police Organizational and Operational

Stress

Table 21. Relationship among Personality Traits and Police Organizational and Operational Stress

Variables (n=401)	M	SD	1	2	3	4	5	6	7
1 Neuroticism	24.84	6.20	-						
2 Extroversion	20.58	4.43	.040	-					
3 Openness	24.98	5.01	-.046	.202**	-				
4 Agreeableness	21.59	6.74	.257**	.030	.148*	-			
5 Conscientiousness	28.41	7.36	-.298**	.185**	.319**	.207**	-		
6 Organizational Stress	75.81	20.42	.163**	-.137**	-.160**	.316**	.279**	-	
7 Operational Stress	69.76	18.16	.196**	-.059	.095	.226**	.174**	.682**	-

** $P < .01$; * $p < .05$

The association between the five personality traits and police organizational and operational stress was assessed. Accordingly, neuroticism was found to have a significant positive correlation $r(401) = .163, p < .001$ with police organizational stress. This shows that police officers with a high level of neuroticism experienced a high level of stress, though the

relationship was moderate. Similarly, neuroticism was found to have a moderately significant positive correlation with police operational stress, $r(401) = .196$, $p < .001$, meaning police officers with a high level of neuroticism also experienced a high level of police operational stress.

Agreeableness was also found to have a significant positive correlation with both organizational and operational stress, $r(401) = .326$, $p < .001$ and $r(401) = .226$, $p < .001$ respectively. This means police officers with a high level of agreeableness tended to experience increased organizational and operational stress. Among the other personality traits, conscientiousness was also found to have a significant positive correlation with police organizational stress $r(401) = .279$, $p < .001$ and with police operational stress $r(401) = .174$, $p < .001$, meaning officers with a high level of conscientiousness experienced a higher level of both organizational and operational stress.

On the other hand, extroversion was found to have a weak but significant negative correlation with organizational stress, $r(401) = -.137$, $p < .001$, indicating police officers with a high extroversion trait experienced a low level of stress. The extroversion trait did not show a significant relationship with operational police stress. The trait openness was also found to have a significant negative association with organizational police stress, $r(401) = -.160$, $p < .001$, but no significant association was found between openness and operational police stress.

Table 22: Summary of Regression Analyses for Variables Predicting Police Organizational Stress

	Organizational Stress			
	B	SE B	Beta	Sig.
Neuroticism	.704	.169	.207	.000
Extroversion	-.967	.219	-.203	.000
Conscientiousness	.893	.149	.312	.000
Agreeableness	.592	.152	.189	.000
Openness	.278	.202	.066	.168
F	21.75			.000
ΔR^2	.216			

A multiple regression analysis was run to test if the five personality traits significantly predicted police organizational stress. The results of the regression indicated that four of the personality traits (neuroticism, extroversion, agreeableness, and conscientiousness) explained 21.6% of the variance in police organizational stress $R^2=.216$, $F(5, 395) =24.87$, $p<.001$. The analysis revealed that neuroticism ($\beta=.207$, $p<.001$) extroversion ($\beta=-.203$, $P<.001$), agreeableness ($\beta=.189$, $P<.001$), and conscientiousness ($\beta=.312$, $P<.001$) significantly predicted the level of organizational stress. Openness did not significantly predict the level of organizational stress.

Table 23: Summary of Regression Analyses for Variables Predicting Police Operational Stress

	Operational Stress			
	B	SE B	Beta	Sig.
Neuroticism	.703	.160	.233	.000
Extroversion	-.374	.207	-.089	.072
Conscientiousness	.488	.141	.192	.001
Agreeableness	.308	.144	.111	.033
Openness	.089	.191	.024	.641
F	9.25			.000
ΔR^2	.105			

A multiple regression analysis was used again to test if the five personality traits also significantly predicted police operational stress. It was found that the four personality traits (neuroticism, extroversion, agreeableness, and conscientiousness) explained 10.5% of the variance $R^2=.105$, $F(5, 395) =9.25$, $p<.001$). Neuroticism significantly predicted police operational stress level ($\beta=.233$, $p<.001$) so did agreeableness ($\beta=.111$, $P=.012$) and conscientiousness ($\beta=.192$, $P<.001$). Extroversion and similar to that of organizational stress, openness did not significantly predict the level of operational stress.

Chapter Five

5. Discussion

Discussion on the psychometric properties of PSQ

The psychometric properties of PSQ-Org and PSQ-Op were found to be good in almost all of the studies that used the questionnaire in different cultures, just like the psychometric properties of the original questionnaires. For instance, Abidin et al. (2014) reported Cronbach's Alpha coefficients of 0.94 for PSQ-org and 0.93 for PSQ-Op on the Malay version of the questionnaire. For the Indonesian version of the questionnaire, Aziz (2020) reported Cronbach's Alpha coefficients of .92 for PSQ-Org and .93 for PSQ-Op. Another study on the Indonesian National Police also reported excellent psychometric characteristics for PSQ-Org, .99 and PSQ-Op, .98 (Yulianto, Argo, & Nuryanto, 2021). In another validation study by Delgado and Vélez (2022) on Puerto Rico Police, the internal consistency of PSQ-org and PSQ-Op was reported to be .96 and .94, respectively, while the internal consistency of PSQ-Org was reported to be .80 for Bangladeshi culture. Higher Cronbach's alpha values were also recorded in other cultures. For example, in the Serbian versions of PSQ-Org and PSQ-Op, Cronbach's alphas of .959 and .961 are recorded respectively (Kukić et al., 2021). Additionally, both questionnaires showed high Cronbach's alpha on the Malay version, .94 for the PSQ-Org and .93 for the PSQ-Op (Irniza et al., 2014). It can be generally observed that PSQ-Org and PSQ-Op are found to be consistent tools to measure police stress across different cultures. In this study, it was found that the Ethiopian versions of PSQ-Org and PSQ-Op showed high reliability and stability indices. The Cronbach's alpha values of PSQ-Org and PSQ-Op are .841 and .855, respectively. The Cronbach's alpha values in this study were found to be a bit higher compared to some studies across the world. For instance, a Cronbach alpha of .793 was reported on the Arabic version of

PSQ-Op by Fayyad et al. (2020), which is lower than the Cronbach's values of the current study (.855). Additionally, Cronbach's alpha value of PSQ-Org in the current study was found to be higher than what Sagar et al. (2015) reported on Bangladeshi culture, which is .80, and what has been reported on the Arabic version of PSQ-Op by Kula et al. (2017), which is .828. Though they are a bit smaller, the reliability indices of this study are not far from what was originally reported by McCreary and Thompson (2006), who reported a Cronbach's alpha of .92 for PSQ-Org and .93 for PSQ-Op.

In the cultures and languages where PSQ was adopted and used, the researchers explained the factor structure of the questionnaire using Principal Component Analysis (PCA), Exploratory Factor Analysis (EFA), and Confirmatory Factor Analysis (CFA) separately or sequentially. The validation reports across different cultures generally showed that the PSQ-Org and PSQ-Op either confirm single dimensions as those of the original design or have more than one factor.

There are a couple of studies that reported single dimensions for both questionnaires. For example, Delgado and Vélez (2022) used CFA and structural equation modeling on the Puerto Rican 20-item PSQ-Op and the 20-item PSQ-Org and identified a single factor structure for each PSQ-Org and PSQ-Op. Additionally, Irniza et al. (2014) reported that the Malay version of the PSQ is one-dimensional with 36 items, including operational and organizational stressors, using PCA. However, they have excluded four items: managing social life outside work, eating, healthy at work, making friends outside the job, and finding time to stay in good physical condition.

More than one factor was reported in other contexts where PSQ was validated. For instance, Queirós et al. (2020) tested PSQ-Org in the Portuguese context and extracted two

components using PCA. They labeled the components from PSQ-Org as ‘poor management’ and ‘lack of resources, responsibilities, and burden’. Additionally, Kukić et al. (2021) extracted two factors from the Serbian version of PSQ-Org through Exploratory Factor Analysis. They labeled the extracted factors as ‘work-related’ and ‘social related’ as named in a study by Queirós et al. (2020). In the present study, the 20 items of the PSQ-Org were organized into four factors: ‘lack of resource and bureaucracy’, ‘dealing with supervisors and workload’, ‘internal investigation and evaluation’ and ‘leadership and policy’. The factor structures in this study are different from what has been reported on USA police by Shane (2010). He reported six factors in the PSQ-Org and labeled them ‘co-worker relations’, ‘training and resources’, ‘leadership and supervision’, ‘bureaucracy’, ‘internal affairs and accountability’, and ‘management and organizational capacity’. In another similar study, Sagar et al. (2014) validated PSQ-Org on Bangladeshi Police and suggested four factors: ‘poor management and bureaucracy’, ‘lack of manpower and resources’, ‘feelings of excessive duty and being supervised’, and ‘lack of leisure time and negative evaluations’. In most cases, the PSQ-Org has more than one dimension, unlike the original questionnaire by McCreary and Thompson (2006). Given the factors found in this study and other similar studies, the questionnaire has limitations in measuring a single construct, which is organizational stress. Within police organizations, specific factors contribute to stress. Even the items that are listed in the questionnaire measure different stressors that are related to organizational matters. Therefore, it is essential to consider the factors and come up with subscales for the OPS-Org. However, it has to be noted that the differences in the number and type of factors extracted from this questionnaire might be due to organizational stress being highly dependent on and related to each police force’s cultural idiosyncrasies, as reported by Queirós et al. (2020), and the cross-cultural specificities of each country, as reported by Irniza et al. (2014).

The PSQ-Op was also reported to have more than one factor in different contexts. It was validated in a Portuguese context by Queirós et al. (2020). Using EFA, they have extracted two factors and labeled the extracted factors as ‘social issues’ and ‘work issues’. Kukić et al. (2021) also extracted two factors from the Serbian version of PSQ-Op, namely ‘work-related’ and ‘social-related’ factors. Additionally, in a cross-cultural study on three countries, Russia, Lebanon, and Serbia, six components were extracted from the Lebanese and Russian samples, and three components were extracted from the Serbian samples (Kukić et al., 2021). Three factors were reported from the Ethiopian version of the PSQ-Op, and named ‘managing social life’, ‘risk of injury and family relationship’, and ‘nature of the work’ were extracted from 18 items. The two factor structures ‘managing social life’ and ‘nature of the work’ from this study align with factors reported in other studies like Queirós et al. (2020) and Kukić et al. (2021). The two items excluded from this scale are ‘Finding time to stay in good physical condition’ and ‘Friends / family feel the effects of the stigma associated with your job’ because of their very low commonalty values.

Discussion on the main study

There is a debate in the literature on whether organizational or operational stressors are more prevalent in the police force. Many studies revealed that organizational stressors are more prevalent than operational ones (Collins & Gibbs, 2003; Prasad, 2012; Garbarino et al., 2013; Suresh et al., 2013). These studies outlined that organizational factors like, never being off duty, lack of time to spend with family, political pressure, low salary, inadequate infrastructures, less demanding work environment less opportunity for reward, independent decision making, and poor relationships between colleagues and superiors, demand for high commitment, demands of work impinging upon home life, lack of consultation and communication, lack of control over

workload, inadequate support and excess workload, in general, were perceived as more stressful than operational issues (Brown & Campbell, 1990; Crank & Caldero, 1991; Biggam et al., 1997). On the other hand, some other studies reported that operational factors are more stressful than some organizational factors (Leino, 2013; Setti & Argentero, 2013). These studies have reported injuries caused by physical violence, poor psychological health, threats or assaults with deadly weapons, accidents, death of a partner, and exposure to life-threatening scenes are some of the highly rated operational stressors (Coman & Evans, 1991; Violanti & Aron, 1995; Berg et al., 2005; Garcia, Nesbary, & Gu 2004). In general terms, evidences incline more towards organizational stressors than to operational factors.

The current study found that within the lens of any of the independent variables, organizational factors are found to be more stressful than operational factors. The mean organizational stress score is found to be ($M= 4.03$ $SD=2.03$ for 7 scales point measure) while the total operational score was found to be ($M= 3.89$ $SD=1.99$ for 7 scales point measure). Hence, this study confirmed the findings that claimed organizational factors to be more stressful than operational factors. Several main issues have to be considered while explaining the comparative level of operational and organizational stress. The first is related to the tools that are used to measure stress. It has to be noted that it is difficult to make reasonable comparisons across studies due to the usage of characteristically inconsistent police stress inventories for both organizational and operational stress. The second issue that has to be considered while addressing the comparison between organizational and operational stress is whether intensity or frequency or both are to be assessed. Some studies ask the frequency of the stressors, others asked about the intensity of stressors, and some others both; hence this makes the comparison difficult. The other issue is the country where the studies were conducted. It has been reported

that some studies consistently reported a higher level of operational stress in a few countries like the USA (Lucas, Weidner, & Janisse, 2012; Violanti et al., 2016), Norway (Berg et al., 2005), Australia (Coman & Evans, 1991), Botswana (Agolla, 2009), South Africa (Gulle, Tredoux, & Foster, 1998) and Switzerland (Arial, Gonik, Wild, & Danuser, 2010) while in some other countries organizational stress was found to be more prevalent. Hence, the findings of the present study are based on one of such inventories (PSQ), however, they conform to other literature that claims organizational factors to be more stressful than operational ones.

This study examined the pattern of relationships among demographic factors like gender, age, experience, marital status, police rank, and type of work. Concerning gender differences in the level of police stress, the current study revealed no significant difference between male and female police personnel in their level of organizational stress, though both genders reported a high level of organizational stress. This finding is supported by literature on police stress. Studies show that gender does not account for stress experience; there is no difference between male and female personnel in their level of stress (Laufersweiler-Dwyer & Dwyer, 2000; Garcia et al., 2004; McCarty, Zhao, & Garland, 2007; Bradway, 2009). In the case of the Ethiopian Federal Police personnel, different reasons can be attached to both male and female personnel experiencing high and similar levels of stress. Some of the top-rated organizational factors in the present study are lack of resources, favoritism, bureaucratic red tape, unequal sharing of work responsibilities, staff shortages, and constant changes in policy and regulation. These factors are believed to affect both male and female police personnel, as they are issues at an organizational level, not individual, and are faced similarly by every police personnel in the commission.

On the other hand, this study also revealed that female police personnel experience a significantly higher level of operational stress than their male partners, confirming evidence in

most of the police stress literature (Collins & Gibbs, 2003; Berg et al., 2005; He, Zhao, & Ren, 2005; Pinear & Rothman, 2006; McCarty et al., 2007; Violanti et al., 2016). These studies suggested that specific duties assigned to female police personnel, like dealing with victims of domestic violence and sexual offenses, handling child abuse cases, use of force, confrontations with violence, and danger, induce a higher level of stress on female personnel than their male counterparts.

Studies showed that personnel with lower ranks experience a higher level of operational stress than high-ranked officers (Brown & Campbell, 1990; Kohan and Mazmanian, 2003; Chen, 2009; Berg et al., 2005). These reports revealed that low ranked personnel are directly exposed to violent and hazardous incidents in their day-to-day activities. The present study revealed that in both organizational and operational stress, the low-ranked police personnel were found to have the highest stress level compared to other rank categories. In the practical experience Ethiopian Federal Police, low ranked officers must participate in dangerous and risky operations like VIP protection, riot control, anti-terror operations, and even wars that results in experiencing a higher level of stress than their higher-ups. Contrary to these findings, some evidence from the literature reported no difference in stress levels concerning the rank of police officers (Morash, Haarr, & Kwak, 2006; Buker & Wiecko, 2007; Narvekar & D'Cunha, 2021). However, these findings concern general police stress and are not specific to organizational or operational stress. The findings of this study also differ from some other studies that considered both operational and organizational stress and reported that high-ranked officers experience a higher level of organizational stress than low-ranked officers (Antoniou, 2009; Nelson & Smith, 2016).

Single police personnel reported the highest level of organizational stress compared to divorced and widowed personnel, while married personnel's level of organizational stress did not

differ significantly from personnel who are single in the present study. Similarly, single police personnel reported significantly the highest level of operational police stress compared to divorced, separated, and widowed personnel. Supporting these findings, some studies reported that single police officers experience a high level of stress (Odedokun, 2015; Wickramasinghe, & Wijesinghe, 2018). The present study further shows that single and married personnel reported the highest level of stress.

The present study found that both age and service years have a significant negative correlation with organizational and operational stress. Early studies (for example, White et al., 1985) reported that police officers with the highest experience years, usually more than 16 years, experience the highest level of organizational stress. On the contrary, other studies, for example, Garcia et al. (2004), found that officers in the early (i.e., less than five years) and later stages (i.e., over 20 years) were least affected by organizational stressors. As the police are currently handling multiple major issues (like the war in northern and western Ethiopia, increasing crime risks and crimes, and police reform), it is expected that the less experienced (the category corresponding to young personnel) are more exposed to organizational stress. Concerning operational stress, personnel with experience of 6–15 years reported the highest level of stress compared to others. This finding is supported by some studies. For instance, Burke (1989) reported that personnel with 6–15 years on the job experience the greatest level of stress. Additionally, personnel with 11–20 years of job experience reported more overall stress compared with those with fewer or more years of service (Chen, 2009). Other studies also suggested a curvilinear relationship between experience and police stress (Gudjonsson & Adlam, 1985; Anshel, Robertson, & Caputi, 1997; Laufersweiler-Dwyer & Dwyer, 2000; Garcia et al., 2004). The relationship between personality traits and police stress and well-being has been a

focus of attention lately, and several studies have tried to establish patterns of police stress and personality traits Collins & Gibbs, 2003; Prasad, 2012; Garbarino et al., 2013; Suresh et al., 2013). In the present study, personality characteristics were found to be significant predictors of organizational and operational police stress. Additionally, four of the personality traits (neuroticism, extroversion, agreeableness, and conscientiousness) were found to have a significant relationship with police operational and organizational stress. This study revealed that among the five personality traits investigated, neuroticism was found to have a positive association with police stress, meaning police officers with a high level of neuroticism reported high level of stress. This finding aligns with most of the findings in the literature concerning the relationship between neuroticism and occupational stress. For example, Ortega et al. (2007) found that neuroticism was positively related to perceived sources of stress; they further suggested that neuroticism was positively associated with feeling tense, uptight, and exhausted, as well as cognitive confusion. Berg et al. (2006) also revealed that police officers with high scores on neuroticism traits reported their work to be more stressful than those with extroverted traits. Other researchers on the same topic also revealed that neuroticism is a significant predictor of police stress and has a positive association with police occupational stress (Cotton, 2002; Lau et al., 2006; Garbarino et al., 2013; Nelson and Smith, 2016).

In a very general understanding from the literature, individuals with a high level of neuroticism are vulnerable to poor activities, get easily worried and angered, show tendencies of melancholy, have difficulties handling pressures, have difficulties controlling their impulses, and are subject to negative affect, which makes them easily susceptible to stress (Costa & McCrae, 1999; Connolly & Viswesvaran, 2000; Zellars et al., 2000 & Gabarino et al., 2013). If officers have a high level of neuroticism, it is difficult to cope with stressful situations that they must face

daily, as the police profession is highly stressful and full of daily hustles. Additionally, being at risk of emotional instability and irrational thinking exposes officers to a high level of neuroticism and a high level of occupational stress.

There is strong evidence in the literature concerning the relationship between extraversion and police stress. For instance, a study conducted on Jamaican police officers revealed that officers' well-being was strongly predicted by extroversion (2016). Additionally, an early study on Australian police officers showed extroversion as the strongest predictor of stress, alongside neuroticism (Hart et al., 1995). In another study by Lau et al. (2006), officers with a high extroversion score reported lower levels of perceived stress compared to the others. Other studies also showed that officers with high extroversion traits were less prone to stress (Hart & Cotton, 2000 & Ortega et al., 2007, Nelson and Smith, 2016). Similarly, the current study showed extroversion as a significant predictor of both operational police stress ($\beta=-.104$, $P=.034$) and organizational police stress ($\beta=-.207$, $P=.000$), meaning officers with a high level of extroversion experienced a low level of stress. A significant negative association was also found between extroversion and organizational police stress ($r=-.137$, $p<.001$), affirming the evidence in the literature. Studies of personality traits indicate that individuals with a high level of extroversion show positivity in social situations, have tendencies toward sociability and vigor, and have an optimistic state of mind (McCrae & Kay, 1995; Connolly & Viswesvaran, 2000; Hayesa & Joseph, 2002 & Gabarino et al., 2014). In this sense, officers with a high level of extroversion can handle stressful situations. The tendency to seek social relationships and social contacts helps them to discuss and vent stressful situations, which in turn helps them to overcome and control their situations. Police officers with high extroversion can handle

situations and deal with problems related to their job more efficiently than others and, therefore, experience a lower level of stress.

Conscientiousness is characterized by a tendency to control impulses, act in socially acceptable ways, and exhibit goal-directed behavior, like being dependable, organized, responsible, and achievement-oriented (John & Srivastava, 1999; Alarcon, Eschlelmn & Bowling, 2009). These characteristics are very much needed in the police profession. In policing, a high level of responsibility is required as they deal with highly sensitive issues related to safety, security, and even life-or-death-deciding incidents involving citizens and themselves in their day-to-day activities. Hence, it is generally expected of police officers to exhibit a higher level of conscientiousness; otherwise, it is imminent that they experience a higher level of stress (Howard & Howard, 2004). Literature in the field has supported this claim. For instance, Nelson and Smith (2016) revealed that conscientiousness significantly predicted police wellbeing. Lau et al. (2006) also revealed that police officers with a high level of conscientiousness reported a low level of occupational stress. The findings of this study affirmed what exists in the literature. It was found that conscientiousness had a significant positive correlation with both organizational ($r=.279$, $p<.001$) and operational ($r =.174$, $p<.001$) police stress, indicating officers with higher level of conscientiousness reported higher level of both organizational and operational stress. This study also found that Ethiopian Federal Police officers' organizational and operational stress is significantly predicted by conscientiousness traits.

There is scarce literature on the relationship between agreeableness and police stress, to the knowledge of the researcher, or the researcher could not access the resources. However, literature on occupational stress in other areas showed that agreeableness was negatively correlated with occupational stress. For instance, a study by Mirhaghi and Sarabian (2016) on

health care professionals revealed a negative correlation between agreeableness and perceived stress. In another study, high agreeableness was found to be associated with lower occupational stress (Törnroos, 2015). Further, Asendorpf & Van Aken (2003) reported that the positive attitude that highly agreeable people manifest is associated with rare social conflicts and more support from others, which can result in a lower level of stress. According to a general understanding from the literature, policing demands constant interaction with different types of people; hence, creating and maintaining healthy relationships is an important factor in the profession. Agreeable police officers can easily coordinate and cooperate with fellow officers, are sympathetic, avoid conflicts at the workplace, and can perform their duties relatively smoothly, which can increase their performance and decrease their burnout.

The present study, however, found contradictory findings with the existing literature. It is found that agreeableness has a significant positive correlation with both organizational ($r=.316$, $p<.001$) and operational ($r=.226$, $p<.001$) stress, meaning agreeable officers reported a higher level of stress. In the current study situation, when one is agreeable, it is easy to be influenced and manipulated by others, resulting in abusing laws, regulations, and policies. This can result in increased negative internal evaluation, thereby creating stress. Additionally, the relationship they have with the public might allow them to closely understand what the public feels about the police, which is most of the time negative and can also increase stress. In a police setting like Ethiopia, where organizational politics and red tape are high, being agreeable can be related to high stress.

The relationship between openness and police stress is rarely indicated in police stress studies. Among these, Nelson and Smith (2016) found that higher levels of openness to experiences were associated with a lower level of stress, though the coefficient is weak. In other

areas, too, openness was reported to be negatively associated with stress (Asendorpf & Van Aken, 2003; Williams et al., 2009 & Pollak et al., 2020). In the present study, openness was found to have a significant negative correlation ($r = -.160$, $p < .001$) with organizational stress, confirming the evidence in the literature. However, openness did not significantly predict both types of police stress.

Chapter Six

6. Conclusions and Recommendations

6.1. Conclusions

The main objective of this study was to examine the relationship gender, work experience, police rank, marital status, department (type of work) and personality traits have with police stress in Ethiopian Federal Police commission. Further the study tried to address intensity of police stress, difference on organizational and operational police stress based on gender, work type, marital status and police rank, the relationship among age and work experience of police officers and police stress and the relationship among personality traits (Neuroticism, Extraversion, Openness to experience, Agreeableness, Conscientiousness) and police organizational and operational stress. To address these aims data were collected from 401 police officers.

Police officers in the Ethiopian Federal Police Commission experienced high level of stress, though the organizational stress was found to be higher than operational stress. Organizational factors like inconsistent leadership style, lack of resources, feeling that different rules apply to different people or favoritism, bureaucratic red tape and unequal sharing of work responsibilities, and constant changes in policy and or legislation were also found to be highly stressful for the police officers. For operational factors, traumatic events like accidents, domestics, death, injury, risk of being injured on the job, and occupation-related health issues like back pain, not having time to spend with family and friends, managing social life outside of work, and lack of understanding from family and friends about the work were highly stressful than other operational factors.

In terms of gender difference on the stress types and levels, male and female officers only differed on level of operational stress, where female police officers experienced higher level of operational stress than male police officers. There was no significant difference between male and female police officers on their organizational stress level, where both male and female police officers reported high and almost similar organizational stress level. Concerning work type, officers who work in both major departments of the commission (Crime prevention and crime investigation) experienced high level of police organizational and operational stress. However, the levels of the stress did not significantly differ between the work types.

Lower-level leaders and beginner officers at EFPC experienced higher level of operational police stress than higher-level leaders. Constables (beginners) experience a higher level of operational stress than the higher level leaders (Chief Inspectors, Deputy Commanders, and Commanders). Lower-level leaders (sergeants) also experienced higher operational stress level than higher-level leaders (Chief Inspectors, Deputy Commanders, and Commanders). Constables level of operational stress was high and similar to lower-level leaders and middle-level leaders, while lower-level leaders also experienced high and similar level of stress with middle-level leaders, and middle-level leaders also experienced as high operational stress level as higher-level leaders. Though the level of organizational stress was high for all rank category, no statistically significant difference was observed.

Marital status also detrmned level of police stress where in all cases the single police personnel reproted the highest level of organizational and operational stress than the other marital status categories. Next to single police personnel, the married ones experienced second highest compared to the other categories.

Younger police officers experienced higher level of both organizational and operational stress than aged police officers, correspondingly, less experienced police officers were subject to higher levels of organizational and operational stress than much experienced police officers.

Concerning the relationship among personality traits and police stress, it can be concluded that personality traits are significant predictors of organizational and operational police stress in the Ethiopian Federal Police. Police personnel with neuroticism, agreeableness, and Conscientiousness traits experience more organizational stress than police personnel with extroversion and openness traits. Similarly, police personnel in the Ethiopian Federal Police with neuroticism, agreeableness, and conscientiousness experience a high level of stress.

6.2. Recommendations

Though number of empirical literature tried to establish a link between police officers stress with other variables, like police personality and other relevant police socio-demographic characteristics there are still limitations to fully understand the complex nature of police stress. Additionally, while investigating police stress individual factors are mostly ignored and this in turn resulted in suggesting or recommending one-size-fits-all approach to manage police stress, while not accounting for significant factors like police work type, and role of individual police officers within their respective department. The findings of this study suggest that the existing system of EFPC exposes officers to higher level of stress and seems that efforts are not made to manage police officers stress. The following recommendations are forwarded to help EFPC police officers to deal with police organizational and operational stress.

- The management of EFPC should be proactive and should target the key organizational and operational risk factors for police stress. The management should understand that stress management will need solid commitment and investment and should understand

that stress management is progressive and requires resources and most importantly adjustment in the culture of police operations.

- EFPC should implement a regular stress inventory and risk assessment particular on officers who are highly vulnerable to stress so that relevant support could be provided. In such ways the commission can use method of rotating officers that are exposed to much stressful tasks to less stressful tasks.
- The traditional meeting between the higher level leaders and lower level leaders (supervisor-subordinate) which focuses on evaluation and critics should have additional element of discussion that involves discussion on stress management. Discussion on stress management offers an opportunity to share experience and better deal with stress.
- Peer-to-peer stress debriefings should be implemented in the EFPC. Peer-to-peer discussion helps officers that are affected highly by critical incidents, by letting officers to share their feelings in meticulous setting and offering better understanding and stress management.
- As personality is found to be important predictor of police operational and organizational stress, officers should be given a training that helps them to be aware of their personality traits and thereby utilize relevant stress management strategy. In the long term, EFPC should consider using personality inventories to assign officers task that suits their personality types to help officers cope with stress and be productive.
- Behavioral science professionals, specifically psychologists and mental health professional (psychiatrists) should be employed in the organization, who can conduct stress inventories, provide stress management trainings, provide counseling and facilitate debriefing on stress management experiences. This occupational health and safety issue

can be integrated with the health service that is provided in the Ethiopian Police Referral Hospital.

- There is very limited research in police stress area in Ethiopia to the best knowledge of the researcher. Further wider studies that include other aspects of the police wellbeing are needed, though time, cost and accessing information from police organizations might be challenging. Further researchers should also consider variables like income, leaving condition, work-life balance and maintain including the role of personality in determining police stress.
- As this study only focused on Ethiopian Federal Police members, further research considering similar variables needs to be replicated in regional police contexts how the relationships among these variables look like.
- As the existing literature mainly focus on the relationship among police stress and other police demographic variables, little empirical evidence exists concerning strategies and mechanisms to manage and overcome stress. Besides assessing the determinants of police stress, police stress research needs to focus on evidence-based intervention strategies and ways of implementing appraising the effectiveness of the strategies.

6.3. Limitations

There are couples of limitations that the researcher encountered during the process of the entire study. The first limitation is related to the time of data collection. There is an ongoing war in the northern and western part of Ethiopia where members of the EFPC are involving in.

Though the data was not directly collected from those who are at war field, the general security issues threats that arise from the flame of the wars that the EFPC officers must deal with might

have resulted in the reported high level of organizational and operational stress among the police officers.

The second limitation is related to the research design. Though cross-sectional study design is time saving and efficient method, collecting data at a time is claimed as being a big disadvantage since it lacks temporal precedence. Using self-report as a data collection technique is also another limitation of this study. Though the psychometric properties of the inventories used in this study are found to be good, the understanding of the psychological terms, the situation and mood of the participants at the time of data collection and the length of the questionnaire and the amount of items in the questionnaire might have affected the way the participants filled the questionnaire.

The nature of the police organization and the way information are kept secret is also one of the main limitations. For example, exact number of police officers in EFPC was difficult to obtain because it is not legitimate to publicize the exact number of officers in the police force due to various security and political reasons.

This study focused on the two work units, crime prevention and crime investigation sectors, which entirely work on the innate police work. Other departments, like training and education and health services are not included in this study, and this might affect the generalizability of the study to the entire police force of EFPC. Additionally, this study considered officers who are working in Addis Ababa and surrounding towns. The researcher did not collect data from officers who are participating in the ongoing war. Hence the, findings might not reflect the situation of those in war fields.

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Appendix

English Questionnaire of the Original Scales

The aim of this research is to study stress in police setting and assessed it relationship with selected socio-demographic factors work type and personality traits. The study is believed to have significant contribution to understand patter of police stress and for further policy formulation concerning police metal health. You are selected to participate in this research randomly. The Questionnaire takes about 40 minutes your and you are kindly asked to give your genuine response as your response will be valuable for the success of this study. Your responses will be kept confidential and used only for purpose of this research.

Thank you very much for your time.

Part I

Basic Sociodemographic Characteristics

No.	Variable	Response
1	Gender	1. Male 2. Female
2	Age	
3	Police Work Experience (in years)	
4	Police Rank	
5	Marital Status	
6	Department/sector	1. Crime prevention 2. Crime investigation (Federal Bureau of Investigation)
7	Specific Department	
8	Position in the department	

Part II: **NEO-Five Factor Inventory (NEO-FFI) (Adopted English Version)**

Response options:

SD=Strongly Disagree D=Disagree N=Neutral A=Agree SA=Strongly Agree

1.	I like to have a lot of people around me.	SD	D	N	A	SA
2.	I try to be courteous to everyone I meet.					
3.	I keep my belongings neat and clean					
4.	I often feel inferior to others					
5.	I laugh easily					
6.	Once I find the right way to do something, I stick to it.					
7.	I often get into arguments with my family and co-workers.					
8.	I'm pretty good about pacing myself so as to get things done on lime.					
9.	When I'm under a great deal of stress, sometimes I feel like a I'm going to pieces.					
10.	I am intrigued by the patterns I find art and nature.					
11.	Some people think that I'm selfish and egoistic person					
12.	I rarely feel lonely or blue					
13.	I would rather cooperative with others than complete with them.					
14.	I try to perform all the tasks assigned to me consciously.					
15.	I often feel tense and jittery					
16.	I like to be where the action is.					
17.	Poetry has little or no effect on me.					
18.	I tend to be cynical and skeptical of others' intentions.					
19.	I have a clear set of goals and work towards them in an orderly fashion.					
20.	Sometimes, I feel completely worthless.					
21.	I believe that most people will take advantage of you if you let them.					
22.	I rarely feel fearful or anxious					
23.	I often feel as if I am bursting with energy.					
24.	I seldom notice the moods or feelings that different environments					

	produce					
25.	I work hard to accomplish my goals.					
26.	I believe we would look to our religious authorities for decision on moral issues					
27.	Some people think of me as cold and calculating.					
28.	When I make a commitment, I can always be counted on to follow through.					
29.	Sometimes, when I am reading poetry or looking at a work of art, I feel a chill or wave of excitement					
30.	I am seldom sad or depressed					
31.	I generally try to be thoughtful and considerate.					
32.	I am a productive person who always gets the job done.					
33.	I often feel helpless and want someone one else to solve my problems.					
34.	I am a very active person.					
35.	I have a lot of intellectual curiosity					
36.	I never seem to be able to get organized.					
37.	At times I have been so ashamed I just wanted to hide.					
38.	I would rather go my own way than be a leader of others.					
39.	I often enjoy playing with theories of abstract ideas.					
40.	If necessary, I am willing to manipulate people to get what I want.					

Appendix 2: **The Original NEO-Five Factor Inventory (NEO-FFI) (English Version)**

Response options:

SD=Strongly Disagree D=Disagree N=Neutral A=Agree SA=Strongly Agree

	Statement	SD	DA	N	A	SA
1.	I am not a worrier	1	2	3	4	5
2.	I like to have a lot of people around me.	1	2	3	4	5
3.	I don't like to waste my time daydreaming.	1	2	3	4	5
4.	I try to be courteous to everyone I meet.	1	2	3	4	5
5.	I keep my belongings neat and clean	1	2	3	4	5
6.	I often feel inferior to others	1	2	3	4	5
7.	I laugh easily	1	2	3	4	5
8.	Once I find the right way to do something, I stick to it.	1	2	3	4	5
9.	I often get into arguments with my family and co-workers.	1	2	3	4	5
10.	I'm pretty good about pacing myself so as to get things done on lime.	1	2	3	4	5
11.	When I'm under a great deal of stress, sometimes I feel like a I'm going to pieces.	1	2	3	4	5
12.	I don't consider myself especially "light-hearted"	1	2	3	4	5
13.	I am intrigued by the patterns I find art and nature .	1	2	3	4	5
14.	Some people think that I'm selfish and egoistic person	1	2	3	4	5
15.	I am not a very methodical person	1	2	3	4	5
16.	I rarely feel lonely or blue	1	2	3	4	5
17.	I really enjoy talking to people.	1	2	3	4	5
18.	I believe, letting students hear controversial speakers can only confuse and mislead them.	1	2	3	4	5
19.	I would rather cooperative with others than complete with them.	1	2	3	4	5
20.	I try to perform all the tasks assigned to me consciously.	1	2	3	4	5
21.	I often feel tense and jittery	1	2	3	4	5
22.	I like to be where the action is.	1	2	3	4	5
23.	Poetry has little or no effect on me.	1	2	3	4	5

24.	I tend to be cynical and skeptical of others' intentions.	1	2	3	4	5
25.	I have a clear set of goals and work towards them in an orderly fashion.	1	2	3	4	5
26.	Sometimes, I feel completely worthless.	1	2	3	4	5
27.	I usually prefer to do things alone.	1	2	3	4	5
28.	I often try new foreign foods.	1	2	3	4	5
29.	I believe that most people will take advantage of you if you let them.	1	2	3	4	5
30.	I waste a lot of time before settling down to work	1	2	3	4	5
31.	I rarely feel fearful or anxious	1	2	3	4	5
32.	I often feel as if I am bursting with energy.	1	2	3	4	5
33.	I seldom notice the moods or feelings that different environments produce	1	2	3	4	5
34.	Most people I know like me.	1	2	3	4	5
35.	I work hard to accomplish my goals.	1	2	3	4	5
36.	I often get angry at the way people treat me.	1	2	3	4	5
37.	I am a cheerful and high-spirited person	1	2	3	4	5
38.	I believe we would look to our religious authorities for decision on moral issues	1	2	3	4	5
39.	Some people think of me as cold and calculating.	1	2	3	4	5
40.	When I make a commitment, I can always be counted on to follow through.	1	2	3	4	5
41.	Too often, when things go wrong, I get discouraged and feel like giving up.	1	2	3	4	5
42.	I am not a cheerful optimist	1	2	3	4	5
43.	Sometimes, when I am reading poetry or looking at a work of art, I feel a chill or wave of excitement	1	2	3	4	5
44.	I am hard-headed and tough-minded in my attitudes.	1	2	3	4	5
45.	Sometimes, I'm not as dependable or I reliable, as I should.	1	2	3	4	5
46.	I am seldom sad or depressed	1	2	3	4	5
47.	My life is fast-paced.	1	2	3	4	5
48.	I have little interest in speculating on the nature of the universe or the	1	2	3	4	5

	human condition.					
49.	I generally try to be thoughtful and considerate.	1	2	3	4	5
50.	I am a productive person who always gets the job done.	1	2	3	4	5
51.	I often feel helpless and want someone 1 else to solve my problems.	1	2	3	4	5
52.	I am a very active person.	1	2	3	4	5
53.	I have a lot of intellectual curiosity	1	2	3	4	5
54.	If I do not like people, I let them know it.	1	2	3	4	5
55.	I never seem to be able to get organized.	1	2	3	4	5
56.	At times I have been so ashamed I just wanted to hide.	1	2	3	4	5
57.	I would rather go my own way than be a leader of others.	1	2	3	4	5
58.	I often enjoy playing with theories of abstract ideas.	1	2	3	4	5
59.	If necessary, I am willing to manipulate people to get what I want.	1	2	3	4	5
60.	I strive for excellence in everything I do.	1	2	3	4	5

Part III: Organizational Police Stress Questionnaire (PSQ-Org)

Below is a list of items that describe different aspects of being a police officer. After each item, please circle how much stress it has caused you over the past 6 months, using a 7-point scale (see below) that ranges from “No Stress At All” to “A Lot of Stress”:

No Stress at All			Moderate Stress			A Lot of Stress
1	2	3	4	5	6	7

1.	Dealing with co-workers	1	2	3	4	5	6	7
2.	The feeling that different rules apply to different people (e.g. favoritism)	1	2	3	4	5	6	7
3.	Feeling like you always have to prove yourself to the organization	1	2	3	4	5	6	7
4.	Excessive administrative duties	1	2	3	4	5	6	7
5.	Constant changes in policy / legislation	1	2	3	4	5	6	7
6.	Staff shortages	1	2	3	4	5	6	7
7.	Bureaucratic red tape	1	2	3	4	5	6	7
8.	Too much computer work	1	2	3	4	5	6	7
9.	Lack of training on new equipment	1	2	3	4	5	6	7
10.	Perceived pressure to volunteer free time	1	2	3	4	5	6	7
11.	Dealing with supervisors	1	2	3	4	5	6	7
12.	Inconsistent leadership style	1	2	3	4	5	6	7
13.	Lack of resources	1	2	3	4	5	6	7
14.	Unequal sharing of work responsibilities	1	2	3	4	5	6	7
15.	If you are sick or injured your co-workers seem to look down on you	1	2	3	4	5	6	7
16.	Leaders over-emphasize the negatives (e.g. supervisor evaluations, public complaints)	1	2	3	4	5	6	7
17.	Internal investigations	1	2	3	4	5	6	7
18.	Dealing the court system	1	2	3	4	5	6	7
19.	The need to be accountable for doing your job	1	2	3	4	5	6	7
20.	Inadequate equipment	1	2	3	4	5	6	7

Part IV: Operational Police Stress Questionnaire (PSQ-Op)

Below is a list of items that describe different aspects of being a police officer. After each item, please circle how much stress it has caused you over the past 6 months, using a 7-pointscale (see below) that ranges from “No Stress at All” to “A Lot of Stress”.

No Stress at All			Moderate Stress			A Lot of Stress
1	2	3	4	5	6	7

1.	Shift work	1	2	3	4	5	6	7
2.	Working alone at night	1	2	3	4	5	6	7
3.	Over-time demands	1	2	3	4	5	6	7
4.	Risk of being injured on the job	1	2	3	4	5	6	7
5.	Work related activities on days off (e.g. court, community events)	1	2	3	4	5	6	7
6.	Traumatic events (e.g. MVA, domestics, death, injury)	1	2	3	4	5	6	7
7.	Managing your social life outside of work	1	2	3	4	5	6	7
8.	Not enough time available to spend with friends and family	1	2	3	4	5	6	7
9.	Paperwork	1	2	3	4	5	6	7
10.	Eating healthy at work	1	2	3	4	5	6	7
11.	Finding time to stay in good physical condition	1	2	3	4	5	6	7
12.	Fatigue (e.g. shift work, over-time)	1	2	3	4	5	6	7
13.	Occupation-related health issues (e.g. back pain)	1	2	3	4	5	6	7
14.	Lack of understanding from family and friends about your work	1	2	3	4	5	6	7
15.	Making friends outside the job	1	2	3	4	5	6	7
16.	Upholding a "higher image" in public	1	2	3	4	5	6	7
17.	Negative comments from the public	1	2	3	4	5	6	7
18.	Limitations to your social life (e.g. who your friends are, where you socialize)	1	2	3	4	5	6	7
19.	Feeling like you are always on the job	1	2	3	4	5	6	7
20.	Friends / family feel the effects of the stigma associated with your job	1	2	3	4	5	6	7

Amharic Questionnaire of the Original Scales

መጠይቅ

የዚህ ጥናት ዋና አላማ የፖሊስ ስራና ተልእኮ ምን ያህል አስጨናቂ እንደሆነ መዳሰስና የፖሊስ ከስራ ጋር የተያያዘ ጭንቀት ከስራ አይነት፣ ከሰብእናና ከሌሎች ጉዳዮች ጋር ያለውን ተዛምዶ መለየት ነው። ይህ ጥናት የፖሊስን ከስራ ጋር የተያያዘ ጭንቀት ሁኔታ ለመረዳት፣ ለማወቅና ከፖሊስ የአዕምሮ ጤና ጋር የተያያዘ ፖሊሲዎችን ለመንደፍ አስተዋጽኦ ይኖረዋል። እርሶም እንደ አጋጣሚ በዚህ ጥናት ላይ እንዲሳተፉ ተመርጠዋል። መጠይቁን ለመሙላት 40 ደቂቃ ሊፈጅ ይችላል። እርሶም ለቀረቡ ጥያቄዎች የሚሰማዎትን ምላሽ በመስጠት እንዲተባበሩን እየጠየቅን መልስዎ ለዚህ ጥናት ዓላማ ብቻ እንደሚውል ለማረጋገጥ እንወዳለን።

ለቀና ትብብርዎ በቅድሚያ እናመሰግናለን።

ክፍል 1: መሰረታዊ መረጃዎች

ተ.ቁ	መረጃዎች	ምላሽ
1.	ጾታ	1. ወንድ 2. ሴት
2.	እድሜ	
3.	የፖሊስ አገልግሎት ዘመን	
4.	የፖሊስ ማዕረግ	
5.	የትዳር ሁኔታ	
6.	ዘርፍ	1. ወንጀል መከላከል 2. ወንጀል ምርመራ ቢሮ 3. የኢትዮጵያ ፖሊስ ዩኒቨርሲቲ 4. የሰው ሃብት አስተዳደር 5. ጤና (ፖሊስ ሆስፒታል)
7.	የስራ ክፍል	
8.	ኃላፊነት	

ክፍል ሁለት፡ የሚቀጥሉት አረፍተ ነገሮች ሰብእና ለመለካት የተዘጋጁ ናቸው፡፡ እባክዎ ዓረፍተ ነገሮቹን በጥንቃቄ በማንበብ እኔን ሊገልጽ ይችላል የሚሉትን የስምምነት ደረጃ ከዓረፍተ ነገሮቹ ፊት ለፊት ያሉትን ቁጥሮች በማክበብ ይግለጹ፡፡

- 1- በፍጹም አልስማማም 2- አልስማማም 3- ገለልተኛ/ሃሳብ የለኝም 4- እስማማለሁ 5- በጣም እስማማለሁ
 የምጽሀረ ቃላት ፍቺ

በፍአ- በፍጹም አልስማማም፣ አል- አልስማማም 3- ገለ- ገለልተኛ/ሃሳብ የለኝም
 4- እስ- እስማማለሁ በእ- በጣም እስማማለሁ

	ዓረፍተ ነገሮች	በፍአ	አል	ገለ	እስ	በእ
1.	ብዙ ተጨናቂ ሰው አይደለሁም	1	2	3	4	5
2.	ብዙ ሰዎች በዙሪያዬ ሲሆኑ ደስ ይለኛል	1	2	3	4	5
3.	ጊዜዬን በቀን ቅገጥነት ማሳለፍ አልወድም	1	2	3	4	5
4.	ለማገኛቸው ሰዎች ሁሉ ትሁት ለመሆን እሞክራለሁ	1	2	3	4	5
5.	መገልገያ ንብረቶቹን ሁሉ በንጽህናና በጥራት እይዛለሁ	1	2	3	4	5
6.	ሁሉ ከሌሎች የበታች እንደሆንኩ ይሰማኛል	1	2	3	4	5
7.	በቀላሉ/ በትንሽ ነገር እስቃለሁ	1	2	3	4	5
8.	የሆነ ነገር ለመስራት አንድ መንገድ ካገኘሁ አልቀይረውም	1	2	3	4	5
9.	ከስራ ባልደረቦቼና ከቤተሰቦች ጋር ብዙ ጊዜ እጋጫለሁ	1	2	3	4	5
10.	ነገሮችን በጊዜያቸው ለመጨረስ እራሴን ማትጋት ላይ ጥሩ ነኝ	1	2	3	4	5
11.	በጣም የሚያስጨንቀኝ ሁኔታ ውስጥ ስሆን አንዳንዴ የምፈነዳ ይመስለኛል	1	2	3	4	5
12.	እራሴን ግዴልሽ አድርጌ አላስበውም	1	2	3	4	5
13.	ተፈጥሮና ኪነ ጥበብ ውስጥ ያሉ ነገሮች ያስደንቁኛል	1	2	3	4	5
14.	እንዳንድ ሰዎች እራስ ወዳድ አድረገው ያስቡኛል	1	2	3	4	5
15.	በጣም ዘዴኛ ሰው አይደለሁም	1	2	3	4	5
16.	ብቸኝነት ከስንተ አንዴ ነው የሚሰማኝ	1	2	3	4	5
17.	ከሰዎች ጋር መወያየት በደንብ ያስደስተኛል	1	2	3	4	5
18.	የሚጋጩ ሃሰቶች ቢሰሙ ተማሪዎች ግራ ይጋባሉ ብዬ አምናለሁ	1	2	3	4	5
19.	ከሌሎች ጋር ከመፍካከር ይልቅ መተባበርን እመርጣለሁ	1	2	3	4	5
20.	የተሰጡኝን ስራዎች/ተልዕኮዎች ሁል በንቃት አፈጽማለሁ	1	2	3	4	5

21.	ብዙ ጊዜ ውጥረትና መጠበብ ይሰማኛል	1	2	3	4	5
22.	ድርጊት ላይ ማተኮር እመርጣለሁ	1	2	3	4	5
23.	ግጥም እኔ ላይ ያለው ስሜት ትንሽ ነው ወይም ለግጥም ስሜት የለኝም	1	2	3	4	5
24.	የሌሎች ሰዎችን ዝንባሌ/ሃሰብ በጥርጣሬ የማየት ጸባይ አለኝ	1	2	3	4	5
25.	ለምሰራው ስራ ቀድሜ ግልጽ ግብ በማስቀመጥ በቅደም ተከተል እከውናለሁ	1	2	3	4	5
26.	አንዳንድ ጊዜ ፈጽሞ ዋጋ እንደሌለኝ ይሰማኛል	1	2	3	4	5
27.	በአብዛኛው ነገሮችን ለብቻዬ መስራት እመርጣለሁ	1	2	3	4	5
28.	በአብዛኛው አዲስ የውጪ ሃገር ምግቦችን እሞክራለሁ	1	2	3	4	5
29.	መንገድ ከተከፈትላቸው ብዙ ሰዎች መጠቀሚያ ያደርጉሃል ብይ አምናለሁ	1	2	3	4	5
30.	ስራ ከመጀመሪያ በፊት ብዙ ጊዜ አጠፋለሁ	1	2	3	4	5
31.	ብዙ የምፈራና የምደነግጥ ሰው አይደለሁም	1	2	3	4	5
32.	ብዙ ጊዜ ውስጤ የታመቀ አቅም እንዳለኝ ይሰማኛል	1	2	3	4	5
33.	በአካባቢዬ ያሉ ስሜቶችን ለመረዳት እቸገራለሁ	1	2	3	4	5
34.	ከማውቃቸው ሰዎች አብዛኞቹ ይወዱኛል	1	2	3	4	5
35.	ግቦቼን ለማሳካት ጠንክሪ እሰራለሁ	1	2	3	4	5
36.	ሰዎች እኔን የሚያስተናግዱበት መንገድ ብዙ ጊዜ ያበሳጩኛል	1	2	3	4	5
37.	በደስታ የተሞላ መንፈስ ያለኝ ሰው ነኝ	1	2	3	4	5
38.	ከስነምግባር ጋር የተያያዙ ጉዳዮች ላይ ስንወስን የሃይማኖት መሪዎቻችንን ድርጊት መነሻ በማድረግ ነው ብዬ አምናለሁ	1	2	3	4	5
39.	አንዳንድ ሰዎች ቀዝቃዛና አታላይ አድረገው ያስቡኛል	1	2	3	4	5
40.	አንድ ጊዜ ግዴታ/ውል ውስጥ ከገባሁ ወይም ቃሌን ከሰጠሁ እስከመጨረሻው የምሄድ ሰው ነኝ	1	2	3	4	5
41.	ነገሮች በታቀደው መንገድ ካልሄዱልኝ ተስፋ የመቁረጥና ነገሩን የመተው ስሜት ይሰማኛል	1	2	3	4	5
42.	ከስሜታዊነት የመነጨ ብሩህ ተስፈኝነት የሚሰማኝ ሰው አይደለሁም	1	2	3	4	5
43.	አንዳንድ ጊዜ ግጥም ሳነብ ወይም የኪነ ጥበብ ስራዎችን ስመለከት የደስታ ማእበል ያናውጠኛል	1	2	3	4	5
44.	የማመንባቸውን አመለካከቶቼን በቀላሉ የምቀይር ሰው አይደለሁም	1	2	3	4	5
45.	አንዳንድ መሆን የሚገባኝን ያህል እምነት የሚጣልብኝ ሰው አይደለሁም	1	2	3	4	5

46.	በቀላሉ የምደበርና የማዘን ሰው አይደለሁም	1	2	3	4	5
47.	ሕይወቴ በፍጥነት እያለፈ ነው	1	2	3	4	5
48.	ስለ ሰውና በዓለም አፈጣጠር ለመመራመር ያለኝ ዝንባሌ ትንሽ ነው	1	2	3	4	5
49.	በአጠቃላይ ሌሎችን ለመረዳት እሞክራሁ	1	2	3	4	5
50.	ሁልጊዜ ስራዬን በአግባብ የምሰራ ውጤታማ ሰው ነኝ	1	2	3	4	5
51.	ሁል ጊዜ አቅመቢስ እንደሆንኩና ሌሎች ሰዎች ችግራን ሊፈቱልኝ እንደሚገባ ይሰማኛል	1	2	3	4	5
52.	በጣም ንቁ ሰው ነኝ	1	2	3	4	5
53.	ነገሮችን በጥልቅ የመመረምርና የመረዳት ፍላጎት አለኝ	1	2	3	4	5
54.	ያልወደድኳቸውን/ያልተመቹኝን ሰዎች እንዳልተመቹኝ እነግራቸዋለሁ	1	2	3	4	5
55.	እራሴን መቼም ፍፁም የማደርገው አይመስለኝም	1	2	3	4	5
56.	በጣም እፈረት ሲሰማኝ መደበኛ የምፈልገባቸው ጊዜዎች አሉ	1	2	3	4	5
57.	ሌሎችን ከምመራ በራሴ መንገድ መሄድ እመርጣለሁ	1	2	3	4	5
58.	የረቀቁ ሃሰቦች ላይ መመራመር ያስደስተኛል	1	2	3	4	5
59.	የምፈልገውን ነገር ለማግኘት የግድ ከሆነ፣ ሌሎችን ለማታለል/ለመሸወድ ዝግጁ ነኝ	1	2	3	4	5
60.	የምሰራው ስራ ሁሉ ፍጹም እንዲሆን እጥራለሁ	1	2	3	4	5

ክፍል ሶስት፡ ከታች የተዘረዘሩት ዓረፍተ ነገሮች ከፖሊስ ስራ ጋር የተገናኙ ናቸው፤ እባክዎ እያንዳንዱን ዓረፍተ ነገር ካነበቡ በኋላ የተጠቃሰው ሃሳብ ባለፉት ስድስት ወራት ምን ያህል እንዳስጨነቀዎ ከ 1-7 በተቀመጡት ቁጥሮችን በማክበብ ያሳዩ፡፡ 1 ማለት ጉዳዩ አላስጨነቀኝም ማለት ሲሆን 7 ማለት ደግሞ ጉዳዩ እጅግ በጣም አስጨንቆኛል ማለት ነው

ምንም አላስጨነቀኝም			መካከለኛ ጭንቀት አሳድሮብኛል			እጅግ በጣም አስጨንቆኛል
1	2	3	4	5	6	7

1.	ከስራ ባልደቦቹ ጋር ያለኝ ጉዳይ	1	2	3	4	5	6	7
2.	በተቋሙ ውስጥ ያለ አድጊዊ አሰራር	1	2	3	4	5	6	7
3.	ዘወትር ብቃቴን ለተቋሙ ማረጋገጥ/ማሳያት አለብኝ የሚለው ስሜት	1	2	3	4	5	6	7
4.	የአስተዳደር ነክ ስራዎች ብዛት	1	2	3	4	5	6	7
5.	የሕጎች/ደንቦች/መመሪያዎችና አሰራሮች በየጊዜው መቀያየር	1	2	3	4	5	6	7
6.	የባለሙያ እጥረት	1	2	3	4	5	6	7
7.	ጥብቅ የቢሮክራሲ አሰራሮች	1	2	3	4	5	6	7
8.	በርካታ የሰነድ ስራዎች	1	2	3	4	5	6	7
9.	ለአዳዲስ መሳሪያዎች አጠቃቀም የሚሰጥ የስልጠና እጥረት	1	2	3	4	5	6	7
10.	በትርፍ ጊዜ ለመሳራት የሚኖር ጫና	1	2	3	4	5	6	7
11.	ከስራ ኃላፊዎች ጋር ያለ መስተጋብር/ጉዳይ	1	2	3	4	5	6	7
12.	ወጥ ያልሆነ የአስተዳደር ዘይቤ	1	2	3	4	5	6	7
13.	የግብአት እጥረት	1	2	3	4	5	6	7
14.	ተመጣጣኝ ያልሆነ የስራ ክፍፍል	1	2	3	4	5	6	7
15.	በህመም ወይም በጉዳት ጊዜ በስራ ባልደረቦች እንደማይጠቅም ሰው መታየት	1	2	3	4	5	6	7
16.	አመራሮች እንደ ክስና ግምገማ ያሉ አሉታዊ ነገሮች ላይ ማተኮራቸው	1	2	3	4	5	6	7
17.	ውስጣዊ ምርመራዎች/ግምገማዎች	1	2	3	4	5	6	7
18.	ከችሎት ጋር የተገናኙ ስራዎች	1	2	3	4	5	6	7
19.	ኃላፊትን በመወጣት ሊመጣ የሚችል ተጠያቂነት	1	2	3	4	5	6	7
20.	የመሳሪያ እጥረት	1	2	3	4	5	6	7

ክፍል አራት፡ ከታች የተዘረዘሩት ዓረፍተ ነገሮች ከፖሊስ ስራ ጋር የተገናኙ ናቸው፤ እባክዎ እያንዳንዱን ዓረፍተ ነገር ካነበቡ በኋላ የተጠቃሰው ሃሳብ ባለፉት ስድስት ወራት ምን ያህል እንዳስጨነቀዎ ከ 1-7 በተቀመጡት ቁጥሮችን በማክበብ ያሳዩ፡፡ 1 ማለት ጉዳዩ አላስጨነቀኝም ማለት ሲሆን 7 ማለት ደግሞ ጉዳዩ እጅግ በጣም አስጨንቆኛል ማለት ነው

ምንም አላስጨነቀኝም			መካከለኛ ጭንቀት አሳድሮብኛል			እጅግ በጣም አስጨንቆኛል
1	2	3	4			7

1.	የፈረቃ ስራ	1	2	3	4	5	6	7
2.	ሌሊት ሌሊት ለብቻ መሰራት	1	2	3	4	5	6	7
3.	ከመደበኛ የስራ ሰዓት ውጪ ያሉ ግዳጆች	1	2	3	4	5	6	7
4.	በስራ ላይ ሊደርስ የሚችል ጉዳት	1	2	3	4	5	6	7
5.	በእረፍት ቀን ከስራው ጋር የተገናኙ እቅስቃሴዎች ላይ መሳተፍ	1	2	3	4	5	6	7
6.	እንደ ሞት፣ የአካል ጉዳት፣ ጥቃት የመሳሰሉ ክስተቶች	1	2	3	4	5	6	7
7.	ከስራ ውጪ ያለ ማኅበራዊ ሕይወትን ማስተካከል	1	2	3	4	5	6	7
8.	ከቤተሰብና ከጓደኛ ጋር ለማሳለፍ በቂ ጊዜ ማጣት	1	2	3	4	5	6	7
9.	የወረቀት ስራ/ የደክሜንቴሽን ስራ	1	2	3	4	5	6	7
10.	የጤናማ አመጋገብ ሁኔታ	1	2	3	4	5	6	7
11.	የአካል ብቃትን ለመጠበቅ ጊዜ ማጣት	1	2	3	4	5	6	7
12.	ከፈረቃና ብዙ ሰዓት መስራት ጋር ተያይዞ የሚመጣ ድካም	1	2	3	4	5	6	7
13.	ከስራው ጋር የተያየዙ የጤና እክሎች	1	2	3	4	5	6	7
14.	ቤተሰብና ጓደኞች የስራውን ጠባይ አለመረዳታቸው	1	2	3	4	5	6	7
15.	ከስራው ውጪ ካሉ ሰዎች ጋር ጓደኝነት መመሰረት	1	2	3	4	5	6	7
16.	ሁል ጊዜ የተቋሙን ገጽታ ይዞ መንቀሳቀስ	1	2	3	4	5	6	7
17.	የሕዝቡ አሉታዊ አስተያየት	1	2	3	4	5	6	7
18.	የማኅበራዊ ሕይወት ውስን መሆን (ለምሳሌ ጓደኛ መምረጥ፣ መዝናኛ ቦታ መምረጥ)	1	2	3	4	5	6	7
19.	ሁሌ ስራ ላይ እደሆኑ ማሳብ/መሰማት	1	2	3	4	5	6	7
20.	የሕዝቡ ከስራው ጋር የተያያዙ አድሎ ወደቤተሰብም መሸሻገር	1	2	3	4	5	6	7

Amharic Questionnaire of the Adopted Scales

መጠይቅ

የዚህ ጥናት ዋና አላማ የፖሊስ ስራና ተልእኮ ምን ያህል አስጨናቂ እንደሆነ መዳሰስና የፖሊስ ከስራ ጋር የተያያዘ ጭንቀት ከስራ አይነት፣ ከሰብእናና ከሌሎች ጉዳዮች ጋር ያለውን ተዛምዶ መለየት ነው። ይህ ጥናት የፖሊስን ከስራ ጋር የተያያዘ ጭንቀት ሁኔታ ለመረዳት፣ ለማወቅና ከፖሊስ የአዕምሮ ጤና ጋር የተያያዘ ፖሊሲዎችን ለመንደፍ አስተዋጽኦ ይኖረዋል። እርሶም እንደ አጋጣሚ በዚህ ጥናት ላይ እንዲሳተፉ ተመርጠዋል። መጠይቁን ለመሙላት 40 ደቂቃ ሊፈጅ ይችላል። እርሶም ለቀረቡ ጥያቄዎች የሚሰማዎትን ምላሽ በመስጠት እንዲተባበሩን እየጠየቅን መልስዎ ለዚህ ጥናት ዓላማ ብቻ እንደሚውል ለማረጋገጥ እንወዳለን።

ለቀና ትብብርዎ በቅድሚያ እናመሰግናለን።

ክፍል 1: መሰረታዊ መረጃዎች

ተ.ቁ	መረጃዎች	ምላሽ
1.	ጾታ	1. ወንድ 2. ሴት
2.	እድሜ	
3.	የፖሊስ አገልግሎት ዘመን	
4.	የፖሊስ ማዕረግ	
5.	የትዳር ሁኔታ	
6.	ዘርፍ	1. ወንጀል መከላከል 2. ወንጀል ምርመራ ቢሮ
7.	የስራ ክፍል	
8.	ኃላፊነት	

ክፍል ሁለት፡ የሚቀጥሉት አረፍተ ነገሮች ሰብእና ለመለካት የተዘጋጁ ናቸው፡፡ እባክዎ ዓረፍተ ነገሮቹን በጥንቃቄ በማንበብ እኔን ሊገልጽ ይችላል የሚሉትን የስምምነት ደረጃ ከዓረፍተ ነገሮቹ ፊት ለፊት ያሉትን ቁጥሮች በማክበብ ይግለጹ፡፡

2- በፍጹም አልስማማም 2- አልስማማም 3- ገለልተኛ/ሃሳብ የለኝም 4- እስማማለሁ 5- በጣም እስማማለሁ
የምጽሀረ ቃላት ፍቺ

**በፍአ- በፍጹም አልስማማም፣ አል- አልስማማም 3- ገለ- ገለልተኛ/ሃሳብ የለኝም
 4- እስ- እስማማለሁ በእ- በጣም እስማማለሁ**

	ዓረፍተ ነገሮች	በፍአ	አል	ገለ	እስ	በእ
1.	ብዙ ሰዎች በዙሪያዬ ሲሆኑ ደስ ይለኛል	1	2	3	4	5
2.	ለማገኛቸው ሰዎች ሁሉ ትሁት ለመሆን እሞክራለሁ	1	2	3	4	5
3.	መገልገያ ንብረቶቼን ሁሉ በንጽህናና በጥራት እይላለሁ	1	2	3	4	5
4.	ሁሉ ከሌሎች የበታች እንደሆንኩ ይሰማኛል	1	2	3	4	5
5.	በቀላሉ/ በትንሽ ነገር እስቃለሁ	1	2	3	4	5
6.	የሆነ ነገር ለመስራት አንድ መንገድ ካገኘሁ አልቀይረውም	1	2	3	4	5
7.	ከስራ ባልደረቦቼና ከቤተሰቦች ጋር ብዙ ጊዜ እጋጫለሁ	1	2	3	4	5
8.	ነገሮችን በጊዜያቸው ለመጨረስ እራሴን ማትጋት ላይ ጥሩ ነኝ	1	2	3	4	5
9.	በጣም የሚያስጨንቀኝ ሁኔታ ውስጥ ስሆን አንዳንዴ የምፈነዳ ይመስለኛል	1	2	3	4	5
10.	ተፈጥሮና ኪነ ጥበብ ውስጥ ያሉ ነገሮች ያስደንቁኛል	1	2	3	4	5
11.	እንዳንድ ሰዎች እራስ ወዳድ አድረገው ያስቡኛል	1	2	3	4	5
12.	ብቸኝነት ከስንተ አንዴ ነው የሚሰማኝ	1	2	3	4	5
13.	ከሌሎች ጋር ከመፎካከር ይልቅ መተባበርን እመርጣለሁ	1	2	3	4	5
14.	የተሰጡኝን ስራዎች/ተልዕኮዎች ሁል በንቃት አፈጽማለሁ	1	2	3	4	5
15.	ብዙ ጊዜ ውጥረትና መጠበብ ይሰማኛል	1	2	3	4	5
16.	ድርጊት ላይ ማተኮር እመርጣለሁ	1	2	3	4	5
17.	ግጥም እኔ ላይ ያለው ስሜት ትንሽ ነው ወይም ለግጥም ስሜት የለኝም	1	2	3	4	5
18.	የሌሎች ሰዎችን ዝንባሌ/ሃሳብ በጥርጣሬ የማየት ጸባይ አለኝ	1	2	3	4	5
19.	ለምሰራው ስራ ቀድሜ ግልጽ ግብ በማስቀመጥ በቅደም ተከተል እከውናለሁ	1	2	3	4	5

20.	አንዳንድ ጊዜ ፈጽሞ ዋጋ እንደሌለኝ ይሰማኛል	1	2	3	4	5
21.	መንገድ ከተከፈትላቸው ብዙ ሰዎች መጠቀሚያ ያደርጉሃል ብይ አምናለሁ	1	2	3	4	5
22.	ብዙ የምፈራና የምደነግጥ ሰው አይደለሁም	1	2	3	4	5
23.	ብዙ ጊዜ ውስጤ የታመቀ አቅም እንዳለኝ ይሰማኛል	1	2	3	4	5
24.	በአካባቢዬ ያሉ ስሜቶችን ለመረዳት እቸገራለሁ	1	2	3	4	5
25.	ግቦቹን ለማሳካት ጠንክሬ እሰራለሁ	1	2	3	4	5
26.	ከስነምግባር ጋር የተያያዙ ጉዳዮች ላይ ስንወስን የሃይማኖት መሪዎቻችንን ድርጊት መነሻ በማድረግ ነው ብዬ አምናለሁ	1	2	3	4	5
27.	አንዳንድ ሰዎች ቀዝቃዛና አታላይ አድረገው ያስቡኛል	1	2	3	4	5
28.	አንድ ጊዜ ግዴታ/ውል ውስጥ ከገባሁ ወይም ቃሌን ከሰጠሁ እስከመጨረሻው የምሄድ ሰው ነኝ	1	2	3	4	5
29.	አንዳንድ ጊዜ ግጥም ሳነብ ወይም የኪነ ጥበብ ስራዎችን ስመለከት የደስታ ማእበል ያናውጠኛል	1	2	3	4	5
30.	በቀላሉ የምደበርና የማዝን ሰው አይደለሁም	1	2	3	4	5
31.	በአጠቃላይ ሌሎችን ለመረዳት እሞክራሁ	1	2	3	4	5
32.	ሁልጊዜ ስራዬን በአግባብ የምሰራ ውጤታማ ሰው ነኝ	1	2	3	4	5
33.	ሁል ጊዜ አቅመቤት እንደሆንኩና ሌሎች ሰዎች ችግራን ሊፈቱልኝ እንደሚገባ ይሰማኛል	1	2	3	4	5
34.	በጣም ንቁ ሰው ነኝ	1	2	3	4	5
35.	ነገሮችን በጥልቅ የመመረምርና የመረዳት ፍላጎት አለኝ	1	2	3	4	5
36.	እራሴን መቼም ጥንቅቅ ያለ የማደርገው አይመስለኝም	1	2	3	4	5
37.	በጣም እፈረት ሲሰማኝ መደበኛ የምፈልገባቸው ጊዜዎች አሉ	1	2	3	4	5
38.	ሌሎችን ከምመራ በራሴ መንገድ መሄድ እመርጣለሁ	1	2	3	4	5
39.	የረቀቁ ሃሰቦች ላይ መመራመር ያስደስተኛል	1	2	3	4	5
40.	የምፈልገውን ነገር ለማግኘት የግድ ከሆነ፣ ሌሎችን ለማታለል/ለመሸወድ ዝግጁ ነኝ	1	2	3	4	5

ክፍል ሶስት፡ ከታች የተዘረዘሩት ዓረፍተ ነገሮች ከፖሊስ ስራ ጋር የተገናኙ ናቸው፤ እባክዎ እያንዳንዱን ዓረፍተ ነገር ካነበቡ በኋላ የተጠቃሰው ሃሳብ ባለፉት ስድስት ወራት ምን ያህል እንዳስጨነቀዎ ከ 1-7 በተቀመጡት ቁጥሮችን በማክበብ ያሳዩ፡፡ 1 ማለት ጉዳዩ አላስጨነቀኝም ማለት ሲሆን 7 ማለት ደግሞ ጉዳዩ እጅግ በጣም አስጨንቆኛል ማለት ነው

ምንም አላስጨነቀኝም			መካከለኛ ጭንቀት አሳድሮብኛል			እጅግ በጣም አስጨንቆኛል
1	2	3	4	5	6	7

1.	ከስራ ባልደቦቹ ጋር ያለኝ ጉዳይ	1	2	3	4	5	6	7
2.	በተቋሙ ውስጥ ያለ አድጊዊ አሰራር	1	2	3	4	5	6	7
3.	ዘወትር ብቃቴን ለተቋሙ ማረጋገጥ/ማሳያት አለብኝ የሚለው ስሜት	1	2	3	4	5	6	7
4.	የአስተዳደር ነክ ስራዎች ብዛት	1	2	3	4	5	6	7
5.	የሕጎች/ደንቦች/መመሪያዎችና አሰራሮች በየጊዜው መቀያየር	1	2	3	4	5	6	7
6.	የባለሙያ እጥረት	1	2	3	4	5	6	7
7.	ጥብቅ የቢሮክራሲ አሰራሮች	1	2	3	4	5	6	7
8.	በርካታ የሰነድ ስራዎች	1	2	3	4	5	6	7
9.	ለአዳዲስ መሳሪያዎች አጠቃቀም የሚሰጥ የስልጠና እጥረት	1	2	3	4	5	6	7
10.	በትርፍ ጊዜ ለመሳራት የሚኖር ጫና	1	2	3	4	5	6	7
11.	ከስራ ኃላፊዎች ጋር ያለ መስተጋብር/ጉዳይ	1	2	3	4	5	6	7
12.	ወጥ ያልሆነ የአስተዳደር ዘይቤ	1	2	3	4	5	6	7
13.	የግብአት እጥረት	1	2	3	4	5	6	7
14.	ተመጣጣኝ ያልሆነ የስራ ክፍፍል	1	2	3	4	5	6	7
15.	በህመም ወይም በጉዳት ጊዜ በስራ ባልደረቦች እንደማይጠቅም ሰው መታየት	1	2	3	4	5	6	7
16.	አመራሮች እንደ ክስና ግምገማ ያሉ አሉታዊ ነገሮች ላይ ማተኮራቸው	1	2	3	4	5	6	7
17.	ውስጣዊ ምርመራዎች/ግምገማዎች	1	2	3	4	5	6	7
18.	ከችሎት ጋር የተገናኙ ስራዎች	1	2	3	4	5	6	7
19.	ኃላፊትን በመወጣት ሊመጣ የሚችል ተጠያቂነት	1	2	3	4	5	6	7
20.	የመሳሪያ እጥረት	1	2	3	4	5	6	7

ክፍል አራት፡ ከታች የተዘረዘሩት ዓረፍተ ነገሮች ከፖሊስ ስራ ጋር የተገናኙ ናቸው፤ እባክዎ እያንዳንዱን ዓረፍተ ነገር ካነበቡ በኋላ የተጠቃሰው ሃሳብ ባለፉት ስድስት ወራት ምን ያህል እንዳስጨነቀዎ ከ 1-7 በተቀመጡት ቁጥሮችን በማክበብ ያሳዩ፡፡ 1 ማለት ጉዳዩ አላስጨነቀኝም ማለት ሲሆን 7 ማለት ደግሞ ጉዳዩ እጅግ በጣም አስጨንቆኛል ማለት ነው

ምንም አላስጨነቀኝም			መካከለኛ ጭንቀት አሳድሮብኛል			እጅግ በጣም አስጨንቆኛል
1	2	3	4			7

1.	የፈረቃ ስራ	1	2	3	4	5	6	7
2.	ሌሊት ሌሊት ለብቻ መሰራት	1	2	3	4	5	6	7
3.	ከመደበኛ የስራ ሰዓት ውጪ ያሉ ግዳጆች	1	2	3	4	5	6	7
4.	በስራ ላይ ሊደርስ የሚችል ጉዳት	1	2	3	4	5	6	7
5.	በእረፍት ቀን ከስራው ጋር የተገናኙ እቅስቃሴዎች ላይ መሳተፍ	1	2	3	4	5	6	7
6.	እንደ ሞት፣ የአካል ጉዳት፣ ጥቃት የመሳሰሉ ክስተቶች	1	2	3	4	5	6	7
7.	ከስራ ውጪ ያለ ማኅበራዊ ሕይወትን ማስተካከል	1	2	3	4	5	6	7
8.	ከቤተሰብና ከጓደኛ ጋር ለማሳለፍ በቂ ጊዜ ማጣት	1	2	3	4	5	6	7
9.	የወረቀት ስራ/ የዶክሜንቴሽን ስራ	1	2	3	4	5	6	7
10.	የጤናማ አመጋገብ ሁኔታ	1	2	3	4	5	6	7
11.	ከፈረቃና ብዙ ሰዓት መስራት ጋር ተያይዞ የሚመጣ ድካም	1	2	3	4	5	6	7
12.	ከስራው ጋር የተያየዙ የጤና እክሎች	1	2	3	4	5	6	7
13.	ቤተሰብና ጓደኞች የስራውን ጠባይ አለመረዳታቸው	1	2	3	4	5	6	7
14.	ከስራው ውጪ ካሉ ሰዎች ጋር ጓደኝነት መመሰረት	1	2	3	4	5	6	7
15.	ሁል ጊዜ የተቋሙን ገጽታ ይዞ መንቀሳቀስ	1	2	3	4	5	6	7
16.	የሕዝቡ አሉታዊ አስተያየት	1	2	3	4	5	6	7
17.	የማኅበራዊ ሕይወት ውሱን መሆን (ለምሳሌ ጓደኛ መምረጥ፣ መዝናኛ ቦታ መምረጥ)	1	2	3	4	5	6	7
18.	ሁሉ ስራ ላይ እደሆኑ ማሳብ/መሰማት	1	2	3	4	5	6	7

Descriptive Statistics of the Scales**Descriptive Statistics of Personality Items**

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
I like to have a lot of people around me.	401	1.00	5.00	3.8254	1.11106	-1.025	.122	.476	.243
I try to be courteous to everyone I meet.	401	1.00	5.00	3.4065	1.48555	-.495	.122	-1.260	.243
I keep my belongings neat and clean	401	1.00	5.00	3.5511	1.35941	-.696	.122	-.773	.243
I often feel inferior to others	401	1.00	5.00	2.0299	1.26456	1.069	.122	-.052	.243
I laugh easily	401	1.00	5.00	2.7606	1.28940	.278	.122	-1.083	.243
Once I find the right way to do something, I stick to it.	401	1.00	5.00	3.0399	1.46574	-.132	.122	-1.478	.243
I often get into arguments with my family and co-workers.	401	1.00	5.00	2.4938	1.40378	.432	.122	-1.263	.243
I'm pretty good about pacing myself so as to get things done on time.	401	1.00	5.00	3.3566	1.29035	-.329	.122	-1.228	.243
When I'm under a great deal of stress, sometimes I feel like a I'm going to pieces.	401	1.00	5.00	2.7631	1.36976	.164	.122	-1.305	.243

I am intrigued by the patterns I find art and nature.	401	1.00	5.00	3.5860	1.34655	-.703	.122	-.783	.243
Some people think that I'm selfish and egoistic person	401	1.00	5.00	2.8878	1.44044	.026	.122	-1.427	.243
I rarely feel lonely or blue	401	1.00	5.00	3.0998	1.29423	-.145	.122	-1.232	.243
I would rather cooperative with others than complete with them.	401	1.00	5.00	2.6534	1.64379	.234	.122	-1.669	.243
I try to perform all the tasks assigned to me consciously.	401	1.00	5.00	3.9476	1.05818	-1.078	.122	.546	.243
I often feel tense and jittery	401	1.00	5.00	2.5337	1.33022	.427	.122	-1.118	.243
I like to be where the action is.	401	1.00	5.00	3.7756	1.04139	-.942	.122	.503	.243
Poetry has little or no effect on me.	401	1.00	5.00	3.3516	1.31284	-.457	.122	-1.047	.243
I have a clear set of goals and work towards them in an orderly fashion.	401	1.00	5.00	3.4963	1.30023	-.623	.122	-.855	.243
Sometimes, I feel completely worthless.	401	1.00	5.00	2.1845	1.32886	.833	.122	-.590	.243
I believe that most people will take advantage of you if you let them.	401	1.00	5.00	2.2070	1.42638	.795	.122	-.842	.243
I rarely feel fearful or anxious	401	1.00	5.00	3.7282	1.11957	-.931	.122	.126	.243
I often feel as if I am bursting with energy.	401	1.00	5.00	3.6334	1.20945	-.886	.122	-.160	.243

I seldom notice the moods or feelings that different environments produce	401	1.00	5.00	2.4564	1.22830	.541	.122	-.878	.243
I work hard to accomplish my goals.	401	1.00	5.00	4.0673	1.00148	-1.531	.122	2.348	.243
I believe we would look to our religious authorities for decision on moral issues	401	1.00	5.00	3.0399	1.37055	-.107	.122	-1.318	.243
Some people think of me as cold and calculating.	401	1.00	5.00	2.3117	1.40893	.685	.122	-.941	.243
When I make a commitment, I can always be counted on to follow through.	401	1.00	5.00	3.5062	1.41088	-.678	.122	-.927	.243
Sometimes, when I am reading poetry or looking at a work of art, I feel a chill or wave of excitement	401	1.00	5.00	2.9052	1.43562	.055	.122	-1.479	.243
I am seldom sad or depressed	401	1.00	5.00	3.5511	1.23004	-.714	.122	-.552	.243
I generally try to be thoughtful and considerate.	401	1.00	5.00	3.4663	1.48812	-.682	.122	-1.040	.243
I am a productive person who always gets the job done.	401	1.00	5.00	3.2643	1.44394	-.324	.122	-1.343	.243

I often feel helpless and want someone else to solve my problems.	401	1.00	5.00	2.2269	1.32131	.772	.122	-.692	.243
I am a very active person.	401	1.00	5.00	3.8180	1.08595	-.999	.122	.474	.243
I have a lot of intellectual curiosity	401	1.00	5.00	3.6608	1.21024	-.856	.122	-.322	.243
I never seem to be able to get organized.	401	1.00	5.00	3.2219	1.44330	-.343	.122	-1.290	.243
At times I have been so ashamed I just wanted to hide.	401	1.00	5.00	2.7282	1.32606	.186	.122	-1.264	.243
I would rather go my own way than be a leader of others.	401	1.00	5.00	2.7631	1.30431	.154	.122	-1.285	.243
I often enjoy playing with theories of abstract ideas.	400	1.00	5.00	3.4900	1.22009	-.730	.122	-.581	.243
If necessary, I am willing to manipulate people to get what I want.	401	1.00	5.00	2.5187	1.46297	.401	.122	-1.332	.243
Valid N (listwise)	400								

Reliability Statistics Tables**Reliability statistics of PSQ-Org**

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Dealing with co-workers	87.5537	428.933	.224	.322	.841
The feeling that different rules apply to different people (e.g. favoritism)	85.3616	413.846	.449	.472	.831
Feeling like you always have to prove yourself to the organization	86.5847	416.816	.368	.286	.835
Excessive administrative duties	86.3955	410.568	.429	.364	.832
Constant changes in policy / legislation	85.6356	411.360	.430	.390	.832
Staff shortages	85.6073	408.602	.491	.484	.829
Bureaucratic red tape	85.3701	411.367	.474	.493	.830
Too much computer work	86.8842	419.774	.339	.270	.836
Lack of training on new equipment	85.8023	413.400	.442	.315	.831
Perceived pressure to volunteer free time	86.8079	413.765	.399	.303	.833
Dealing with supervisors	86.5480	406.707	.453	.402	.831
Inconsistent leadership style	85.3051	416.553	.426	.495	.832
Lack of resources	85.3220	413.284	.467	.365	.830
Unequal sharing of work responsibilities	85.4887	415.486	.419	.528	.832
If you are sick or injured your co-workers seem to look down on you	85.7119	412.251	.431	.431	.832
Leaders over-emphasize the negatives (e.g. supervisor evaluations, public complaints)	86.2768	407.306	.431	.493	.832

Internal investigations	87.0056	413.303	.392	.379	.834
Dealing the court system	87.1299	407.932	.460	.362	.830
The need to be accountable for doing your job	86.9153	413.489	.359	.423	.835
Inadequate equipment	86.0876	406.023	.465	.367	.830

Reliability statistics of PSQ-Op

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Shift work	71.6328	413.406	.398	.412	.849
Working alone at night	70.3588	411.251	.391	.279	.849
Over-time demands	70.4153	408.929	.404	.386	.849
Risk of being injured on the job	69.6469	413.934	.334	.393	.852
Work related activities on days off (e.g. court, community events)	70.8588	402.167	.464	.503	.846
Traumatic events (e.g. MVA, domestics, death, injury)	68.8418	406.881	.487	.481	.845
Managing your social life outside of work	69.5819	403.785	.498	.451	.844
Not enough time available to spend with friends and family	69.4435	414.095	.401	.512	.848
Paperwork	71.0056	404.289	.479	.446	.845
Eating healthy at work	70.1610	403.410	.445	.393	.847
Fatigue (e.g. shift work, over-time)	69.9435	396.677	.566	.441	.841
Occupation-related health issues (e.g. back pain)	69.5932	398.316	.528	.415	.843
Lack of understanding from family and friends about your work	69.7571	408.553	.407	.457	.848

Making friends outside the job	70.8051	395.710	.555	.445	.841
Upholding a "higher image" in public	69.8107	402.250	.489	.398	.845
Negative comments from the public	69.6045	409.747	.418	.418	.848
Limitations to your social life (e.g. who your friends are, where you socialize)	70.7599	408.778	.418	.305	.848
Feeling like you are always on the job	70.8220	402.708	.525	.393	.843

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	4.112	2.664	5.455	2.791	2.048	.491	20

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
OPRS1	79.5763	476.370	.386	.422	.851
OPRS2	78.3023	473.010	.392	.284	.851
OPRS3	78.3588	471.160	.398	.406	.851
OPRS4	77.5904	473.937	.354	.417	.853
OPRS5	78.8023	465.961	.437	.513	.849
OPRS6	76.7853	467.993	.490	.484	.847
OPRS7	77.5254	466.193	.484	.464	.847
OPRS8	77.3870	474.787	.416	.519	.850
OPRS9	78.9492	464.666	.488	.489	.847
OPRS10	78.1045	464.717	.444	.396	.849
OPRS11	78.8955	470.570	.424	.389	.850
OPRS12	77.8870	457.823	.560	.442	.844
OPRS13	77.5367	458.980	.529	.416	.845
OPRS14	77.7006	468.069	.429	.471	.849
OPRS15	78.7486	455.577	.564	.463	.844
OPRS16	77.7542	464.877	.473	.402	.848

OPRS17	77.5480	470.311	.431	.427	.849
OPRS18	78.7034	469.473	.428	.369	.849
OPRS19	78.7655	464.894	.512	.398	.846
OPRS20	77.6412	494.616	.178	.225	.859

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
82.2401	515.412	22.70270	20

Correlation Matrix of the Scale

PSQ-Org Correlation Matrix^a

	ORG S1	ORG S2	ORG S3	ORG S4	ORG S5	ORG S6	ORG S7	ORG S8	ORG S9	ORGS 10	ORGS 11	ORGS 12	ORGS 13	ORGS 14	ORGS 15	ORGS 16	ORGS 17	ORGS 18	ORGS 19	ORGS 20
Correlation 1	1.000	.043	.212	.213	-.074	.082	-.034	.305	.127	.128	.371	.052	.116	-.102	.139	-.019	.083	.050	.356	.065
ORGS 2	.043	1.000	.118	.155	.389	.260	.563	-.029	.239	.095	.265	.293	.269	.322	.345	.277	.186	.235	-.014	.299
ORGS 3	.212	.118	1.000	.197	.117	.249	.044	.230	.134	.253	.275	.168	.220	.142	.081	.172	.077	.344	.232	.213
ORGS 4	.213	.155	.197	1.000	.245	.227	.216	.374	.224	.290	.314	.181	.237	.217	.035	.037	.121	.168	.359	.247
ORGS 5	-.074	.389	.117	.245	1.000	.433	.398	.139	.252	.197	.123	.413	.288	.325	.238	.194	.121	.226	-.020	.188
ORGS 6	.082	.260	.249	.227	.433	1.000	.352	.219	.155	.128	.141	.554	.253	.506	.218	.234	.202	.207	.116	.179
ORGS 7	-.034	.563	.044	.216	.398	.352	1.000	.064	.313	.190	.107	.239	.276	.273	.220	.338	.263	.207	.095	.401
ORGS 8	.305	-.029	.230	.374	.139	.219	.064	1.000	.193	.217	.235	.127	.131	.081	.077	.087	.191	.190	.257	.108
ORGS 9	.127	.239	.134	.224	.252	.155	.313	.193	1.000	.184	.159	.210	.367	.094	.205	.303	.277	.209	.163	.378
ORGS 10	.128	.095	.253	.290	.197	.128	.190	.217	.184	1.000	.390	.096	.142	.091	.068	.130	.183	.276	.370	.295
ORGS 11	.371	.265	.275	.314	.123	.141	.107	.235	.159	.390	1.000	.169	.162	.070	.231	.202	.127	.263	.349	.280

ORGS 12	.052	.293	.168	.181	.413	.554	.239	.127	.210	.096	.169	1.000	.337	.522	.313	.080	.028	.140	.063	.157
ORGS 13	.116	.269	.220	.237	.288	.253	.276	.131	.367	.142	.162	.337	1.000	.276	.344	.211	.189	.085	.129	.425
ORGS 14	-.102	.322	.142	.217	.325	.506	.273	.081	.094	.091	.070	.522	.276	1.000	.421	.367	.131	.247	-.056	.146
ORGS 15	.139	.345	.081	.035	.238	.218	.220	.077	.205	.068	.231	.313	.344	.421	1.000	.463	.170	.252	.079	.232
ORGS 16	-.019	.277	.172	.037	.194	.234	.338	.087	.303	.130	.202	.080	.211	.367	.463	1.000	.442	.334	.045	.221
ORGS 17	.083	.186	.077	.121	.121	.202	.263	.191	.277	.183	.127	.028	.189	.131	.170	.442	1.000	.373	.326	.195
ORGS 18	.050	.235	.344	.168	.226	.207	.207	.190	.209	.276	.263	.140	.085	.247	.252	.334	.373	1.000	.305	.188
ORGS 19	.356	-.014	.232	.359	-.020	.116	.095	.257	.163	.370	.349	.063	.129	-.056	.079	.045	.326	.305	1.000	.208
ORGS 20	.065	.299	.213	.247	.188	.179	.401	.108	.378	.295	.280	.157	.425	.146	.232	.221	.195	.188	.208	1.000

a. Determinant = .002

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.778
Bartlett's Test of Sphericity	Approx. Chi-Square	2138.807
	df	190
	Sig.	.000

OPRS 13	.141	.264	.201	.189	.234	.382	.229	.243	.297	.330	.237	.364	1.000	.435	.315	.239	.409	.201	.316	.141
OPRS 14	-.051	.095	.195	.147	-.006	.396	.346	.487	.070	.247	.184	.252	.435	1.000	.288	.109	.428	.203	.130	.316
OPRS 15	.372	.167	.206	.089	.338	.230	.498	.202	.341	.147	.359	.468	.315	.288	1.000	.353	.235	.401	.400	.095
OPRS 16	.247	.190	.087	.180	.309	.239	.405	.109	.307	.352	.211	.344	.239	.109	.353	1.000	.325	.303	.356	-.039
OPRS 17	.078	.094	.057	.180	.013	.350	.277	.387	.090	.287	.174	.122	.409	.428	.235	.325	1.000	.322	.203	.236
OPRS 18	.288	.145	.103	.092	.300	.098	.337	.177	.214	.084	.401	.272	.201	.203	.401	.303	.322	1.000	.314	-.026
OPRS 19	.447	.286	.300	.126	.433	.157	.331	.044	.414	.153	.290	.348	.316	.130	.400	.356	.203	.314	1.000	-.058
OPRS 20	-.109	.038	.143	.147	-.095	.228	.057	.314	.032	.192	.145	.050	.141	.316	.095	-.039	.236	-.026	-.058	1.000

a. Determinant = .001

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.811
Bartlett's Test of Sphericity	Approx. Chi-Square	2362.989
	df	190
	Sig.	.000

Neuroticism Items Correlation Matrix^a

	P1NE1	P6NE2	P11NE3	P16NE4	P21NE5	P26NE6	P31NE7	P36NE8	P41NE9	P46NE10	P51NE11	P56NE12	
Correlation	P1NE1	1.000	-.065	.102	.078	.134	.161	.083	.117	.172	.176	.166	.002
	P6NE2	-.065	1.000	.305	.305	.319	.296	.109	.064	.230	.059	.303	.298
	P11NE3	.102	.305	1.000	.372	.332	.323	.066	.194	.222	.039	.387	.098
	P16NE4	.078	.305	.372	1.000	.218	.260	.139	.160	.139	.088	.314	.228
	P21NE5	.134	.319	.332	.218	1.000	.571	.072	.111	.078	-.009	.303	.065
	P26NE6	.161	.296	.323	.260	.571	1.000	-.030	.135	.237	-.036	.439	.026
	P31NE7	.083	.109	.066	.139	.072	-.030	1.000	-.007	.030	.345	.097	.189
	P36NE8	.117	.064	.194	.160	.111	.135	-.007	1.000	.169	-.025	.169	.079
	P41NE9	.172	.230	.222	.139	.078	.237	.030	.169	1.000	.149	.267	.212
	P46NE10	.176	.059	.039	.088	-.009	-.036	.345	-.025	.149	1.000	.144	.187
	P51NE11	.166	.303	.387	.314	.303	.439	.097	.169	.267	.144	1.000	.105
	P56NE12	.002	.298	.098	.228	.065	.026	.189	.079	.212	.187	.105	1.000

a. Determinant = .134

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.746
Bartlett's Test of Sphericity	Approx. Chi-Square	698.549
	df	66
	Sig.	.000

Agreeableness items Correlation Matrix^a

	P4AG1	P9AG2	P14AG3	P19AG4	P24AG5	P29AG6	P34AG7	P39AG8	P44AG9	P49AG10	P54AG11	P59AG12	
Correlation	P4AG1	1.000	.030	.171	.569	-.022	.224	.091	.176	.179	.641	-.019	.086
	P9AG2	.030	1.000	.448	.061	.256	.200	.173	.440	.179	.057	-.084	.492
	P14AG3	.171	.448	1.000	.248	.090	.480	.075	.510	.107	.157	.000	.513
	P19AG4	.569	.061	.248	1.000	.080	.267	.133	.122	.276	.545	-.002	.073
	P24AG5	-.022	.256	.090	.080	1.000	-.026	-.053	.061	-.011	.063	.088	.108
	P29AG6	.224	.200	.480	.267	-.026	1.000	.085	.406	.029	.192	.079	.381
	P34AG7	.091	.173	.075	.133	-.053	.085	1.000	.094	.197	.181	.023	.107
	P39AG8	.176	.440	.510	.122	.061	.406	.094	1.000	.053	.173	-.113	.747
	P44AG9	.179	.179	.107	.276	-.011	.029	.197	.053	1.000	.177	-.011	.061
	P49AG10	.641	.057	.157	.545	.063	.192	.181	.173	.177	1.000	.132	.011
	P54AG11	-.019	-.084	.000	-.002	.088	.079	.023	-.113	-.011	.132	1.000	-.116
	P59AG12	.086	.492	.513	.073	.108	.381	.107	.747	.061	.011	-.116	1.000

a. Determinant = .032

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.731
Bartlett's Test of Sphericity	Approx. Chi-Square	1202.702
	df	66
	Sig.	.000

Openness items Correlation Matrix^a

	P3OP1	P8OP2	P13OP3	P23OP5	P33OP7	P38OP8	P43OP9	P48OP10	P58OP12	P53OP11	
Correlation	P3OP1	1.000	.098	.276	.239	.142	.065	.067	.044	.079	.004
	P8OP2	.098	1.000	.220	.168	.394	.013	-.072	.292	-.285	-.136
	P13OP3	.276	.220	1.000	.297	.001	.314	.109	.099	.100	.054
	P23OP5	.239	.168	.297	1.000	.047	.214	.034	.006	.112	.060
	P33OP7	.142	.394	.001	.047	1.000	-.072	-.131	.289	-.206	-.165
	P38OP8	.065	.013	.314	.214	-.072	1.000	-.001	.095	.277	.050
	P43OP9	.067	-.072	.109	.034	-.131	-.001	1.000	.048	.306	.859
	P48OP10	.044	.292	.099	.006	.289	.095	.048	1.000	-.274	.071
	P58OP12	.079	-.285	.100	.112	-.206	.277	.306	-.274	1.000	.306
	P53OP11	.004	-.136	.054	.060	-.165	.050	.859	.071	.306	1.000

a. Determinant = .076

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.580
Bartlett's Test of Sphericity	Approx. Chi-Square	899.540
	df	45
	Sig.	.000

Extroversion items Correlation Matrix^a

	P2EX1	P7EX2	P12EX3	P22EX5	P27EX6	P32EX7	P37EX8	P42EX9	P47EX10	P52EX11	P57EX12	
Correlation	P2EX1	1.000	.089	.183	.647	.227	.804	.208	-.001	.082	.922	.005
	P7EX2	.089	1.000	.170	.136	.083	.153	.252	-.061	.184	.108	.102
	P12EX3	.183	.170	1.000	.112	.094	.127	.042	-.034	.047	.150	-.005
	P22EX5	.647	.136	.112	1.000	.227	.461	.207	-.078	.059	.551	.128
	P27EX6	.227	.083	.094	.227	1.000	.321	.202	-.020	.098	.218	.068
	P32EX7	.804	.153	.127	.461	.321	1.000	.234	-.056	.116	.832	-.173
	P37EX8	.208	.252	.042	.207	.202	.234	1.000	.019	.012	.152	.002
	P42EX9	-.001	-.061	-.034	-.078	-.020	-.056	.019	1.000	-.014	.019	.188
	P47EX10	.082	.184	.047	.059	.098	.116	.012	-.014	1.000	.112	.061
	P52EX11	.922	.108	.150	.551	.218	.832	.152	.019	.112	1.000	-.033
	P57EX12	.005	.102	-.005	.128	.068	-.173	.002	.188	.061	-.033	1.000

a. Determinant = .013

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.729
Bartlett's Test of Sphericity	Approx. Chi-Square	1523.666
	Df	55
	Sig.	.000

Conscientiousness Items Correlation Matrix^a

		P5C O1	P10C O2	P15C O3	P20C O4	P25C O5	P30C O6	P35C O7	P40C O8	P45C O9	P50CO 10	P55CO 11	P60CO 12
Correlation	P5CO1	1.000	.488	.065	.499	.727	-.329	.467	.637	-.144	.761	.578	.376
	P10CO 2	.488	1.000	-.037	.605	.563	-.271	.334	.460	-.089	.542	.440	.235
	P15CO 3	.065	-.037	1.000	.022	.067	.193	.017	.051	.108	.010	.006	.067
	P20CO 4	.499	.605	.022	1.000	.599	-.350	.332	.469	.018	.580	.438	.323
	P25CO 5	.727	.563	.067	.599	1.000	-.334	.640	.759	-.106	.869	.739	.308
	P30CO 6	-.329	-.271	.193	-.350	-.334	1.000	-.219	-.248	.260	-.357	-.267	-.187
	P35CO 7	.467	.334	.017	.332	.640	-.219	1.000	.696	-.074	.650	.631	.147
	P40CO 8	.637	.460	.051	.469	.759	-.248	.696	1.000	-.025	.809	.727	.288
	P45CO 9	-.144	-.089	.108	.018	-.106	.260	-.074	-.025	1.000	-.102	-.007	-.052
	P50CO 10	.761	.542	.010	.580	.869	-.357	.650	.809	-.102	1.000	.722	.357
	P55CO 11	.578	.440	.006	.438	.739	-.267	.631	.727	-.007	.722	1.000	.306
	P60CO 12	.376	.235	.067	.323	.308	-.187	.147	.288	-.052	.357	.306	1.000

a. Determinant = .001

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.903
Bartlett's Test of Sphericity	Approx. Chi-Square	2375.989
	Df	66
	Sig.	.000

