BEHIND THE FRONTLINES: OCCUPATIONAL STRESS AND WELL-BEING IN JAMAICAN POLICE OFFICERS

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Publications in Thesis

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Summary

Policing is considered highly stressful, and this is particularly true for the police in Jamaica. Along with the everyday demands and pressures of police work, these officers also contend with socio-economic challenges and high levels of crime and violence. However, there is a lack of empircal data on police stress and its effects in this context. Furthermore, while much progress has been made over the past four decades, it has been argued that there is a need for more thorough and organised research frameworks in understanding the complexities of police stress and its consequences. The current research was consistent with this recommendation and sought to provide a comprehensive study of work-related stress in the Jamaican Police Force.

The first objective was to identify sources of occupational stress among police officers. The second was to use a multidimensional approach, guided by a contemporary theoretical framework, to examine the determinants of police officers' well-being. This research investigated the relative contribution of occupational factors, individual differences, and work-family conflict in predicting occupational and personal well-being outcomes. Moderation effects of positive work factors and coping, as well as the intermediate role of subjective appraisals in the stress-strain relationship were also examined.

Findings showed that organizational stressors, including inadequate pay and resources, poor working conditions, and poor management practices were the primary sources of stress for the Jamaican police. Confrontations with harm or death, public scrutiny and criticism as well as stress from the interplay of work and family life were also important.

Considering objective two, findings indicated that occupational factors were strong predictors of well-being outcomes but personality characteristics and work-family conflict were also important covariates. Coping styles exerted relatively little influence on police officers' well-being. Little support was found for the moderation effects model, but there was evidence to support the intermediate linkages of subjective job appraisals.

Overall, the research showed that using a process approach, involving a system of variables is essential to advance our understanding of stress-strain relationships in police research. Findings highlight areas for future research and provide direction for improving the work experience and quality of life of Jamaican police officers.

Chapter 1
Introduction

1.1. General Introduction

In industrialised countries, there have been growing preoccupations with work-related stress as a major challenge to the health and well-being of employees and by extension the productivity and success of organisations. It is generally accepted that "workers who are stressed are more likely to be unhealthy, poorly motivated, less productive and less safe at work" (Leka, Griffiths, & Cox, 2003, p. 1). Indeed, both the human and economic costs of workplace stress have been well documented in the literature. There is now considerable evidence and reasonable consensus that exposure to prolonged stress emanating from the work environment can lead to psychological problems such as depression, anxiety, and burnout; physiological problems such as cardiovascular disease, musculoskeletal problems, and hypertension; and organisational problems such as absenteeism, workplace violence or accidents (Bongers, de Winter, Kompier, & Hildebrandt, 1993; Byrne & Espnes, 2008; Cooper & Cartwright, 1994; Ganster & Schaubroeck, 1991; Rosenthal & Alter, 2012; Stansfeld & Candy, 2006).

The economic cost of employee healthcare due to work-related stress is mounting (Caulfield, Chang, Dollard, & Elshaug, 2004; Cooper & Cartwright, 1994; Kortum, Leka, & Cox, 2010). It has been reported, for example, that "stress-related disability claims are the most rapidly growing form of occupational illness within the workers' compensation system" (King, 1995, p. 36). In the United Kingdom, stress accounted for 37% of all work-related ill health cases and 45% of all work days lost due to ill health (Health and Safety Executive [HSE], 2016). In the US, it has been estimated that over 50% of the 550 million workdays lost as a result of absenteeism is stress-related (Cox, Griffiths, & Rial-Gonzalez,

2000). Nationally, the estimates of the cost of stress in Australia between 2000 and 2001 were approximately $105.5 million (Caulfield et al., 2004). In light of the financial and human costs, work-related stress and its effects have been widely studied in many occupational groups in an attempt to treat, manage and where possible mitigate its occurrence.

Policing has been no exception, particularly due to the physical and emotional demands associated with the job. In fact, many authors have suggested that policing is amongst, if not, the most stressful occupation. For example, Somodevilla (1978), a police psychologist, stated, "it is an accepted fact that a police officer is under stress and pressure unequalled by any other profession" (p.21), and Hans Selye (1978) who is considered the father of stress research asserted that police work "ranks as one of the most hazardous (occupations), exceeding the formidable stresses and strains of air traffic control" (p. 7). These underlying assumptions that policing must be a high-stress occupation are based on the fact that along with stressors common to other aspects of work life, the job also involves an increased risk of danger and unpredictable situations. So ingrained are these beliefs that one author suggested that the police profession has emphasised this notion of police stress, regardless of its validity, as a means of gaining external professional legitimacy and prestige (Terry, 1985). That is, officers have developed a form of self-fulfilling prophesy such that, "to the extent that police stress is glamorised and highly publicised as a significant problem, it may create a greater likelihood among officers to perceive their work as stressful" (Stinchcomb, 2004, p. 263).

While Terry (1985) makes a valid point, it is undeniable that police officers in the lifespan of their careers will inevitably be exposed to any number of traumatic events. When one thinks of policing, it is intuitively viewed as untypically hazardous, due particularly to the fact that police officers are exposed to an exceptionally high level of risk

for personal injury and fatality in the normal course of their duty (Violanti & Aron, 1995). For instance, policing is one of the few occupations in which workers must contend with the ever-present threat of being attacked and even killed by those whom they serve. Further, the fact that the police must necessarily participate in operations such as search and rescue and high-risk driving-related duties such as high-speed chase means that they face a markedly higher risk of accidental death and injury compared to persons in most other lines of work (Abdollahi, 2002; Stinchcomb, 2004). But is police work uniquely stressful?

Whether police officers experience their work as relatively more stressful than other occupations is debatable. The task of addressing this question is made even more challenging because the literature, while vast, contains inconsistent findings. Abdollahi (2002) in her review concluded that police stress research is often discipline-specific, contrasting and inconclusive. For example, while there are studies that support the notion that police work is among the most stressful occupations (Brough, 2005; Hart & Cotton, 2002; Houdmont, Kerr, & Randall., 2012; Johnson, Cooper, Cartwright, Taylor, & Millet, 2005; Sigler, Wilson, & Allen, 1991), others suggest that police work is no more stressful, and police officers are no more prone to stress-related problems compared to other occupational groups (Deschamps, Paganon-Badiner, Marchand, & Merle, 2003; Hart & Cotton, 2002; Zhao, He, & Lovrich, 2002). In fact, police officers in some cases show less severe symptoms of stress when compared with other groups (Berg, Hem, Lau, & Ekeberg, 2006; Kop, Euwema & Schaufeli, 1999; van der Velden, Rademaker, Vermetten, Portengen, Yzermans, & Grievink, 2013). Furthermore, research shows that though they may not generate as much attention as the potentially dangerous aspects of the job, it is the day-to-day stressors from within the organisation that are a cause for most concern (Brown & Campbell, 1994; Hart et al., 1994; Stinchcomb, 2004). That is, those unobtrusive,

routine, but persistent stressors related to the organisational structure and management practices (Abdollahi, 2002; Stinchcomb, 2004).

Still, while the question of whether police officers experience stress more severely relative to other occupational groups is interesting, and may even serve to legitimise the burden of police work and thus incite empathy from an often unappreciative public, it is perhaps a futile one to ask. As Webb and Smith (1980) point out, whether police work is more or less stressful is not a pertinent question in and of itself, but consideration of the sources of stress and adverse consequences should be key areas of focus for police research. The authors acknowledge that despite the contradictions in the claims of the uniqueness of stress in policing, it does appear that police work is stressful and have negative consequences for the general health of the individual police officer and the organisation. Importantly, when one considers that stress in policing can have serious implications for public harm, there is a reason to reframe the discussion away from the comparative debate. As Manolias (cited in Brown & Campbell, 1994, p.11) asserts, the topic of police stress requires pertinent consideration because (1) the police, among others, fulfil an essential function in society, this requires an effective workforce, and stress potentially undermines the effectiveness and efficiency of the police service; (2) the consequences of police stress may have an adverse effect on the development and maintenance of good police relations with the public; and (3) there exists the possibility that police officers under stress can, in certain situations, constitute a real threat to their safety, that of their fellow officers, the offenders they deal with and indeed the public in general.

The arguments above are at least in part why police stress has been a subject of interest for many years. However, while there is a plethora of research on the topic of police stress from large industrialised countries, there is a paucity of research from

developing nations including smaller Caribbean nations, such as Jamaica. The scarcity of research restricts any in-depth understanding of the nature of police work in these contexts, including how work-related stress is perceived, the factors that may cause it and how it affects these populations. Generally, having inadequate information presents a potential barrier to building awareness and fully addressing any existing problems in developing nations (Kortum et al., 2010). Therefore, further research (broadly and specific to occupational groups), is needed to fill the gap in the literature and to help us to begin to understand the problem so health care policies and interventions can be developed to ensure the health of workers in these contexts.

The overall aim of this research, therefore, is to investigate work stress and well-being among Jamaican police officers. The next sections will provide some background to the research to set the context of policing in Jamaica and highlight pertinent issues facing this workforce. This is followed by a description of the significance of the study and an outline of the main objectives and research questions. Lastly, the final sections provide an overview of the entire thesis, summarising the purpose and structure of each of the subsequent chapters.

1.2. Background to the Jamaican context

Developing nations face broader issues beyond the workplace such as poor socio-economic conditions, high levels of crime, and economic and cultural structures that are important variables for consideration when undertaking research in these contexts (Houtman, Jettinghoff, & Cedillo, 2007; Leka et al., 2010). For instance, in some Caribbean nations such as Jamaica, policing is increasingly challenging due to unrelentingly high crime rates. Moreover, there are economic challenges which mean that the police organisations are typically underfunded and under-resourced. Policing in these

contexts, therefore, requires a skilful balance of using finite resources efficiently while attempting to protect citizens and property and maintain law and order. Bennett (1997) in making an assessment of policing in Caribbean nations stated:

> Most police forces in the developing world operate with very limited financial and personnel resources, so they must understand how to use those resources most effectively and efficiently. At the same time, developing nations (especially in the Caribbean), are experiencing dramatic increases in crime, and particularly crimes of violence, that challenge their established ways of operating. (p.296)

Jamaica has one of the lowest average annual per capita Gross Domestic Product (GDP) growth rates and remains one of the most highly indebted countries in the world (Johnston & Montecino, 2012). A high debt burden has resulted in increased allocations to debt servicing which displaces public expenditures to important sectors such as healthcare, education and security (Johnston & Montecino, 2012). No doubt an underfunded and under-resourced police force with pressure to perform in a high crime environment is likely to exacerbate the stress experience of police officers.

For years, Jamaica has been ranked in the top ten countries with the highest homicide rates per capita (United Nations Office on Drugs and Crime [UNODC], 2013). For the year 2012, the UNODC reported that this small island nation with a population of approximately 2.7 million had a murder rate of 39.3 per 100,000. The country has a complex history of crime and violence that can be attributed to a combination of key factors including but not limited to poor socio-economic conditions, proliferation of illegal firearms and ammunition, the transhipment of illegal narcotics, gang violence, and in recent years international extortion (Government of Jamaica Report, 2013; Harriot, 2000; Jamaica Constabulary Force [JCF] Corporate Plan, 2015). Notably, sources indicate that gang conflict accounts for the majority of homicides in the country with reportedly over

250 criminal gangs in mostly urban areas across the island (Government of Jamaica Report, 2013; JCF Corporate Plan, 2015).

As the complexities of criminal activity and social problems has increased over the years, the responsibilities of the police have become even greater and operations more challenging (Government of Jamaica Report, 2013; Stewart & Mansingh, 2010). At the same time, the police are expected to operate in an atmosphere that lacks respect for their authority and questions the legitimacy of their roles (Harriot & Lewis, 2014; Stewart & Mansingh, 2010). From the perspective of the police, the use of strong policing tactics, including the use of force, is therefore necessary given the policing terrain in the country. However, some of these practices have been controversial, particularly, alleged cases of police brutality and extrajudicial killings. The result is continuous deterioration of police-community relations underlined by high levels of distrust and negative attitudes on both sides (Harriot & Lewis, 2014). Consequently, performing policing duties is thwarted, as citizens, in anticipation of conflict, respond defensively in interacting with police officers (Jamaica Ministry of National Security, 2008).

Because of the continued allegations of abuse of power and authority, human rights violations by police officers are closely monitored and scrutinised both locally and internationally. However, some sources have suggested that the heavy scrutiny and resulting fear of prosecution have resulted in a demoralised police force (Harriot, 2000; Johnson, 2011). For instance, the Independent Commission of Investigations (INDECOM), an oversight body, was established in 2010 in response to the excessive use of force by police officers. According to the Independent Commission of Investigations Act (2010), the mandate of INDECOM is to investigate actions of the security forces that result in injury or death of citizens or alleged abuse of power. However, while there has reportedly been a decrease in the number of police killings since the introduction of

INDECOM, the relationship between the oversight body and the police is strained. Reports emanating from within the JCF suggest that there has been a drop in the morale of its members as a direct result of the high-handed approach taken by the regulatory body and this is adversely affecting crime-fighting. Reportedly some police officers have become reluctant in fully carrying out their duties for fear of being persecuted or prosecuted (Jones, 2016). The general sense, however, is not that officers are against having an oversight body, but are concerned about the approach taken in carrying out investigations levied against them.

Cumulatively, these observations suggest a multiplicity of challenges that can be summarised in four overarching themes: a harsh policing environment, an underfunded police force, disagreeable and antagonistic police-citizen relations, and intimidating oversight and scrutiny. Within this framework, it seems that police officers' professional life, defined as one of power, is in many ways characterised by a sense of powerlessness (Stinchcomb, 2004). On the one hand, their role in society is of tremendous importance and comes with immense authority, whereas, on the other hand, the enormity of their responsibilities coupled with constant scrutiny and lack of acceptance of their roles thwarts their ability to efficiently and successfully do their job. With prolonged frustrations emanating from these working conditions, it likely becomes harder to maintain a positive attitude or feel a sense of accomplishment (Stinchcomb, 2004). Ultimately, over time, manifestations of stress and stress-related problems may surface, conditions that are likely to further exacerbate existing problems.

1.2.1. The Jamaica Constabulary Force.

In Jamaica, maintenance of law and order falls under the remit of the Jamaica Constabulary Force (JCF) and is overseen by the Ministry of National Security. The structure of policing in Jamaica has been shaped by its heritage as a postcolonial state.

Therefore, modelled on policing practices of the Royal Irish Constabulary (RIC), the formal structure of the JCF is designed to be paramilitary in nature, imposing a style of policing characterised by 'policing by control' rather than 'policing with consent' (Harriot, 2000). At the time of formation, this type of authoritarian structure was regarded as preferable for controlling the colonial population (Harriot, 2000), particularly in an attempt to control local rebellions by the "masses", which posed a threat to the economic and political classes (Chambers, 2014).

The JCF has a highly bureaucratic hierarchical structure consisting of eleven ranks from constable to commissioner. The organisation is characterised by an autocratic management style with emphasis on a high level of compliance, where seniority and position are used as a tool of intimidation (Jamaica Ministry of National Security, 2008). The organisation's structure consists of a number of operational and administrative arms that falls under five broad portfolios: inspectorate of constabulary (including the department of bureau of special investigations and audit and inspections); crime portfolio (including national intelligence agency, criminal investigations, and counter-terrorism and organised crime investigation branch); operations portfolio (including mobile reserve and community safety and security branch); administrative portfolio (including the national police college, research, planning and legal services); and security services portfolio (including protective services and border and vital infrastructure security) (JCF Annual Report, 2015). Officers are assigned in one of two major divisions: Geographic, where they work across one of 19 geographic police locations throughout the island; and non-geographic. Officers in non-geographic divisions can also work at various geographic locations but typically are assigned to specialised units.

Statistics from the Planning, Research and Development Branch (2016) of the JCF indicates that the current strength of the force is approximately 13,545 officers. However,

they also reveal an increase in resignations over the past five years, from 163 members resigning in 2011 to 457 in 2015. A review report on the JCF commissioned by the Ministry of National Security (2008) stated that "the challenge of staffing up to the establishment has been severely impacted by a range of negative aspects related to the way the force manages the interests and well-being of its staff" (p. 60). A number of factors were listed as related to the challenges of retention including: (1) limited professional HR management. Linked to training, development and career management; (2) inadequate compensation; (3) limited respect for work/life balance issues; (4) workplace health and safety, relating particularly to working conditions and limited vehicles and equipment; and (5) a training facility whose physical plant falls well short of that expected of modern police recruit and in-service training facility.

Similarly, in a more recent report, (JCF's Corporate Plan, 2015), a number of internal organisational factors were identified as challenges that not only threaten effective policing but also impact on stress levels and well-being of police officers. These included lack of resources and funding to administer the JCF's plans, ineffective administrative and operational systems and processes, negative perceptions of the force by citizens, job dissatisfaction among members, poor communication within the organisation, and mistreatment of members of the force based on gender and rank.

1.2.2. Anecdotal evidence of police stress in Jamaica.

A search of the literature recovered no empirical research on stress or well-being related problems in Jamaican police officers. However, there has been growing anecdotal reports that these police officers suffer high stress levels and emotional/psychological disorders due to the challenges they face on the job. Typically, these reports come to the fore in the local media subsequent to an incident occurring such as reports of homicide-suicide or controversial acts of use of force. Recent events were highlighted in articles

published in the country's two local newspapers and are briefly discussed here to provide a sense of the reactions in this context. The narratives in the referenced articles are based on responses to incidents that occurred over the past four years.

In response to an incident involving the fatal shooting of a pregnant female in 2012, there was heightened concern about the justification for such an action. Allegedly, the victim was shot following a struggle after the police officer accosted her over the use of indecent language. Two of the victim's sisters were also allegedly assaulted by the officer (Cunningham, 2012). In attempting to offer a plausible explanation for his actions and perhaps prompted by reports that the officer was behaving strangely up to the time of the event (Cunningham, 2012), the discussion turned to the mental state of police officers. An article published in the Jamaica Observer entitled "Cops: We're not Treated Like Humans: Many Police said Suffering from Emotional Disorders" (Thompson, 2012) captured the concerns at the time. The article reported on several accounts from serving police officers about stressors they face, the trauma involved in performing their duties, inappropriate coping responses, the lack of adequate support provided – psychological and otherwise - and the general lack of concern about police officers' welfare. It is this series of discussions around this incident that served as the catalyst for the research undertaken in this thesis.

In 2015, while data collection was ongoing for the main study to be discussed later in this thesis, the mental state of police officers was again in the news. This time after four police officers lost their lives in the line of duty over a period of four consecutive weeks. Soon after, there was also an alleged case of suicide of another member of the police force (Barrett & Williams, 2015). These events reinforced the high risks that police regularly face by virtue of their occupation and the debilitating effects they might have. In reporting on the state of the police officers, the Gleaner published an article entitled: "Stress cops -

Police High Command Urges Members to Use Force's Counselling Services" (Barrett & Williams, 2015). The then head of the Administrative Branch of the JCF who was interviewed for the article stated that: "We do know that this job, by itself, is high-risk and high-stress and the police are humans like anybody else. Many of them have to work long hours and be away from their core support, which is their families, and we are aware that those are factors that impact on them" (line 19). She went on to say that the police high command was aware of the many challenges facing the members of the JCF and encouraged them to use the support systems that were available within the force.

These types of ongoing reports have received attention from members of the general public who have also documented their observations and concerns for police officers in articles. For example, a regular online columnist for the Gleaner, prompted by recent incidents of suicide and homicide-suicide involving police officers, wrote the piece: "Good Cop, Bad Cop, Stressed-Out Cop" (Abrahams, 2014). In this article, he highlighted how what might be considered well-known issues facing the members of the JCF including lack of resources, unsatisfactory salaries, and negative public criticism can be demoralising and demotivating. He also observed that recurring exposure to extreme violence and trauma places officers at risk for psychological dysfunction, but that there was lack of psychological support and stigma associated with mental health was a barrier for seeking help.

Another commentator in an article entitled "Bad Cops or 'Mad' Cops?" in the Jamaica Observer commented on the seemingly regular occurrence of suicide in the police force and opined: "many police officers do assume that they should always be strong and shudder at the thought of displaying weaknesses and vulnerabilities. Therefore, in moments when they are overwhelmed, they will not confide in anyone, and the consequences can be catastrophic and can have immediate demoralising effects on the

police force" (Lindo, 2015, line 19). In offering his recommendations, he suggested that there should be a collaborative effort between the government and the JCF to increase the resources and support for police officers if they seek to prioritise mental health services for its members.

The aforementioned events are not confined to the time frame of the past four years. Indeed, they are recurring and are almost always followed by seemingly ephemeral commentaries and conversations about the issues facing the members of the JCF and how to address them. But what steps have been taken to understand and treat the police officers' level of stress and their mental health? Over the years, as various problems have been underlined, there have been some efforts made to provide support for police officers. Currently, the JCF has several support units and individuals geared towards managing well-fare needs. For instance, in 2005, the medical service branch was created to provide a range of services to meet the physical and mental needs of police members (JCF Health, Wellness and Safety Policy, n.d.). The Unit consists of healthcare professionals including psychiatrists, psychologists, and social workers. Other units that provide support for members include the chaplaincy unit, Jamaica Police Federation (the union for ranks constable to inspector), and Police Officers Association (the union for superintendents to commissioner ranks). Each police geographical area and the non-geographical formation have a chaplain, and there are internally trained peer counsellors and volunteer chaplains across the divisions (Thompson, 2012).

Despite these efforts, however, it is argued that these services are not adequately meeting the needs of officers. For example, the medical services branch and its staff are based in one parish and therefore reach officers within a limited geographical location (Cunningham, 2016). Moreover, some officers are hesitant to use internally based services (Thompson, 2012). It can also be argued that the lack of empirical data does not facilitate a

holistic understanding of the reality of policing in this context and may be a barrier that prevents the police organisation from effectively and proactively addressing the problems through appropriate interventions. This research, therefore, provides an important contribution, as it aims to increase our understanding of work-related stress and well-being in this population.

1.3. Research Questions and Objectives

The general policing context and ongoing public manifestations and concerns are strong indicators that JCF members are impacted by stress and problematic stress-related outcomes. However, without empirical data, we are yet to fully understand the extent of the problem and the factors that place officers at risk. This thesis is aimed at expanding our knowledge of this under-studied population by systematically exploring the psychosocial risk factors and well-being outcomes for police officers in the Jamaican context. A two level approach is adopted in accomplishing the research objectives, using both the traditional approach to police stress and a second approach underpinned by a transactional stress framework. The overarching thesis aim is guided by the following research objectives and research questions:

1.3.1. Objective 1: To identify job-specific stressors commonly experienced by Jamaican police officers.

As previously mentioned, research shows that while the potentially dangerous aspects of policing has received much attention, it is the police organisation that appears to be the primary source of stress for officers. However, it is possible that differences in policing environment may yield different results. For instance, while most UK-based studies report organisational factors such as heavy workload, staff shortages, shift-work and time pressures (Biggam, Power, McDonald, Carcary, & Moody, 1997; Brown & Campbell, 1990) as major stressors, studies out of the US, where firearm policies are more

liberal, have found inherent stressors such as killing someone while on duty and witnessing a fellow officer killed as significant sources of stress (Violanti & Aron, 1994, 1995). Another observation is that most studies report the self-rated stressfulness of police events, but not their frequency. It is important to consider both how officers rate work stressors and the frequency at which they occur to differentiate those stressors that occur frequently but may not be highly rated and those that are rated high but rarely occur. The first objective, therefore, sought to answer two questions:

1. What specific aspects of policing are frequently experienced and rated as most stressful by Jamaican police officers?

2. Are the rankings (based on exposure and intensity) of policing events consistent with the existing literature? That is, are organisational stressors ranked higher than operational stressors?

1.3.2. Objective 2: To use a contemporary conceptual framework to explain the relationships between work-related factors, work-family conflict, individual characteristics (i.e., coping and personality characteristics), and well-being.

While the literature on police stress is vast, few studies have taken multiple factors into account or used a comprehensive theoretical framework to explain the stress process (Abdollahi, 2002; Burke, 1994; Webster, 2013). One of the problems in the police literature is that most adopt a unilateral approach that presumes that work-related experiences cause psychological or behavioural strain (Hart & Cotton, 2002), without considering the role that individual characteristics play in the process. Further, mechanisms such as how relevant variables interact and pathways by which work experiences exert their effects are often overlooked. Therefore, a second objective of the current research was to provide a comprehensive study that includes a broad range of psychosocial work and individual characteristics and well-being outcomes. Additionally,

though work-family conflict was not initially considered, its importance emerged in the earlier studies and was subsequently incorporated in the research model. The second objective of the current research was therefore addressed by answering the following research questions:

1. What is the relative contribution of psychosocial work characteristics, coping styles, personality characteristics, and work-family conflict to the occupational and personal well-being of Jamaican police officers?

2. Do positive work factors moderate the relationship between adverse work factors and well-being outcomes?

3. Do coping styles moderate the relationship between work factors and well-being outcomes?

4. Does perceived job stress mediate the relationship between work factors and well-being outcomes (i.e., job satisfaction and personal well-being)?

5. Does job satisfaction mediate the relationship between work factors and personal well-being?

1.4. Significance of the Research

The originality and contribution of this thesis lie in two main domains. First, the research is aimed at addressing the gap in the occupational stress literature on police officers in a small developing country by exploring the nature of stress and its effects on well-being. From a practical standpoint, evidenced-based findings can inform policy and pragmatic approaches to improving the quality of life of police officers in this context. Second, the research further extends the broader literature on police stress by adopting a cognitive-relational framework that includes examining both work and non-work risk factors, and moderated and mediated relationships. Though, the generalizability of the

research will, of course, be limited to the population under study, delineating relevant links and pathways embedded in the stress process can inform further theoretical and methodological considerations.

1.5. Summary of Research Approach

The research objectives and specific questions were addressed by carrying out an extensive research programme. First, to lay the groundwork that would help fulfil the research objectives, theoretical frameworks of occupational stress were examined. This was followed by a review of police stress-related literature which highlights the breadth of previous research as well as the existing shortcomings. Within this context, the methodology and design of the current research were established. Thereafter, the research sought to generate original data on the stress experience of Jamaican police officers using a mixed method approach and multiple data sources spread across three studies.

First, preliminary studies were carried out on a relatively small Jamaican sample to obtain an initial idea of the important issues affecting this population and to perform a pre-test of the measures and examine potential direct relationships between the main variables. To help evaluate these results within the context of not just existing literature, a recent study of UK police officers provided contemporary evidence from a developed nation and comparable data. An untapped, yet relevant source of information on police stress is professionals who offer support services to the police. Rich qualitative data was gathered from a sample of these individuals to help broaden our understanding of the factors that contribute to the experience of police stress. The research culminates with data collected from a large sample of Jamaican police officers. With additional information gleaned from earlier studies, the substantive research was able to expand on the proposed research

model. In the next section the structure of the thesis is outlined including a brief explanation of the contents of each chapter.

1.6. Organisation of the Thesis

Chapter 1 sought to underscore the significance of the research to be undertaken and the rationale for studying the population of interest. It provided a brief discussion of the research context, the primary objectives to be tackled in the thesis, and an overview of the research approach.

Chapter 2 discusses the concept of 'stress' and major occupational stress theories, leading up to the conceptual model that frames the current research. The chapter then provides a comprehensive review of the literature on police stress, links between police work conditions and relevant well-being outcomes, and a discussion of the role of individual differences (i.e., demographics, coping, and personality) and work-family conflict.

Chapter 3 outlines the methodological approach adopted for this research. Both quantitative and qualitative methods across three studies were employed, and in this chapter, a detailed account of the sampling, data collection instruments, research procedures, analyses, and ethics are presented.

The research described in Chapter 4 sought to address the first objective of the thesis. Using data collected from cross-sectional studies, the chapter provides information on the major sources of stress affecting Jamaican police officers at two time points. Because few studies on ratings of police job-specific stressors have been conducted in over a decade, and there are variations in measures, the chapter also reported on a recent survey of UK police officers. This facilitated parallel cross-national evaluations on the same measure and in the same time period.

The conceptual model to be applied in the current research is based on literature from large developed nations. It is possible that specific national differences may result in varying experiences and differences in relationships among variables. Therefore, in Chapter 5, the groundwork for establishing direct relationships based on individual components of the proposed research model is laid. First, main effect relationships are established using recent data from a UK sample. The feasibility and efficacy of the study variables are then tested in the Jamaican population. Concurrent reference is made between the two samples. Therefore, analysis and interpretation of findings for the Jamaican data are not only made in the context of previous research but with current data from a developed nation.

Chapter 6 presents the background and findings for the qualitative component of the research project. The purpose of this study was to generate corroborative and complementary evidence of the stress experience of police officers from the perspective of individuals working in the police support services units. Support units are primary points of contact for officers seeking help for stress and stress-related problems and professionals working in these units occupy a unique position from which to observe the various issues affecting police officers. Emerging themes are discussed in the context of existing quantitative findings.

Chapters 7 and 8 are the major empirical chapters in which the second objective of the thesis is thoroughly investigated. In Chapter 7, the relative contribution of the main antecedent variables (i.e., psychosocial job characteristics, coping styles, personality characteristics, and work-family conflict) to occupational outcomes (perceived job stress and job satisfaction) is examined. Moderation effects as it relates to work resources (i.e., work support and positive job factors) and coping are tested as well as the mediation role of perceived job stress.

In Chapter 8, an extended model is tested with personal well-being variables as outcomes. First, the relative contribution of antecedent variables to personal well-being outcomes is examined. This is followed by results for interaction effects of work resources and coping, and mediation effects of perceived job stress and job satisfaction.

In the final chapter, the objectives of the thesis are summarised, and the findings of the studies are integrated and discussed in relation to existing research. The chapter summarises the overarching theoretical and practical implications of the research, strengths and weaknesses of the current research and suggestions for future studies.

1.7. Chapter Summary

This chapter provided an overview of the thesis, provided the context for the research undertaken, the significance of such research and outlined the primary aims. Before any empirical work can be conducted, it is important to examine the extent to which the subject has been investigated and any gaps that might exist. The next chapter, therefore, reviews the literature and sets the theoretical foundation for the research covered in the thesis.

Chapter 2
Theoretical Framework and Literature Review

2.1. Overview of Chapter

Chapter 2 provides a theoretical perspective on occupational stress and a comprehensive review of the police stress literature. The chapter starts with a discussion of the theories and models that have shaped our understanding of stress. Distinctions are made between earlier theories and more contemporary ones, noting important limitations. The chapter then synthesises the extant literature on police stress and its relevant correlates. This includes a discussion of the major sources of stress in policing, the role of individual differences, and work-family conflicts. The chapter also considers the relationship between psychosocial work conditions in police work and well-being outcomes.

2.2. Conceptualising Stress

An examination of the definition of stress is essential to ground any discussion or investigation of stress in policing. Stress is argued to be quite a complex term to define and measure. In some sense, we can think of the definition of stress as evolving over time from the inclusion of relatively simple components to more intricate relationships among these elements (Dewe, O'Driscoll, & Cooper, 2012). In earlier years, the term "stress" was referred to as a stimulus, a response, and as a process – an interaction between the individual and their environment.

The response-based approach views stress as an outcome and can be traced back to the work of Han Selye (as cited in Cox, 1993). Selye suggested that stress is a non-specific response of the body to any demand placed upon it which he referred to as the General Adaptation Syndrome (GAS). In essence, Selye believed that stress was not an

environmental stimulus (i.e., a stressor) but a set of physiological reactions to environmental demands. On the contrary, the stimulus-based approach focuses on the potential source of stress and treats stress as an independent variable. That is, stress is an aversive stimulus or some environmental demand that impinges on the individual in a damaging way (Cox, 1993). As influential as these ideas were in the early days of stress research, there were some limitations associated with both approaches. For instance, the stimulus-based and response-based approaches have been criticised for being overly simplistic and inadequate in explaining the multidimensionality and complexity of stress (Cox, 1993; Dewe et al., 2012; Lazarus, 1999). As stress research has advanced, researchers now recognise that these approaches lack a comprehensive theoretical framework, failing to account for the role of individual differences and the cognitive processes that underpin these differences (Cox, 1993).

Later definitions, therefore, conceptualised stress as a more dynamic process, taking into account the interaction between individuals and their environment. This approach recognises the role of psychological processes, such as perception, cognition, and emotion (Cox, 1993; Cox & Griffiths, 2010). Two variations of this contemporary approach are identified: a structural-oriented person-environment interaction and a transactional process (Cox, 1993). The interactional approach defines stress as a relatively static interaction between the stimulus and response but places less emphasis on exposing the ongoing relationship between the individual and their environment (Cooper, Dewe, & O'Driscoll, 2001), including the individual's attempts to cope (Cox & Griffiths, 2010). In contrast, the transactional model points out that the interaction between the individual and their environment is a complex process and takes into account the demand that the environment places on the individual and how the individual actively responds to it (Lazarus, 1999). This approach focuses on the dynamics that underpin the psychological

mechanisms of cognitive appraisals and coping that results from stressful situations (Cox & Griffiths, 2010). Therefore, stress is an ongoing transaction in which the individual tries to balance the demand of the environmental stimuli and the resources available to buffer said demands (Lazarus, 1999). In fact, a dominant definition in contemporary stress literature is one proposed by Lazarus and Folkman (1984) who 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).

2.3. Occupational Stress Models

Evolving definitions of stress influenced several interactional and transactional theories that have been used to describe contemporary work experiences. However, it is beyond the scope of this review to discuss all of them. The approach here will be to offer a brief discussion of the most influential theories and models in occupational stress research. This will be followed by an introduction to a new integrative model that will frame the research presented in this thesis.

2.3.1. Person-environment fit.

One of the most frequently cited and an early interactional approach to stress is the person-environment fit (P-E fit) model. This model proposes that a misfit between an employee and the demands of the job can influence their health (Cox, 1993). The theory is based on two fundamental aspects of fit: (1) the degree to which the employee's abilities match or are congruent with the demands of the job; and (2) the extent to which the benefits or resources of the job meets the needs of the employee. If there is a lack of fit in either or both domains, stress is likely to occur, and wellbeing is threatened (Cox, 1993; Dewe et al., 2012). P-E Fit theory suggests that lack of fit can lead to two sets of outcomes. The first set comprises psychological (e.g., dissatisfaction, anxiety, dysphoria),

physical (e.g., high blood pressure and cholesterol), and behavioural (e.g., smoking, overeating) strains. The second set of outcomes involves coping and defence mechanisms to resolve the P-E misfit (Cox, 1993; Edwards, Caplan, & Harrison, 1998). While this theoretical model has been influential, it has been criticised for being too general with no clear explanation as to what aspects of the individual and characteristics of the work environment should fit (Jones & Bright, 2001), as well as assumes that a lack of fit is always undesirable (Cox & Griffith, 2010). Nonetheless, later approaches to stress and wellbeing have built on the foundation set by the P-E Fit theory. Key among them is Karasek's (1979) Demand-Control theory and Siegrist's (1996) Effort-Imbalance theory, each of which is discussed in the following sections.

2.3.2. Job Demand-Control model.

The Job Demand-Control (JDC) model, formulated by Karasek (1979) is cited as one of the most influential approaches in occupational stress research. Central to this theory is the interaction between two main psychosocial work characteristics: Job demands and job control (Cox & Griffiths, 2010). Job demands refer to workload as operationalised in terms of volume, pace, and conflicts of work. Job control refers to decision-making latitude and is made up of decision-making authority (control or autonomy) and skill discretion (skill utilisation) (Dewe et al., 2012). Karasek proposed that while both demand and control have an independent influence on strain, it is the interactive combination of the two dimensions that is most important (Dewe et al., 2012). Therefore, the model conceptualises stress as resulting from the interaction between the demands of the job and a person's control over what is required of them. High job demands and low control is likely to lead to strain and adverse health outcomes. However, high levels of control would buffer the negative effects of high job demands (Karasek, 1979).

JDC theory was later expanded to include social support, as a moderator that buffers the effects of job demands on strain, particularly when the type of support matches the perceived source of stress (Johnson & Hall, 1988; Karasek & Theorell, 1990). The revised formulation, the demands-control-support (DCS) model, suggests that the highest levels psychological strain occur when there are high job demands but low levels of control and low social support. Research using various occupational groups has provided considerable support for the additive effects of the DCS dimensions. However, support for interactive (multiplicative and buffering) effects is less convincing (Häusser, Mojzisch, Niesel, & Schulz-Hardt, 2010; Van der Doef & Maes, 1999).

Furthermore, the model has been criticised for failing to consider individual differences in the perception of stress and thus its mechanical nature in explaining the stress process (Mark & Smith, 2008). In addition, there are concerns about the assessment of the three dimensions. For instance, the dimension of demand tapping into one main construct "workload" has been questioned (Cox, 1993). Further, the model assumes high levels of control to always be desirable when in fact some individuals may find a high degree of autonomy and decision-making latitude to be itself stressful (Mark & Smith, 2008). Similarly, employees may respond differently depending on the type of social support available (Dewe et al., 2012).

2.3.3. Effort-Reward Imbalance model.

The Effort-Reward-Imbalance (ERI) model has gained momentum in occupational stress research (mainly European research) over the years, with studies applying it to various health outcomes. The model was introduced by Siegrist and colleagues (1986) to predict cardiovascular disease and in intervening years has been applied to other psychological and behavioural outcomes (van Vergchel, de Jonge, Bosma, & Schaufeli, 2005). ERI theory originates from equity theory and suggests that stress depends on the

reciprocal relationship between the efforts and rewards of work (Cox & Griffiths, 2010). More specifically, an employee will likely experience emotional distress and other strain reactions when high levels of effort are followed by low levels of reward (de Longe, Bosma, Peter, & Siegrist, 2000; Siegrist, 1996). Rewards can be in the form of money, esteem, or security/career opportunities. Siegrist (1996) distinguishes between extrinsic and intrinsic sources of effort. Extrinsic sources relate to the demands of the job while the intrinsic component consists of the employee's patterns of coping in dealing with high job demands while trying to gain rewards – referred to as 'over-commitment'. While effort and reward can be thought of as situation-specific, over-commitment is person-specific. Information about both sources is needed to make an accurate assessment of the experience of stress (de Longe et al., 2000).

Strong evidence for the predictive validity of the ERI model on employee health has been demonstrated in several studies (van Vegchel et al., 2005), but it is not without faults. One criticism of the ERI model is that although it makes an effort to include subjective perceptions of the environment, the model's emphasis on the role of individual difference is not fully developed (Mark & Smith, 2008). Furthermore, results on the role of over-commitment and its mediating effect remain inconclusive (van Vegchel et al., 2005).

2.3.4. The Transactional theory of stress and coping.

Interactional theories, though fundamental to the development of occupational stress research provide a narrow focus of stress as they deemphasize individual processes (Dewe et al., 2012; Lazarus, 1990). As Lazarus (1990) suggests, work conditions alone are not sufficient to explain the stress process. This line of argument led to the development of transactional models of stress, and perhaps the one that has been most influential is the psychological stress and coping model by Lazarus and Folkman (1984). Lazarus and Folkman developed a cognitive-relational approach that proposes an interdependent

transactional relationship involving characteristics of the environment and the individual. 'Transaction' implies a process, not a static relationship, but one that is dynamic, mutually reciprocal, and involves the ever-changing interplay between the person and their environment. More specifically, this view of stress suggests a complex multi-dimensional process comprising of environmental variables, person-oriented antecedents, mediating appraisals, coping, and responses to the stress process (Lazarus, 1990). The key concepts in the process, as suggested by Lazarus, are subjective appraisals and coping. Importantly, the process of appraisal provides that link between what one experiences and how one reacts or feels about the encounter (Dewe et al., 2012).

Two important appraisals processes are identified in the theory. Primary appraisal is where the person determines whether an encounter is potentially harmful, threatening or challenging. At this stage the individual attributes meaning to the encounter and evaluates whether it is: (1) irrelevant and is ignored; (2) benign-positive and considered beneficial/desirable; or (3) considered harmful, threatening or challenging (Lazarus, 1994). In secondary appraisal, the person determines if anything can be done about the encounter if it is evaluated as potentially harmful (Lazarus, 1999). This cognitive-evaluative process is an evaluation of the availability of resources to cope. Simply defined, "coping is an effort to manage psychological stress" (p.111), and stress occurs when individuals perceive that they have inadequate resources to cope.

2.3.5. Cox's Transactional Model of Occupational Stress.

Cox's transactional model of stress is similar in many ways to the work of Lazarus and Folkman but is adapted specifically to the work environment (Cox, 1993). Cox described the stress process in terms of five basic stages (Cox & Griffiths, 2010). The first stage represents antecedent factors, including exposure to psychosocial work hazards. The second stage involves 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. The third stage represents psychological, physiological and behavioural correlates of the stress experience which may also be in response to attempts to cope. The fourth stage involves the secondary effects of stress that may lead to adverse individual and organisational outcomes. Lastly, the fifth stage represents feedback from the environment that may reflect whether coping was successful or not (Cox & Ferguson, 1991; Cox & Griffiths, 2010). In the transactional process, individual differences, particularly hardiness, locus of control, and coping are emphasised and suggested to exert their effects through mediating the appraisal process and moderating the stress-health relationship (Cox & Ferguson, 1991).

Admittedly, as with the case with the Lazarus and Folkman's Transactional theory, the process described by Cox is complicated and it can be difficult to operationalise and measure all components empirically (Mark & Smith, 2008). Because of the complexities involved in transactional models, they have seen less practical applications in occupational stress research where the goal, primarily, is to identify and modify work factors that are likely to result in aversive individual and organisational outcomes (Dewe et al., 2012; Jones & Bright, 2001). It is therefore not surprising that much of the occupational stress research reflects interactional models of stress as they can more expediently be applied in occupational settings.

2.3.6. The Demands, Resources and Individual Effects (DRIVE) model.

There have been varying arguments for the usefulness and efficacy of the models noted above in occupational research. On the one hand, it has been argued that the focus of interactional models such as is depicted in DCS and ERI models does not provide an adequate explanation of the stress process. However, the complex processes that underpin transactional models are difficult to test and interpret and as a result have seen less use in

occupational research (Mark & Smith, 2008). In trying to find a balance of existing stress models with their varying levels of complexities, Mark and Smith (2008) proposed the Demands, Resources, and Individual Effects (DRIVE) model of occupational stress.

The DRIVE model adopts elements of contemporary occupational stress theories, representing the role of important psychosocial work characteristics while also accounting for the influence of individual differences and subjective appraisals of the stress experience. This conceptual framework attempts to include these essential components of the stress process, without probing too deeply into the complexities inherent in mental processes. In its original form, the model considers additive effects of particular work characteristics representing components of both the DCS and ERI models and individual difference variables (i.e., coping style and attributional style). Additionally, it considers the interaction effects typical of the DCS and ERI models, as well as individual differences where variables such as coping and work resources (e.g., job control and work support) can moderate the relationship between work demands and health outcomes.

In an attempt to represent the subjective appraisal process analogous to the appraisal stages of transactional models, Mark and Smith (2008) proposed that affective perceptions, namely, perceived job stress can mediate the relationship between work characteristics and health outcomes. This affective component is meant to reflect how the individual subjectively feels about a potential environmental stressor they have encountered and acts as a precursor to other well-being outcomes. In other words, the DRIVE model acknowledges that a psychosocial stressor will not transmit its effect on outcomes if it is not perceived as stressful. Perceived job stress is simply measured by asking how the individual appraises the level of stress associated with their job. Figure 2.1 shows the structure of the original DRIVE model. The figure shows several relationships

including independent main effects of work characteristics on outcomes, interactions effects, and the mediating effect of perceived job stress.
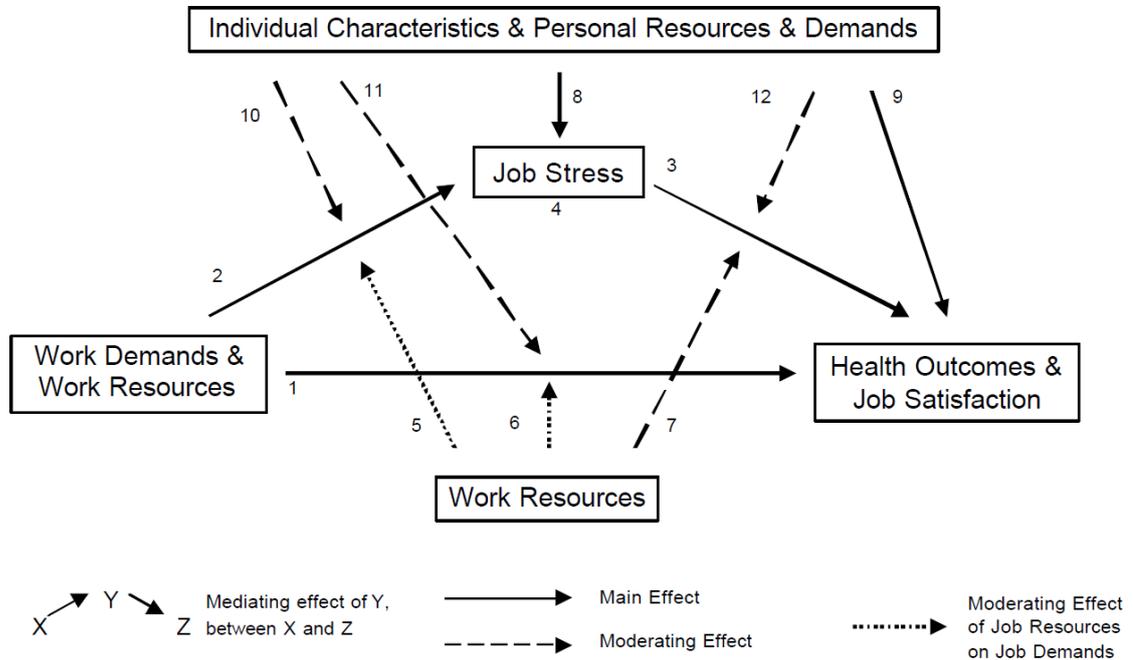
Figure 2.1. Illustration of the Demands, Resources, and Individual Differences (DRIVE) Model.

In developing the foundation for their conceptual framework, Mark and Smith (2008) found mixed support for the various components of their model. The hypothesised relationships were tested in approximately 1,200 nurses and university employees. They found strong support for the main effects of work characteristics and individual differences (i.e., coping and attributional style) on outcomes (i.e., anxiety, depression and job satisfaction) (Mark & Smith, 2008, 2012a, 2012b). However, there were less conclusive findings regarding moderating relationships. Evidence for at least partial mediation of perceived job stress was better supported (Mark & Smith, 2008, 2012a).

Additional support for some components of the DRIVE model has been provided in more recent studies. For instance, several studies have found support for the additive

effects of psychosocial work and individual characteristics when the model was applied in different groups including migrant workers in Italy (Capasso, Zurlo, & Smith, 2016a, 2016b, 2016c), nursing and postgraduate psychology students (Galvin & Smith, 2015), and university staff (Williams & Smith, 2016). Similar to the findings from research conducted by Mark and Smith, little evidence for moderation effects have been found (Galvin & Smith, 2015; Williams & Smith, 2016). This is not surprising as moderating effects for similar frameworks, such as the DCS model, do not have consistent support in the literature (Häusser, Mojzisch, Niesel, & Schulz-Hardt, 2010; van der Doef, & Maes, 1999). On the other hand, there was some support for the mediation effect of perceived job stress (Galvin & Smith, 2015).

In the original conceptualization of the DRIVE model, job satisfaction was considered as a dependent variable. However, evidence from more recent applications of the model and the literature, in general, suggests that job satisfaction also likely plays a mediating role similar to that of perceived job stress. That is, a "cognitive appraisal" element through which work characteristics exert their effect on individual well-being outcomes. For instance, Capasso and colleagues (2016a, 2016b) in adapting the model to their study of migrant workers in Italy concluded that job satisfaction better fits into the model as an appraisal alongside perceived job stress and perceived racial discrimination. Other studies have also identified associations between various work conditions and job satisfaction on the one hand (Bennett, 1997; Davey, Obst, & Sheehan, 2001; Jo & Shim, 2015; Nalla, Rydberg, & Meško, 2011; Noblet, Rodwell, & Allisey, 2009a), and job satisfaction and health-related outcomes on the other hand (Brough, 2004; Kirkcaldy & Cooper, 1992; Kirkcaldy, Cooper, & Brown, 1995), supporting the proposition that job satisfaction is likely to act as mediator in these relationships.

According to Mark and Smith (2008), the strength of the DRIVE model lies in its flexibility, to the extent that it allows for the addition of relevant variables contingent on the context in which it is being applied. The appeal of the model also lies in its relatively simple approach in testing the cognitive appraisal link, an area that has proved challenging for other transactional models. The DRIVE model was, therefore, considered a practical tool for assessing the multi-dimensional nature of stress and was adopted as the conceptual framework that guides the research in this thesis.

2.4. Review of the Police Stress Literature

2.4.1. Sources of police stress.

A part of the problem with discerning what we know about police stress is the fact that there are varied meanings attributed to the term "stress". As discussed earlier in this chapter, stress is conceptualised in various ways, whether, as a stimulus, a response, or a process. A detailed examination of the police stress literature revealed that much of the research has focused on identifying sources of stress (i.e., stressors) commonly encountered by police officers. Researchers have also attempted to group these events into categories. Symonds (1970) was perhaps the first to propose a useful and parsimonious model of police stress. His early observations revealed two categories of stress: (1) those related to the nature of the organisation; and (2) those due to the nature of police work, including the danger and unpredictability of the job. In one of the first empirical studies conducted on 100 patrol officers in the USA, Kroes, Hurrel, and Margolis (1974) identified administration, equipment/manpower, community relations, and courts as major categories of stress. Later, Golembiewski and Kim (1990) conveniently grouped stressors in the police literature into extra-organizational sources (e.g., criminal justice system and community relationships), intra-organizational sources (e.g., physical danger, shift work), and individual sources.

Building on some of the seminal works on police stress, Spielberg et al. (1981) adopted a more quantitative approach and developed the Police Stress Survey. The 60-item inventory was standardised using police officers in the USA. Using factor analysis, Spielberg and colleagues identified two and three-factor solutions. The more parsimonious two-factor solution yielded (1) administrative and organisational pressure; and (2) physical and psychological threat. A three-factor solution that included the addition of lack of support was later extracted. Martelli and Martelli (1989) in examining the reliability and validity of the Police Stress Survey extracted a similar two-component model found earlier by Spielberg et al. (1981). However, several years later, Pienaar and Rothmann (2006) in their study on South African police, found support for a three-factor solution: (1) job demands; (2) crime related stressors; and (3) lack of support.

Others have also contributed to this body of research by applying similar types of analyses in categorising police stressors, albeit using other measures. For instance, Laufersweiler-Dwyer and Dwyer (2000) used a comprehensive custom-developed instrument in their study of 408 police officers and identified eight factors: (1) policies and structures; (2) resource allocation; (3) role ambiguity; (4) processes; (5) group conflict; (6) role conflict; (7) job security; and (8) new job aspects. Brown, Fielding, and Grover (1999) focused their research on operational stressors among UK officers and identified three factors: death and disaster, violence and injury, and sexual crimes.

Despite the many attempts to group police stressors over the years, two broad distinctions – organisational versus operational stressors - analogous to Symonds' (1970) first observations have prevailed in the literature (Coman & Evans, 1991; Hart et al., 1993, 1995; McCreary & Thompson, 2006; Violanti & Aron, 1994). Organisational stressors emanate from the organisation and are commonly experienced in other occupations. They are routinely encountered by the officer, and often involve situations over which they have

limited control (Stinchcomb, 2004). Shane (2010) summarised organisational stressors from a police perspective as "the niggling aspects of the work environment that pervade police organisations because of the structural arrangements and social life inside the organisation. These issues subject the lower members of the organisation to rigid and often conflicting and oppressive rules and regulations that inhibit effective communication and fail to acknowledge autonomy and individual discretion" (p.815). Operational stressors, on the other hand, are characteristically seen as acute and episodic in nature and can involve critical/traumatic incidents (Stinchcomb, 2004). These stressors essentially differentiate policing from other occupations. Webster (2013) in her review summarised four inherent characteristics of police work: (1) an inherent potential for danger; (2) the unique authority to use coercive force; (3) a propensity for social isolation; and (4) responsibility for the safety of others.

While both organisational and operational stressors have been highlighted in the literature, the prevailing conclusion is that organisational stressors are more bothersome than operational stressors (Biggam et al., 1997b; Brown & Campbell, 1990; Crank & Caldero, 1991). However, these findings are not always consistent as others document police officers' ratings of operational events as highly stressful (Berg, Hem, Lau, Håseth, & Ekeberg, 2005; Coman & Evans, 1991; Garcia, Nesbary, & Gu 2004; Spielberg et al., 1980; Violanti & Aron, 1994, 1995). Further examination of the literature revealed that these differences in ratings might be due to the country of origin or whether intensity or frequency is considered across organisational and operational categories. To obtain a firmer understanding of the variations in ratings, a detailed search of the literature was conducted and is presented here.

Relevant English-language manuscripts were identified through electronic searches using PubMed, Psych INFO, SCOPUS, IS Web of Knowledge, and Google Scholar

databases, and the following search terms: (police OR law enforcement) AND (stress OR stressors). Manual searches using the reference lists of articles were also conducted. The criteria for inclusion were twofold: (1) the studies had to be published in a scholarly journal and be of a quantitative nature, and (2) articles had to include comparative information on organisational and operational stressor rankings. The researcher read the acquired abstracts to determine relevance, and further perusal was made of all articles deemed relevant. Twenty-eight journal articles that fit the search criteria were identified. Table 2.1 provides a summary of the studies' characteristics and findings presented in the articles.

Table 2.1. *Published Manuscripts that have Provided Police Officers' Ratings of Organisational and Operational Job Stressors*

Authors	Location	N	Instrument	Measurement	Findings
Agolla, 2009	Botswana	229	Ad hoc 35 items	Intensity	Injured while on duty [OP]; Use force when job demands [OP]; Work overload [ORG]
Anson et al., 1997	USA	48	Ad hoc 37 items	Intensity	Lack of support by agency [ORG]; Lack of promotional opportunity [ORG]; Lack of recognition for good work [ORG]
Ariel et al., 2010	Switzerland	354	Ad hoc 25 items	Intensity	Exposure to violence [OP]; Staff shortages [ORG]; High mental/intellectual demand [OP]
Bartol et al., 1992	USA	60	Ad hoc 87 items	Intensity	Frustration with criminal process [ORG]; Frustration with the courts [ORG]; Frustration with state's attorney [ORG]
Berg et al., 2005	Norway	3272	Designed Ad hoc The Job Stress Survey 30 items	Intensity	Fellow officer hurt [OP]; Cause another person injury during active police work [OP]; Road accident with a police car [OP]
				Frequency of Exposure	Working overtime [ORG]; Frequent interruptions [ORG]; Frequent changes in boring to demanding tasks [ORG]
Biggam et al. 1997b	UK	699	Ad hoc 36 items	Perception of personal source of stress	Staff shortages [ORG]; Inadequate resources [ORG]; Time pressures [ORG]
Brown & Campbell, 1990	UK	954	Ad hoc 54 items	Frequency of Exposure and Intensity (combined)	Staff/manpower shortages [ORG]; Time pressures/deadlines [ORG]; Lack of consultation/communication [ORG]
Collins & Gibbs, 2003	UK	1206	Ad hoc 38 items	Intensity	Demands of work impinging on home [ORG]; Lack of consultation/communication [ORG]; Not enough support from senior officers [ORG]
Coman & Evans, 1991	Australia	271	Modified Critical Life Events Scale Sewel, 1983 137 items	Intensity	Violent death of partner in line of duty [OP]; Participation in an act of police corruption [OP]; Failing police training course [ORG]
				Frequency of exposure	Long hours [ORG]; Job overload [ORG]; Giving evidence in court [ORG]

Authors	Location	N	Instrument	Measurement	Findings
Crowe, & Stradling, 1993	UK	232	Ad hoc 43 items	Intensity	Policing riots/public disorder [OP]; Dealing with fatal/serious RTAs [OP]; Poor shift patterns [ORG]
Garcia et al., 2004	USA	1022	Ad hoc Boston Police Officers Survey (BPOS) 21 items	Intensity	Fellow officer being killed or injured [OP]; Public criticism [ORG]; Family demands [ORG]
Gulle et al., 1998	South Africa	91	Police Stress Inventory (Spielberg et al., 1980) 60 items	Intensity	Fellow officer killed in line of duty [OP]; Killing someone in line of duty [OP]; Inadequate salary [ORG]
				Frequency of Exposure	Excessive paperwork [ORG]; Court leniency with criminals [ORG]; Insufficient manpower [ORG]
Lucas et al., 2012	USA	115	Police stress survey Spielberg et al. (1981) 60 items	Intensity	Killing in the line of duty [OP]; Inadequate supervisor support [ORG]; Fellow officer killed [OP]
McCreary & Thompson, 2006	Canada	197	Organisational Police stress questionnaire (PSQ-Org) Operational Police stress questionnaire (PSQ- Op) McCreary, 2004 20 items each	Intensity	Staff shortages [ORG]; Fatigue [OP]; Bureaucratic red tape [ORG]
		188			Bureaucratic red tape [ORG]; Staff shortages [ORG]; Inconsistent leadership style [ORG]
Pienaar & Rothmann, 2006	South Africa	2145	Ad hoc Police stress Inventory 88 items	Intensity	Staff shortages [ORG]; Seeing criminals go free [ORG]; Inadequate salary [ORG]
				Frequency of Exposure	Staff shortages [ORG]; Fellow officers not doing their job [ORG]; Inadequate salary [ORG]
Scott, 2004	USA	135	Ad hoc 24 items	Intensity	Internal departmental politics [ORG]; The department's leadership [ORG]; Witnessing child abuse [OP]
Slate et al., 2007	USA	234	Ad hoc	Intensity	Negative/distorted press accounts [ORG]; Courts too lenient with offenders [ORG]; Ineffectiveness

Authors	Location	N	Instrument	Measurement	Findings
					of judicial system [ORG]
Spielberg et al., 1981	USA	210	Police stress survey Spielberg et al. (1981) 60 items	Frequency of Exposure and Intensity (combined)	Fellow officer killed in line of duty [OP]; Killing someone in the line of duty [OP]; Exposure to battered children [OP]
Sundaram & Kumaran, 2012b	India	274	Ad hoc 44 items	Intensity	Insufficient personal time [ORG]; Seeing criminals go free [ORG]; Lack of recognition for good work [ORG]
Sundaram & Kumaran, 2012a	India	250	Ad hoc 44 items	Intensity	Seeing criminals go free [ORG]; Having to deal with media [ORG]; Fellow officers not doing their job [ORG]
Sundaram & Kumaran, 2012c	India	200	Ad hoc 44 items	Intensity	Seeing criminals go free [ORG]; Having to deal with media [ORG]; Insufficient personal time [OP]
Sundaram & Sekar, 2015	India	600	Ad hoc 44 items	Intensity	Seeing criminals go free [ORG]; Killing someone in the line of duty [OP]; Lack of opportunity for advancement [ORG]
Suresh et al., 2013	India	220	Ad hoc 80 items	Intensity	Never off duty or around the clock duty [ORG]; Lack of time to spend with family [ORG]; Political pressure from outside the department [ORG]
Taylor & Bennell, 2006	Canada	154	Organisational Police stress questionnaire (PSQ-Org) Operational Police stress questionnaire (PSQ- Op) McCreary, 2004 20 items each	Intensity	The feeling that different rules apply to different people [ORG]; Fatigue [OP]; Feeling like you always have to prove yourself to the organisation [ORG]
Udih & Iubor, 2016	Nigeria	1000	Organisational Police stress questionnaire (PSQ-Org) Operational Police stress questionnaire (PSQ- Op) McCreary, 2004 20 items each	Intensity	Inadequate welfare/health packages [ORG]; Lack of new/modern crime fighting equipment [ORG]; Lack of resources [ORG]
Violanti & Aron, 1994,1995	USA	103	Police Stress Survey Spielberg et al. (1981) 60 items	Intensity	Killing someone in the line of duty [OP]; Fellow officer killed [OP]; Physical attack [OP]

Authors	Location	N	Instrument	Measurement	Findings
Violanti et al., 2016	USA	365	Police Stress Inventory (Spielberg et al., 1980) 60 items	Intensity	Exposure to battered children [OP]; Killing someone in the line of duty [OP]; Fellow officer killed in the line of duty [OP]
				Frequency of Exposure	Dealing with family disputes [OP]; Responding to a felony in progress [OP]; Fellow officers not doing their job [ORG]
White et al., 1985	USA	355	Modified Police Stress Inventory (Spielberg et al., 1980) 85 items	Intensity	Rating system for pay increases [ORG]; Fellow officer killed in line of duty [OP]; Inadequate salary [ORG]

Note. ORG = organisational stressors, OP = Operational stressor

One of the challenges with assessing the topic of sources of stress in the police literature is the lack of consistency in measurement. This lack of uniformity in stress measures across police studies implies that we cannot be confident about the reliability and validity of rankings or the measures themselves. For example, as shown in Table 2.1, the Police Stress Survey developed by Spielberg et al. (1981), and an organisational and operational stressor measure developed by McCreary and Thompson (2006) are two frequently cited instruments. However, further examination shows that studies have either used modified versions of these inventories (e.g., Pienaar & Rothmann, 2006; Suresh, Anantharaman, Angusamy, & Ganesan, 2013; White, Lawrence, Biggerstaff, & Grubb, 1985) or have developed ad hoc inventories from different sources (e.g., Anson, Johnson, & Anson, 1997; Biggam et al. 1997b; Collins & Gibbs, 2003; Crowe & Stradling, 1993; Slate, Johnson, & Colbert, 2007; Sundaram & Kumaran, 2012).

There are also potential issues with the dichotomizing of police stressors as organisational and operational stressors. Specifically, there is a lack of consistency in which stressors are classified as operational or organisational. For example, shift work can be considered an inherent aspect of policing, but on the other hand, changes in shift or shift schedules are administered and managed by the police department (McCreary & Thompson, 2006; Violanti & Aron, 1994). Further, while some authors classify certain stressors such as public criticism, dealing with courts and ineffectiveness of the justice system as 'external' (e.g., Garcia et al., 2004; Slate et al., 2007), others collate them alongside organisational factors (e.g., Spielberg et al., 1981). For simplification of assessment, the current review adopted Spielberg and colleagues' two-factor structure as a guide and these 'external stressors' will be considered 'organisational stressors'.

As mentioned previously, the widespread conclusion among police stress researchers is that organisational stressors are the primary sources of stress. The findings

from the current literature search are supportive of this observation. In 15 out of 33 cases where intensity and frequency of stressors were measured (some studies included both measures), the top three stressors were related to the organisation. In four cases, the top three were related to operational duties. For the remaining 14 cases, the top three stressors were mixed. That is, both organisational and operational stressors were represented in the three most stressful policing events. For half of these cases, two out of three highly rated stressors were operational, and in the other half, two out of three were organisational stressors.

Commonly cited organisational stressors included staff shortages, inadequate salary, insufficient resources, time pressures/deadlines, lack of support, lack of communication/consultation, unfair treatment, frustrsations with the courts and judicial system, time away from family, job overload, public criticism, and dealing with the media. Abdollahi (2002) in her review of the police stress literature provided a similar collation of the most cited organisational stressors. Researchers have concluded that organisational stressors have such strong effects because of the rigidness and highly bureaucratic nature of the organisation and the resistance to change including the unwillingness to correct management practices (Stinchcomb, 2004).

Although the overall findings are generally in support of organisational stressors, further examination shows that in studies from certain countries, particularly the USA, police officers are more consistent in endorsing operational stressors as their primary source of stress (Garcia et al., 2004; Lucas, Weidner, & Janisse, 2012; Spielberg et al., 1980; Violanti & Aron, 1994, 1995; Violanti et al., 2016). These studies consistently show high rankings of stressors linked to the potential for harm or trauma such as killing someone in the line of duty, fellow officer being killed, exposure to battered children, and physical attack. High rankings of similar operational stressors were also observed in other

countries such as 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), particulary when intensity was assessed. What is clear from this review is that inasmuch as the police stress literature points to organisational stressors being as important as or even more important than operational ones, there is also the need to consider variations across policing contexts.

There is also the need to take into account both intensity and frequency when considering the ratings of stressors. Gudjonsson and Adlam (1985) and later Biggam et al. (1997b) noted that studies often ask police officers to rate the level of stress associated with a stressor without considering whether they have actually been exposed to the event. Furthermore, there are some events that are frequently experienced that might be regarded as stressful to some officers but not for others, and in fact, in some cases, certain events may be perceived as stimulating rather than stressful. As shown in Table 2.1, most studies tend to either consider the frequency or intensity of the stressor, but not both. However, of the five studies that measured both, three demonstrate that whereas operational stressors are rated as more intense by police officers, organisational stressors are more routinely experienced (Berg et al., 2005; Coman & Evans, 1991; Gulle et al., 1998). These findings suggest that it is worthwhile considering both intensity and frequency measures in police stress studies to better understand how the various stressors of the job affect police officers.

2.4.2. A focus on well-being.

Well-being is a complex construct. From one perspective the term "well-being" is generally conceptualised to mean a state of optimal functioning and experience (Ryan & Deci, 2001). That is, well-being refers to a positive psychological state and is derived from two standpoints: the hedonic approach which suggests well-being involves pleasure or

happiness and the eudaimonic approach which suggests well-being consists of being fully functioning and realising one's potential (Ryan & Deci, 2001). However, other approaches take on a broader and more encompassing conceptualization of this construct (Danna & Griffin, 1999; Grawitch, Gottschalk, & Munz, 2006). For instance, operational definitions in the literature cover a wide range of outcomes including psychological, emotional or mental concerns and physical states (Danna & Griffin, 1999; Wadsworth, Chaplin, Allen, & Smith, 2010).

In reality, well-being more likely reflects a combination of multiple indicators. For instance, Hart and colleagues (Hart & Cooper, 2001; Hart & Cotton, 2002; Hart et al., 1995) in their proposed well-being framework, suggest that an individual's overall perceived quality of life includes affective, cognitive and somatic health components. The affective component is defined by positive (e.g., positive affect, psychological morale and well-being) and negative (e.g., negative affect, psychological distress and ill-being) dimensions, whereas the cognitive component is associated with satisfaction with various life domains (Hart & Cooper, 2001; Hart & Cotton, 2002). The acknowledgement that well-being is a multifaceted construct has informed recommendations for the assessment of well-being to involve various measures that reflect its various components (Hart et al., 1995). In this thesis and for the review that follows, the term "well-being" will be used to refer to job-specific (e.g., job satisfaction) and context-free measures of mental, psychological and physical experiences. The following sections provide a closer examination of the relationship between work characteristics and well-being in the police literature.

2.4.2.1. Job satisfaction.

One of the most commonly cited definitions of job satisfaction in organisational research is by Locke (1976), who defined job satisfaction as "the pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (p. 1304). Despite being one of the most studied areas in organisational psychology, job satisfaction in policing is relatively understudied (Bennett, 1997; Zhao, Thurman, & He, 1999). As asserted by Bennett (1997), "job satisfaction is a neglected but important and timely topic in police studies" (p.296). Indeed, there are many reasons why police organisations should be concerned about job satisfaction (or dissatisfaction) among their members. At the organisational level, negative job attitudes can adversely affect performance levels, turnover rates, as well as police interactions with citizens (Dantzker, 1994; Dantzker & Surette, 1996). Further, dissatisfaction among police officers is also linked to poor personal well-being outcomes (Brough, 2005; Kohan & O'Connor, 2002; Violanti & Aron, 1993). Still, years later, the study of job satisfaction in this occupational group is an area that is lagging behind compared to other areas of interests (Ercikti, Vito, Walsh, & Higgins, 2011).

Existing research has identified a number of possible psychosocial stressors in police work that can impact negatively on how officers appraise their jobs. Specifically, studies have examined the influence of organisational level variables on police job satisfaction. For example, core job characteristics from the Job Diagnostic Survey (JDS), namely, skill variety, task identity, feedback, and autonomy have been found to be associated with job satisfaction. However, findings may vary depending on whether overall satisfaction levels or facets of job satisfaction are being assessed (Ercikti et al., 2011; Miller, Mire, & Kim, 2009; Johnson, 2012; Zhao et al., 1999). As shown in one study by Zhao and colleagues (1999), whereas all dimensions, except feedback, were

associated with satisfaction with work, satisfaction with supervisors was determined by feedback and autonomy, and satisfaction with co-workers was only influenced by autonomy. Buker and Dolu (2010) found a similar pattern of relationships among the five job dimensions and these facets of job satisfaction in a sample of Turkish Police officers.

Other organisational variables have had varying effects on police officers' level of job satisfaction. Notably, support from others within the police organisation has been shown to be positively associated with job satisfaction in several studies (Allisey et al., 2014; Brough & Frame, 2004; Davey et al., 2001; Jo & Shim, 2015; Kuo, 2015; Noblet et al., 2009a), though this is not always supported (Nalla et al., 2011). Some studies also suggest that support from outside, specifically citizen support, is important for job satisfaction in the police (Bennett, 1997; Nalla et al., 2011), but again, these findings are not always consistent (Jo & Shim, 2015). Additionally, work factors such as perceived control over one's job, role clarity, promotion opportunities, job security, opportunities to innovate have been found to increase job satisfaction levels in police officers, whereas, working on shift, inadequate pay, organisational changes, and job demands/challenges impedes job satisfaction (Allisey et al., 2014; Bennett, 1997; Brunetto & Farr-Wharton, 2002; Davey et al., 2001; Kuo, 2015; Nalla et al., 2011; Noblet et al., 2009a).

Although the research has mostly focused on organisational work characteristics as determinants of job satisfaction in police officers, some studies have examined the effects of operational policing and community characteristics, but findings have been inconsistent. For instance, Buker and Dulo (2010) examined the relationship between dangerousness in police jurisdictions (e.g., the ratio of total crime to population to police officer) and job satisfaction (i.e., satisfaction with work itself, satisfaction with supervisors, and co-workers) in Turkish police officers. They found that the ratio of crime to population was inversely related to officers' satisfaction with their colleagues, whereas ratio of crime to

police officers significantly affected satisfaction with supervisors. No significant association was found between satisfaction with work itself and either of the two community variables. A similar study conducted by Jo and Shim (2015) on Korean officers; however, found no significant relationships between any of these community characteristics and job satisfaction. Interestingly, Davey et al. (2001) in a study of Australian police officers found a positive relationship between dangerous work duties and job satisfaction. The authors hypothesise that "this could indicate that police officers actually find the unpredictability and danger involved in policing a highly satisfying part of the job" (p. 37).

2.4.2.2. Psychological well-being.

Police officers are often considered a high-risk group for psychological dysfunction because of the types of job stressors they encounter. Studies have investigated the effects of specific aspects of police work such as shift schedules (Gerber, Hartman, Brand, Holsboer-Trachsler, & Pühse, 2010; Violanti et al., 2008), organisational change (e.g., Greubrel & Kecklund, 2011), and killing and injuring others (Komarovskaya et al., 2011) on psychological health. However, as discussed previously, much of the research has taken a more collective approach such that stressors are grouped according to the nature of the organisation and inherent stressors to policing.

On a whole, organisational experiences have been found to be more important than operational experiences in predicting mental health. For instance, in several cross-sectional studies on Australian police officers, Hart and colleagues (Hart, Wearing, & Headley, 1993, 1995; Hart & Cotton, 2002) using measures of police hassles and uplifts, found that organisational factors were the strongest determinants of psychological distress and perceived quality of life. Among US-based police officers, Violanti and Aron (1994)

examined the relationships between organisational and inherent police stressors and psychological distress and found that organisational stressors increased distress 6.3 times more than inherent stressors. Also based in the US, Liberman et al. (2002) found that stress from routine organisational tasks was a stronger predictor of psychological distress than critical incident exposure.

In a longitudinal study of police recruits from New Zealand, Huddleston, Stephens, and Paton (2007) evaluated the impact of traumatic and organisational experiences on psychological distress. While both components of the job were associated with distress one year later, organisational stressors had the strongest effect. Wang and colleagues (2010) in another longitudinal study of urban US police officers, found that routine police work in the first year of police service was significantly associated with depression at 12 months follow-up in officers with no previous mental health symptoms. However, no association between critical incidents and depression was found. Similarly, van der Velden et al. (2010) examined the relationship between the frequency of exposure to aggression, taken into account organisational stressors and life events, and mental health in a longitudinal study of Dutch police officers. Findings indicated that, while the frequency of confrontations with physical aggression was not associated with mental health problems at follow-up, organisational stressors were predictive of mental health issues at follow-up as at baseline.

A cross-sectional study by Berg et al. (2006) showed some variations in findings. The authors regressed measures of anxiety and depression against the frequency and severity of four aspects of police work: job pressure, lack of support, serious operational tasks, and work injuries. Increased levels of anxiety were related to frequency and severity of job pressures, the frequency of lack of support, and severity of operational tasks. Depression was only related to the frequency of exposure to lack of support and work

injuries. Based on these mixed findings, the authors concluded that both organisational hassles and operational duties should be considered when assessing police health. Findings from other studies also support the argument that frontline duties have an additive effect in determining psychological functioning (Adams & Buck, 2010) and the extent of the adverse impact may vary depending on the types of operational stress exposure (Brough, 2004; Brown et al., 1999).

Research has also shown strong predictive validity of dimensions from contemporary theoretical models when applied in police populations. Using a small study of Canadian police officers, Janzen, Muhanjarine, Zhu, and Kelly (2007) were one the first to test the utility of the effort-reward imbalance model in relation to well-being in this occupational group. Findings showed that the constructs of effort, reward, and over-commitment were significantly associated with psychological distress. Noblet et al. (2009a, 2009b) in their study of Australian police officers found dimensions of demand, control and social support to be important predictors of psychological distress. They also examined interaction effects but found little evidence to support the buffering effect of control and social support. In a study of Italian police officers, Gabarino et al. (2013) tested the additive effect of components of the DCS and ERI models after controlling for demographic and personality variables. Control, support and all three dimensions of ERI (i.e., effort, reward, and over-commitment) predicted depression. Support and reward were associated with lower anxiety levels, and high effort increased anxiety levels.

Houdmont, Randall, Kerr, and Addley (2013) used the HSE Management Indicator Tool to assess police officers' perceptions of work conditions and the association with psychological distress. The measure, developed by the UK government through its Health and Safety Executive (HSE), consist of components taken from the DCS model along with other dimensions of the psychosocial work environment (i.e., demand, control, managerial

support, peer support, relationships, role clarity, and change) (Houdmont et al, 2013). Studying a large group of UK police officers, Houdmont and colleagues found that four psychosocial dimensions of the HSE Management Standard tool – demands, control, relationships and role clarity - were important predictors of psychological distress.

2.4.2.3. Physical well-being.

The demanding work of police officers is not only likely to affect their psychological functioning but can also result in poor physical health. In fact, there have been increasing reports of disease and high morbidity and mortality rates among this occupational group. For instance, previous research have shown that police officers are more prone to develop cardiovascular disease than other comparison groups (Frank, Collins, & Hinz, 1998; Ramey, Downing & Franke, 2009) and show higher rates of cardiovascular disease risk factors including obesity, high cholesterol, and hypertension (Franke, Ramey, & Shelley, 2002; Ramey et al, 2009; Hartley, Burchfiel, Fekedulegn, Andrew, & Violanti, 2011). Increased mortality risks for diseases such as cancers of the colon and oesophagus, and diabetes have also been reported (Vena, Violanti, Marshall, & Fielder, 1986; Wirth, Vena, Smith, Vauer, Violanti & Burch, 2013). Some of these disorders have been directly linked to policing work conditions and perceived job stress (Franke et al., 2002, Ramey, 2003; Ramey, Perkhounkova, Downing, & Culp, 2011). However, findings of these associations may vary depending on demographic characteristics such as gender (Hartley et al., 2011; Yoo & Franke, 2011).

Research has also emphasised the prevalence of physical health problems in a wider context. In an earlier study of over 2,000 US-based police officers, Hurrel, Pate, and Kliesmet (1984) found that the number and types of health disorders that officers reported over a 6-month period were equivalent to what is reported by average workers in 12-months. The authors found that the most commonly reported disorders were related to

musculoskeletal problems (e.g., whiplash injuries, trouble with spine) and hypertension/high blood pressure. Those commonly associated with stress were hypertension and gastrointestinal problems. A more recent study by Gershon et al. (2009) found that chronic lower back pain, foot problems, migraines and chronic insomnia were commonly reported symptoms in US police officers. Gershon and colleagues also found these physiological symptoms were positively associated with perceived job stress. Similarly, Cheuh, Len, and Yu (2011) found that perceived work stress was a predictor of psychosomatic symptoms (e.g., feeling tired and exhausted, shortness of breath, feeling dizzy, and muscle trembling) among male Taiwanese police officers. In addition, more specific aspects of the policing, such as shift rotation (Violanti et al., 2009; Gerber et al., 2010), lack of social support (Berg et al., 2006), and exposure to assault and violence from citizens (Yun, Kim, Jung, & Borhamian, 2013) have also been linked to adverse physical health outcomes.

2.4.3. The role of individual characteristics.

While there is an extensive body of research on police stress, incorporation of individual characteristics in explaining the stress - strain relationship has lagged behind relative to the general stress literature. No two persons perceive or respond to stress in the same way. Stress appraisal and response are likely to differ on an individual level (Lazarus, 1999) and across sub-groups of a population. Some variables – mostly those related to socio-demographic and occupational characteristics – have received attention in the police stress literature either as controls or more explicitly as primary variables of interest. However, the evidence pertaining to the role of these variables is sometimes contradictory. In the following sections, influential individual and occupational variables in the police stress literature and those of interest in the current research namely gender, rank, job tenure, personality, and coping are discussed.

2.4.3.1. Gender.

Research on police stress has focused almost exclusively on male police officers. There have been few studies conducted on policewomen, largely in part, because policing has been a male dominated occupation. However, in recent years, as the number of policewomen in forces has increased, more attention has been on gender disparities and the experience of females in police work, though comparative research has still been difficult due to the small numbers of policewomen represented in study samples (Karunanidi & Chitra, 2013).

Police work is perhaps considered by many to be a "masculine job". This may lead to the assumption that policewomen experience unique struggles and therefore have significantly higher stress experiences compared to their male counterparts. He, Zhao, and Archbold (2002) point out that "both the internal organisational culture and external work environment are much less favourable to female police officers" (p.689). However, the evidence concerning gender disparities in police work is mixed. While some studies have found gender differences in the overall experience of stress (Berg et al., 2005; Collins & Gibbs, 2003; He, Zhao, & Ren, 2005; Pinear & Rothman, 2006; Salo & Allwood, 2010), others report little or no difference in overall levels of stress between police men and women (Bradway, 2009; Garcia et al., 2004; Laufersweiler-Dwyer & Dwyer, 2000; Morash & Haar, 1995; McCarty, Zhao, & Garland, 2007; Zhao et al., 1999). In fact, these studies show that the overall experience of men and women as it relates to police work is more similar than different.

Still, while overall perceptions of stress may not be substantially higher in female officers, they may encounter a unique set of circumstances. For instance, studies show that women report different experiences in their work environment because of discrimination, sexual harassment, lack of support, unequal opportunity issues, being seen as an "out-

group", and work-home balance issues (Antoniou, 2009; Brown & Fielding, 1993; Burke & Mikkelsen, 2005; Liberman et al., 2002; Morash & Haarr, 1995; Violanti et al., 2016). Furthermore, certain police duties are more likely to be assigned to women and may give rise to gender specific stressors. For example, policewomen report more stress related to duties that involve dealing with victims of domestic violence, sexual offences, and handling cases of abused children (Bartol, Bergen, Volckens, & Knoras, 1992; Biggam et al., 1997b; Brown & Fielding, 1993; Brown et al., 1999; McCarty et al., 2007), though their overall level of stress was not significantly higher than their male counterparts. Previous research also shows that female officers tend to report more stress associated with use of force and confrontations with violence or danger (Bartol, 1992; Brown & Fielding, 1993; Jermier, Gaines, & McIntosh, 1989; Violanti et al., 2016). Brown and Fielding (1993) surmise that differential experiences on these operational tasks may be due to coping differences between male and female officers. It is also possible that operational tasks with the potential for violence may provide a sense of excitement for male officers such that it validates the projected masculine police image (Jermier et al., 1989).

2.4.3.2. Rank.

Some research has shown that a police officer's position or rank in the police organisation is related to their experience of stress. When measuring overall stress, some studies indicate that higher ranked police officers report less job stress compared to lower ranked officers (Brown & Campbell, 1990; Chen, 2009; Gudjonsson & Adlam, 1985), though such findings are not always consistent. For example, Perrott and Taylor (1995) found no difference in overall levels of perceived stress between Canadian constables and supervisors. That said, rank differences appear to be more apparent when job-specific stressors are considered. For instance, in assessing the frequency of exposure to job stressors, Gudjonsson and Adlam (1985) and Brown and Campbell (1990) found that

senior officers were more likely to report higher exposure to organisational stressors and less exposure to operational stressors compared to lower ranked officers. Other studies have made similar observations, where police officers who are higher ranked and in managerial positions (usually sergeants) are exposed to more organisational type stressors such as those related to administration (e.g., poor communication, excessive paperwork, bureaucracy, inadequate support, and insufficient resources). Lower ranked officers (i.e., constables) tend to be exposed to more operational stressors such as violent arrests and domestic disputes (Berg et al., 2005; Biggam et al., 1997b; Kohan & Mazmanian, 2003).

In accordance with findings on exposure, similar differences in rank in regard to the intensity of felt stress have also been reported. For example, Violanti and Aron (1995) found that line sergeants, detective investigators and especially desk sergeants perceived organisational stressors as more intense relative to other ranks. Laufersweiler-Dwyer and Dwyer (2000) reported that sergeants scored higher compared to other officers on aspects of the job related to workload and resource allocations, organisational processes (e.g., paperwork, bureaucracy, inefficiencies), relationships (e.g., getting along with supervisors, incompatible partner), and organisational changes. More recently, Antoniou (2009) found that higher ranked officers reported more stress in relation to several organisational issues including "dealing with situations that are in conflict with personal duty", "expectance of decisions on promotion", "complaints against subordinates", "responsibility for public events", and "society's attitude towards the police."

2.4.3.3. Job Tenure.

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 organisation's promotional system. However, Stotland, Pendleton, and Schwartz (1989) found that stress and strain declined with job tenure, but only for police supervisors 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 highest organisational 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 organisational 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 trajectory. For instance, earlier career police officers may have a sense of enthusiasm and 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 realise the frustrations of the job. Midway into

their career, officers come to the realisation that their job expectations are not being met and are frustrated with the bureaucratic administration and lack of support from the organisation (Laufersweiler-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).

2.4.3.4. Coping.

It is argued that coping is a dynamic and complex process and this is reflected in the diversity with which it is approached in the literature (Hurrel, 1995). One recognised and well-supported theory that underpins the interaction of stress, coping, and psychological and physiological health is the Transactional Stress Theory proposed by Lazarus and Folkman (1984). Coping is defined as "constantly changing cognitive and behavioural efforts to manage specific external and or internal demands that are appraised as taxing or exceeding the resources of a person" (Folkman & Lazarus, 1984, p.141). In other words, the coping process is based on the individuals' knowledge about what coping options are available to them and their estimation of how useful the strategies may be in a given situation. It is the differences in individual approaches to stress and the coping process that then mediates the experience of psychological and physical outcomes (Lazarus, 1999).

Lazarus suggested that there are three features of coping: (1) coping is a process, that is, it is what the person thinks and does in a specific stressful encounter and how this changes as the situation unfolds; (2) coping is contextual – influenced by the specific encounter and perception of available resources to manage that encounter; and (3) coping

is 'independent of outcome', that is, coping is a person's effort to manage an encounter, and is independent of whether that effort is successful or not (Cox, 1993). Prominent in the coping literature is the distinction between problem-focused and emotion-focused coping. Problem-focused coping includes action-oriented efforts to directly manage or alter perceived stress whereas emotion-focused coping relies on efforts to regulate emotional responses to stress. People can use both coping strategies together or independently depending on the stressful encounter (Folkman & Lazarus, 1984; Lazarus, 1999).

An important component of police stress research is being able to explain and understand the needs of the police with the aim of reducing stress and its symptoms and enhance coping capacity. The context in which police officers work often means that they have little control over the sources of job stress (Stinchcomb, 2004). However, effective use of coping strategies targeted at reducing the effects of unpleasant events is controllable through education and training (Lanterman, Boyle, Pascarellam, & Furrer, 2010). Therefore, understanding the effects of coping in the stress-strain relationship can help to develop proactive and practical strategies for stress management within the workplace.

Existing research on the use of coping strategies among police officers have conceptualised coping in several ways and have found mixed results. There is some evidence to suggest that police officers often use positive coping strategies. For instance, Evans, Coman, Stanley, and Burrows (1993) found that Australian police officers utilise more problem-focused or action directed coping strategies in response to stress compared to social support, self-blame, and wishful thinking. Similarly, Biggam, Power, and MacDonald (1997) found that Scottish police officers had a preference for more problem-focused or action-oriented strategies. On the other hand, Alexander and Walker (1994) found that police officers from the UK reported the use of both adaptive (e.g., exercise) and maladaptive methods (e.g., use of alcohol and increased smoking and eating) to relieve

stress. The use of negative strategies has also been reported by Burke (1998) who found that officers in his study tend to use escapist coping (i.e., use of alcohol and drugs, withdrawal, sleeping, anger-catharism) in response to job stress.

Further research suggests that police officers who rely on action-oriented strategies in response to problems tend to report lower stress levels, whereas officers who use emotion-focused or try to escape from problems report higher stress levels (Gershon et al., 2009; Haar & Morash, 1999; Hart et al., 1995; Kirkcaldy et al., 1995a; Morash et al., 2008). For example, Hart and colleagues (1995) in their study of Australian police officers, found that while emotion-focused coping strategies were associated with an increase in work experiences that are harmful to well-being (i.e., daily hassles), using direct methods of coping were related to more positive experiences of police work (i.e., work uplifts). In a study of US-based officers, Gershon et al. (2009) found that avoidant and negative coping tend to intensify perceived work stress, whereas problem-solving coping was inversely related to perceived stress, though the latter association did not remain at the multivariate level.

Similar relationships have been demonstrated between coping and stress-related outcomes. For instance, Violanti (1992) found that distress was significantly reduced in police recruits who used distancing and planful problem solving but increased in those that used escape/avoidance and self-control coping. Other studies have also found that officers who use avoidant or other emotive coping strategies are more likely to experience poorer psychological functioning and physical ill-health (Burke, 1994; He et al., 2002; Pasillas, Follete, & Perumean-Chaney, 2006; Yun, Kim, Jung, & Borhanian, 2013). For instance, Burke (1994) found that police officers who use alcohol and drugs, those who withdraw and isolate themselves, and lack physical exercise reported poorer emotional well-being and more psychosomatic symptoms. These findings may not be surprising, as Alexander

and Walker (1994) point out, police officers may not be satisfied with the methods they use to cope with work-related stress or even perceive them as effective. Notwithstanding this evidence, the direct effects of coping on psychological correlates are not always supported, as findings from other studies show that after accounting for other variables, coping, on a whole, has a negligible effect on psychological health outcomes (Hart & Cotton, 2002; Hart et al., 1995; Ortega, Brenner, & Leather, 2007; Patterson, 2003).

In addition to having a direct effect (regardless of levels of stress), coping has also been shown to moderate the relationship between stress and stress-related outcomes. Some research suggests that maladaptive coping strategies lead to an exasperation of adverse psychological and physiological outcomes in police officers. For instance, Gershon et al. (2009) in a study with a large sample of American police officers found an interaction effect of perceived work stress and coping on psychological well-being. Officers who reported high work stress and relied on avoidant coping strategies were 14 and 9 times more likely to report increased levels of anxiety and burnout respectively compared to officers who did not report using these strategies. In another large-scale study of police officers in the UK, Kirkcaldy et al. (1995a) found that coping (as measured with the Occupational Health Indicator [OSI] scale) moderated the relationship between job stress and job satisfaction and the relationship between job stress and psychological health.

While it might be expected that "negative" coping will often exacerbate stress and "positive" coping helps to alleviate stress, the direction of these predicted effects are not always supported. For instance, Patterson (2003) found that social support, often considered a method of coping, buffered the relationship between work stress and psychological distress while emotion-focused coping buffered the relationship between life stress and distress. They also found a reverse buffering effect of problem-focused coping, such that this coping strategy increased rather than decreased the negative effects of work

stress. These findings support the assertions that different coping methods can be beneficial or impeding depending on the context or purpose for which they are being used (Balmer, Pooley, & Cohen, 2011; Lazarus, 1991).

2.4.3.5. Personality.

Certain personal dispositions have been associated with police officers and showed to influence perceived stress and wellbeing. Lawrence (1984) was one of the first to study the influence of personality factors on police officers' appraisal 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 is 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 behaviours 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 behaviours may be a reflection of recruitment and selection insofar that 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 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 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' perception 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 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 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 was 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 individual 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, and 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 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 three personality traits of neuroticism, conscientiousness, and extraversion to form eight unique personality typologies such that each represented 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.

2.4.4. Work-family conflict.

Work-family conflict is defined as a form of inter-role conflict in which the demands in the work domain and family domain are incompatible (Greenhaus & Beutell, 1985). Reviews on work-family conflict have demonstrated its importance in predicting work-related and non-work related outcomes (e.g., Allen, Herst, Bruck, & Sutton, 2000). Work-family interface includes two dimensions: work-to-family conflict (WFC) and family-to-work conflict (FWC). For example, WFC might occur when the police officer experiences a traumatic incident at work which results in reduced engagement in family activities or takes home an authoritative posture which might be effective at work but is threatening at home. An officer might experience FWC when he or she has challenges at home with their spouse that affects their ability to concentrate or function effectively at work. Although the bi-directionality of work-family conflict is recognised, the literature shows that WFC has been more widely studied and show stronger relationships with covariates than FWC (Frone, Russell, & Cooper, 1992).

Given the nature of police work (e.g., irregular work hours and emotionally demanding work), it is not unreasonable to expect that police officers experience challenges balancing home and work life. Indeed, police officers tend to rank time away from family or work-home imbalance as a major stressor above many other organisational and operational stressors (Garcia et al., 2004; Biggam et al., 1997b, Collins & Gibbs, 2003; Suresh et al., 2013). In one study, Toch (2002) found that 67% of police officers reported that work-related stress impacted on their family life and 47% indicated that family stress affected their work. Findings such as these have spurred a growing interest in

the dynamics of work and home and, indeed, research has shown that strain associated with work-family conflict can have detrimental effects on police personnel.

For instance, Singh and Nayak (2015) found that work-to-family conflict was positively associated with police job stress in Indian police officers. Meanwhile, other studies show that work-family conflict is inversely related to job satisfaction in this occupational group (Burke, 1994; Howard, Donofrio, & Boles, 2004; Singh & Nayak, 2015). Similarly, work-family conflict has been found to be important in determining psychological health (He et al., 2002; Janzen, Muhajarine, & Kelly, 2007), and physical health complaints (Mikkelsen & Burke, 2004). Furthermore, research has found that police officers themselves are not the only ones impacted. For instance, Alexander and Walker (1996) studied the impact of police work on UK police officers and their spouses and found that stress from the job also affected their spouse's health.

2.5. Chapter Summary

This chapter provided a discussion of a number of topics including the conceptualisation of stress, an understanding of police stress, relationships between police stress and well-being, the role of individual differences, and work-family conflict. The discussions in the chapter demonstrated the many variations in conceptualising stress and respective theoretical and practical strengths and weaknesses. Further, while there is a large body of work on police stress, there is much variability in the research methodology and application of more contemporary and comprehensive frameworks are limited (Abdollahi, 2002; Webster, 2013).

The police stress literature has primarily focused on identifying the primary sources of stress. Increasingly stressors related to the organisational climate have emerged as the main source of stress for police officers relative to operational stressors, though this may

vary across nations. Job characteristics from within the police organisation 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, are likely to expand our understanding of police stress. Work-family conflict is also a growing area in police stress research but requires further exploration.

For the most part, noticeable in the literature is that police stress research is confined to developed countries, particularly the United States, United Kingdom and Australia. Only a limited number of published studies have examined the experience of stress and its effects on police officers in lesser developed countries (e.g., 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 lesser developed countries. With differences in culture, socio-economic contexts, crime levels and types, and firearm policies, care should be taken in making generalisations cross-nationally. Additional and more comprehensive research from other nations may help to determine how much can be generalised about work-related stress in policing on a whole.

In sum, various gaps or aspects of police research that need further investigation have been noted in the literature. Importantly, there is a lack of a comprehensive approach to the study of police stress, and research appears to be confined to developed nations. The current research programme sought to add to the police stress literature by providing one of the most comprehensive approaches to understanding the nature of police stress and its correlates, using officers from Jamaica - a developing country - as the primary subjects. The methodological considerations pertinent to accomplishing the research objectives are discussed in the next chapter.

Chapter 3
Methodological Considerations

3.1. Overview of Chapter

As described in Chapter 1, there are two major objectives and a number of research questions that will be addressed in this thesis. The first objective was to identify the job-specific stressors affecting Jamaican police officers. The second was to apply a contemporary theoretical framework to examine the relationship between police stress and well-being. Chapter 3 outlines the methodology employed to achieve these objectives. The chapter provides a detailed description of the research design; sample selection; measures used, the research procedure and ethical considerations. The chapter also provides an overview of the data analysis procedures undertaken throughout the thesis.

3.2. Research Design

The research undertaken for the purpose of this thesis consisted of three main studies that used a cross-sectional design. Causality between antecedent variables and outcomes can only be regarded as tentative in cross-sectional designs. However, given the scope of this research, longitudinal studies, though obviously advantageous, would not have been feasible primarily because of foreseen data collection challenges, timeframe and costs restrictions. Nonetheless, a mixed-method design was employed to provide a comprehensive study reflecting the stress experience of the police officers. Study 1 and 3 comprised the quantitative components of the research and survey methodology was used to collect data on the study variables. Study 2 was qualitative in nature and utilized semi-structured interviews. The methodologies for the quantitative studies are outlined first followed by the methods employed for the qualitative component.

3.3. Quantitative Studies: Sample and Sample Selection

3.3.1. Sampling restrictions.

Ideally, a strictly representative sample would require the use of a probability sampling technique to acquire a random sample of police officers. However, this sampling approach was not feasible or practical in the present research because of several reasons, among them, time constraints, resource restrictions and challenges in accessing information that would be needed for such methods. In light of this, given the scope of the research, non-probability (i.e., convenient) samples of active duty police officers were obtained. Despite the sampling limitations, however, the researcher purposefully sampled officers from a wide cross-section of the Jamaica Constabulary Force in Study 3 to ensure that officers working in different capacities and locations were represented.

3.3.2. Inclusion criteria.

The participants of interest consisted of active duty policemen and women at the time of data collection who were working in various police divisions and units. The target groups were officers between constable and inspector ranks. These are police officers referred to as "rank and file" and who largely carry out the day to day policing duties. Police officers above inspector ranks were not included as they tend to perform more administrative or managerial duties, are much smaller in numbers, and would have been less easy to access for this research purpose.

3.3.3. Sample selection - Study 1.

Jamaican police officers were the primary subjects of interest for the research described in this thesis. Given the fact that there is no known published research on this population, Study 1 was exploratory in nature and sought to gain a broad understanding of the stress experience of these officers. The study provided an opportunity to pre-test and

refine the research instrument and obtain preliminary data on potential direct relationships between the antecedent and outcome variables. However, in order to further anchor these results, not just in the broader context of the literature, but with current data so as to enable a better understanding of the nature of police stress in the Jamaican context, a sample of UK police officers was used as a reference group.

It is noted that data obtained from Study 1 was used to test individual components of the proposed research model in both samples, rather than the extended model. Therefore, in light of the objectives of Study 1, a relatively small group of police officers from each country was targeted. A total of 149 Jamaican and 135 UK police officers completed questionnaires. Nineteen and 21 incomplete questionnaires from the respective groups were discarded. Therefore, 130 questionnaires from the Jamaican sample and 114 from the UK were considered usable data. The descriptive characteristics of the participants included in this study are provided in Chapter 4.

3.3.4. Sample selection - Study 3.

Study 3 comprised the main component of the research project. The data collected in this study was subjected to a broad range of analyses to fulfil the research objectives. In determining an appropriate sample size, certain conditions were taken into consideration. For instance, Tabachnick and Fidell (2014, p.159) recommend the following formula for calculating sample requirements, bearing in mind the number of independent variables that you wish to use in regression analyses: $N \geq 50 + 8m$ (where m = number of independent variables). These rules of thumb assume a medium sized relationship between the independent variables and the dependent variable, and that $\alpha = .05$ and $\beta = .20$. Eighteen independent variables were to be considered in the regression model. Using the formula, it was determined that a sample size of at least 194 would be appropriate (i.e., $N \geq 50 + (8)(18) = 194$).

Nine hundred ($N = 900$) questionnaires were distributed, and 688 were returned, representing a response rate of 76%. Of the surveys returned, 39 were found to have been completed by officers outside the ranks needed for the study and 71 were discarded because of incomplete data. In the end, 578 usable questionnaires were retained. A detailed description of the participants included in this study is described in Chapter 5.

3.4. Rationale for Self-report Data and Single-Item Measures

Self-report data was primarily used in the present research. Self-report methods, specifically questionnaires have been the primary means of collecting data in occupational stress research (Razavi, 2001). Some of the advantages associated with the use of self-report data are that it is one of the most efficient ways of determining the subjective experiences of human subjects. It is relatively quick and easy to administer and is less expensive compared to other methods. In occupational research, self-reported methods use standardised procedures to obtain data about participants' personal and environmental characteristics, affective responses to that environment (e.g., job satisfaction) and mental and physical health (Razavi, 2001).

The quantitative studies described in this thesis involved the development of a multi-measure questionnaire in assessing the variables of interest. If researchers are to assess multiple factors in occupational stress and well-being research, as suggested by theoretical frameworks such as the DRIVE model (Mark & Smith, 2008), they must include multiple measures. This would involve several multi-item scales and a lengthy questionnaire which can have practical implications related to response time and burden, particularly in work settings. Further, the additional demands placed on the participant are likely to result in lower response rates and increase attrition (Fisher, Mathews, & Gibbons, 2016), all of which can impact on the validity of responses and affect generalisation of

research findings. Therefore, to reduce the frustration and fatigue that comes with longer instruments, while not limiting the number of constructs that are measured, researchers have to consider alternative approaches.

The use of single items is one proposed alternative. Though there is some controversy surrounding the use of single items, these measures can be usefully applied and advantageous in occupational settings (Fisher et al., 2016). For instance, with single items, more constructs can be measured with shorter questionnaires which would provide more informed analysis of stress-strain models. Single items are also appropriate in occupational settings where time and response burden is a challenge. Particularly, in police populations, the demands of police work and the fact that most officers operate on duties outside of police posts, make it difficult for them to attend to responding to surveys. Further, researchers agree that single item measures are more likely to reduce criterion contamination and have increased face validity (Fisher et al., 2016; Nagy, 2002; Wanous, Reichers, & Hudy, 1997).

Indeed, single item use is not new in academic research, and the approach has been applied to a variety of research constructs. Some researchers have found support for the use of single item measures, and there are items which have gained a level of respectability in the research literature. For instance, there has been well-documented successful use of single measures such as job satisfaction (Wanous & Hudy, 2001; Wanous et al., 1997), overall perceived health (Bowling, 2005), perceived stress (Littman, White, Satia, Bowen, & Kristal, 2006; Smith, Johal, Wadsworth, & Peters, 2000), self-esteem (Robins, Hendin, & Trzesniewski, 2001), quality of life (de Boer et al., 2004), depression (Zimmerman et al., 2006), and bullying (Sawyer, Bradshaw, & O'Brennan, 2008). In a recent study, Fisher et al. (2016) developed and evaluated the psychometric properties of constructs commonly considered in organisational and occupational health research. The authors found

favourable psychometric results for a number of measures including supervisor support, work role clarity, work-family imbalance, life satisfaction, and job satisfaction.

Despite the success of single-item measures, there are ongoing concerns over the statistical robustness of this approach. Mainly, the concerns pertain to reliability and validity issues (Fisher et al., 2016). First, single item measures are often considered unreliable because it is difficult to calculate internal consistency estimates (Nagy, 2002; Wanous et al., 1997). Second, single items may not provide an accurate representation of the content domain of complex constructs because of criterion deficiency (Nunnally & Burnstein, 1978). However, even with these concerns about single item measures, multi-item measures are not perfect and have their limitations. For instance, Drolet and Morrison (2001) suggest that multi-item scales, with each additional similarly worded item, can significantly inflate alpha scores without improving informational value. The authors stated: "multi-item scales that produce high reliability (i.e., high alphas) may simultaneously reduce the quality of responses and add little information over a single – or, at most, two-item scale" (p. 201). Overall, the literature on single item measures suggests that these measures offer a practical alternative to multi-item measures particularly in settings where multiple constructs are being assessed and where response burden and cost are concerns (Williams & Smith, 2012).

3.4.1. The Well-Being Process Questionnaire.

For the current research project, single-item measures were taken from the Well-being Process Questionnaire (WPQ) (Williams, 2012, 2014; Williams & Smith, 2012, 2013). Also using the DRIVE model as his guiding framework, Williams (2014) developed single-item measures for variables associated with well-being within an organisational context. Items measuring various constructs including work demands, work resources (e.g., job control, work support), coping, personality characteristics, and well-

being outcomes (e.g., depression, anxiety, and job satisfaction) were created. The approach to the development of these items involved the use of a stem followed by examples of original items of the multi-item scale to provide evidence on what the statement represents and increase congruence between the single item and multi-item measures. For example:

> I feel that my work is too demanding (for example: I have to work fast, I have to work hard, I have conflicting demands). (Williams, 2014)

Using a sample of nurses and university employees, Williams (2014) validated the single-items against multi-item measures and demonstrated that these items displayed a satisfactory representation of the constructs being measured. Williams also demonstrated that the predictive validity of the single-item measures was comparable to the multi-item scales. In a recent study, Williams and Smith (2016) showed that single item measures of work and personality characteristics were suitable in predicting well-being outcomes, consistent with what is expected based on the literature. Similarly, Galvin and Smith (2015, 2016) examined well-being in nursing and postgraduate students using single-item measures from the WPQ and found consistent relationships and similarly explained variance in outcomes relative to the literature. Based on the evidence, the approach taken by Williams and Smith has demonstrated that the items that comprise the WPQ show acceptable psychometric properties and can provide the same indicators of well-being as their multi-items measures. The application of these measures was considered suitable for the current research program given the circumstances of testing multiple constructs and the mindfulness of response burden given the population under study. The following sections provide a description of the various measures used in Study 1 and 3.

3.5. Description of Study Variables - Study 1

Study 1 gathered data on demographic characteristics, job-specific stressors, work characteristics, coping styles, personality characteristics, perceived job stress, job satisfaction, and personal well-being outcomes (e.g., depression, anxiety). As one of the aims of Study 1 was to test and refine the research instrument, modifications were made to the measurement of some variables in Study 3 and are discussed in subsequent sections of the thesis.

3.5.1. Demographic and occupational variables

The socio-demographic profile of the participants was determined by asking participants to respond to a series of questions that define their demographic characteristics and employment details. These questions included identifying participants' gender, age, relationship status, rank, level of education, and years of service. These are the common variables used in most studies of police stress (Violanti & Aron, 1995).

3.5.2. Police job stress survey.

A 55 item measure was used to investigate the various sources of stress common among police officers. As discussed in Chapter 2, several studies have identified specific stressors affecting the police (e.g., Coman & Evans, 1991; Pienaar & Rothmann, 2006; Spielberg et al., 1981; Violanti & Aron, 1994). These sources were consulted in the construction of the instrument, though the items were predominately taken from the Police Stress Survey by Spielberg et al. (1981). Additional items that were considered relevant to the Jamaican policing landscape were also included. For example, the item "having to deal with gangs/gang members/gang activities" was included as gang activity is a prevalent problem in Jamaica.

Stressors for the purpose of this study were categorised into organisational and operational stressors, as has been done in other studies (see Brown & Campbell, 1994; Comans & Evans, 1991; Violanti & Aron, 1994; Spielberg et al., 1981). For instance, items that represent organisational factors included: inadequate support from fellow officers, lack of participation in policy decisions, insufficient personnel to handle assignments. Items that reflect operational duties included: the threat of being injured/killed on the job, seeing a fellow officer being injured/killed, and verbal insults/aggression from the public. Stressors that emanate from the structure of other agencies or individuals with whom the police interacts such as the public, media and judicial system were considered organisational stressors. Similar categorisations have been made in other studies (see Biggam et al., 1997b; Brown & Campbell, 1994; Coman & Evans, 1991; Spielberg et al., 1981; Violanti & Aron, 1994). As recommended by previous researchers such as Biggam et al. (1997b) the study addressed both the frequency and intensity of stressors. In this study, participants were first asked to indicate how frequently they had experienced the event over the past 12 months using the scale, 0 (*never*) to 3 (*very frequently*). If they indicated in the affirmative, they were then asked to rate on a scale of 1 (*not at all stressful*) to 10 (*very stressful*) how stressful the event was for them.

3.5.3. Organisational work characteristics.

As previously mentioned, Williams (2014) developed short items that comprise the WPQ. Work-related variables consisted of items derived from dimensions of the Demand-Control-Support (Karasek, 1979) and Effort-Reward Imbalance (Siegrist, Siegrist, & Weber, 1986) models as well as additional items taken from the HSE Management Indicator Tool that are not accounted for in the former two models. The latter is the Management Standards for Work-Related Stress introduced by the UK agency of Health and Safety Executive (HSE) to assess psychosocial risks within organisations. The original

instrument consists of 35 items that tap into six constructs, some reflective of dimensions of the DCS model. Subscales of the HSE Management Indicator tool are: demand, job autonomy, work support (i.e., managerial support, peer support), role clarity, relationships, and consultation on change (HSE, n.d.).

A total of 11 constructs were used for the current research: demand, control, effort, reward, over-commitment, colleague support, supervisor support, role clarity, supervisor relationship, consultation on change, and bullying. Items had a response scale from 1 (*disagree strongly*) to 10 (*agree strongly*).

3.5.4. Coping styles.

Single item measures for coping from the WPQ tapped into five dimensions of the Ways of Coping Checklist developed by Folkman and Lazarus (1988) namely problem-focused, seek advice, self-blame, wishful thinking, and escape/avoidance. Similar to the job characteristic measures, examples were provided for guidance. For example: *When I find myself in stressful situations, I blame myself (for example: I criticise or lecture myself, I realise I brought the problem on myself)*. Items had a response scale from 1 (*disagree strongly*) to 10 (*agree strongly*)

3.5.5. Personality characteristics.

The most commonly represented model of personality in the literature is the Five-Factor, or "Big Five" model (McCrae & Costa, 1987). Williams (2014) developed short measures for the WPQ derived from this model: extraversion, emotional stability, conscientiousness, agreeableness, and openness. For example: *I feel like I am a conscientious person (for example: I am always prepared, I make plans and stick to them, I pay attention to details)*. Items had a response scale from 1 (*disagree strongly*) to 10 (*agree strongly*)

3.5.5.1. Core self-evaluations.

Other frequently cited dimensions of personality are optimism, self-esteem, and self-efficacy. Single-item measures of these dispositional characteristics were also included, and are hereby referred to core self-evaluations. Items were rated on a similar 10 point Likert scale as with previous measures. An example of an item is*: In general, I feel optimistic about the future (for example: I usually expect the best, I expect more good things to happen to me than bad).*

3.5.6. Well-being outcomes.

As mentioned in Chapter 2, there are many operational definitions of well-being in the literature. In line with Hart and colleagues' (Hart & Cooper, 2001; Hart et al., 1995) model of occupational health, three dimensions of well-being (i.e., affective, cognitive, and somatic) are explored in this thesis. Cognitive components represent the employee's appraisal of the job (e.g., job satisfaction), the emotional component reflects dimensions of positive and negative affect (e.g., positive well-being and distress), and somatic component involves indicators of physical well-being.

For ease of reference, the term "personal well-being" will be used to refer to well-being outcomes that relate to the individual. That is, both psychological and physical states and positive and negative dimensions. Personal well-being measures were selected to reflect common mental and physical health constructs in the occupational health literature (Smith, Johal, Wadsworth, Smith, & Peters, 2000; Smith, Wadsworth, Chaplin, & Allen, 2009). As mentioned in Chapter 2, perceived job stress and job satisfaction reflect cognitive appraisals in the adapted DRIVE model through which work characteristics exert their effect. Along with playing a mediator role these variables were also considered independent outcomes in of themselves and represent a gauge for occupational well-being.

3.5.6.1. Perceived job stress.

Single item measures of perceived stress has been used widely in the literature on workplace stress and has been found to be an adequate measure of the construct (Calnan, Wadsworth, May, & Smith, 2004; Smith et al., 2000; Smith et al., 2009; Wadsworth et al., 2007). A similar item was developed by Williams (2014). The item: *Overall, how stressful is your job?* was evaluated along a 10-point Likert-type scale, from 1 (*not at all stressful*) to 10 (*very stressful*).

3.5.6.2. Job satisfaction.

There is a long history of evaluating job satisfaction using a single item (Wanous et al., 1997). Over three decades ago, Scarpello and Campbell (1982) compared a measure of overall job satisfaction with specific facets of job satisfaction and concluded that the global measure was preferable to the facet measures. In the years since, single item measures of global job satisfaction have gained legitimacy in the literature (Fisher et al., 2016; Wanous & Hudy, 2001; Wanous et al., 1997; Williams & Smith, 2012). For this study, the job satisfaction measure was taken from the WPQ. Respondents were asked: *Overall, how satisfied are you with your current job?* with responses on a Likert scale from 1 (*very dissatisfied*) to 10 (*very satisfied*).

3.5.6.3. Psychological well-being.

Single items from the WPQ were used for well-being variables (i.e., anxiety, depression, happiness). For example: *On a scale of one to ten, how depressed would you say you are in general (e.g. feeling 'down', no longer looking forward to things or enjoying things that you use to)?* The item had a response scale from 1 (*not at all depressed*) to 10 (*extremely depressed*).

A modified version of the Warwick-Edinburgh Mental Well-being Scale (Tennant et al., 2007) used a 5-item scale to assess positive psychological well-being. An example of an item was: *I have been feeling in good spirits (e.g. I feel good about myself and confident in my abilities)*. The items had response scales from 1 (*disagree strongly*) to 10 (*agree strongly*).

3.5.6.4. General physical health.

Global self-rated health is another example of the use of single item measures, especially common in epidemiology research (Bowling, 2005). For example, prior research has shown that single item measures of overall perceived health are effective in predicting mortality (DeSalvo, Bloser, Reynolds, He, & Muntner, 2006; Idler & Benyamini, 1997). A single item, similar to measures used in previous research (Bowling, 2005; Smith et al., 2000; Williams & Smith, 2012) was used to assess the overall health status of respondents. The item: *Over the past 12 months, how would you say your general physical health has been?* asked respondents to indicate their rating on a response scale from 1 (*extremely poor*) to 10 (*extremely good*).

3.5.6.5. Psychosomatic symptoms.

The measurement of psychosomatic symptoms was adopted from the scale used in the Bristol Stress and Health study (Smith et al., 2000). Participants were asked to indicate whether they had experienced 14 psychosomatic symptoms over a 12 month period. The symptoms included pains at different areas of the body (e.g., headache, stomach pains, back pains, chest pains); problems breathing, gastrointestinal issues (e.g., diarrhoea, heartburn/indigestion, constipation, nausea/vomiting), chronic fatigue, difficulty breathing, nerviness/tenseness, difficulty sleeping, and changes in metabolism.

3.6. Additions and Modifications to Measures – Study 3

The findings from Study 1 (to be discussed in Chapters 5 and 6 in more detail) influenced changes to some scales for Study 3. To summarise, the Police Job Stress Survey was reduced to 39 items based on findings that indicated the most relevant items from Study 1. The frequency of exposure scale was also modified to a "no" or "yes" format for clarity and ease of response. The measures for personality and job satisfaction were adjusted for Study 3 to include multi-item measures, as previous single item measures did not appear to be adequate measures for those variables in the Jamaican sample. Also, psychosomatic symptom items were reduced to represent four categories of symptoms, rather than 14 individual items.

Regarding variables added, information from both Study 1 and 2 (qualitative study) guided the decision to include a variable reflecting stressors police officers might be exposed to on frontline duty in Study 3. The measure entitled "victimisation" assessed the frequency with which police officers experience assault and violence at the hands of citizens. Findings from the first two studies also guided the decision to include work-family conflict as a variable in Study 3. In both studies, findings suggested that this was an important variable that is likely to influence well-being in the police. Details of the new scales are described in the following sections.

3.6.1. Victimisation.

Participants were asked to indicate how often they had been subjected to aggression and violence while on duty over a 12 month period. Four types of victimisation were examined using five items: verbal threat, physical assault (two items), threat with a weapon, and assault with a weapon. Items were measured on a five-point scale ranging from 0 (*never*) to 4 (*more than 15 times*). The sum of the five items constitutes the indicator of victimisation. This measure has been used in previous studies and found to

have satisfactory psychometric properties (Cheong & Yun, 2010; Manzoni & Eisner, 2006).

3.6.2. Personality characteristics.

Based on the findings of Study 1, the single items measures were discontinued and replaced with a short multi-item scale – the Ten-Item Personality Inventory (TIPI) (Gosling, Rentfrow, & Swann, 2003).The TIPI is a short version of the Big-Five personality dimensions and is commonly used when time is a major concern in research, and multiple variables are being measured. The five subscales of the TIPI are measured by two items with items representing each pole of the personality dimension. Each item is defined by two central descriptors, using a common stem. For example: *I see myself as… extraverted, enthusiastic.* Respondents are asked to rate the items on a scale ranging from 1 (*disagree strongly*) to 7 (*agree strongly*). Gosling and colleagues have demonstrated that the TIPI shows reasonable psychometric properties in terms of discriminant validity, test-retest reliability and patterns of external correlates.

3.6.3. Work-family conflict.

Work-family conflict was measured using six items from scales developed and validated by Carlson, Kacmar, and Williams (2000). Though, Carlson and colleagues developed bidirectional scales for three aspects (i.e., time-based interference, strain-based interference and behaviour-based interference) of how work and family interact, the strain-based scales were used for the purpose of the current research. Work-to-family conflict and family-to-work conflict were measured by three items each. An example of an item for work-to-family is: *when I get home from work, I often feel too frazzled to participate in family activities* and for family-to-work conflict is: *due to stress at home, I am often preoccupied with family matters at work*. Items were rated on a Likert scale, from 1 (*disagree strongly*) to 10 (*agree strongly*).

3.6.4. Job satisfaction.

In Study 3, the Warr-Cook-Wall (1979) job satisfaction scale was used. The scale requires participants to indicate how satisfied they are with 15 job items and a global measure of job satisfaction. Each item was rated on a 7-point Likert scale, 1(*very dissatisfied*) to 7 (*very satisfied*). The measure assesses both intrinsic and extrinsic job satisfaction. However, studies have shown that an overall score of job satisfaction is recommended for research and practical use (e.g., Heritage, Polluck, & Roberts, 2015). Therefore for the purpose of this research, the sum of the items on this scale provided an overall measure of job satisfaction, such that high scores represent high job satisfaction.

3.6.5. Psychosomatic symptoms.

Psychosomatic symptom items were collapsed into four categories, namely; feeling unaccountably tired and exhausted, having pains (e.g., headaches, backache, and pain in the chest); having difficulty sleeping; having gastrointestinal problems (e.g., heartburn/indigestion, nausea/vomiting, constipation). Participants were asked whether they had experienced any of the symptoms over the previous six months.

A summary of the study variables and measures for Study 1 and Study 3 are presented in Table 3.1. A copy the questionnaire is provided in Appendix A.

Table 3.1. *Summary of Study Variables and Measures for Study 1 and 3*

	Variables	Study 1	Study 3
Sources of stress	Police Stress Survey	Developed for study (55 items)	Modified 39 item version
Organisational characteristics	Demand, control, support, effort, reward, over-commitment, colleague support, supervisor support, supervisory relationship, role understanding, consultation of change, bullying	WPQ	WPQ
Coping styles	Problem-focused, seek advice, self-blame, wishful thinking, escape/avoidance	WPQ	WPQ
Personality	Extraversion, emotional stability, conscientiousness, agreeableness, openness	WPQ	Ten-item Personality Inventory (TIPI) by Gosling, Rentfrow, and Swann Jr. (2003)
Core self-evaluations	Optimism, self-efficacy, positive self-esteem	WPQ	WPQ
Occupational well-being/Mediators	1. Perceived job stress	1. WPQ	1. WPQ
	2. Job satisfaction	2. WPQ	2. Job Satisfaction scale by Warr-Cook-Wall (1979)
Personal Well-being	1. Anxiety, depression, happiness, general health	1. WPQ	1. WPQ
	2. Positive psychological well-being	2. Short Warwick-Edinburgh Mental Well-being Scale	2. Short Warwick-Edinburgh Mental Well-being Scale
	3. Psychosomatic symptoms	3. 14 symptoms See Smith et al., 2000	3. Four groups of symptoms
Victimisation	Verbal threats, physical assault (2 items), threat with a weapon, assault with a weapon	None	See Cheong and Yun (2010) and Manzoni and Eisner (2006)
Work-family conflict	Work-to-family conflict Family-to-work conflict	None	Calson, Kacmar and Williams (2000)

3.7. Research Procedures

3.7.1. Study 1.

Initially, an attempt was made to recruit participants for the UK and Jamaican samples online via the research survey platform, Qualtrics. For the Jamaican sample, emails were sent to the rank and file officers within targeted divisions using the police organisation's internal communication network. The emails included an introduction to the study and an invitation to participate with an accompanying link to the survey. Unfortunately, this online data collection approach was not successful with the Jamaican sample as few persons (38) participated after four months of the survey's launch and the sending of several reminders. After reassessing the conditions for data collection, it was decided that a face-to-face approach would be more appropriate in collecting data from this population. Subsequently, the researcher with the assistance of a well-placed contact in the police organisation was able to recruit police officers in groups. That is, police officers who at the time of data collection were in training courses at the police training college. The researcher was put in contact with the training coordinators who then introduced her to the participants at the beginning of classes. The researcher provided an introduction to her research, its purpose and responded to any questions from participants. Members of the class who agreed to participate, read and signed the consent forms, after which the questionnaires were completed and returned directly to the researcher.

The UK sample was more successfully recruited using the online platform. Approximately 50% of the sample was recruited independently through sending emails to police departments in England and Wales. The researcher first made contact with individuals in police departments through available email addresses on their websites. The email was forwarded to personnel in the appropriate departments (e.g., Occupational Health and Safety or Human Resources). Once it was agreed that the department would

facilitate the study, an email with the study information was delivered to a contact in the department who subsequently disseminated the email through the departments' internal communication system. The other half of the sample was recruited through a Qualtrics participant panel. Qualtrics offers a project management tool in which they obtain data from specific demographics. Information was provided to the Qualtrics team about the target demographic, the sample size required and length of the survey. The team then recruited panel members who fit the desired characteristics to complete the survey.

3.7.2. Study 3.

For Study 3, police officers were recruited from several geographical divisions and training courses occurring during the period of data collection. A contact in the police organisation initially communicated with the heads of the divisions. The contact introduced the researcher, the research purpose and asked the divisional leaders to facilitate the researcher on her visits to the divisions. The researcher subsequently contacted the divisional heads to confirm dates and times of visits. Divisional leaders facilitated the distribution of questionnaires to police officers who were present and available on the days that the researcher visited the divisional headquarters/police stations. Questionnaires were distributed in a group setting and completed and returned to the researcher.

For those participants in training courses, similar to Study 1, training coordinators were contacted, and they facilitated distribution of the questionnaires to police officers attending their classes.

3.7.3. Ethical considerations.

Ethical approval for this research was obtained from the School of Psychology at Cardiff University, and consent for conducting the research was obtained from the

Commissioner of the Jamaica Constabulary Force (JCF). For both quantitative studies, participants were given verbal (except for online participants) and written consent. They were provided with an instruction sheet which included the purpose of the research, what would be requested of them, and assurances of anonymity and confidentiality. They were also assured that the research was external to the police department and that their participation was voluntary and they were free to withdraw from the study at any time. Individuals who agreed to participate were required to sign and return consent forms (see Appendix B) before completing questionnaires. After completing the survey, participants were provided with a debriefing statement along with contact details for the research team in the event that they had further queries or feedback. A copy of the debriefing statement is provided in Appendix C.

3.8. Analytic Strategy

All quantitative data was analysed using the Statistical Package for Social Sciences (SPSS) computer program, Version 20.0. Several statistical procedures were performed on the quantitative data namely: descriptive analysis, exploratory factor analysis, correlation analysis, regressions, moderation analysis, and mediation analysis. An overview of these procedures and rationale is provided in the following sections.

3.8.1. Descriptive data analysis.

Descriptive analyses were used to outline the characteristics of the samples whether demonstrated with frequency tables or means and standard deviations. Descriptive analyses were also performed in examining the first research question – *what are the job-specific stressors affecting police officers?* - using frequency tables, means and standard deviations to rank the most troublesome stressors reported by the participants.

Chi-square tests, between subjects t-tests, and one-way between-subjects analysis of variance (ANOVA) were used to examine relationships and differences between groups when data was categorical.

3.8.2. Correlation analyses.

Pearson Product Moment tests were used to examine relationships among the study variables to be included in the proposed research model. Pearson r is designed for interval level (continuous) variables and assumes that the relationship between variables is linear. It can also be used if one variable is dichotomous and the other is continuous (Pallant, 2013). Diagnostics of multicollinearity were observed to see whether the explanatory variables were strongly related to each other prior to multivariate analysis.

3.8.3. Data reduction (Factor analysis).

Factor analysis is a technique used to reduce or summarise a larger data set to a smaller set of factors or components. The term "factor analysis" in the literature refers to a variety of different, but related techniques. However, principal component analysis (PCA) is perhaps the most commonly used extraction method (Pallant, 2013). The technique essentially looks for the variability among observed variables that have common characteristics and identifies to what extent there are inter-correlations among them (Pallant, 2013). For the analysis conducted in this thesis, PCA was the approach used to reduce the number of items, for instance, in meeting the requirements for multivariate analysis as recommended by Tabachnick and Fidell (2013). This method allowed for identifying the extent to which there was measurement overlap and created a more parsimonious model of variables for these subsequent analyses.

Once variables are extracted, the next step is to try and interpret them and to do this factors are "rotated". Two main approaches to rotation are orthogonal which assumes that

underlying constructs are unrelated (e.g., varimax) and oblique which assumes that factors are correlated (e.g., direct oblimin) (Pallant, 2013). Though orthogonal methods tend to be easier to interpret, both methods tend to result in very similar solutions. However, the oblique approach is recommended because the assumption of factors being unrelated is hardly ever realistic (Tabachnik & Fidel, 2013). PCA with Oblique (i.e., Direct Oblimin) rotation was used in the analyses conducted in this thesis. Kaiser's criterion (or eigenvalue) and scree test were used to determine the number of factors to retain.

PCA was performed to derive clusters of associated measures of work characteristics, coping styles, core self-evaluations, and psychological well-being outcomes. Scores obtained from these analyses were then used in subsequent multivariate analyses. A similar approach of combining variables has been taken in previous research (Calnan et al., 2004; Capasso et al., 2016a, 2016b; Galvin & Smith, 2015; Smith et al., 2009; Williams, 2014; Williams & Smith, 2016). For instance, Smith and colleagues (2009) in assessing multiple constructs in a well-being model used a "combined effects" approach that combined multiple dimensions of work including components of DCS, ERI and HSE models into measures of job characteristics (e.g., demand, role, control) and job appraisals (e.g., reward, satisfaction with supervisor, satisfaction with peers). Broad outcome measures were also created, namely negative mental wellbeing (e.g., negative mood, depression, anxiety); physical health (e.g., physical health symptoms, fatigue); and positive mental health (e.g., positive mood, happiness). The authors surmise that taking this approach not only reduces the number of variables into manageable clusters but also reduces the possibility of chance effects in subsequent analysis. Findings from their study also suggest that combined factors scores were the best predictors of outcomes.

For practical reasons, this broad approach was used to reduce the number of items for subsequent multivariate analyses due to the number of comparisons that would be

required. Though taking this approach may mean that there are limitations in examining possible distinctions within factors, assessing combined scores provides initial evidence of existing relationships which can later be subjected to closer inspection. The value of this approach is best expressed by Smith and colleagues (2009): "what it does initially is to show whether or not problems are present (it acts as a piece of litmus paper, warning light or flag system) and then allow a fine-grain dissection of them" (p.62).

3.8.4. Hierarchical regressions.

Regression analyses are used to test multivariate effects of several predictor variables on one continuous predictor variable. In hierarchical regressions, sets of variables are entered in steps (or blocks) with each subsequently entered set of variable assessed based on what it uniquely adds to the prediction of the dependent variable. Along with determining the relative contribution of each block of variables, the independent contributions of each variable is observed in the final model (Pallant, 2013). Logistic regression serves a similar purpose but is used to predict categorical outcome variables. These approaches suited the analytic objectives of the current research and were deemed as appropriate in examining the relative predictive power of sets of explanatory variables, independent contributions in the final model, and interaction effects.

Figure 3.1 demonstrates the direct effects and order in which sets of variables were entered based on the relative importance of each for the purpose of the research. It is noted that this model was applied to data collected in Study 3, the main component of the thesis.
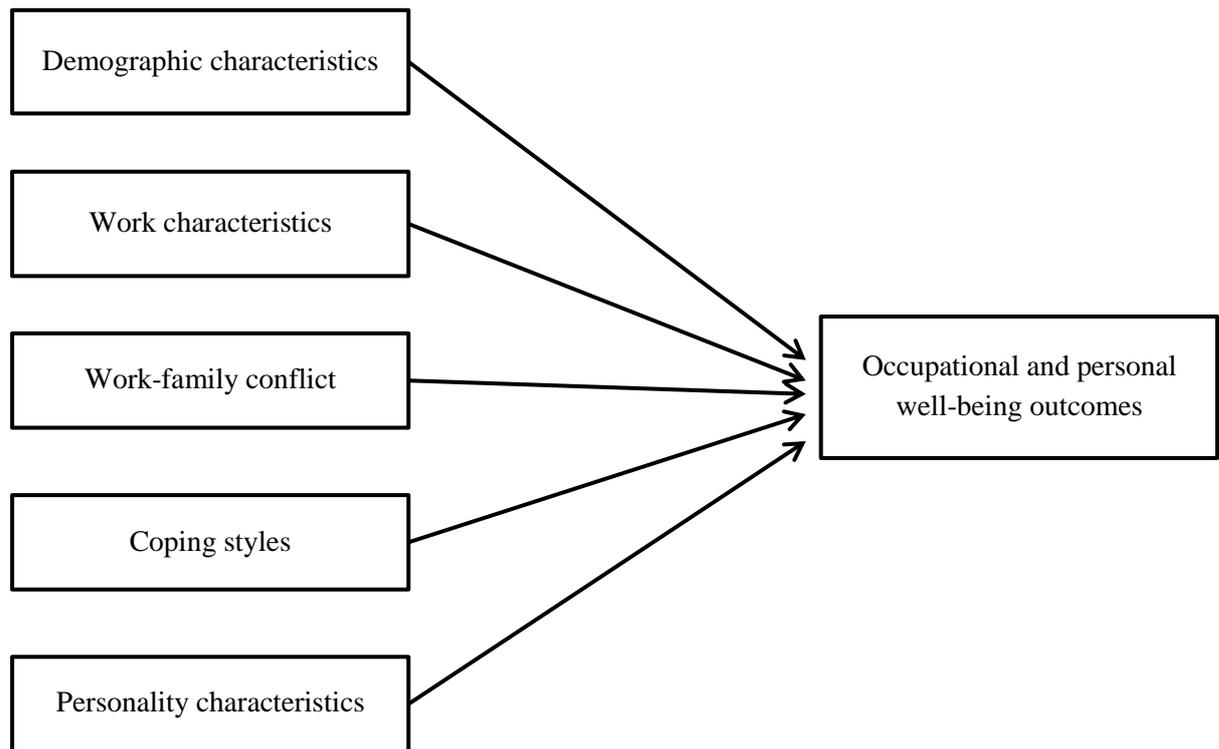
Figure 3.1. Research Model Showing Direct Relationships and Sequence of Predictor Variables.

3.8.6. Moderation analysis.

A moderation or an interaction effect occurs when the relationship between two variables changes as a result of a third variable. That is, the interaction effect implies that the magnitude and direction of an independent variable on a dependent variable depend on the level of a moderator variable (Field, 2013). As discussed in Chapter 2, along with direct effects, the DRIVE model proposed by Mark and Smith (2008) suggests that work resources and individual differences, such as coping styles can moderate the relationship between work demands and outcomes. The authors suggest that work resources such as social support and positive coping styles should have a "buffering effect" on work demands while negative coping may act to exacerbate the effects of work demands. However, evidence for these proposed moderating effects has been varied and may be

dependent on the types of measures employed or differences in sample characteristics (Mark & Smith, 2008).

Using data obtained from Study 3, hierarchical regression analyses were also performed to test the moderation effects of positive work variables and coping styles. Hierarchical regressions are commonly used to test interaction effects due to its feature of entering blocks of variables. Moderation effects are often tested by entering interaction terms (e.g., demands x support) in a block following previously entered independent variables. A simple model of the proposed interaction effects is illustrated in Figure 3.2.
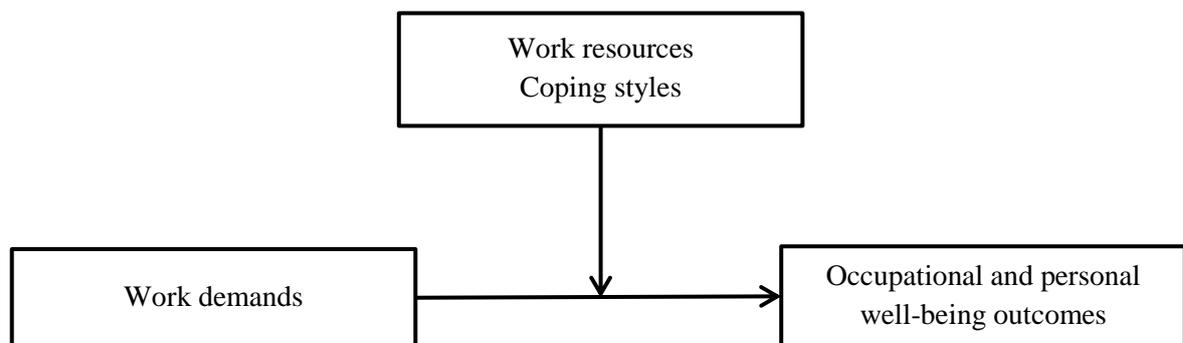
Figure 3.2. Simple Moderation Model.

3.8.7. Mediation analysis.

A mediation effect is said to occur when the relationship between an independent variable and dependent variable can be explained by a third/mediator variable. That is, when there is an indirect pathway between a predictor and an outcome via a third variable (Field, 2013). The original DRIVE model provides a cognitive-relational framework which takes into account the intermediate role of cognitive job appraisals such as perceived job stress. Mark and Smith (2008) in testing their model and indeed other researchers (e.g., Allisey et al., 2014) have provided support for perceived stress mediating the relationship between work conditions and occupational and personal outcomes. As discussed in Chapter 2, although not included as a potential mediator in the original

DRIVE model, job satisfaction has also been shown to act as an indirect pathway between work conditions and well-being outcomes (Allisey et al. 2014; Violant & Aron, 1993). For the research described in this thesis, the mediation role of both perceived job stress and job satisfaction are tested.

Commonly, mediation models have been verified using a series of regressions to test four different conditions (Baron & Kenny, 1986). Baron and Kenny suggest performing three regressions to determine the mediation effect: (1) the predictor must significantly predict the outcome variable; (2) the predictor must significantly predict the mediator; and (3) the mediator must significantly predict the outcome variable. A mediation effect occurs when the predictor predicts the outcome variable less strongly when the mediator is included in the regression analysis. The significance of the effect is evaluated using the Sobel test.

Although this is a widely used method, it has come under some criticisms including but not limited to the emphasis placed on p-value "significance" when evaluating the relationships between predictor and outcome (Field, 2013; Hayes, 2009, 2013). In light of this, alternate methods have been proposed which, for example, place less emphasis on the assumption of a significant association between the predictor and outcome as a precondition. For instance, Hayes (2013) proposed estimating the indirect effect and its confidence interval. Hayes later developed a macro for SPSS called PROCESS to test mediation effects by generating bias-bootstrap confidence intervals for indirect effects. This tool was deemed appropriate for use in this thesis to test proposed mediation effects. A simple model of the proposed indirect effects is described in Figure 3.3.
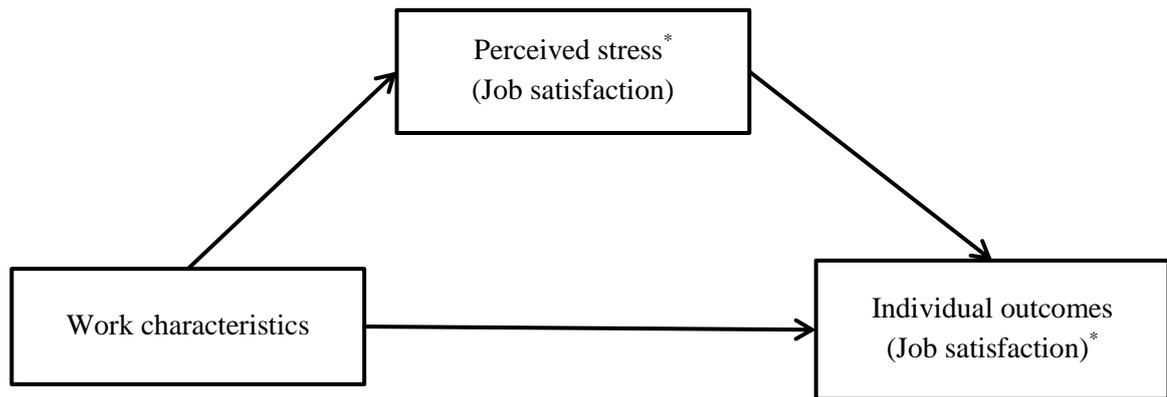
Figure 3.3. Simple Mediation Model.
Note. [*]perceived stress is also tested as a mediator between work conditions and job satisfaction

3.9. Study 2: The Qualitative Study

The purpose of including a qualitative study was to gain a more in-depth understanding of the work experience of police officers and complement and expand on the findings of the quantitative studies.

3.9.1. Sample selection.

Study 2 consisted of a sample of individuals who worked in support service units in the police organisation. These individuals are most likely to come in contact with police officers in offering various forms of support. They are the main points of contact within the police organisation for police officers who may be experiencing difficulties on the job or in their lives and would be able to provide valuable information to give a more rounded picture of the police experience. Interviews were conducted with a small sample ($N = 6$) of these individuals, purposively selected from the following units: Human Resources, Chaplaincy, Medical Services Branch, and the Police Federation.

3.9.2. Qualitative interview schedule.

A semi-structured interview was used to obtain the participants' views on the stress experience of the police officers they serve. In a semi-structured interview, the researcher uses a set of questions as a guide for topics to be covered during the interview but has the flexibility to follow-up topical trajectories with additional questions. Therefore the flow of the discussion is conversational and partly determined by the respondent which allows for a natural description of events. The interview guide used in this study was designed around 11 core questions that were used to prompt discussion about a number of topics including: the types of stressors facing policing officers, who is most affected by stress, how officers cope with stress, levels of job satisfaction among police officers, and how to approach enhancing the well-being of officers. A copy of the interview schedule is provided in Appendix D.

3.9.3. Procedures.

Participants were recruited using purposive sampling. The researcher's contact within the JCF liaised with potential participants and introduced the researcher and the purpose of her research. Participants were later contacted by the researcher and arrangements made with those who agreed to participate for the interviews to take place. Interviews were conducted at the participants' offices. The interviews were tape-recorded and lasted on average between 30-45 minutes. The recorded interviews were later transcribed by the researcher.

3.9.3.1. Ethical considerations.

Similar to the quantitative studies described earlier, all ethical gatekeeper channels were followed for this study. Consent was obtained from each participant before the start of the interviews. Before commencing the interviews participants were informed about the

purpose and rationale of the study as well as why they were selected to be interviewed. Participants were also informed that participation was voluntary and they could withdraw at any time or refuse to answer any questions with which they were uncomfortable. Participants were informed that it was necessary to tape record the interviews to ensure accurate information was documented and were given the opportunity to consent or refuse to the recording of interviews.

3.9.4. Analytic strategy: rationale for using thematic analysis.

Thematic analysis is one of the most widely used methods of analysis in qualitative research. It is a method used to analyse data in detail through identifying and describing themes within the data (Braun & Clarke, 2006). However, according to the authors, it is not classified as a specific method of qualitative analysis like other methods, such as grounded theory and narrative analysis. Thematic analysis should be considered "a foundation method for qualitative analysis" (Braun & Clarke, p. 78) and its approach tend to be more accessible than others. Further, Braun and Clarke contend that thematic analysis can be applied across a range of theoretical and epistemological approaches and this flexibility allows for comprehensive yet unconstrained analysis of data.

A theme represents something that is salient within the data set and is derived from patterned or meaningful responses (Braun & Clarke, 2006). Themes can be inductive or deductive. Inductive themes are derived and driven by the data itself without trying to fit into the researcher's pre-existing analytic presumptions. That is, it is data driven. Deductive themes, on the other hand, are analysis driven and rely heavily on the researcher's theoretical interest in the topic (Braun & Clarke, 2006). The authors explain that a theme taken from the data set is guided by the researcher's judgment and is based on whether it qualitatively captures something important rather than quantifiable measures of the prevalence of responses.

Thematic analysis was considered appropriate for this study because of its flexibility and accessibility. The method allowed the researcher to organise the data into meaningful patterns of responses reflected across the data set using more of a deductive approach.

3.9.4.1. Thematic analysis procedure.

Braun and Clarke (2006) suggest a six-phase process for thematic analysis, which was followed in this study. The six phases are summarised as presented in Table 3.2. Each interview was analysed and a coding framework devised. Transcripts were initially read to gain some familiarity with the data then repeatedly to solidify themes. Transcripts were later shared with two other researchers who are experienced in qualitative methods for validation of the themes.

Table 3.2. *Phases of Thematic Analysis*

Phase	Description of the Process
1. Familiarising yourself with your data:	Transcribing data (if necessary), reading and re-reading the data, noting initial ideas.
2. Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing the themes:	Checking if the themes work in relation to coded extracts (level 1) and the entire data set (level 2), generating a thematic 'map' of the analysis.
5. Defining and naming the themes:	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.
6. Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, the final analysis of selected extracts, relating back to the analysis of the research question and literature, producing scholarly report analysis.

Note. Braun and Clarke (2006, p. 87).

3.10. Chapter Summary

This chapter presented a discussion of relevant considerations that informed the methods applied in the three main studies described in this thesis. Specifically, matters related to research design, sample selection, measurement of study variables, research procedures and analytic strategy were addressed. The following chapter explores data that addresses the first research objective of the thesis.

Chapter 4

Job-Specific Stressors in Police Work

4.1. Overview of Chapter

This chapter primarily sought to address the lack of published research concerning sources of job stress among Jamaican police officers. While it is important to relate stress to occupational and personal outcomes, it was first necessary to clarify what specific aspects of policing are problematic. Therefore, using a "traditional model" of police stress, the first objective of this thesis was to identify and collate job stressors that are most commonly experienced and perceived as most stressful among Jamaican officers.

For a comprehensive analysis of the sources of job stressors in police work, data from three studies are presented in this chapter. First, before examining research from the Jamaican context, findings are presented from a recent study that reviews the evidence on job stressors affecting police officers in a larger industrialised nation – the UK. This study provides contemporary and comparable data on police officers from a developed country and allows for parallel cross-study evaluations. This is followed by the presentation of results from a pilot study on Jamaican officers. An advantage of the research described here is that the same job stressor inventory is used across both police contexts. Therefore, ratings can be evaluated based on the same stressors, a comparison which is not always possible from the literature, given the variability in measures. Last, data from a larger study on the Jamaican police is presented that clarifies perceived sources of stress in this group and perceptual variations across demographic and occupational variables. The chapter ends with a general discussion of findings.

The specific aims of the research described in this chapter were to: (1) identify the current stressors affecting police officers in the UK and examine whether the pattern of

stressors are generally consistent with findings from earlier research; (2) identify the primary sources of stress prevalent among Jamaican police officers; and (3) determine whether findings on sources of stress among Jamaican police officers are generally consistent with the current UK findings and that of the extant literature.

4.2. Job Stressors Affecting UK Police Officers: An Up-to-Date Study

4.2.1. Introduction and rationale.

A large portion of police research stems from the USA and the UK, and most were published in the 1990s. With considerable changes in the policing context in ensuing years, earlier research findings may not be applicable in a contemporary policing context. For instance, Collins and Gibbs (2003) asserts that in the decade before their study, various measures were introduced to manage police stress including employee assistance programmes, improved recruitment selection, better performance recognition, equal opportunities and sexual equality training. These measures may have helped in mitigating stress from organisational factors. At the same time increases in violence and demands for accountability may have also increased the frequency and level of stress associated with operational duties (Collins & Gibbs, 2003). Because there has been little research over the last decade, it was considered pertinent to first have a fresh look at the stressors facing police officers in a developed nation. With much of the research on police stress emanating from the UK, they were determined to be an ideal population to include in this research. UK police officers were also convenient to access giving the setting in which the current research project occurred.

This first study serves two main purposes. First, the study provides current data on stressors affecting UK police officers which allows us to evaluate whether there are changes in the stress experience relative to findings from earlier studies. Secondly, the

study allows for concurrent cross-study observations with the Jamaican study, where the same measures are used and with data collected over the same period.

4.2.2. Method.

4.2.2.1. Participants.

Table 4.1 summarises the demographic composition of the UK sample. Police officers were selected from among the non-gazetted ranks, that is, personnel from the rank of constable to inspector. These are the active duty officers who are presumed to have varying degrees of exposure to the risk factors being investigated. The sample consisted of 114 police officers, with 64% males. The majority of the sample were constables (62%), 21% sergeants, and 17% inspectors. Mean time in the police service was 15 years (SD = 8.51) with a range from 1 to 37 years. The mean age of the sample was 40 years (SD = 8.78), ranging between 22 and 61 years old. Sixty-three percent of participants had some post-secondary education. The majority of these officers were married, 19% reported being in a relationship, 13% were single, and 5% reported being either separated, divorced or widowed.

Table 4.1. *Demographic Description of the UK Sample*

		n	*%*
Gender *(N = 111)*	Male	71	64
	Female	40	36
Age *(N = 114)*	≤ 30	20	18
	31-37	29	25
	38+	65	57
Education *(N =111)*	Secondary	41	37
	Undergraduate	37	33
	Graduate	33	30
Relationship status *(N = 111)*	Single	15	13
	In a relationship	21	19
	Married	70	63
	Separated/divorced/widowed	5	5
Rank *(N = 111)*	Constable	69	62
	Sergeant	23	21
	Inspector	19	17
Years of service *(N = 114)*	≤ 7	23	20
	8 -14	37	33
	15+	54	47

4.2.2.2. Materials.

A detailed description of the job stressor measure was provided in Chapter 3. To summarise, the Police Stress Survey asked officers to indicate both the frequency with which they experienced each stressor on a scale of 0 (*never*) to 3 (*very frequently*) and how stressful the event was if they had experienced it, which was rated on a scale 1 (*not at all stressful*) to 10 (*very stressful*). The measure consisted of 55 job events that police officers are likely to encounter on their job.

4.2.2.3. Procedure.

The procedures followed to collect data from this population were presented in detail in Chapter 3.

4.2.2.4. Analytic approach.

As previously outlined in Chapter 3, job stressors for the purpose of this study were categorised into organisational and operational stressors. Organisational stressors were considered stressors generated from within the police organisation and related agents with which the police interact, such as the media and judiciary system. Operational stressors are those primarily encountered while working on the frontline.

Analyses were descriptive in nature. First, mean and standard deviation scores based on frequency rates and intensity levels for each job stressor were calculated. The stressors were then ranked to reflect the most frequently experienced and most stressful to least frequently experienced and least stressful. As mentioned earlier, the intensity of stress associated with a stressor was measured by asking participants to rate the events on a 10 point Likert scale. However, to provide more clarity on how ratings were distributed, the rating scale was further grouped and analysed according to three categories. Ratings from 1-3 were considered "not very stressful", 4-6 was "moderately stressful", and 7-10 was "very stressful". A similar procedure was followed to group the rating scale for frequency of exposure. The four point scale was reduced to three, such that the option of rating an item as 'frequently experienced' and 'very frequently experienced' were grouped together for ease of analysis and presentation.

4.2.3. Results.

4.2.3.1. Frequency of exposure.

Table 4.2 shows frequencies, means, standard deviations, and ranking of stressors based on the frequency of exposure. Mean scores ranged from a high of 2.19 (Excessive paperwork) to a low of .21 (shooting/killing someone in the line of duty), with standard deviations scores indicating much variation in responses across ratings. Twenty-nine stressors were reported as "frequently" experienced by 50% or more of the participants, with 24 of these being organisational stressors. In fact, of the top 10 ranked stressors, seven were organisational. Distorted/negative press accounts of the police (M = 2.18, SD = .76); insufficient personnel to handle cases (M = 2.09, SD = .84); bureaucracy involved in carrying out tasks (M = 2.04, SD = .86); reorganisation and transformation within the organisation (M = 1.95, SD = .76); not enough time to spend with family (M = 1.94, SD = .88) and ineffectiveness of the judicial system (M = 1.94, SD = .83) were included in the top 10 most frequently experienced stressors.

Making critical on the spot decisions (M = 2.18, SD = 2.18, SD = .85); job conflict (M = 2.07, SD = .80); and verbal aggression from the public (M = 2.02, SD = .86) were three operational stressors that rounded out the 10 most frequently experienced job events. However, more operational type duties, in general, were ranked among the least experienced stressors. These included pursuit of an armed suspect (M = .65, SD = .79); being involved in high speed chases (M = .73, SD = .75) and seeing a fellow officer injured/killed in the line of duty (M = .80, SD = .75). Less than 20% of participants indicated that these were frequently experienced. Sexual advances from another officer (M = .35, SD = .74); internal investigations (M = .63, SD = .66); and difficulty getting along with supervisor (M = 1.00, SD = .84) were the least experienced organisational stressors

with less than 10% of participants reporting that they were frequently exposed to these situations.

Table 4.2. *Frequencies, Means, Standard Deviations and Rankings of Exposure to Job Stressors for UK Police*

Item No.	Organisational Stressors	Never	Occasionally	Frequently	Mean (SD)	Rank
			%			
1	Excessive paperwork	3.5	17.7	78.8	2.19 (.85)	1
2	Distorted or negative press accounts of the police	.9	18.6	80.5	2.18 (.76)	3
3	Insufficient personnel to handle assignments	5.4	14.4	80.2	2.09 (.84)	4
4	Bureaucracy in carrying out the essentials of the job	3.5	24.6	71.9	2.04 (.86)	6
5	Reorganisation/transformation within the organisation	.9	28.8	70.3	1.95 (.76)	8
6	Not enough time to spend with family and friends	4.4	28.1	67.5	1.94 (.88)	9
7	Ineffectiveness of the judicial system	2.7	29.5	67.9	1.94 (.83)	9
8	Neg. attitude towards the police force from the public	.9	32.7	66.4	1.94 (.81)	9
9	Lack of recognition from the police organisation	5.3	27.4	67.3	1.93 (.89)	10
10	Pressure to produce results/solve cases	3.6	23.4	73.0	1.91 (.77)	11
11	Overtime demands/working long hours	1.8	32.7	65.5	1.88 (.80)	12
12	Poor communication within the organisation	5.3	31.6	62.3	1.88 (.91)	13
13	Seeing criminals go free	5.4	28.6	66.1	1.87 (.87)	13
14	Performing tasks not related to your job description	4.4	37.7	57.9	1.79 (.88)	14
15	Assignment of increased responsibilities	3.6	34.2	62.2	1.75 (.77)	15
16	Feeling not fairly compensated for the job you do	11.8	30.9	57.3	1.75 (1.02)	15
17	Lack of participation in policy-making decisions	8.9	28.6	62.5	1.74 (.89)	16
18	Given too many cases to handle in a single day	8.0	38.0	54.0	1.73 (.95)	17
19	Changing shift schedule	.9	43.0	56.1	1.70 (.77)	18
20	Unequal sharing of responsibilities	7.3	42.7	50.0	1.59 (.85)	21
21	Inadequate or poor quality equipment	10.9	39.1	50.0	1.55 (.88)	22
22	Poor or uncomfortable working environment	14.2	38.9	46.9	1.55 (.99)	22
23	Inadequate opportunities for advancement	21.8	30.9	47.3	1.46 (1.05)	25
24	Inadequate support from supervisor	16.1	50.9	33.0	1.31 (.91)	26
25	Assignment to new or unfamiliar duties	4.5	68.8	26.8	1.30 (.68)	27
26	Having to give evidence in court	10.5	58.4	31.0	1.29 (.78)	28

Table 4.2. *Frequencies, Means, Standard Deviations and Rankings of Exposure to Job Stressors for UK Police (Continued)*

		Categories				
Organisational Stressors		**Never**	**Occasionally**	**Frequently**	**Mean (SD)**	**Rank**
Item No.			**%**			
27	Inadequate training for the job you are required to do	13.6	55.5	30.9	1.26 (.81)	30
28	Inadequate support from fellow officers	17.9	54.5	27.7	1.21 (.86)	32
29	Lack of understanding from family/friends about your work	32.1	35.7	32.1	1.11 (.98)	34
30	Conflict with fellow officers	16.8	65.5	17.7	1.04 (.67)	36
31	Difficulty getting along with supervisor	26.4	55.5	18.2	1.00 (.84)	38
32	Internal investigations against yourself	45.6	46.5	7.9	.63 (.66)	42
33	Sexual advancement toward you by another officer	77.0	15.9	7.1	.35 (.74)	43
Operational stressors						
34	Making critical on-the-spot decisions	5.4	12.5	82.1	2.18 (.85)	2
35	Job conflict (by-the-book vs. by-the-situation)	1.8	22.7	75.5	2.07 (.80)	5
36	Verbal aggression/insults from the public	3.5	25.4	71.1	2.02 (.86)	7
37	Responding to a "crime-in-progress" call	10.7	31.3	58.0	1.73 (.97)	17
38	Attendance to incidence of domestic violence	15.8	26.3	57.9	1.70 (1.05)	18
39	Policing high crime communities	9.0	36.0	55.0	1.63 (.87)	19
40	Handling a mentally/emotionally disturbed person	9.0	37.8	53.2	1.61 (.88)	20
41	Making an arrest of a violent suspect	12.4	33.6	54.0	1.54 (.87)	23
42	Physical aggression from the public	11.5	40.7	47.8	1.54 (.92)	23
43	Interrogation session with a suspect	19.6	27.7	52.7	1.53 (1.02)	24
44	Exposure to situations involving children	12.5	53.6	33.9	1.27 (.75)	29
45	Participation in a narcotics raid	15.2	53.6	31.3	1.26 (.84)	30
46	Threat of being injured/killed on the job	13.2	56.1	30.7	1.23 (.74)	31
47	Delivering bad news or death message to someone	11.6	67.0	21.4	1.14 (.67)	33
48	Having to handle large crowds or demonstrations	23.4	49.5	27.0	1.10 (.83)	35
49	Attending to the scene of a serious/fatal accident	20.5	54.5	25.0	1.10 (.78)	35
50	Dealing with gangs/gang related activities	33.0	37.5	29.5	1.02 (.89)	37
51	Working on road traffic duty	31.5	45.9	22.5	1.00 (.91)	38

Table 4.2. *Frequencies, Means, Standard Deviations and Rankings of Exposure to Job Stressors for UK Police (Continued)*

	Operational Stressors	Categories			Mean (SD)	Rank
Item No.		Never	Occasionally	Frequently		
		%				
52	Seeing a fellow officer injured/killed in the line of duty	35.4	54.0	10.6	.80 (.75)	39
53	Being involved in high-speed chases	42.9	42.9	14.3	.73 (.75)	40
54	Pursuit of an armed suspect	50.0	39.3	10.7	.65 (.79)	41
55	Shooting/killing someone in the line of duty	87.4	6.3	6.3	.21 (.61)	44

4.2.3.2. Intensity of stress.

Table 4.3 shows frequencies, means, standard deviations and ranking based on the level of stress associated with each job event. Overall, mean scores ranged from a high of 7.05 (insufficient personnel to handle assignments) to a low of 3.46 (working on road traffic duty). Over 50% of police officers found 17 out the 55 items to be "very stressful", with 12 of these being organisational stressors. Organisational stressors comprised eight of the top 10 ranked most stressful job events. Mean scores indicated that not enough time to spend with family and friends (M = 6.87, SD = 2.47); given too many cases to handle in a day (M = 6.86, SD = 2.57); reorganisation and transformation within the organisation (M = 6.68, SD = 2.74); bureaucracy (M = 6.63, SD = 2.63); excessive paperwork (M = 6.61, SD = 2.76); pressure to produce results (M = 6.50, SD = 2.64); and overtime demands (M = 6.35, SD = 2.50) were among the most stressful job events.

Exposure to situations involving children (M = 6.73, SD = 2.73) and job conflict (M = 6.30, SD = 2.65) were the only two operational stressors ranked in the top ten. Similar to frequency of exposure, on a whole, more operational stressors were ranked among the least stressful events. These included working work traffic duty (M = 3.46, SD = 2.51); participation in narcotics raid (M = 4.01, SD = 2.52); interrogation session with a suspect (M = 4.21, SD = 2.67) with less than 20% of participants reporting these events to be "very stressful". Less than 20% of the sample also rated the organisational stressors, sexual advances from another officer (M = 2.77, SD = 2.86) and lack of understanding from family and friends (M = 4.92, SD = 3.31) as very stressful.

Table 4.3. *Frequencies, Means, Standard Deviations and Rankings of Level of Stressfulness Associated With Job Stressors for UK Police*

Item No.	Organisational Stressors	Not V. Stressful	Mod. Stressful	Very stressful	Mean (SD)	Rank
		Categories				
		%				
1	Insufficient personnel to handle assignments	12.7	20.9	66.4	7.05 (2.60)	1
2	Not enough time to spend with family/friends	11.6	25.9	62.5	6.87 (2.47)	2
3	Given too many cases to handle in a single day	12.6	23.4	64.0	6.86 (2.57)	3
4	Reorganisation/transformation within the organisation	16.1	28.6	55.4	6.68 (2.74)	5
5	Bureaucracy in carrying out the essentials of the job	16.8	20.4	62.8	6.63 (2.63)	6
6	Excessive paperwork	17.7	21.2	61.2	6.61 (2.76)	7
7	Pressure to produce results/solve cases	18.2	22.7	59.1	6.50 (2.64)	8
8	Overtime demands/working long hours	17.7	31.9	50.4	6.35 (2.50)	9
9	Ineffectiveness of the judicial system	21.4	25.0	53.6	6.28 (2.71)	11
10	Unequal sharing of responsibilities	17.0	30.4	52.7	6.26 (2.63)	12
11	Seeing criminals go free	18.9	27.9	53.2	6.26 (2.79)	12
12	Distorted or negative press accounts of the police	20.5	28.6	50.9	6.25 (2.79)	13
13	Feeling that you are not compensated for the job you do	21.1	29.4	49.5	6.14 (2.90)	16
14	Changing shift schedule	21.4	31.3	47.3	5.95 (2.55)	19
15	Poor communication within the organisation	25.0	29.5	45.5	5.94 (2.81)	20
16	Inadequate support from fellow officers	21.6	31.5	46.8	5.88 (2.73)	21
17	Inadequate or poor quality equipment	25.0	27.8	47.2	5.88 (2.84)	21
18	Lack of recognition from the police organisation	29.5	25.9	44.6	5.79 (2.94)	22
19	Inadequate training for the job you are required to do	24.5	35.5	40.0	5.71 (2.76)	25
20	Neg. attitude towards the police force from the public	25.9	31.3	42.9	5.71 (2.85)	25
21	Assignment of increased responsibilities	25.0	28.6	46.4	5.71 (2.66)	25
22	Performing tasks not related to your job description	27.7	28.6	43.8	5.70 (2.86)	26
23	Inadequate support from supervisor	29.5	25.0	45.5	5.66 (2.89)	27
24	Assignment to new or unfamiliar duties	27.0	28.8	44.1	5.63 (2.66)	28
25	Internal investigations against yourself	36.7	17.4	45.9	5.61 (3.75)	29
26	Difficulty getting along with supervisor	32.1	24.8	43.1	5.39 (3.04)	33

Table 4.3. *Frequencies, Means, Standard Deviations and Rankings of Level of Stressfulness Associated With Job Stressors for UK Police (Continued)*

Item No.	Organisational Stressors	Not V. Stressful	Mod. Stressful	Very stressful	Mean (SD)	Rank
			%			
27	Lack of participation in policy-making decisions	34.2	27.9	37.8	5.32 (2.72)	34
28	Conflict with fellow officers	28.4	38.5	33.0	5.32 (2.77)	34
29	Inadequate opportunities for advancement	36.7	21.1	42.2	5.21 (3.12)	36
30	Having to give evidence in court	32.4	32.4	35.1	5.18 (2.74)	37
31	Poor or uncomfortable working environment	38.7	24.3	36.9	5.06 (2.91)	39
32	Lack of understanding from family/friends about your work	43.0	17.8	39.3	4.92 (3.31)	41
33	Sexual advancement toward you by another officer	72.5	12.7	14.7	2.77 (2.86)	49
	Operational stressors					
34	Exposure to situations involving children	15.0	28.3	56.6	6.73 (2.73)	4
35	Job conflict (by-the-book vs. by-the-situation)	16.2	33.3	50.5	6.30 (2.65)	10
36	Seeing a fellow officer injured/killed in the line of duty	24.1	17.6	58.3	6.24 (3.26)	14
37	Attending to the scene of a serious/fatal accident	23.6	320.9	55.5	6.20 (2.93)	15
38	Delivering bad news or death message to someone	20.7	28.8	50.5	6.10 (2.86)	17
39	Making critical on-the-spot decisions	21.4	29.5	49.1	6.00 (2.66	18
40	Physical aggression from the public	27.0	27.9	45.0	5.76 (2.86)	23
41	Threat of being injured/killed on the job	24.8	31.0	44.2	5.74 (2.80)	24
42	Making an arrest of a violent suspect	25.2	33.3	41.4	5.60 (2.67)	30
43	Having to handle large crowds or demonstrations	25.2	31.8	43.0	5.50 (2.79)	31
44	Handling a mentally/emotionally disturbed person	31.0	29.2	39.8	5.47 (2.79)	32
45	Policing high crime communities	26.8	37.5	35.7	5.30 (2.56)	35
46	Verbal aggression/insults from the public	33.0	29.5	37.5	5.21 (2.81)	36
47	Attendance to incidence of domestic violence	27.9	38.7	33.3	5.17 (2.59)	38
48	Responding to a "crime-in-progress" call	30.0	35.5	34.5	5.05 (2.60)	40
49	Dealing with gangs/gang related activities	36.9	30.1	33.0	4.79 (2.82)	42
50	Pursuit of an armed suspect	42.2	22.5	35.3	4.76 (3.37)	43

Table 4.3. *Frequencies, Means, Standard Deviations and Rankings of Level of Stressfulness Associated With Job Stressors for UK Police (Continued)*

Item No.	Operational Stressors	Categories			Mean (SD)	Rank
		Not V. Stressful	Mod. Stressful	Very stressful		
		%				
51	Being involved in high-speed chases	43.9	27.1	29.0	4.34 (2.84)	44
52	Shooting/killing someone in the line of duty	57.4	7.9	34.7	4.28 (3.94)	45
53	Interrogation session with a suspect	47.7	27.1	25.2	4.21 (2.67)	46
54	Participation in a narcotics raid	49.1	31.5	19.4	4.01 (2.52)	47
55	Working on road traffic duty	58.6	27.9	13.5	3.46 (2.51)	48

4.2.4. Discussion.

The aim of this research was to provide contemporary evidence on how police officers from a large industrialised nation perceived work stress sources. To the best of the researcher's knowledge, the last study to document various sources of stressors among UK police was by Collins and Gibbs (2003). With over a decade since this research, current findings suggest that the factors affecting police officers in the UK remain centred on the structure and management practices within the police organisation. Organisational stressors that broadly reflect workload (e.g., excessive paperwork, insufficient persons to handle cases, overtime demands); organisational structure and changes (e.g., bureaucracy and reorganisation of the organisation); and time away from family ranked consistently as both most frequently experienced and most stressful. These findings are in accordance with prior UK-based studies (Biggam et al., 1997b; Brown & Campbell, 1990, 1994; Collins & Gibbs, 2003) and similar citations have been made in the broader literature (Abdollahi, 2002; Ayres & Flanagan, 1990; Kroes, 1976).

Kroes (1976) delineated two components of job overload. Quantitative overload is experienced when the officer simply has too much to do and qualitative overload occurs when expectations are placed on the officer which is beyond his/her ability to fulfil. It is not surprising that elements associated with work overload are consistently cited as sources of stress. An officer is required to perform many roles as part of his/her duties. Police officers, for example, understand that paperwork is a part of the job, but may become frustrated with having to prepare unnecessary, redundant, and obsolete forms and procedures, that may be the responsibility of their superiors or could otherwise be completed by clerical support (Ayres & Flanagan, 1990). Being bogged down by excessive paperwork takes away from performing substantive policing duties, which means officers may then need to work overtime to try and make up for these deficiencies (Kroes, 1976). A

constant feeling of having to play "catch up" can over time decrease officers' sense of accomplishment and result in lower morale (Ayres & Flanagan, 1990).

A bureaucratic work environment, with its rigid and centralised structures, means that officers, particularly at the lower level of the organisation, must go through several levels of administrators when, for example, making decisions necessary for carrying out their duties. Furthermore, those at the bottom of the pyramid have little control or involvement in decisions that often affect them and are not consulted on organisational change processes (Stinchcomb, 2004). Ultimately, they are the ones to be most affected by any transformation or reorganisation within the police organisation, and this feeling of powerlessness and lack of appreciation for their input can decrease their sense of professionalism and contribute to lowered self-esteem (Ayres & Flanagan, 1990).

As mentioned in Chapter 2, the imbalance between work and family life is frequently cited as a source of stress for police officers (Biggam et al., 1997b, Collins & Gibbs, 2003; Garcia et al., 2004; Suresh et al., 2013). Given the irregular work hours and demands of police work, it is not surprising that time away from family is ranked highly as a source of stress. Psychologically, it can be conflicting not being able to spend quality time with family because of persistent work constraints and this may lead to adverse problems in the officers' personal life (Toch, 2002).

Evidence from the extant UK literature suggests that ratings of operational stressors are less often experienced and reported as less stressful than organisation practices. Nonetheless, verbal and physical aggression from the public, dealing with a violent person, sudden death and dealing with domestic violence situations have been reported among the most frequently experienced operational stressors (Biggam et al., 1997b; Brown & Campbell, 1990, 1994; Collins & Gibbs, 2003), results that find some support in the

current research. It is noteworthy, however, that it is difficult to make fair comparisons across studies due to inherent inconsistencies in stress inventories, as there tend to be wider variations in items representing operational stressors across studies.

In the current research, while most operational stressors were not frequently experienced relative to organisational stressors or rated as highly stressful, there were some that appear to affect these police officers. Making critical on-the-spot decisions, job conflict, and verbal aggression from the public were the three most frequently experienced operational stressors, regularly experienced by more than two-thirds of participants. When intensity of stress was assessed, exposure to situations involving children, job conflict, and seeing a fellow officer injured/killed on duty were among the highly stressful operational events with over 50% of police officers rating them as very stressful. Violanti et al. (2016) cited similar operational stressors having a highly stressful effect on US-based officers, though for their study these were ranked above organisational stressors.

Research shows that police officers involved in the investigation of child cases such as sexual abuse and neglect are at high risk for vicarious trauma and adverse psychological health outcomes (Brown et al., 1999). Similarly, experiencing a fellow officer killed in the line of duty can be traumatising for police officers, as policing is a cohesive occupation and officers generally have close personal relationships with their co-workers (Violanti et al., 2016). Further, being on the frontline has its obvious challenges and making the "right" decision can be difficult in unpredictable and fast-paced situations. Violanti et al. (2016) suggest that the stress associated with decision making during critical incidents may be related to lack of support from the police department.

In sum, this study provides current evidence that further clarifies how police officers from the UK perceive specific sources of job stress. As has been asserted by other

researchers (e.g., Collins & Gibbs), resources and efforts to alleviate stress in this population would be best spent on modifying organisational policies and practices. Keeping these findings in mind, the research that follows replicates this study with Jamaican police officers using the same job stressor inventory. Findings are then discussed in relation to the current UK results and that of previous research.

4.3. Job Stressors Affecting Jamaican Police Officers: A Preliminary Study.

4.3.1. Introduction and rationale.

As indicated in previous chapters, the seemingly highly stressful nature of police work prompted investigations over four decades ago aimed at identifying the primary sources of stress in this occupation (Kroes et al., 1974). Much of this initial work focused on the inherent characteristics of police work, as stress was associated with the stereotypically aspects of the job including the potential for danger, violence or trauma. However, as more systematic empirical research emerged, findings suggested that it is not operational aspects but rather organisational issues such as management practices and administrative responsibilities that are more salient (see discussion in Chapter 2). A recent study on UK police officers described in the previous section of this chapter is supportive of these findings.

However, it is unclear whether these findings can be extrapolated to the Jamaican context as local conditions such as the high incidence of gun crimes, escalating rate of crime and violence, and poor socio-economic conditions may result in perceptual differences in stress experiences. Given these circumstances, it might be expected that rankings of job stressors may vary with possibly higher ratings given to operational stressors. For instance, there is some indication from studies in the US, where gun laws are more liberal compared to countries such as the UK, that police officers rank crime-related stressors (e.g., seeing fellow officer killed, physical attacks, use of force) as highly stressful compared to organisational stressors (e.g., Garcia et al, 2004; Spielberg et al., 1981; Violanti & Aron, 1994). Given the lack of empirical research investigating police stress in Jamaica, the present study offers a first step towards filling this gap and constitutes a preliminary exploration of job stressors in this population.

4.3.2. Methods.

4.3.2.1. Participants.

The Jamaican sample consisted of 130 police officers. Table 4.4 summarises the demographic characteristics of the sample. The majority were male (63%). Forty-nine percent were constables, 19% corporals, 30% sergeants and 2% inspectors. The mean time in the police force was eight years (SD = 5.58) ranging from 1 to 26 years. Participants' age ranged from between 21 to 51 years old (M = 31 years, SD = 5.93). Just over half of participants had a university education (51%). Most police officers reported being in a relationship where they were either cohabiting with their partner or living independently (57%), 18% were married, 22% single and 3% were separated, divorced or widowed.

Table 4.4. *Demographic Description of the Jamaican Sample*

		n	*%*
Gender *(N = 124)*	Male	78	63
	Female	46	37
Age *(N = 130)*	≤ 30	64	49
	31-37	50	39
	38+	16	12
Education *(N = 122)*	Secondary	49	40
	Undergraduate	58	48
	Graduate	4	3
	Other	11	9
Relationship status *(N = 124)*	Single	27	22
	In a relationship	71	57
	Married	22	18
	Separated/divorced/widowed	4	3
Rank *(N = 125)*	Constable	61	49
	Corporal	24	19
	Sergeant	37	30
	Inspector	3	2
Years of service *(N = 130)*	≤ 7	62	48
	8 -14	49	38
	15	19	14

4.3.2.2. Materials and procedures.

The materials used in this study are the same as that utilized in the UK study. A detailed description of the materials and procedures is provided in Chapter 3.

4.3.3. Results.

4.3.3.1. Frequency of exposure.

Table 4.5 shows frequencies, means, standard deviation, and ranking of stressors based on the frequency of experience. Mean scores ranged from a high of 2.34 (feeling not

adequately compensated for the job) to a low of .32 (shooting/killing someone in the line of duty). Similar to ratings of the UK study, the most experienced stressors for the Jamaican sample were mainly organisational. Eighteen stressors were "frequently" experienced by 50% or more of the participants, of which 17 were organisational stressors. Mean scores indicated that the ten most experienced events were all related to the police organisation. Inadequate or poor quality equipment (M = 2.31, SD = .76); distorted or negative press accounts of the police (M = 2.21, SD = .90); experienced negative attitude from the public (M = 2.18, SD = .84); not enough time to spend with family and friends (M = 2.14, SD = .86); and insufficient personal to handle assignments (M = .2.06, SD = .89) were among the highest rated stressors. Over 70% of participants reported that they frequently experienced these events.

Also, similar to the UK sample, the least experienced stressors were, in general, related to police operational duties. In fact, less than 20% of participants reported that they frequently experienced 12 of the 22 operational stressors. The highest ranked operational stressors were making critical on-the spot decisions (M = 1.66, SD = .85); threat of being injured/killed (M = 1.57, SD = .98); and verbal aggression/insults from the public (M = 1.56, SD = .92). Between 41 and 55% of participants were frequently exposed to these events. Shooting/killing someone in the line of duty (M = .32, SD = .67); being involved in high speed chases (M = .33, SD = .52); seeing a fellow officer injured/killed in the line of duty (M = .55, SD = .67); delivering bad news to someone (M = .55, SD = .75); and participation in narcotics raids (M = .57, SD = .75) were among the lowest rated stressors, frequently experienced by less than 10% of participants. Internal investigations against self (M = .24, SD = .50) and sexual advances from another officer (M = .66, SD = .95) were the two least experienced organisational stressors.

Table 4.5. *Frequencies, Means, Standard Deviations and Rankings of Exposure to Job Stressors for Jamaican Police*

Item No	Organisational stressors	Never	Occasionally	Frequently	Mean (SD)	Rank
			%			
1	Feeling that you are not compensated for the job you do	4.8	16.7	78.6	2.34 (.92)	1
2	Inadequate or poor quality equipment	.8	15.3	83.9	2.31 (.76)	2
3	Distorted or negative press accounts of the police	4.8	17.7	77.4	2.21 (.90)	3
4	Negative attitude towards the police force from the public	1.6	23.0	75.4	2.18 (.84)	4
5	Not enough time to spend with family and friends	2.4	23.4	74.2	2.14 (.86)	5
6	Insufficient personnel to handle assignments	3.2	26.6	70.2	2.06 (.89)	6
7	Overtime demands/working long hours	.8	33.3	65.9	1.95 (.82)	7
8	Poor or uncomfortable working environment	7.3	26.6	66.1	1.95 (.96)	7
9	Poor communication within the organisation	4.0	34.7	61.3	1.90 (.91)	8
10	Lack of recognition from the police organisation	5.8	34.7	59.5	1.86 (.94)	9
11	Inadequate opportunities for advancement	5.1	39.8	55.1	1.85 (.97)	10
12	Unequal sharing of responsibilities	3.2	40.3	56.5	1.84 (.91)	11
13	Excessive paperwork	7.3	32.5	60.2	1.80 (.92)	12
14	Seeing criminals go free	8.1	33.3	58.5	1.80 (.96)	12
15	Ineffectiveness of the judicial system	12.3	27.9	59.8	1.75 (.99)	13
16	Pressure to produce results/solve cases	9.7	31.5	58.9	1.75 (.95)	13
17	Assignment of increased responsibilities	3.3	43.9	52.8	1.63 (.75)	15
18	Lack of participation in policy-making decisions	28.9	21.9	49.1	1.56 (1.25)	17
19	Performing tasks not related to your job description	10.5	46.8	42.7	1.48 (.89)	19
20	Bureaucracy in carrying out the essentials of the job	13.0	44.7	42.3	1.45 (.91)	20
21	Inadequate support from supervisor	10.7	49.2	40.2	1.43 (.85)	22
22	Inadequate support from fellow officers	5.6	60.8	33.6	1.42 (.81)	23
23	Reorganisation and transformation within the organisation	4.8	62.4	32.8	1.40 (.76)	24
24	Changing shift schedules	11.2	52.8	36.0	1.39 (.87)	25
25	Given too many cases to handle in a single day	24.6	33.6	41.8	1.32 (1.01)	26
26	Lack of understanding from family/friends about your work	11.1	58.7	30.2	1.30 (.81)	27

Table 4.5. *Frequencies, Means, Standard Deviations and Rankings of Exposure to Job Stressors for Jamaican Police (Continued)*

Item No	Organisational stressors	Never	Occasionally	Frequently	Mean (SD)	Rank
			%			
27	Inadequate training for the job you are required to do	15.3	59.7	12.9	1.22	30
28	Assignment to new or unfamiliar duties	10.2	70.2	11.0	1.18	31
29	Having to give evidence in court	32.0	39.2	18.4	1.07	33
30	Difficulty getting along with supervisor	24.4	61.4	14.2	.96 (.76)	34
31	Conflict with fellow officers	27.0	64.3	8.7	.86 (.68)	37
32	Sexual advancement toward you by another officer	58.3	26.0	15.7	.66 (.95)	41
33	Internal investigations against yourself	78.2	20.2	1.7	.24 (.50)	48
	Operational stressors					
34	Making critical on-the-spot decisions	6.6	38.5	54.9	1.66 (.85)	14
35	Threat of being injured/killed on the job	11.3	44.4	44.4	1.57 (.98)	16
36	Verbal aggression/insults from the public	7.3	51.2	41.5	1.56 (.92)	17
37	Job conflict (by-the-book vs. by-the-situation)	8.2	50.8	41.0	1.53 (.91)	18
38	Policing high crime communities	19.4	37.9	42.7	1.44 (1.02)	21
39	Dealing with gangs/gang related activities	29.8	33.1	37.1	1.26 (1.08)	28
40	Physical aggression from the public	26.8	37.4	35.8	1.23 (1.00)	29
41	Interrogation session with a suspect	32.3	37.1	30.6	1.15 (1.06)	32
42	Making an arrest of a violent suspect	37.4	35.8	26.8	.96 (.92)	34
43	Having to handle large crowds or demonstrations	31.2	50.4	18.4	.94 (.83)	35
44	Responding to a "crime-in-progress" call	37.1	38.7	24.2	.94 (.91)	35
45	Attendance to incidence of domestic violence	36.3	45.2	18.5	.90 (.89)	36
46	Attending to the scene of a serious/fatal accident	45.7	40.2	14.2	.72 (.79)	38
47	Exposure to situations involving children	45.2	42.9	11.9	.70 (.76)	39
48	Working on road traffic duty	43.4	45.9	10.7	.67 (.66)	40
49	Pursuit of an armed suspect	48.4	40.3	11.3	.66 (.76)	41
50	Handling a mentally/emotionally disturbed person	46.8	46.0	7.3	.63 (.69)	42

Table 4.5. *Frequencies, Means, Standard Deviations and Rankings of Exposure to Job Stressors for Jamaican Police (Continued)*

	Organisational stressors	Categories			Mean (SD)	Rank
Item No		Never	Occasionally	Frequently		
			%			
51	Participation in a narcotics raid	55.3	35.8	8.9	.57 (.75)	43
52	Seeing a fellow officer injured/killed in the line of duty	53.7	39.7	6.6	.55 (.67)	44
53	Delivering bad news or death message to someone	56.8	34.4	8.8	.55 (.75)	45
54	Being involved in high-speed chases	69.3	28.3	2.4	.33 (.52)	46
55	Shooting/killing someone in the line of duty	76.2	18.9	4.9	.32 (.67)	47

4.3.3.2. Intensity of stress.

As shown in Table 4.6, mean scores ranged from a high of 7.95 (inadequate or poor quality equipment) to a low of 2.99 (being involved in high-speed chases). Nineteen of the 55 stressors were considered to be "very stressful" by over 50% of participants, with only three of these being operational stressors. Similar to the frequency ratings, the top 10 most stressful events were all related to the organisation. Among the highest ranked stressors were feeling that you are not fairly compensated (M = 7.94, SD = 2.86); not enough time to spend with family and friends (M = 7.62, SD = 2.74); insufficient personnel to handle cases (M = 7.33, SD = 2.58); poor or uncomfortable working environment (M = 7.19, SD = 3.00); inadequate opportunities for advancement (M = 7.11, SD = 2.86); and seeing criminals go free (M = 7.03, 2.78). Over 60% of participants rated these as very stressful.

Only four operational stressors were ranked in the top 20 most stressful events. These were: threat of being killed (M = 6.57, SD = 3.05); policing high crime communities (M = 6.37, SD = 3.13); seeing a fellow officer injured/killed (M = 6.25, SD = 3.80); and job conflict (M = 6.07, SD = 2.98). Over 40% of participants reported that these were very stressful. On the other hand, six of the ten least troublesome stressors were related to operational duties. Participation in narcotics raids (M = 3.02, SD = 2.45); working on road traffic duty (M = 3.51, SD = 2.68; attending to domestic violence (M = 3.83, SD = 2.74); and interrogation of a suspect (M = 3.91, SD = 2.66) were among the least intense stressors, endorsed by only 20% or fewer participants. Sexual advances from another officer (M = 3.47, SD = 3.38); internal investigations (M = 3.31, SD = 3.44); and having to give evidence in court (M = 3.78, SD = 2.68) were the least stressful organisational stressors.

Table 4.6. *Frequencies, Means, Standard Deviations and Rankings of Level of Stressfulness Associated With Job Stressors For Jamaican Police*

Item No.	Organisational stressors	Categories			Mean (SD)	Rank
		Not V. Stressful	Mod. Stressful	V. Stressful		
		%				
1	Inadequate or poor quality equipment	11.8	11.8	76.4	7.95 (2.60)	1
2	Feeling not fairly compensated for the job you do	12.7	13.5	73.8	7.94 (2.86)	2
3	Not enough time to spend with family/friends	11.2	19.2	69.6	7.62 (2.74)	3
4	Insufficient personnel to handle assignments	10.6	22.8	66.7	7.33 (2.58)	4
5	Poor or uncomfortable working environment	15.6	19.7	64.8	7.19 (3.00)	5
6	Inadequate opportunities for advancement	17.8	16.9	65.3	7.11 (2.86)	6
7	Seeing criminals go free	12.4	24.8	62.8	7.03 (2.78)	7
8	Ineffectiveness of the judicial system	17.0	21.4	31.6	6.92 (2.88)	8
9	Distorted or negative press accounts of the police	15.6	22.1	62.3	6.90 (2.86)	9
10	Neg. attitude towards the police force from the public	17.5	24.6	57.9	6.81 (2.93)	10
11	Lack of recognition from the police organisation	23.1	17.1	59.8	6.79 (3.05)	11
12	Unequal sharing of responsibilities	16.8	31.2	52.0	6.78 (2.76)	12
13	Poor communication within the organisation	20.3	18.7	61.0	6.78 (2.97)	12
14	Pressure to produce results/solve cases	23.3	20.8	55.8	6.58 (3.01)	13
15	Given too many cases to handle in a single day	23.9	16.8	59.3	6.48 (3.33)	15
16	Overtime demands/working long hours	15.4	33.3	51.2	6.37 (2.63)	16
17	Inadequate support from supervisor	21.7	29.2	49.2	6.12 (2.88)	18
18	Excessive paperwork	25.2	28.6	46.2	6.09 (2.85)	19
19	Lack of understanding from family/friends about work	24.8	26.4	48.8	5.91 (3.11)	21
20	Bureaucracy in carrying out the essentials of the job	24.8	34.5	40.7	5.86 (3.02)	22
21	Performing tasks not related to your job description	28.9	29.8	41.2	5.79 (2.97)	23
22	Inadequate support from fellow officers	25.2	35.8	39.0	5.75 (2.70)	25
23	Assignment of increased responsibilities	25.4	37.3	37.7	5.58 (2.72)	29
24	Inadequate training for the job you are required to do	31.6	29.8	38.6	5.54 (2.96)	31

Table 4.6.*Frequencies, Means, Standard Deviations and Rankings of Level of Stressfulness Associated with Job Stressors for Jamaican Police (continued)*

Item No.	Organisational stressors	Categories			Mean (SD)	Rank
		Not V. Stressful	Mod. Stressful	V. Stressful		
		%				
25	Lack of participation in policy-making decisions	35.0	29.0	36.0	5.33 (3.09)	32
26	Reorganisation/transformation within the organisation	37.1	34.7	28.2	5.01 (2.93)	34
27	Difficulty getting along with supervisor	39.3	32.1	28.6	4.86 (3.01)	39
28	Assignment to new or unfamiliar duties	36.4	40.5	23.1	4.71 (2.66)	40
29	Conflict with fellow officers	39.0	39.0	21.9	4.51 (2.73)	43
30	Changing shift schedule	42.9	39.5	17.6	4.24 (2.49)	44
31	Having to give evidence in court	53.7	27.8	18.5	3.78 (2.68)	48
32	Sexual advancement toward you by another officer	64.9	14.4	20.6	3.47 (3.38)	50
33	Internal investigations against yourself	70.0	7.5	22.5	3.31 (3.44)	51
	Operational stressors					
34	Threat of being injured/killed on the job	21.5	24.8	53.7	6.57 (3.05)	14
35	Policing high crime communities	24.8	21.2	54.0	6.37 (3.13)	16
36	Seeing a fellow officer injured/killed in the line of duty	33.3	9.8	56.9	6.25 (3.80)	17
37	Job conflict (by-the-book vs. by-the-situation)	22.2	37.6	40.2	6.07 (2.98)	20
38	Having to handle large crowds or demonstrations	30.3	22.9	46.8	5.76 (3.20)	24
39	Exposure to situations involving children	35.0	14.0	51.0	5.72 (3.56)	26
40	Dealing with gangs/gang related activities	34.3	18.5	47.2	5.69 (3.32)	27
41	Physical aggression from the public	35.2	17.6	47.2	5.61 (3.31)	28
42	Verbal aggression/insults from the public	36.4	24.8	38.8	5.55 (3.18)	30
43	Making critical on-the-spot decisions	31.1	33.6	35.3	5.28 (2.75)	33
44	Attending to the scene of a serious/fatal accident	42.7	18.8	38.5	4.95 (3.33)	35
45	Handling a mentally/emotionally disturbed person	40.2	20.6	39.2	4.90 (3.32)	36
46	Responding to a "crime-in-progress" call	40.2	22.5	37.3	4.88 (3.91)	37
47	Making an arrest of a violent suspect	37.6	25.7	36.6	4.87 (3.16)	38

Table 4.6. *Frequencies, Means, Standard Deviations and Rankings of Level of Stressfulness Associated With Job Stressors for Jamaican Police (continued)*

Item No.	Operational stressors	Not V. Stressful	Mod. Stressful	V. Stressful	Mean (SD)	Rank
			%			
48	Pursuit of an armed suspect	45.2	21.5	33.3	4.68 (3.36)	41
49	Delivering bad news or death message to someone	43.7	23.0	33.3	4.64 (3.33)	42
50	Shooting/killing someone in the line of duty	62.2	6.7	31.1	3.96 (3.73)	45
51	Interrogation session with a suspect	48.0	33.3	18.6	3.91 (2.66)	46
52	Attendance to incidence of domestic violence	52.3	27.5	20.2	3.83 (2.74)	47
53	Working on road traffic duty	57.9	25.3	16.8	3.51 (2.68)	49
54	Participation in a narcotics raid	64.5	24.7	10.8	3.02 (2.45)	52
55	Being involved in high-speed chases	67.8	18.4	13.8	2.99 (2.82)	53

4.3.3.3. Similarities and differences in the UK and Jamaican police ratings.

Further analyses were performed to make basic comparisons of ratings across the UK and Jamaican samples. In examining the extent to which both samples are in agreement with the relative frequency in which stressors are experienced and associated perceived stressfulness, a simple correlation analysis of the rankings was performed. Results showed that there was strong agreement for the rankings of exposure rates when all events, $r = .76$, $p < .001$ were considered as well as when organisational, $r = .76$, $p < .001$ and operational, $r = .72$, $p < .001$ stressors were assessed independently. Further examination of the data showed similar ratings for half of the top 10 most frequently experienced organisational stressors in the Jamaican and UK sample. That is, distorted press accounts, insufficient personnel to handle assignments, negative attitudes from the public, not enough time to spend with family, and lack of the recognition were in the top 10 most frequently experienced stressors in both samples. More consistently, among the most experienced operational stressors, seven out of 10 stressors were ranked in the top 10 in both samples. These were: making critical on-the-spot decisions, job conflict, policing high-crime communities, verbal aggression from the public, physical aggression from the public, interrogation of a subject, and making a violent arrest.

When the agreement for rankings of the intensity of felt stressed was examined, results showed that rankings for operational stressors, $r = .61$, $p < .001$ were more similar in both samples than that of organisational stressors, $r = .48$, $p < .001$ or when all stressors, $r = .59$, $p < .001$ were considered. Only three stressors (i.e., insufficient personnel to handle assignments, the ineffectiveness of judicial system, and not enough time to spend with family) were consistently rated in the top 10 most stressful organisational events in both samples. However, again, seven out of ten events were among the 10 most stressful operational incidents in both samples. These were: the threat of being killed, exposure to

situations involving children, seeing a fellow officer injured/killed, making critical on-the-spot decisions, physical aggression from the public, job conflict, and having to handle large crowds.

4.3.4. Discussion.

Much of the police stress literature suggests that organisational stressors are more salient for police officers. Additional evidence in support of these findings was found using a recent sample of UK police as discussed earlier in the chapter. However, whether these findings could be generalised to Jamaican context was a question that needed to be addressed. Given the lack of research on the Jamaican police and concerns about the harsh policing environment within which police officers operate, the aim of the current research was to provide an initial investigation into the sources of stress affecting members of the Jamaica Constabulary Force.

Overall, findings suggest that even with the high crime environment that exists in Jamaica, the primary sources of stress are also organisationally oriented. Specifically, results show that prominent stressors in the Jamaican context tend to reflect challenges related to inadequate resources and support, (i.e., inadequate or poor quality equipment and insufficient personnel to handle cases), perceived inequities in compensation, time away from family, and outside pressures on the police organisation (i.e., distorted press accounts of the police and negative public attitudes towards the police). Similar rankings were found for both frequency of exposure and level of perceived stress.

Police work is difficult, and officers invariably put their lives on the line. At a minimum, they expect to be compensated fairly and have proper facilities and tools to carry out their responsibilities effectively. When these basic needs are not met, the police officer is likely to feel frustrated and dissatisfied with his/her job. Resource problems,

however, are commonly reported in the police literature. Although not as highly ranked relative to other stressors in the recent UK sample, prior studies from the UK and other countries also document lack of resources as a problem in police organisations (Biggam et al., 1997b; Brown & Campbell, 1990; Kroes, 1976; Pienaar & Rothmann, 2006; Suresh et al., 2013). It is noted, however, that problems specifically related to inadequate manpower were also a major stressor for the UK sample. Similarly, problems with insufficient pay/salary have been cited in previous research, particularly from other developing nations (e.g., Pienaar & Rothmann, 2006; Suresh et al., 2013), though these appear to be long-standing issues (Abdollahi, 2002; Ayres & Flanagan, 1990; Kroes, 1976).

Based on earlier discussions in Chapter 1, it is not surprising that negative press accounts and public criticism are major stressors for the Jamaican police. These stressors were also ranked relatively high in the UK sample, particularly in terms of frequency. Prior research has also demonstrated concerns about public criticism and media coverage (Biggam et al., 1997b; Brown & Campbell, 1990; Golembiewski & Kim, 1990; Kroes, 1976; Suresh et al., 2013; Territo & Vetter, 1981). While it is important to hold police accountable for their actions, constant or unwarranted criticism and distorted media coverage damages the reputation of the police organisation. Furthermore, distorted media accounts can frame the public's attitude towards the police, potentially creating a climate of distrust. Unfavourable public perceptions can, therefore, lead to increased emotional strain and decreased morale in the police (Kroes, 1976).

Not enough time to spend with family was also a problem in the recent UK study, and in general appears to be a major area of concern (Biggam et al., 1997b, Collins & Gibbs, 2003; Garcia et al., 2004; Suresh et al., 2013) for the police. Taken in conjunction, current and prior findings seem to suggest that balancing home and family life may be universally applicable to police officers.

While relative to organisational issues, operational events were not as frequently experienced and officers were not as acutely affected by them, there are some that are important to note. In terms of frequency, Jamaican police officers rated making critical on-the-spot decisions, threat of being killed, verbal aggression from the public, and job conflict as the most regularly experienced operational stressors. Similar ratings were also observed in the UK study. However, events related to the dangers of the job (e.g., threat of being killed, policing high-crime communities, and seeing a colleague injured/killed) were the most intensely experienced operational stressors. Events that involve acts of violence or exposure to harm or danger have also been reported in countries such as the US (Garcia, et al., 1994; Violanti & Aron, 1994, 1995) and other developing nations (Agolla, 2009; Gule et al., 1998). It is possible that these high ratings may be a reflection of differences in the policing climate in these societies.

The UK versus Jamaica comparison revealed some interesting results. First, correlations of rankings show that officers across police jurisdictions may have similar experiences in terms of the stressors to which they are frequently exposed. However, there is likely to be more variation in how acutely they experience these events. In addition, findings suggest that while organisational stressors, in general, may be the most salient factors regardless of police department, the specific types of issues that affect officers may differ. Understanding these nuances can help to better determine specific areas for stress management and intervention programmes in different policing environments. For instance, it was observed that inadequate resources and compensation were ranked highly by Jamaican officers relative to UK police. This may reflect the inherent socio-economic challenges faced by developing nations. Appropriate interventions targeted at these problems may, therefore, be of more benefit in the Jamaican context whereas UK officers

may be better served in addressing problems relating to other issues such as workload and organisational structure.

On a whole, though both samples showed less varied rankings for operational stressors, it is important to note where rankings deviate. For instance, whereas UK police may need support in potentially traumatic cases involving children and making critical decisions, stress management for Jamaican police may need to focus on building resilience for dealing with the threat of being killed while on duty.

4.3.5. Summary of findings.

The studies described thus far in this chapter highlights two main findings: (1) the police experience of work stressors in the UK has generally remained consistent over the years as organisationally oriented stressors persist as a major problem, and (2) organisational stress also strongly affect members of the Jamaican police force, even with additional inherent operational pressures.

Overall, the results of this research are supportive of existing research which bolsters the argument that organisational stressors are key risk factors among police officers. However, while the UK study is embedded in previous literature, the Jamaican study provides preliminary findings that need to be replicated before firm conclusions can be drawn. In light of this, the research in the next section sought to provide additional evidence aimed at increasing the robustness of findings using a larger and arguably more representative sample of Jamaican officers.

4.4. Job Stressors Affecting Jamaican Police Officers: A Follow-up Study

4.4.1. Introduction.

The exploratory study described in the preceding section showed that Jamaican police officers are most affected by stressors related to the organisation including inadequate resources and pay, spending time away from family, and public and media scrutiny. However, with no prior published research on members of the Jamaican police force, and the use of a small sample in the earlier study, it was important to conduct more robust research with a larger, more representative sample to confirm these findings. With a larger sample, more information can also be drawn from the research. Therefore, further analyses were undertaken to determine differences in perceptions of work-related stressors across key demographic characteristics considered pertinent in this research programme.

As discussed in Chapter 2, gender, rank, and job tenure are among the most studied demographic characteristics thought to potentially affect police officers' perceptions of stress. Different gender perceptions may be due to differential functions and treatment (Brown & Fielding, 1993; Morash & Haar, 1995; Violanti & Aron, 1995); rank defines officers' position in the organisation and indicates variation in roles and responsibilities which can affect how stressors are perceived (Biggam et al., 1997b; Brown & Campbell, 1990; Gudjonsson & Adlam, 1985; Violanti & Aron, 1995); and the amount of time spent in policing may affect perceptions at various career stages (Violanti & Aron, 1995).

The purpose of this study, therefore, was to provide further clarification on the stressors affecting police officers in Jamaica and to examine differential perceptions that may arise based on gender, rank, and job tenure.

4.4.2. Method.

4.4.2.1. Participants.

Table 5.1 summarises the demographic composition of the sample which consisted of 578 police officers drawn from the Jamaica Constabulary Force (JCF). Seventy-four percent of the sample was male. Sixty-two and a half percent were constables, 22% corporals, 11% sergeants and 5% inspectors. Mean time in the police force was 10 years (SD = 8.20). Forty-three percent served for five or fewer years, 27% for 6 - 12 years and 31% served for 13 or more years. Participants' ages ranged from between 20 - 63 years old, with a mean age of 33 years (SD = 8.53). Thirty-five percent were 28 years and younger, 34% between ages 29 and 35 years, and 31% were 36 years and older. Just over half of participants had at least a secondary level education (57%), the rest had some form of post-secondary education. Most police officers reported being in a relationship (45%), 28% were married, 21% single and 6 % were separated, divorced or widowed.

Table 4.7. *Demographic Description of the Jamaican Sample*

		n	%
Gender *(N = 578)*	Male	427	74
	Female	151	26
Age *(N = 578)*	≤ 28	200	35
	29-35	197	34
	36+	181	31
Education *(N = 574)*	Secondary	330	58
	Diploma	117	20
	Associate degree	23	4
	Bachelor's	99	17
	Master's	5	1
Relationship status *(N = 578)*	Single	122	21
	In a relationship	257	45
	Married	164	28
	separated/divorced/widowed	35	6
Rank *(N = 578)*	Constable	362	63
	Corporal	128	22
	Sergeant	62	11
	Inspector	26	4
Years of service *(N = 578)*	≤ 5	246	43
	6-12	157	27
	13+	175	30

4.4.2.2. Materials.

The police stress survey was modified for the current study based on feedback obtained from participants in the preliminary study regarding the length and structure of the questionnaire. Specifically, modifications were made to shorten the inventory and improve the ease of responding to items. Stressors included in the previous study that were recorded as particularly low in terms of frequency and intensity of stress were discarded

from the list such that the focus would be on the most important policing events for this population. The modified version of the measure consisted of a list of 39 stressors.

In addition, the frequency scale of the measure was adjusted. It was considered important to determine whether police officers had been exposed to a stressor, for their rating of its intensity to be valid. However, based on feedback during previous data collection sessions, the combined assessments of frequency and level of stressfulness were too burdensome for participants. Therefore, the frequency of exposure scale was adjusted to a simple "no" or "yes" response format which was still able to capture exposure. The level of stressfulness scale remained where participants were asked to rate the level of stressfulness on a scale of 1 (*not at all stressful*) to 10 (*very stressful*).

4.4.2.3. Procedure.

The procedure followed to collect the data was described in detail in Chapter 3.

4.4.2.4. Analytic approach.

As in the previous sections, job stressors were categorised as organisational and operational stressors. Frequency distributions were calculated to determine whether or not police officers were exposed to the events. Mean and standard deviations were calculated, and stressors ranked based on the level of stressfulness. Also, similar to previous analyses, the intensity of stress scale was grouped into three categories to further demonstrate the distribution of ratings.

Chi-square analyses, T-tests, and ANOVAs were performed to determined differences and relationships based on gender, rank, and years of service.

4.4.3. Results.

Stress exposure, the average level of stressfulness and rankings associated with each stressor are reported in Table 4.8. Results show that most stressors were experienced by most police officers with 54% or more of participants exposed to 36 of 39 stressors. Operational stressors were generally less experienced when compared to organisational stressors. For instance, more than 70% of participants reported that they experience 20 of 23 organisational stressors. Exposure rate ranged from 98% (feeling not fairly compensated) at the higher end to 54% (given too many cases to handle in a day) at the lower end. On the other hand, only half of the operational stressors were experienced by 70% or more of the sample. Exposure rates ranged from 84% (threat of being injured/killed) at the higher end to 34% (shooting/killing someone in the line of duty) at the lower end.

Most stressors (35/39) were rated as "very stressful" by over 50% of officers. Mean scores ranged from a high of 9.29 (feeling not fairly compensated) to a low of 5.28 (participation in a narcotics raid). Of the top 10 ranked stressors, seven were from the organisation. Inadequate or poor quality equipment (M = 8.49, SD = 2.06); poor or uncomfortable working environment (M = 8.28, SD = 2.44); inadequate opportunity for advancement (M = 8.07, SD = 2.24); not enough time to spend with family and friends (M = 7.94, SD = 2.31); insufficient personnel to handle assignments (M = 7.91, SD = 2.35); and seeing criminals go free (M = 7.70, SD = 2.54) were among the top rated stressors. The data shows that between 69% (seeing criminals go free) and 92% (feeling not fairly compensated) of participants rated these items as very stressful.

The operational events among the top 10 ranked stressors were seeing a fellow officer injured/killed in the line of duty (M = 8.40, SD = 2.56); policing high crime communities (M = 7.82, SD = 2.54); and the threat of being killed on the job (M = 7.75,

SD = 2.59). Sixty-nine to 80% of officers rated these as very stressful. Four others rounded

out the top 20 most stressful events: exposure to situations involving children (M = 7.47,

SD = 2.73); handling mentally/emotionally disturbed persons (M = 7.39, SD = 2.71); and

dealing with gangs/gang activity (M = 7.35, SD = 2.58).

Table 4.8. *Exposure Rate, Level of Stressfulness, and Ranking of Job Stressors for Jamaican Sample.*

Item No.	Organisational Stressors	Exposure %	Not V. Stressful %	Mod. Stressful %	V. Stressful	Mean (SD)	Rank
1	Feeling not fairly compensation for the job you do	97.6	2.4	6.1	91.5	9.29 (1.70)	1
2	Inadequate or poor quality equipment	94.9	3.8	12.3	83.9	8.49 (2.06)	2
3	Poor or uncomfortable working environment	88.2	7.1	15.3	77.6	8.28 (2.44)	4
4	Inadequate opportunity for advancement	85.0	3.7	21.3	75.0	8.07 (2.24)	5
5	Not enough time to spend with family and friends	88.7	4.9	22.0	73.0	7.94 (2.31)	6
6	Insufficient personnel to handle assignments	92.1	4.9	22.1	72.9	7.91 (2.35)	7
7	Seeing criminals go free	77.9	7.7	23.3	69.1	7.70 (2.54)	10
8	Unequal sharing of responsibilities	83.1	6.1	24.1	69.8	7.67 (2.32)	12
9	Lack of recognition from the police organisation	86.0	8.2	23.3	68.5	7.62 (2.56)	13
10	Experiencing negative attitude towards the police force	95.1	9.9	20.2	69.8	7.60 (2.66)	14
11	Poor communication within the organisation	88.9	8.2	25.0	66.8	7.58 (2.52)	15
12	Overtime demands/long working hours	91.6	5.6	27.3	67.1	7.53 (2.37)	16
13	Ineffectiveness of the judicial system	75.6	9.5	25.6	64.9	7.38 (2.60)	19
14	Given too many cases to handle in a single day	53.8	14.6	24.2	61.3	7.25 (2.82)	22
15	Distorted or negative press accounts of the police	85.2	9.3	28.7	62.0	7.19 (2.58)	23
16	Performing tasks not related to your job description	76.6	14.0	25.1	60.9	7.09 (2.86)	26
17	Excessive paperwork	66.8	11.9	27.1	61.0	7.07 (2.77)	27
18	Bureaucracy in carrying out the essentials of the job	76.1	12.4	30.1	57.5	6.99 (2.65)	28
19	Pressure to produce results/solve cases	72.8	12.7	28.2	59.1	6.99 (2.72)	28
20	Inadequate support from supervisor	71.4	11.4	34.0	54.6	6.80 (2.52)	30
21	Inadequate training for the job you are required to do	67.0	12.5	34.6	52.9	6.66 (2.64)	32
22	Assignment of increased responsibility	79.8	19.0	33.5	47.5	6.23 (2.81)	35
23	Reorganization/transformation within the organization	77.9	18.2	35.8	46.0	6.21 (2.81)	36

Table 4.8. *Exposure Rate, Level of Stressfulness, and Ranking of Job Stressors for the Jamaican Sample (Continued)*

Item No.	Operational stressors	Exposure %	Categories Not V. Stressful	Mod. Stressful %	V. Stressful	Mean (SD)	Rank
24	Seeing a fellow officer injured/killed in the line of duty	56.0	6.1	14.2	79.6	8.40 (2.56)	3
25	Policing high crime communities	82.8	8.3	18.3	73.4	7.82 (2.54)	8
26	Threat of being killed on the job	84.3	9.0	21.7	69.3	7.75 (2.59)	9
27	Exposure to situations involving children	68.0	12.0	22.7	65.3	7.47 (2.73)	17
28	Handling a mentally/emotionally disturbed person	79.0	10.7	22.8	66.5	7.39 (2.71)	18
29	Dealing with gangs/gang activity/gang members	7.06	8.4	26.5	65.1	7.35 (2.58)	20
30	Physical aggression from the public	78.6	10.1	25.9	64.0	7.33 (2.67)	21
31	Shooting/killing someone in the line of duty	33.7	17.9	20.7	61.5	7.15 (3.15)	24
32	Job conflict (by-the-book vs. by-the-situation).	78.6	11.1	27.1	61.7	7.11 (2.60)	25
33	Having to handle large crowds or demonstrations	74.3	12.7	27.6	59.8	6.99 (2.69)	28
34	Pursuit of an armed suspect	58.1	15.7	25.1	59.2	6.93 (2.94)	29
35	Attending to the scene of a serious road traffic accident	68.9	17.1	28.2	54.7	6.69 (2.90)	31
36	Responding to a "crime-in-progress" call	73.3	15.9	31.1	53.0	6.64 (2.76)	33
37	Making an arrest of a violent suspect	67.4	18.3	29.0	52.7	6.46 (2.95)	34
38	Being involved in high-speed chases	41.2	23.2	33.8	43.0	5.90 (2.87)	37
39	Participation in a narcotics raid	46.3	30.9	33.7	35.3	5.28 (2.99)	38

4.4.3.1. Exposure and intensity of stressors by gender.

Chi-square analysis showed that there were significant relationships between gender and exposure for seven operational stressors, but only one organisational stressor. Male officers were more frequently exposed to the threat of being injured/killed on duty, $\chi^2(1, N = 574) = 4.35$, $p < .05$; policing high crime communities, $\chi^2(1, N = 564) = 5.26$, $p < .02$; dealing with gangs, $\chi^2(1, N = 572) = 8.65$, $p < .01$; being involved in high speed chases, $\chi^2(1, N = 573) = 4.42$, $p < .05$; pursuit of an armed suspect, $\chi^2(1, N = 571) = 17.41$, $p < .001$; making an arrest of a violent suspect, $\chi^2(1, N = 574) = 13.31$, $p < .001$; and pressure to produce results, $\chi^2(1, N = 566) = 4.19$, $p < .05$. Exposure to situations involving children, $\chi^2(1, N = 571) = 2.84$, $p < .05$ was reported with significantly higher frequency by female officers.

Independent-samples t-tests showed that female officers were significantly more affected by poor communication within the organisation, $t(486) = -2.75$, $p = .006$; excessive paperwork, $t(367) = -3.19$, $p = .002$; given to many cases to handle in a single day, $t(300) = -2.20$, $p = .029$; exposure to situations involving children, $t(373) = -2.87$, $p = .004$; and attending to the scene of a fatal/serious traffic accident, $t(378) = -3.31$, $p = .001$. Table 4.9 summarises the significant chi-square and t-test results.

Table 4.9. *Chi-Square and T-Test Results for Exposure Rate and Intensity by Gender*

	Exposure		Intensity	
	Male	Female	Male	Female
	n (%)	*n* (%)	M (SD)	M (SD)
Threat of being injured/killed	424 (86.3)	150 (24.4)		
Policing high crime communities	416 (85.1)	148 (76.4)		
Dealing with gangs/gang activity	424 (74.1)	148 (60.8)		
Being involved in high-speed chases	424 (43.9)	149 (33.6)		
Pursuits of an armed suspect	423 (63.4)	148 (43.2)		
Making an arrest of a violent suspect	425 (71.8)	149 (55.0)		
Pressure to produce results	419 (75.2)	147 (66.0)		
Exposure to situations involving children	422 (65.9)	149 (73.8)	7.22 (2.73)	8.11 (2.64)
Attend scene of fatal accident			6.43 (2.94)	7.57 (2.28)
Poor communication within the organisation			7.39 (2.54)	8.10 (2.38)
Given too many cases to handle			7.02 (2.88)	7.81 (2.60)
Excessive paperwork			6.79 (2.80)	7.82 (2.54)

4.4.3.2. Exposure and intensity of stressors by rank.

Significant chi-square and t-test results for rank differences are shown in Table 4.10. Only two significant associations were found between rank and exposure to stressors. A larger proportion of lower ranked officers (i.e., constables) reported that they were frequently given increased responsibility, $\chi^2(1, N = 568) = 6.97, p < .01$; and attended to more scenes of fatal accidents $\chi^2(1, N = 575) = 4.29, p < .05$ when compared to higher ranks.

In terms of intensity, t-test statistics showed that officers above constable level were significantly more affected by seeing a fellow officer injured/killed, $t(307) = -2.76, p = .006$; insufficient personnel to handle assignments, $t(504) = -1.99, p = . 047$; inadequate training, $t(365) = -2.01, p = .045$; responding to a crime in progress call, $t(400) = -2.44, p = .015$; and exposure to situations involving children, $t(373) = -2.85, p = .005$.

Table 4.10. *Chi-Square and T-Test Results for Exposure Rate and Intensity by Rank*

	Exposure		Intensity	
	Lower rank	Higher rank	Lower rank	Higher rank
	n (%)	n (%)	M (SD)	M (SD)
Attending scene of serious/fatal accident	361 (65.7)	214 (74.3)		
Assignment of increased responsibility	357 (76.2)	211 (85.8)		
Seeing fellow officer injured/killed			8.11 (2.59)	8.86 (2.18)
Insufficient personnel for assignments			7.75 (2.37)	8.17 (2.30)
Inadequate training			6.45 (2.64)	7.02 (2.57)
Responding to a crime-in-progress call			6.38 (2.80)	7.06 (2.64)
Exposure to situations involving children			7.16 (2.77)	7.98 (2.60)

4.4.3.3. Exposure and intensity of stressors by job tenure.

Chi-square analyses showed a general linear association with exposure to the following stressors and job tenure: ineffectiveness of the judicial system, $\chi^2(2, N = 566) = 8.44$, $p < .05$; shooting someone in the line of duty, $\chi^2(2, N = 570) = 8.36$, $p < .05$; seeing criminals go free, $\chi^2(2, N = 575) = 10.16$, $p < .01$; exposure to situations involving children, $\chi^2(2, N = 571) = 7.61$, $p < .05$; and participation in a narcotics raid, $\chi^2(2, N = 566) = 6.89$, $p < .05$. Further observations showed that seeing a fellow officer injured/killed, $\chi^2(2, N = 571) = 10.28$, $p < .01$; attending to the scene of a serious accident, $\chi^2(2, N = 575) = 6.32$, $p < .05$; and assignment of increased responsibility, $\chi^2(2, N = 568) = 9.45$, $p < .01$ were more prevalent for mid-career officers. Inadequate support from supervisor, $\chi^2(2, N = 567) = 7.83$, $p < .05$ was more prevalent for officers in the early stages of their career, while overtime demands/having to work long hours, $\chi^2(2, N = 573) = 9.87$, $p < .01$ was reported by a larger portion of officers in the latter career stage.

ANOVA analysis with post hoc comparisons showed that officers with 6-12 years of experience reported significantly higher mean stress scores for overtime demands/ long working hours, $F(2, 499) = 4.04$, $p = .018$ and policing high-crime communities, $F(2, 444) = 3.53$, $p = .030$ compared with those with five or fewer years of experience. Mid-career

officers also reported significantly higher scores for job conflict, $F(2, 428) = 3.38$, $p = .035$ and poor communication within the organisation, $F(2, 485) = 3.03$, $p = .049$ compared to officers in the later career stage. Officers in the early stages of their career were the least affected by seeing a fellow officer injured/killed, $F(2, 306) = 3.51$, $p = .031$. The significant chi-square and t-test results are shown in Table 4.11.

Table 4.11. *Chi-Square and ANOVA Results for Exposure Rate and Intensity by Job Tenure*

	Exposure			Intensity		
	≤ 5	6-12	13+	≤ 5	6-12	13+
	n (%)	*n* (%)	*n* (%)	M (SD)	M (SD)	M (SD)
Exposure to situations involving children	244 (63.1)	157 (66.9)	170 (75.9)			
Attending scene of serious/fatal accident	245 (63.3)	156 (73.7)	174 (72.4)			
Assignment of increased responsibility	242 (74.0)	157 (86.0)	169 (82.2)			
Inadequate support from supervisor	241 (77.6)	155 (66.5)	171 (67.3)			
Shooting/killing someone in the line of duty	244 (28.3)	154 (33.1)	172 (41.9)			
Seeing criminals go free	245 (71.8)	155 (80.0)	175 (84.6)			
Participation in narcotics raids	239 (41.0)	157 (45.9)	170 (54.1)			
Ineffectiveness of the judicial system	240 (70.0)	156 (76.9)	170 (82.4)			
Seeing fellow officer injured/killed	244 (48.4)	155 (62.6)	172 (61.0)	7.93 (2.69)	8.73 (2.10)	8.65 (2.43)
Overtime demands	243 (90.9)	155 (87.1)	175 (96.6)	7.19 (2.37)	7.84 (2.19)	7.73 (2.47)
Policing high crime communities				7.47 (2.62)	8.19 (2.31)	8.00 (2.59)
Job conflict				7.09 (2.57)	7.58 (2.46)	6.71 (2.73)
Poor communication				7.71 (2.51)	7.82 (2.50)	7.14 (2.50)

4.4.4. Discussion.

Except for the exploratory study described in an earlier section of this chapter, to the researcher's knowledge, there has been no published research that has identified the full range of potential stressors affecting police officers in Jamaica. Findings from the earlier study suggested that, primarily, sources of stress are related to the police organisation itself. The present research sought to increase the robustness of these findings. A larger sample taken from various divisions within the Jamaica Constabulary Force was obtained to provide a better representation of the prevalence of and level of stress associated with each job stressor. Additionally, perceptual variations across gender, rank and job tenure were examined.

The results of the current research confirm the findings from the first study on Jamaican police officers. All in all, it appears that the most salient stressors for this group of officers indeed lies within the organisation itself, and these stressors are primarily related to inadequate resources, poor working conditions, feeling unfairly compensated, inadequate opportunity for advancement, and not enough time to spend with family. These were reportedly experienced by more than 85% of participants. As discussed earlier in the chapter, the pattern of ratings with an emphasis on compensation, resource problems and poor work conditions, may not be surprising and may reflect socio-economic challenges inherent to developing nations. Time away from family has remained a consistent cause of concern for police officers across the studies described in this chapter. Such a stable high rating is a strong indicator that there are potential challenges due to work-life balance and is a topic that should be explored further. Seeing a fellow officer injured/killed in the line of duty, policing high-crime communities, and the threat of being injured/killed were also highly rated in the current study. Between 56 and 84% of participants reportedly experienced these events, at least once, over a 12 month period. All three are

representative of situations for the potential of harm or death and were also ranked among the most stressful operational stressors in the preliminary study. What is interesting, however, is the increase in rankings for these stressors relative to others, a finding that further emphasise the impact of the policing climate on these officers.

That said, it is noteworthy that the ratings for one stressor, in particular, may have been influenced by current events affecting police officers during the time of data collection. While data was being collected for Study 3, four police officers were killed in consecutive incidents over a four week period. This may have resulted in an exacerbation of the intensity levels associated with some operational stressors, particularly, seeing a fellow officer being injured/killed in the line of duty. In fact, in the first study, this event was ranked 19 of 55 stressors, but its ranking rose significantly in the subsequent study to be the third most stressful event. Therefore, any conclusions drawn from this finding should take these circumstances into consideration. Still, it is apparent that working in a highly violent policing climate can take its toll. It could, therefore, be reasoned that these aspects of police work should be continuously explored simultaneously with other work stressors.

Further observations show that while organisational stressors appear to be more routinely experienced by the participants, there were more variations in exposure across operational stressors. For instance, over 70% of participants reported that they experienced 20 of the 23 organisational stressors. However, there were some operational events that seem to be more prevalent than others. For instance, the threat of being injured/killed on the job and policing high-crime communities are stressors that appear to be a constant for this group of participants. However, stressors such as shooting/killing someone in the line of duty are less prevalent, though the event is associated with a relatively high level of stress. Other stressors such as participation in narcotics raids are much less prevalent and

are only moderately stressful. These findings are in support of the argument put forward by Brown et al. (1999) for the importance of differentiating police operational stressors. For instance, in their research, the authors categorised low frequency, high impact operational stressors such as those associated with death and disaster as traumatic, those with relatively high frequency but low impact such as the potential for injury or violence and dealing with victims were categorised as routine, and stressors related to rape and sexually abused children were grouped as vicarious.

The current study also considered the influence of gender, rank and job tenure on exposure to and intensity of stressors. With regards to exposure, significant relationships were found between gender and several operational stressors but few for organisational stressors. More male officers experienced the feeling that their lives were threatened and were more exposed to duties with the potential for danger such as the pursuit of an armed suspect, policing high-crime communities, making a violent arrest, and being involved in high-speed chases. While these events were more prevalent in male officers, no significant relationships were found for ratings of intensity. However, female officers were both significantly more exposed to and impacted by situations involving children.

Current findings are consistent with observations made by Brown and Fielding (1993) concerning how male and female police officers are deployed and role conflicts that may emerge. Findings from their study on UK police showed that male officers reported more frequent exposure to frontline duties related to violence and public disorder, whereas female officers were more likely to be given roles involving children and victims. One explanation for these findings may be that male police officers tend to gravitate towards high-risk activities as it validates stereotypical masculine roles (Jermier et al., 1989), whereas females may be expected to take on nurturing roles. Findings also suggest that female officers in the Jamaican police force may not be adequately supported in duties

pertaining to workload (i.e., excessive paperwork and given too many cases to handle) and are challenged by poor communication within the organisation. Women officers in past research have also reported lower levels of support from their colleagues and superiors (Violanti et al., 2016)

Rank is the occupational variable most obviously associated with stress in policing. Several researchers have demonstrated rank differences with regards to specific sources of stress (Biggam et al., 1997b; Brown & Campbell, 1990; Garcia et al., 2004; Gudjonson & Adlam, 1985). On a whole, these studies show that stressors from within the organisation itself are more salient for senior officers, while operational stressors are more likely to affect lower-ranked officers. The current study found relatively few rank differences and less distinctive results. Officers above the constable rank were more likely to be assigned increased responsibilities and visit scenes of fatal accidents, but these events were not perceived as significantly more stressful compared to lower-ranked officers. However, senior officers were more likely to be affected by critical incident situations (i.e., seeing a colleague injured/killed, responding to a crime in progress calls, and exposure to situations involving children), staff shortages, and inadequate training. It appears that senior officers may not have acquired the requisite skills needed to manage certain aspects of their job and may need ongoing training and support in carrying out their duties.

Exposure to stressors seems to vary broadly in relation to job tenure, and this might be expected given anticipated changes in roles and responsibilities across career stages. Results showed that as officers spend more time in the police force, they are gradually exposed to certain operational duties (i.e., shooting/killing someone, exposure to situations with children, and narcotics raids) and issues related to the legal system (i.e., seeing criminals go free and the ineffectiveness of the judicial system). Mid-career officers were more likely exposed to seeing a colleague injured/killed, attending to a fatal accident, and

assignment of increased responsibly. Late career officers frequently experienced overtime demands/long working hours, while early career officers were likely to encounter inadequate support from supervisors.

However, when the intensity of stress is considered, mid-career officers appear to the most affected. Overtime demands/long working hours, seeing a colleague injured/killed, policing high-crime communities, job conflict, and poor communication within the organisation were more acutely experienced by mid-career officers. The general pattern of results is supportive of existing research that purports curvilinear relationships with job tenure and stress among police officers (Burke, 1989; Garcia et al., 2004; Violanti & Aron, 1995). Researchers suggest that early career officers tend to be optimistic and enthusiastic about the job in the formative years and are, therefore, less affected by stressors. However, by mid-career stage, the cumulative experience of working with colleagues, outside agencies and interacting with citizens eventually reduces enthusiasm, and different aspects of the job begin to take a toll. Subsequently, officers may develop skills and or obtain desired rank assignments that may help to compensate for the effects of stress (Laufersweiler-Dwyer & Dwyer, 2000; Garcia et al., 2004; Gudjonsson & Adlam, 1985; Violanti & Aron, 1995).

Overall, these findings suggest that the experience of police work is not necessarily homogenous and there are differential effects across gender, rank and job tenure. Approaches to successful stress management, therefore, have to take these specific differences into account and intervention strategies be tailored accordingly. Continuous monitoring and evaluation of how different groups of officers are affected by their job should also be done to maintain an accurate profile of their sources of stress.

4.4.5. Chapter summary.

The Jamaican police are an understudied population, and it was necessary to identify the specific sources of stress affecting this group of officers. It is evident from the consistent results across two studies that stressors within the organisation are a major problem for these police officers, a finding that that is not dissimilar to previous literature from other nations. However, local conditions, particularly the high rate of violent crime, give rise to stressors that are also of significant concern. Further, there is some evidence to suggest that the experience of police stress in not homogeneously distributed and may vary across gender, rank and job tenure.

Overall, this research provided valuable insights into the specific events that are problematic for these officers. However, this approach to evaluating stress has its limitations. The assessment of stress here is simply that of the perception of a stimulus and findings are primarily descriptive in nature. As mentioned in Chapter 2, comprehensive approaches to stress in policing, including frameworks that explain the role of occupational and individual characteristics in the stress process are few. In an attempt to address these concerns, the research described in the following chapter draws on a contemporary theoretical framework that emphasises the role of personal and occupational variables.

Chapter 5

Exploring a Model of Job Stress in the Police

5.1. Overview of Chapter

Despite the strong influence of organisational characteristics, it is surprising that the application of common theoretical models of occupational stress that encompass broad constructs within occupational settings is understated in the police literature (Houdmont et al., 2012). As discussed in Chapter 2, the DCS and ERI models are two of the most widely used stress models in occupational research. However, these frameworks have been criticised for being overly simplistic and not accounting for individual experiences. On the other hand, more complex theories such as the transactional models (Cox, 1993; Lazarus & Folkman, 1984) consider multiple factors in explaining the stress process. For instance, these frameworks emphasise the individual's interpretation of their environment and themselves as important in determining stress-related outcomes (Cox & Griffiths, 2010). A second component of transactional models is the appraisal process, which reflects an individual's assessment of how threatening a situation is and their ability to meet the demands made on them (Lazarus, 1999). However, because of the complexities involved in the appraisal processes, such cognitive-relational models have been criticised for being impractical for use in occupational settings (Mark & Smith, 2008).

As discussed in Chapter 2, the DRIVE model (Mark & Smith, 2008) was developed to counterbalance the over simplicity and complexities of previously mentioned theories, and as such was considered an appropriate framework to guide the current research. Specifically, the model incorporates important work characteristics inherent to both DCS and ERI models alongside equally important individual characteristics and subjective perceptions. The framework proposes direct effects of work and individual

characteristics on stress-related outcomes, moderating effects of work resources and coping, and intermediate appraisal links. However, while interaction and indirect effects are important components of the model and will be explored in later sections of this thesis, it was first necessary to establish direct effects for individual components of the model before more intricate applications and analyses are conducted. It is noted that in the original model, coping styles and attributional styles were the main individual variables of interest. However, in the current application, personality dimensions are considered rather than attributional styles. Personality characteristics, such as dimensions of the "Big Five" model, have been frequently used in occupational stress research (Hart & Cotton, 1995; Hart et al., 1994; 1995).

The focus of this chapter, therefore, was to establish the most strongly and consistently supported main effect models. The applicability of the main components model is tested in two studies, one using a sample of police officers from the UK and the other using a sample from the main country of interest, Jamaica. The rationale and description of the studies are provided in the next sections of the chapter.

5.2 Exploring a Model of Police Stress: A Case of UK Police

5.2.1. Introduction and rationale.

The first study presented in this chapter examines the main effects of individual components of the proposed research model using a sample of police officers from the UK. The UK is one of the leading nations for research on occupational stress. Moreover, the constructs that comprise the theoretical framework have been widely used and accepted in this and other developed countries (see Häusser et al., 2010). Therefore, this population was considered ideal for obtaining a benchmark of the relationships between the

antecedent variables (work characteristics, coping styles, and personality characteristics) and well-being outcomes, before considering the Jamaican sample.

There has been relatively little research in recent years concerning work-related stress in the UK police population, and even fewer that assess police stress and well-being by applying contemporary frameworks such as dimensions of the DCS, ERI model. Houdmont et al. (2012) noted that assessment of "organisational psychosocial hazards" in UK police officers was concentrated in the 1990s, and there was a need for more contemporary studies given the changing nature of the policing environment. In addition to the paucity of studies applying independent dimensions from the above frameworks, even fewer have considered a combined model. Research, for example, has shown that health-related outcomes are best predicted by a combination of ERI and DCS models (Cox & Griffiths, 2010).

The current research, therefore, sought to take a novel approach by incorporating combined dimensions of DCS and ERI models as well as the HSE Management Standards in predicting well-being outcomes. The research also examines the predictive power of personality characteristics and coping styles. As mentioned previously, the aim of the current research is to establish the independent contribution of each set of predictor variables.

5.2.2. Methods.

5.2.2.1. Participants.

Participant characteristics for this study were described in Chapter 4.

5.2.2.2. Materials.

A detailed description of the measures used in this study was provided in Chapter 3. To summarise, for the purpose of the current research, demographic characteristics,

work characteristics, coping styles, personality characteristics, perceived job stress, job satisfaction, and personal well-being outcomes are the variables of interest.

5.2.2.3. Procedure.

The procedure followed to collect data from this population was outlined in detail in Chapter 3.

5.2.2.4. Analytic approach.

First, sets of variables (i.e., items measuring work characteristics, coping styles, core self-evaluations, and psychological well-being outcomes) were subjected to factor analyses to reduce variables into smaller components for further multivariate analyses. Previous research has used similar methods of combining these types of variables (Calnan et al., 2004; Galvin & Smith, 2015; Smith et al., 2009).

Preliminary relationships were examined using Pearson Product Moment correlations. Subsequently, hierarchical regressions were used to examine the relationships between work characteristics, coping styles, personality characteristics and well-being outcomes, while adjusting for demographic characteristics.

Fourteen psychosomatic symptoms were assessed and a total score calculated; however, based on the distribution of the data in both the UK and Jamaican sample, the total number of symptoms was divided into two categories based on a cut-off point that represented a similar ratio in both samples. The lower category consisted of reports of up to four symptoms while the upper category consisted of participants reporting five or more symptoms. Logistic regression analysis was performed to assess the relationship between independent variables and number of reported symptoms.

5.2.3. Results

5.2.3.1. Factor analysis of work characteristics.

The items representing the characteristics of the job were subjected to principal component (PCA) analysis with direct oblimin rotation. An initial PCA revealed four components explaining 71%, of the total of variance. However, inspection of the scree plot revealed a break at the second component and another break at the third. Only one item loaded strongly on the fourth component. To obtain a more parsimonious factor loading, a second PCA was performed, this time, constraining the analysis to a three-factor solution. The pattern matrix produced a more logical factor structure which explained 61% of total variance. The factors were labelled: negative job characteristics, positive job characteristics and work support (see Table 5.1).

Table 5.1. *PCA with Oblimin Rotation of the Three-Factor Solution for Work Characteristics (UK Sample)*

	Rotated Factor Loadings		
Items	Work support	Neg. Job characteristics	Pos. Job characteristics
Supervisor support	**.92**	.14	.08
Supervisor relationship	**.90**	.16	.07
Bullying*	**.64**	-.28	-.18
Colleague support	**.57**	-.13	.18
Over-commitment	-.11	**.73**	.01
Demands	.15	**.66**	-.40
Role ambiguity	-.03	**.65**	.11
Rewards	.14	.27	**.79**
Control	.05	-.04	**.77**
Lack of consultation*	.02	-.32	**.59**
Kaiser-Myer-Olkin			**.65**
Eigenvalues	**2.80**	**1.72**	**1.36**
% of Variance	**29.98**	**17.22**	**13.62**

Note. * indicates that items were reverse-coded

5.2.3.2. Factor analysis of coping styles.

PCA using oblimin rotation was also performed on coping measures. A two-factor solution was obtained for coping, namely, emotion-focused coping and action-oriented

coping. The components explained 58% of total variance. Table 5.2 shows the factor loadings.

Table 5.2. *PCA with Oblimin Rotation of the Two-Factor Solution of Coping Styles (UK Sample)*

	Rotated Factor Loadings	
Items	Emotion-focused coping	Problem-focused coping
Wishful thinking	**.83**	-.05
Avoidance	**.75**	.05
Self-blame	**.72**	-.01
Problem-focused	-.12	**.75**
Social support	.12	**.73**
Kaiser-Myer-Olkin		**.60**
Eigenvalues	**1.79**	**1.10**
% of Variance	**35.73**	**22.02**

5.2.3.3. Factor analysis of core self-evaluations.

PCA for self-evaluations resulted in the three items: self-efficacy, optimism, and positive self-esteem, loading onto one factor and explaining 67% of total variance (see Table 5.3).

Table 5.3. *PCA with Oblimin Rotation of the One-Factor Solution of Self-Evaluations (UK Sample)*

	Rotated factor loading
Items	Positive self-evaluations
Positive self-esteem	**.87**
Optimism	**.83**
Self-efficacy	**.76**
Kaiser-Myer-Olkin	**.66**
Eigenvalues	**2.02**
% of Variance	**67.33**

5.2.3.4. Factor analysis of psychological well-being.

Table 5.4 shows the two-factor solution for items that were indicators of psychological well-being outcomes. An initial PCA revealed a single component with

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positive well-being items loading strongly but relatively weaker for negative well-being items. However, because the research aims to take into account both negative and positive well-being dimensions, a second PCA was performed with a two-factor solution constraint. The resulting factors explained 78% of total variance and were labelled: positive well-being and psychological distress.

Table 5.4. *PCA with Oblimin Rotation of the Two-Factor Solution of Well-Being Outcomes (UK Sample)*

	Rotated Factor Loadings	
Items	Positive well-being	Psychological distress
I have been feeling good about my relationships with others	**.93**	.17
I have been energetic and involved in things in my life	**.92**	.06
I have been feeling in good spirits	**.94**	-.13
I have been feeling useful and having good mental health	**.77**	-.21
Happiness	**.66**	-.27
I have been feeling relaxed	**.50**	-.44
Anxiety	.06	**.98**
Depression	-.15	**.80**
Kaiser-Myer-Olkin		**.89**
Eigenvalues	**5.37**	**.89**
% of Variance	**67.16**	**11.14**

5.2.3.5. Bivariate analysis.

Inter-correlations between the main study variables are shown in Table 5.5. There were no correlations above .8 between any independent variables which suggest no evidence of multicollinearity. Significant correlations between independent variables and well-being outcomes were examined.

In terms of work characteristics, work support and positive job characteristics showed significant correlations with all six outcome measures, while negative job characteristics were significantly associated with all other outcomes except job

satisfaction. All correlations were in the expected direction and were in the moderate to strong range. Negative job characteristics had the strongest relationship with job stress, $r = .62, p < .01$; and positive job characteristics, $r = .50, p < .01$ and work support, $r = .49, p < .01$ with positive well-being.

Emotion-focused coping showed significant weak to moderate correlations with all other well-being outcomes except psychosomatic symptoms. Correlation coefficients ranged from $r = -.23, p < .05$ (general health) to $r = .43, p < .01$ (psychological distress). Action-oriented was significantly and positively associated with job satisfaction, $r = .27, p < .01$; positive well-being, $r = .36, p < .01$; and general health, $r = .26, p < .01$.

Considering the personality variables, positive self-evaluations showed significant correlations with all well-being outcomes with coefficients ranging from $r = -.32, p < .01$ (psychosomatic symptoms) to $r = .73, p < .01$ (positive well-being). Extraversion was significantly associated with all other outcomes except general health and psychosomatic symptoms, showing the strongest correlation with psychological distress, $r = -.38, p < .01$ and the weakest with job stress, $r = -.28, p < .01$. Agreeableness, $r = .22, p < .05$; conscientiousness, $r = .19, p < .05$; emotional stability, $r = .25, p < .01$; and openness, $r = .28, p < .01$, were all significantly correlated with positive well-being. Conscientiousness was also associated with job satisfaction, $r = .25, p < .01$ and openness with general health, $r = .21, p < .05$.

Job tenure was the only demographic variable that showed a significant correlation with any of the well-being outcomes. As length of service in the police force increased, job satisfaction decreased, $r = -.19, p < .05$.

Table 5.5. *Pearson Product Moment Correlations Between Independent Variables and Well-being Outcomes (UK sample)*

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1.	Job stress	-																		
2.	Job satisfaction	-.33**	-																	
3.	Psychological distress	.71**	-.54**	-																
4.	Positive well-being	-.51**	.56**	-.68**	-															
5.	General health	-.46**	.51**	-.62**	.64**	-														
6.	Psychosomatic symptoms	.50*	-.44**	.51**	-.45**	-.48**	-													
7.	Neg. job characteristics	.62**	-.16	.50**	-.33**	-.22*	.23*	-												
8.	Work support	-.32**	.44**	-.47**	.50**	.39**	-.38**	-.18	-											
9.	Pos. job characteristics	-.39**	.37**	-.37**	.49**	.41**	-.32**	-.24**	.30**	-										
10.	Action-oriented coping	-.06	.27**	-.16	.36**	.26**	-.16	-.04	.18	.32**	-									
11.	Emotion-focused coping	.37**	-.27**	.43**	-.31**	-.23*	.15	.42**	-.17	-.09	-.02	-								
12.	Pos. self-evaluations	-.34**	.54**	-.57**	.73**	.65**	-.32**	-.24**	.36**	.37**	.40**	-.29**	-							
13.	Extraversion	-.28**	.29**	-.38**	.31**	.11	-.13	-.23*	.23*	.13	.13	-.48**	.12	-						
14.	Agreeableness	-.02	.11	.01	.22*	.11	-.04	-.11	-.03	-.09	.11	.17	.22*	.02	-					
15.	Conscientiousness	.04	.25**	-.04	.19*	.07	-.02	-.02	.09	-.02	.20*	-.18	.24*	-.06	.50**	-				
16.	Emotional stability	-.10	.10	-.16	.25**	.16	-.16	-.18	.08	-.17	.06	-.29**	.30**	.18	.49**	.45**	-			
17.	Openness	-.01	.15	-.12	.28**	.21*	-.03	-.01	.04	.07	.31**	-.13	.41**	-.02	.42**	.25**	.44**	-		
18.	Years of service	-.00	-.19*	.04	-.09	-.14	.10	-.05	-.12	-.20*	-.11	-.04	-.10	.08	.02	.14	.06	-.13	-	
19.	Gender	.08	.14	.12	-.03	-.19	-	.11	.05	.07	.15	.04	-.10	.22*	.03	.12	-.04	-.07	-.07	-
20.	Rank	-.07	-.02	-.06	.00	.03	-	-.04	-.16	.13	.04	-.11	.05	.22*	.10	-.19	-.08	.04	.18	-

Note. Gender: male = 0, female = 1. Rank: constable = 0, above constable = 1. Psychosomatic symptoms: ≤ 4 = 0, 5+ = 1

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

5.2.3.6. Multivariate analyses: work characteristics and outcomes.

Standardised regression coefficients for the hierarchical regression model are shown in Table 5.6. It is noted here that demographic characteristics, on a whole, did not significantly contribute to any of the models, though gender was significantly associated with general health in the final model with work characteristics and coping styles. All three work conditions were related to perceived job stress and positive well-being. The models altogether accounted for 46% and 39% of explained variance respectively. Negative job characteristics were the strongest contributor to perceived stress by beta weight, while work support had the strongest influence on well-being.

Job satisfaction and general health were predicted by 'positive' work factors (i.e., work support and positive job characteristics), with work support having the strongest influence by beta weight in both models. The models accounted for 27% and 31% of explained variance in job satisfaction and general health respectively. For psychological distress, negative job characteristics and work support were the most important variables, with the model accounting for 45% of explained variance.

Logistic regression analysis was used to determine the predictors of number of reported psychosomatic symptoms. The initial model containing only demographic variables was significant, $\chi^2(3, N = 110) = 10.09$, $p < .05$, and explained between 9% (Cox and Snell R square) and 12% (Nagelkerke R square) of variance. The model including work characteristics, $\chi^2(6, N = 110) = 37.26$, $p < .001$, explained between 29% and 39% of variance in symptoms and accounted for 74.5% of cases. Gender, OR = 5.31, C.I. [1.95, 14.44], $p < .001$, work support, OR = .90, C.I. [.84, .96], $p < .01$, and positive job characteristics, OR = .89, C.I. [.81, .98], $p < .05$ were the most important predictors (see Appendix E).

Table 5.6. *Standardised Regression Coefficients (β) for Demographic and Work Characteristics as Predictors of Outcomes (UK Sample)*

	Perceived stress	Job satisfaction	Psychological distress	Positive well-being	General health
	β	β	β	β	β
Step 1					
Gender	.08	.13	.12	-.03	-.19*
Rank	-.07	.02	-.07	.02	.06
Years of service	.02	-.19	.06	-.10	-.17
F	.436	2.00	.79	.36	2.41
R^2	.01	.05	.02	.01	.06
Adjusted R^2	-.02	.03	-.01	-.02	.04
Step 2					
Gender	.05	.11	.11	-.04	-.22**
Rank	-.05	.03	-.09	.01	.05
Years of service	-.03	-.11	.01	.00	-.08
Negative job characteristics	.50***	-.06	.35***	-.18*	-.05
Work support	-.19*	.35***	-.40***	.36***	.33***
Positive job characteristics	-.21**	.20*	-.15	.33**	.28**
F	14.97***	6.30***	14.10***	11.21***	7.75***
R^2	.46	.27	.45	.39	.31
Adjusted R^2	.43	.22	.42	.36	.27
ΔR^2	.45***	.21***	.43***	.38***	.25***

Note. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

5.2.3.7. Coping styles and outcomes.

Table 6.7 shows the regression model consisting of coping styles as predictors. The strongest predicted model was with positive well-being as outcome (R^2 = .25), with both coping styles contributing significantly to well-being. Both action-oriented and emotion-focused coping were also significantly associated with job satisfaction and general health and accounted for 19% and 18% of explained variance respectively. Based on standardised beta weight, emotion-focused coping had the stronger influence on job satisfaction and general health, while action-oriented coping was more important for positive well-being. On the other hand, perceived job stress and psychological distress were only significantly predicted by emotion-focused coping styles with the overall models accounting for 24% and 16% of explained variance respectively.

Logistic regression analysis showed a significant model, χ^2 (5, *N* = 110) = 18.03, *p* < .01 that accounted for between 15% and 20% of variance in psychosomatic symptoms (see Appendix E). The model correctly classified 62.7% of cases. Along with gender, action-oriented coping was the only other variable significantly association with number of reported symptoms, OR = .85, C.I. [.75, .97], *p* < .05.

Table 5.7. *Standardised Regression Coefficients (β) for Demographic Characteristics and Coping Styles as Predictors of Outcomes (UK Sample)*

	Perceived stress	Job satisfaction	Psychological distress	Positive well-being	General health
	β	β	β	β	β
Step 1					
Gender	.08	.13	.12	-.03	-.19*
Rank	-.07	.02	-.07	.02	.06
Years of service	.02	-.19	.06	-.10	-.17
F	.436	2.00	.79	.36	2.41
R^2	.01	.05	.02	.01	.06
Adjusted R^2	-.02	.03	-.01	-.02	.04
Step 2					
Gender	.07	.11	.13	-.07	-.22*
Rank	-.03	-.02	-.02	-.03	.02
Years of service	.02	-.17	.06	-.06	-.15
Action-oriented coping	-.03	.22*	-.13	.37***	.23*
Emotion-focused coping	.38***	-.29**	.45***	-.31***	-.25**
F	3.89**	4.84***	6.61***	7.01***	4.66***
R^2	.16	.19	.24	.25	.18
Adjusted R^2	.12	.15	.20	.22	.14
ΔR^2	.14***	.13***	.22***	.24***	.12***

Note. *p < 0.05, **p < 0.01, ***p < 0.001

5.2.3.8. Personality characteristics and outcomes.

Table 5.8 shows the regression model consisting of personality characteristics as predictors. On a whole, the models accounted for between 20% (perceived job stress) and 61% (positive well-being) of variance among well-being outcomes. Positive self-evaluations and extraversion were the most important predictors of perceived job stress, job satisfaction, psychological distress, and positive well-being. Except for job satisfaction, positive self-evaluation had the strongest influence on all other outcomes by beta weight. Job satisfaction was also associated with conscientiousness, and positive self-evaluation was the only predictor of general health.

The logistic regression model was significant, χ^2 (5, $N = 110$) = 28.20, $p < .001$ for psychosomatic symptoms (see Appendix E). The full model accounted for between 23% and 31% of the variance in number of reported symptoms and correctly classified 72.7% of cases. However, other than gender, positive self-evaluations was only personality variable to make an independent significant contribution, OR = .85, C.I. [.76, .95], $p < .01$.

Table 5.8. *Standardised Regression Coefficients (β) for Demographic and Personality Characteristics as Predictors of Outcomes (UK Sample)*

	Perceived stress	Job satisfaction	Psychological distress	Positive well-being	General health
	β	β	β	β	β
Step 1					
Gender	.08	.13	.12	-.03	-.19*
Rank	-.07	.02	-.07	.02	.06
Years of service	.02	-.19	.06	-.10	-.17
F	.436	2.00	.79	.36	2.41
R^2	.01	.05	.02	.01	.06
Adjusted R^2	-.02	.03	-.01	-.02	.04
Step 2					
Gender	.10	.09	.15	-.02	-.14
Rank	.01	-.04	.06	-.09	-.01
Years of service	-.01	-.18*	.02	-.03	-.10
Positive self-evaluations	-.35***	.51***	-.53***	.70***	.63***
Extraversion	-.26*	.27***	-.38***	.26***	.07
Agreeableness	-.01	-.08	.16	.04	-.01
Conscientiousness	.08	.25**	-.02	.00	-.06
Emotional Stability	-.04	-.14	-.03	-.02	.03
Openness	.13	-.02	.03	.02	-.05
F	2.88**	8.64***	9.84***	17.66***	8.89***
R^2	.20	.44	.47	.61	.44
Adjusted R^2	.13	.39	.42	.58	.39
ΔR^2	.19***	.38***	.45***	.60***	.38***

Note. *p < 0.05, **p < 0.01, ***p < 0.001

5.2.4. Discussion.

The use of contemporary stress models such as DCS, ERI, and the HSE Management Standard in police research is relatively limited, and studies that have assessed combined dimensions from these models are even fewer. Furthermore, the focus of police stress research has predominantly been on occupational variables with less attention to individual differences such as coping and personality characteristics. This study, therefore, sought to expand on previous literature and build a further argument for the inclusion of these variables in future police studies.

5.2.4.1. Work characteristics and outcomes.

Findings demonstrated that combined dimensions of the DCS, ERI and HSE models showed a reasonably ability to predict occupational and personal well-being outcomes. Work characteristics, on a whole, were most predictive of perceived job stress, psychological distress, positive well-being, and psychosomatic symptoms, in that order, and least predictive of job satisfaction. The models after adjusting for demographic characteristics accounted for between 27% and 46% of explained variance in outcomes.

Relationships between specific independent variables and outcomes were examined. Support at work had the most consistent influence, as it was significant for all outcomes. Examination of beta weights showed that work support was also the strongest predictor of all other well-being outcomes except perceived job stress. The strong influence of work support is consistent with findings in the literature. Prior research has also shown that work relationships are important for police officers' health and are likely to affect how they appraise their jobs (Allisey et al., 2013; Brough & Frame, 2004; Gabarino et al. 2013; Noblet et al., 2009a, 2009b). Based on these results, it can be

reasoned that initiatives aimed at improving occupational and personal well-being should focus on promoting a supportive work environment.

Positive job characteristics were associated with all other outcomes, except psychological distress, whereas negative job characteristics predicted three outcomes: perceived job stress, psychological distress and to a lesser extent positive well-being. Prior studies have demonstrated the strong explanatory power of variables that make up the component, 'job characteristics'. For instance, consistent support has been found for job control, and the reward dimension of the ERI model in predicting job appraisals and well-being outcomes (Allisey et al., 2013; Gabarino et al., 2013; Houdmont, et al., 2013; Noblet et al., 2009a, 2009b). On the other hand, whereas some studies have found support for the predictive ability of negative factors such as job demands (Houdmont et al., 2013; Noblet et al., 2009a, 2009b), findings are not always consistent (Allisey et al., 2013; Gabarino et al., 2013). Cumulatively, what these results show is that the absence or presence of positive job factors (i.e., work support, positive job characteristics) are significant determinants of work and health outcomes, perhaps in some cases more so than the negative aspects of the job. These findings are generally supportive of existing literature that suggest that employees in demanding jobs with few reinforcing elements are likely to have poorer well-being outcomes (Karasek, 1979; Mark & Smith, 2008; Siegrist, 1996).

5.2.4.2. Coping styles and outcomes.

The coping models, relative to the other models, were least predictive of outcomes. This may not be surprising as other police studies have shown that coping has a lesser effect on well-being relative to other factors (Hart & Cotton, 2000; Hart et al., 1995). In the current study, the coping models (after adjusting for demographic variables) accounted for 15% (perceived job stress) to 25% (positive well-being) of explained variance among

outcomes. Based on R-square values, psychological outcomes (i.e., psychological distress and positive well-being) were most strongly predicted by coping.

Emotive coping was consistent in predicting all well-being outcomes. Action-oriented coping was associated with job satisfaction, positive well-being and general health, but, except for positive well-being, emotion-focused had the stronger influence by beta weight. These findings provide both supportive and contrasting evidence in relation to prior police research. Regarding occupational outcomes, previous studies have shown that emotion-focused coping is associated with higher levels of job stress (Gershon et al., 2009; Haar & Morash, 1999). However, there is little support in the police literature for a direct relationship between coping strategies and job satisfaction (Burke, 1994; Kirkcaldy et al., 1995a). Consistent with current findings, studies have shown that using emotional strategies to cope with job stress is associated with poorer psychological and physical health outcomes (Burke, 1994; He et al., 2002; Pasillas, Follete, & Perumean-Chaney, 2006; Violant, 1992; Yun et al., 2013). Studies have also shown that distress is reduced in police officers who use problem-solving coping (e.g., Violanti, 1992), but this finding was not supported in the current study.

5.2.4.3. Personality characteristics and outcomes.

Personality characteristics, altogether, accounted for a substantial amount of variance in the well-being outcomes ranging from 20% (perceived job stress) to 61% (positive well-being). However, much of this influence can be attributed to two variables: positive self-evaluations and extraversion. There is strong support for the contribution of personality variables in the extant literature, particularly extraversion and neuroticism (i.e., low emotional stability) (Hart & Cotton, 2000; Hart et al., 1995; Lau et al., 2006; Ortega et al., 2007. In fact, Hart and colleagues (1995) studied the effects of Australian police

officers' negative and positive work experience, coping processes, and personality on their psychological well-being and found that neuroticism and extraversion were the strongest determinants of well-being. While the current study did not show much evidence for the predictive power of emotional stability, findings indicate other dispositional characteristics such as core self-evaluations (i.e., self-efficacy, self-esteem, and optimism) are significant determinants of well-being. Overall, current and existing research demonstrated that personality characteristics are pertinent in trying to understand stress and well-being among police officers.

5.2.5. Summary of findings.

Findings from the current UK study suggest that combined dimensions of contemporary stress models show strong predictive validity for occupational and personal well-being outcomes. Results also suggest that work and personality characteristics (mainly positive self-evaluations and extraversion) are important determinants of well-being outcomes whereas coping styles show relatively weaker associations. It is noted that independent factors are likely to have varying influence on specific well-being outcomes and this should be considered based on the outcome of interest to the researcher. Overall the results suggest that these sets of variables are likely to be important determinants of well-being outcomes in police officers. Therefore, it is worthwhile considering their additive influence in future studies.

However, while the models have found support in the sample of UK police, it is unclear whether they can be fully adopted in the Jamaican context. Therefore, the study that follows uses similar methods in a sample of Jamaican police officers to determine whether the models can be useful in understanding police stress and well-being in this population.

5.3. Exploring a Model of Police Stress: A Case of Jamaican Police

5.3.1. Introduction and rationale.

Components of the proposed research model based on literature from developing nations, and which has found favour in the UK study, will be tested on a sample of Jamaican officers in this section. As noted in earlier chapters, the Jamaican police are an understudied group. Therefore, preliminary analyses were performed on a small sample of Jamaican officers to determine the applicability and efficacy of the research approach in this population.

Burke (2010) asserts that there is an increasing need to understand occupational stress and well-being research across different cultural and national contexts, particularly extending research from industrialised developed countries to emerging and developing economies that are under-researched. One of the suggestions he makes for advancing our understanding of workplace stress and well-being is to apply theories, concepts and measures previously used in developed countries to other contexts. Although various countries are likely to differ on a number of factors, there is evidence to suggest that measures created in North America, for example, can be relevant to other countries and have similar and desirable psychometric properties to those obtained in North American studies (Burke, 2010).

With these arguments in mind, the present research applied the same measures used in the study on UK police to examine the extent to which work characteristics, coping styles and personality characteristics independently predicted well-being outcomes in the Jamaican police. Importantly, using the same methodology in both samples provided an opportunity to make cross-study observations.

5.3.2. Methods.

5.3.2.1. Participants.

The participant profile for this study was described in detail in Chapter 4.

5.3.2.2. Materials and procedures.

The materials used in this study are the same as those used in the earlier UK study. A detailed description of the materials and procedures was provided in Chapter 3.

5.3.2.3. Analytic approach.

Analyses performed for the current study are similar to those described in the UK study.

5.3.3. Results

5.3.3.1. Factor analysis of work characteristics.

Factor analysis was performed to reduce the number of items related to work characteristics into smaller factors. PCA revealed three components explaining 58%, of the total variance. Inspection of the scree plot revealed a clear break at the third component. Examination of the factor loadings showed relatively distinct components. The factors loadings were similar to that observed in the UK study except for the interchange of role clarity and lack of consultation. In the previous study, these two items loaded onto negative job characteristics and positive job characteristics components respectively. In the current study, role clarity loaded onto positive characteristics and consultation onto negative job characteristics (see Table 5.9). In both studies, these two items had the lowest factor loadings on their respective components.

Table 5.9. *PCA with Oblimin Rotation of the Three-Factor Solution of Work Characteristics (Jamaican Sample)*

Items	Rotated Factor Loadings		
	Work support	Neg. Job characteristics	Pos. Job characteristics
Supervisor relationship	**.77**	.16	.19
Supervisor support	**.74**	.24	.29
Colleague support	**.71**	.04	-.00
Bullying*	**.70**	-.36	.21
Demands	-.05	**.72**	-.14
Over-commitment	.31	**.71**	.02
Lack of consultation	-.43	**.60**	-.07
Rewards	.06	.10	**.77**
Control	.03	-.13	**.66**
Role ambiguity*	-.04	-.41	**.50**
Kaiser-Myer-Olkin			.74
Eigenvalues	**2.98**	**1.86**	**1.01**
% of variance	**29.75**	**18.55**	**10.08**

Note. * indicate that the item was reverse coded.

5.3.3.2. Factor analysis of coping styles.

Similar to the UK study, a two-factor solution was obtained for coping styles (i.e., emotion-focused coping and action-oriented coping) explaining 61% of total variance. Factor loadings are summarised in Table 5.10.

Table 5.10. *PCA with Oblimin Rotation of the Two-Factor Solution of Coping Styles (Jamaican Sample)*

Items	Rotated Factor Loadings	
	Emotion-focused coping	Problem-focused coping
Wishful thinking	**.83**	.11
Self-blame	**.76**	-.05
Avoidance	**.71**	-.06
Social support	.12	**.81**
Problem-focused	-.13	**.77**
Kaiser-Myer-Olkin		.57
Eigenvalues	**1.81**	**1.25**
% of variance	**36.11**	**25.07**

5.3.3.3. Factor analysis of core self-evaluations.

As shown in Table 5.11, the three items, self-efficacy, optimism, and positive self-esteem loaded onto one factor and explained 68% of the total variance.

Table 5.11. *PCA with Oblimin Rotation of the One-Factor Solution of Self-Evaluations (Jamaican Sample)*

	Rotated factor loading
Items	Positive self-evaluations
Positive self-esteem	**.90**
Self-efficacy	**.88**
Optimism	**.67**
Kaiser-Myer-Olkin	**.61**
Eigenvalues	**2.04**
% of variance	**67.89**

5.3.3.4. Factor analysis of psychological well-being.

PCA revealed the presence of two components for the psychological well-being items, explaining 69% of total variance. The factors were similarly labelled as in the UK study: positive well-being and psychological distress (see Table 5.12).

Table 5.12. *PCA with Oblimin Rotation of the Two-Factor Solution of Well-Being Outcomes (Jamaican Sample)*

	Rotated Factor Loadings	
Items	Positive well-being	Psychological distress
I have been energetic and involved in things in my life	**.88**	.10
I have been feeling good about my relationships with others	**.84**	.16
I have been feeling useful and having good mental health	**.84**	-.05
I have been feeling relaxed	**.80**	-.07
I have been feeling in good spirits	**.75**	-.16
Happiness	**.64**	-.16
Anxiety	.03	**.90**
Depression	-.09	**.83**
Kaiser-Myer-Olkin		**.94**
Eigenvalues	**4.35**	**1.18**
% of variance	**54.39**	**14.69**

5.3.3.5. Bivariate analysis.

Inter-correlations among study variables for the sample are shown in Table 5.13. There were no correlations above .8 between any independent variables which suggest no evidence of multicollinearity.

In this sample of police officers, positive job characteristics showed significant correlations with all other well-being outcomes except number of reported psychosomatic symptoms. Both negative job characteristics and work support were significantly related to all other outcomes except general health and psychosomatic symptoms. Correlations were weak to moderate and in the expected directions. Negative job characteristics had the strongest relationship with psychological distress, $r = .44$, $p < .01$; and work support, $r = -.34$, $p < .01$, and positive job characteristics, $r = -.40$, $p < .01$ with perceived job stress.

Emotion-focused coping showed significant correlations with all other well-being outcomes except job satisfaction and general health. Correlation coefficients ranged from $r = -.25$, $p < .01$ (positive well-being) to $r = .50$, $p < .01$ (psychological distress). Action-oriented was significantly but weakly associated with only one outcome, positive well-being, $r = .20$, $p < .01$.

Considering personality characteristics, positive self-evaluations and conscientiousness showed significant correlations with all other well-being outcomes except perceived job stress and number of reported psychosomatic symptoms. Both positive self-evaluations, $r = .53$, $p < .01$ and conscientiousness, $r = .38$, $p < .01$ had the strongest correlation with positive well-being. Extraversion, $r = .29$, $p < .01$; emotional stability, $r = .20$, $p < .05$; and openness, $r = .31$, $p < .01$ were also significantly associated with positive well-being. Weak, but significant correlations were found between openness

and number of reported symptoms, $r = -.21$, $p < .05$, and agreeableness and job satisfaction, $r = .18$, $p < .05$.

Rank was the only demographic variable that showed a significant correlation with any of the well-being outcomes. Though a weak correlation, results showed that job satisfaction was higher among participants above constable rank, $r = .19$, $p < .05$.

Table 5.13. *Pearson Product Moment Correlations Between Independent Variables and Well-being Outcomes (Jamaican Sample)*

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1.	Job stress	-																		
2.	Job satisfaction	-.19*	-																	
3.	Psychological distress	.38**	-.17	-																
4.	Positive well-being	-.08	.25**	-.45**	-															
5.	General health	-.15	.15	-.19*	.37**	-														
6.	Psychosomatic symptoms	.28**	-.12	.29**	-.21*	-.36**	-													
7.	Neg. job characteristics	.39**	-.18*	.44**	-.19*	-.11	.17	-												
8.	Work support	-.34**	.22*	-.25**	.21*	.11	-.06	-.11	-											
9.	Pos. job characteristics	-.40**	.25**	-.33**	.34**	.23**	-.19	-.34**	.33**	-										
10.	Action-oriented coping	.11	-.01	-.16	.20*	-.01	.02	.04	.27**	.12	-									
11.	Emotion-focused coping	.26**	-.04	.50**	-.25**	-.04	.26**	.28**	-.15	-.22*	-.02	-								
12.	Core self-evaluations	-.09	.20*	-.26**	.53**	.21*	-.09	.01	.33**	.31**	.29**	-.31**	-							
13.	Extraversion	.04	.12	-.11	.29**	.07	-.06	-.01	.00	.07	.09	-.21*	.23**	-						
14.	Agreeableness	-.11	.18*	.09	.01	-.07	-.06	.04	.06	.13	.04	.15	.08	.08	-					
15.	Conscientiousness	-.05	.18*	-.21*	.38**	.18*	.01	.05	.20*	-.05	.16	-.05	.33**	-.08	.06	-				
16.	Emotional stability	-.06	.11	-.17	.20*	.06	-.04	.16	.30**	.16	.34**	-.15	.40**	.13	.15	.18*	-			
17.	Openness	-.03	.05	-.16	.31**	.05	-.21*	.04	.14	.19*	.28**	-.16	.32**	.11	.20*	.26**	.28**	-		
18.	Years of service	-.01	-.00	-.04	.04	.04	-.12	.01	.10	.02	-.01	-.10	-.02	.17	.09	.08	-.041	.13	-	
19.	Gender	.03	-.00	.13	-.04	-.03	-	.01	-.01	-.08	.00	.22*	-.08	.04	.06	-.01	-.06	.00	-.10	-
20.	Rank	-.09	.19*	-.13	.10	.09	-	-.08	.07	.14	-.05	-.11	.06	.01	.08	.18*	-.03	.12	.62**	-

Note: Gender: male = 0, female = 1. Rank: constable = 0, above constable = 1. Psychosomatic symptoms: ≤ 4 = 0, 5+ = 1

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

5.3.3.6. Multivariate analyses: work characteristics and outcomes.

Standardised regression coefficients for the hierarchical regression model are shown in Table 5.14. Results showed that the model for general health did not reach statistical significance. Interestingly, while the model for job satisfaction reached statistical significance, rank was the only significant predictor. Similarly, only positive job characteristics showed a weak but significant association with positive well-being. On the other hand, all three elements of the work environment were significantly associated with perceived job stress, with negative job characteristics having the strongest influence by beta weight. Psychological distress was also best predicted by negative job characteristics. The significant models accounted for 12%, 26%, and 27% of the explained variance in job satisfaction and positive well-being, perceived job stress, and distress respectively.

For psychosomatic symptoms, the initial logistic regression model containing only demographic variables was significant, $\chi^2(3, N = 117) = 10.15$, $p < .05$, and accounted for between 8% (Cox and Snell R square) and 11% (Nagelkerke R square) of explained variance. The full model, $\chi^2(6, N = 117) = 14.73$, $p < .05$, accounted for between 12% and 16% of variance and correctly classifying 68% of cases. However, none of the work variables made a significant contribution and gender was the only variable significantly associated with symptoms, OR = 2.44, C.I. [1.04, 5.73], $p < .05$ (see Appendix F).

Table 5.14. *Standardised Regression Coefficients (β) for Demographic and Work Characteristics as Predictors of Outcomes (Jamaican Sample)*

	Perceived stress	Job satisfaction	Psychological distress	Positive well-being	General health
	β	β	β	β	β
Step 1					
Gender	.04	-.02	.14	-.04	-.04
Rank	-.11	.31**	-.17	.11	.10
Years of service	.06	-.20	.09	-.03	-.03
F	.35	2.41	1.52	.43	.36
R^2	.01	.06	.04	.01	.01
Adjusted R^2	-.02	.03	.01	-.01	-.02
Step 2					
Gender	.02	-.01	.12	-.02	-.02
Rank	-.04	.27*	-.11	.06	.06
Years of service	.04	-.19	.06	-.01	-.01
Negative job characteristics	.29***	-.12	.38***	-.10	-.04
Work support	-.22**	.15	-.15	.11	.04
Positive job characteristics	-.19*	.10	-.12	.23*	.18
F	6.78***	2.75*	7.18***	2.61*	1.08
R^2	.26	.12	.27	.12	.05
Adjusted R^2	.22	.08	.23	.07	.00
ΔR^2	.25***	.07*	.23***	.11**	.04

Note. *p < 0.05, **p < 0.01, ***p < 0.001

5.3.3.7. Coping styles and outcomes.

As shown in Table 5.15, only the model for psychological distress and positive well-being reached statistical significance. Both coping styles were significantly associated with psychological distress and well-being, with emotion-focused coping having the stronger influence by beta weight. However, the overall model for positive well-being (R^2 = 10) was weaker compared to the model for distress (R^2 = 29). While the model for perceived stress was not significant overall, a significant but weak association with emotion-focused coping was observed.

The logistic regression model was significant, $\chi^2(5, N = 117) = 15.28$, $p < .01$ and accounted for between 12% and 16% of variance in number of reported psychosomatic symptoms (see Appendix F). The model correctly classified 67.5% of cases. Emotion-focused coping was the only variable significantly associated with psychosomatic symptoms, OR = 1.08, C.I. [1.01, 1.15], $p < .05$.

Table 5.15. *Standardised Regression Coefficient (β) for Demographic Characteristics and Coping Styles as Predictors of Outcomes (Jamaican Sample)*

	Perceived stress	Job satisfaction	Psychological distress	Positive well-being	General health
	β	β	β	β	β
Step 1					
Gender	.04	-.02	.14	-.04	-.04
Rank	-.11	.31**	-.17	.11	.10
Years of service	.06	-.20	.09	-.03	-.03
F	.35	2.41	1.52	.43	.36
R^2	.01	.06	.04	.01	.01
Adjusted R^2	-.02	.03	.01	-.01	-.03
Step 2					
Gender	-.01	-.02	.04	.01	-.03
Rank	-.09	.31**	-.15	.11	.10
Years of service	.07	-.20	.11	-.04	-.03
Action-oriented coping	.09	.01	-.17*	.21*	-.01
Emotion-focused coping	.22*	.02	.48***	-.22*	-.01
F	1.56	1.43	9.43***	2.68*	.21
R^2	.06	.06	.29	.10	.01
Adjusted R^2	.02	.02	.26	.06	-.03
ΔR^2	.05*	.00	.25***	.09**	.00

Note. *p < 0.05, **p < 0.01, ***p < 0.001

5.3.3.8. Personality characteristics and outcomes.

Table 5.16 shows the model consisting of personality characteristics as predictors. Results indicated that only the models for psychological distress and positive well-being reached statistical significance. The model for distress accounted for 14% of explained variance. However, none of the variables showed an independent significant relationship with this well-being outcome. Positive self-evaluations, extraversion, and conscientiousness, were significantly and positively associated with positive well-being, with the model accounting for 38% of the explained variance.

Personality characteristics, on a whole, were associated with number of psychosomatic symptoms reported, $\chi^2(9, N = 117) = 17.14$, $p < .05$ (see Appendix F). The full model accounted for between 14% and 18% of explained variance and correctly classified 63% of cases. However, openness was the only personality dimension that made a significant contribution, OR = .76, C.I. [.59, .98], $p < .05$. Gender, OR = 2.72, C.I. [1.12, 6.60], $p < .05$ and rank, OR = .32, C.I. [.114, .90], $p < .05$ were also associated with number of reported symptoms in the final model.

Table 5.16. *Standardised Regression Coefficients (β) for Demographic and Personality Characteristics as Predictors of Outcomes (Jamaican Sample)*

	Perceived stress	Job satisfaction	Psychological distress	Positive well-being	General health
	β	β	β	β	β
Step 1					
Gender	.04	-.02	.14	-.04	-.04
Rank	-.11	.31**	-.17	.11	.10
Years of service	.06	-.20	.09	-.03	-.03
F	.35	2.41	1.52	.43	.36
R^2	.01	.06	.04	.01	.01
Adjusted R^2	-.02	.03	.01	-.01	-.02
Step 2					
Gender	.03	-.02	.12	-.02	-.02
Rank	-.09	.30*	-.15	.05	.07
Years of service	.03	-.22	.09	-.05	-.01
Positive self-evaluations	-.09	.09	-.14	.37***	.15
Extraversion	.10	.12	-.11	.22**	.04
Agreeableness	-.09	.16	.16	-.08	-.09
Conscientiousness	.05	.12	-.11	.22**	.14
Emotional Stability	-.00	.04	-.06	-.05	-.01
Openness	.02	-.09	-.08	.14	-.03
F	.37	1.94	2.03*	7.63***	.91
R^2	.03	.13	.14	.38	.07
Adjusted R^2	-.05	.06	.07	.33	-.01
$\Delta R2$	.02	.08	.10*	.37***	.06

Note. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

5.3.4. Discussion.

The current research sought to obtain a basic understanding of relationships between work and individual characteristics and well-being outcomes in the Jamaican police, using established methodology from developed nations. Findings are discussed in relation to a recent study on UK police that utilised the same approach as well as the broader police literature.

5.3.4.1. Work characteristics and outcomes.

The current study showed an interesting mix of findings when work characteristics were included as predictors. One model (i.e. general health) did not reach statistical significance. Interestingly, while the models for job satisfaction and psychosomatic symptoms reached statistical significance, none of the work variables significantly contributed to these outcomes. Positive job characteristics was the only variable significantly associated with positive well-being, but the relationship was weak. Perceived job stress and psychological distress were the two outcomes best predicted by characteristics of the work environment. Negative job characteristics had the strongest (by beta weight) association with these outcomes, though work support and positive job characteristics also predicted perceived stress.

While results for perceived stress and psychological distress are generally in line with what is expected based on the previous UK study and existing police literature (Allisey et al., 2014; Garbarino et al., 2013; Houdmont et al., 2012; Noblet et al., 2009a, 2009b), to a large extent, the results for the other outcomes vary widely from what was anticipated. However, it is hard to say whether these findings are an accurate representation of the proposed relationships for this population. It is possible that findings may be a reflection of characteristics that are unique to this particular sample of officers.

Before firm conclusions can be drawn, further research is needed to determine whether these results remain consistent.

5.3.4.2. Coping styles and outcomes.

Current findings showed that coping exerted a negligible influence on all other well-being outcomes except psychological distress, positive well-being, and psychosomatic symptoms. Coping styles were reasonably predictive of psychological distress, with the model accounted for 29% of explained variance. This is slightly larger than the variance accounted for in distress for the UK sample. Results from the present study showed that psychological distress was negatively associated with action-oriented coping and positively related to emotion-focused coping. In the UK study, emotion-focused coping was the only significant predictor of distress.

The association between coping styles and positive well-being was weaker, with the model accounting for 10% of explained variance. In the UK sample, coping styles accounted for a larger proportion of variance (25%). However, in both samples action-oriented and emotive coping were significantly associated with positive well-being.

The total variance accounted for in number of reported psychosomatic symptoms was slightly smaller in the Jamaican sample (12% to 16%) compared to the UK sample (15% to 20%). Additionally, while emotion-focused coping predicted participants reporting five or more symptoms in the present study, it was action-oriented coping that had a significant effect on the number of reported symptoms in the UK sample.

As discussed in previous chapters, findings on the relationship between coping and well-being outcomes in police research are somewhat inconsistent. However, there is evidence to show that coping exert a relatively weaker effect relative to other factors. As shown in the previous UK study, the predictive power of coping was weaker compared to

work and personality characteristics, and particularly for occupational well-being and physical health outcomes. In prior police research, coping strategies were also found to have a less significant or negligible influence on measures of distress and well-being (Hart & Cotton, 2002; Hart et al., 1995; Ortega et al., 2007). Interestingly, for the Jamaican sample, while the effect of coping was negligible for most outcomes, it was important in predicting psychological distress. However, it is still unclear whether this effect would remain if multiple factors are considered altogether.

In sum, the evidence for coping potentially being a major contributing factor in determining well-being outcomes appear to be weak in this sample of police officers. However further investigations are warranted to test the robustness of these findings.

5.3.4.3. Personality characteristics and outcomes.

Personality characteristics, on a whole, were weak predictors for most outcomes. In fact, the models for perceived stress, job satisfaction, and general health did not reach statistical significance. While the model for psychological distress was statistically significant, none of the personality variables made a significant independent contribution to this well-being outcome. Positive well-being was the strongest predicted model, with much of the explained variance attributed to positive self-evaluations, extraversion and conscientiousness. Also, participants who reported higher levels of openness were less likely to report five or more symptoms. However, this association was weak.

The small effect of personality characteristics on well-being outcomes is contrary to what was expected based on the previous UK study and indeed prior police research (Gabarino et al., 2013; Hart & Cotton, 2000; Hart et al., 1995). For instance, Hart and colleagues (1995) have shown that personality variables (particularly neuroticism and extraversion) are the most important determinants of well-being in Australian officers.

Strong support for personality characteristics, on a whole, and specifically, positive self-evaluations and extraversion was also demonstrated in the recent study on UK police.

With such robust evidence in support of personality variables in determining well-being outcomes, it is unclear why current results are in such stark contrast. One explanation might be that current findings reflect the characteristics of the sample or their interpretation of the measures used. Conclusions from this study, therefore, remain tentative and warrant further investigations.

5.3.5. Summary of findings.

The mixed results found in the current research present more questions than answers. As shown in Table 5.17, the proposed main effect models were less supported in the Jamaican sample compared to the UK sample. The findings of the UK study are more in line with previous police literature and there were more consistent results across outcomes. In the Jamaican study, models fits and predicted relationships varied widely. However, it is noteworthy that work characteristics, altogether, best predicted perceived job stress and psychological distress; coping best predicted psychological distress, and personality characteristics were most important for positive well-being.

In one sense, the present findings might reflect genuine differences in how police officers respond to work-related stress across nations or cultures. It is reasonable to expect that stress experiences and relationships between working conditions, individual responses and stress-related outcomes will differ depending on context. Therefore, current findings might suggest that literature from developed nations might not be wholly generalizable to developing countries. Indeed, cross-national studies using other occupational groups have demonstrated that differences in occupational stress experience can have different effects

on well-being (e.g., Pal & Saksvik, 2008; Schuafeli & Janczur, 1994). Findings such as these underpin the importance of conducting cross-national research.

On the other hand, the discrepancies in the results might be representative of the particular sample of police officers observed. It is possible that this group of participants may have indiscernible characteristics that affected the results. Nonetheless, because there is no benchmark on which to base these results in this population, the conclusions drawn from this study remains tentative and requires more robust research.

Table 5.17. *Summary of Results for the UK and Jamaican Samples*

Independent variables	UK Study					
	Job stress	Job satisfaction	Psychological distress	Positive well-being	General health	Somatic symptoms
Work characteristics						
Neg. Job characteristics	*		*	*		
Work support	*	*	*	*	*	*
Pos. Job characteristics	*	*		*	*	*
% Total Variance	46%	27%	45%	39%	31%	9-12%
Coping Styles						
Action-oriented		*		*	*	*
Emotion-focused	*	*	*	*	*	
% Total Variance	16%	19%	24%	25%	18%	15-20%
Personality Characteristics						
Pos. self-evaluations	*	*	*	*	*	*
Extraversion	*	*	*	*		
Conscientiousness		*				
Agreeableness						
Emotional Stability						
Openness						
% Total Variance	20%	44%	47%	61%	44%	23-31%
	Jamaica Study					
Work Characteristics						
Neg. Job characteristics	*		*			
Work support	*					
Pos. Job characteristics	*			*		
% Total Variance	26%	12%	27%	12%	5%	8-11%
Coping Styles						
Action-oriented			*	*		
Emotion-focused	*		*	*		*
% Total Variance	6%	6%	29%	10%	1%	12-16%
Personality Characteristics						
Pos. self-evaluations				*		
Extraversion				*		
Conscientiousness				*		
Agreeableness						
Emotional Stability						
Openness						*
% Total Variance	3%	13%	14%	38%	7%	14-18%

5.3.6. Chapter summary.

This chapter presented results from studies conducted in two countries. The constructs and measures utilised are based on components of the DRIVE model and are well established in developed nations. The first study examined the relationships between occupational and individual characteristics and well-being outcomes in a recent sample of UK police. The second study sought to determine whether these constructs and measures would also be applicable in understanding the stress process in the Jamaican police. Findings from the UK study were supportive of that of existing police research, suggesting that measures used were efficacious in assessing the constructs. However, findings from the Jamaican study remain tentative and require further research before definitive conclusions can be drawn. In later chapters, research is presented that sought to clarify some of the uncertainties in relation to Jamaican police officers. However, first, an attempt was made to further expand our understanding of work-related stress in this group of police officers. The study described in the next chapter took an alternative approach and sought to obtain additional information on the experience of police stress from professionals who serve these officers.

Chapter 6

Occupational Stress in Jamaican Police Officers: A Qualitative Study of the Perceptions of Support Service Personnel

6.1. Overview of Chapter

The research described in this chapter provides a qualitative account of support service professional's perceptions of Jamaican police officers' experience of work stress. The study provides an alternative perspective in an attempt to build consensus and expand our understanding of police stress in the Jamaican context. Interpretations of findings are based on central themes and sub-themes extracted from the data using a deductive approach. Themes and sub-themes are substantiated through the use of verbatim reports that articulated the participants' observations and perspective. Later in the chapter, themes are summarised and discussed within the context of existing literature.

6.2. Rationale for Study

Little qualitative research exists within the area of police stress and to this researcher's knowledge, none that has captured the perspective of police "helpers". Support service personnel in their various capacities play an important role in police organisations as they are tasked with providing confidential services to address police officers' well-being needs. Consequently, these individuals regularly interact and treat with officers who may need assistance pertaining to work-related demands or pressures and personal or emotional challenges. For this reason, their roles make them a unique source from which to extract rich data that would help shape the reality of the challenges facing these officers. Therefore, the current study served to provide greater clarity on problems that confront police officers on the basis of reported issues for which they seek assistance. The insights gained from this approach provided another layer of understanding

of police stress and complemented the overall objectives of the thesis. It was expected that the results would not only help to inform subsequent studies as discussed later in the thesis, but also provide insights for targeted stress management and intervention programmes.

6.3. Method

6.3.1. Participants.

The participants were professionals who were working in one of four support service units (i.e., Human Resource Management, Chaplaincy, Police Federation [union], and Medical Services Branch) within the Jamaica Constabulary Force. Six participants volunteered to be interviewed. The support service units consist of a relatively small number of individuals; therefore to maintain some level of anonymity, limited personal details of participants are reported on here. Of the six persons interviewed, three were sworn police officers who had advanced through the police ranks and three civilians. Participants consisted of four males and two females and had served the police organisation for 4 to 20 years.

6.3.2. Materials.

A detailed description of the materials used in this study was provided in Chapter 3. To summarise, semi-structured interviews designed around 11 core questions were conducted. Questions focused on primary sources of stress, coping approaches, job satisfaction and an intervention related question.

6.3.3. Procedures.

A detail description of the procedures followed in this study was presented in Chapter 3. In sum, participants were recruited using purposive sampling. Interviews were

tape recorded, lasted between 30-45 minutes and were later transcribed verbatim by the researcher. Appropriate ethical procedures were followed.

6.3.4. Analytic approach.

Thematic analysis was employed to analyse and interpret the data. The rationale for using this form of analysis was provided in Chapter 3. Braun and Clarke's (2006) step-by-step approach guided the analysis. To summarise, transcripts were repeatedly read, then codes applied and collated. Themes were then extracted from codes and refined through checks and cross-checks with two other researchers with expertise in qualitative data analysis.

6.4. Results

Several themes were derived from the semi-structured interviews. Broadly, the overarching themes represented sources of stress that emanate from organisational policies and managerial practices as well as those from operational duties. Other themes were representative of the interplay of work and home life, coping responses, and positive job appraisals. The extracted themes and examples of supporting narratives are outlined in the following sections.

6.4.1. Relationships with supervisors.

Supervisory relationships are important as supervisors regularly engage with their subordinates on a day-to-day basis. The significance of the supervisory relationship was perhaps summed up best by Eisenberg (1975) (as cited in Kroes, 1976),

> Poor supervision, particularly sergeants, play a key role in the work of a police officer. Styles of supervision vary tremendously, some providing a haven for the nurturance of psychological stress, while others tend to prohibit its manifestations or at least provide a vehicle available to the police officer for coping with stress. The supervisor who always "goes by the book," is never available on a complicated or delicate street situation, is overly demanding, tends not to back-up a subordinate when conditions

justify such support, or who fails to attend to subordinate's personal needs represent a supervisor who can substantially contribute to the psychological stress of his subordinates. The importance of the supervisor in the life of the patrol officer cannot be underestimated. (p. 19)

Among the persons interviewed the supervisory relationship was consistently noted as a source of stress. Participants described what appears to be a combative relationship between supervisors and their subordinates and this tends to be perpetuated through the rigid hierarchical structure of the police organisation. The following four sub-themes highlight how being in a position of authority governs the relationship between supervisors and subordinates in different ways.

Rank and power. Interviewees reported that the relationship between supervisors and their subordinates is often strained as a result of the inherent authority and power that comes with the rank structure of police organisations.

> Is largely antagonistic where there is no respect so people… the relationship is largely fashioned on rank rather than respect. So well mi nuh have no [*translation: I don't have any*] respect for him but a [*translation: he is*] the sergeant so seeing as him a [*translation: he is*] the sergeant and he has the authority I'll go with what him say [*translation: he says*] but not that I buy into it or even respect it. [Int. 1]

> But a lot of it is conflict with supervisors because some of them don't think supervisors are really considerate. And because it's a rank structure and there is a lot of power, sometimes when persons are in supervisory positions they wheel that power, and so it doesn't help. [Int. 6]

Lack of a voice. The para-militaristic nature of police organisations also discourages input in decision-making processes and contributions to solutions by the lower ranks. Supervisors may have a 'know it all' attitude and believe that because of their years of experience, their knowledge and mode of operation are superior. Operating in this type of environment can be a source of constant frustration for subordinates who may believe their skills are not being utilised. The interviews suggest that over time as police officers

realise that there is little regard for their input, they lose their enthusiasm and motivation for work.

> So you send the youngster out, and they go to a police… what we call a division where our police supervisors and managers are probably persons with seven years, seven to ten years at the minimum in terms of service. You might find a corporal like (name removed) who has lower service than that, but usually, seven years and a lot of them are from old school. So a youngster comes out who is technologically savvy, or his vocabulary speaks about transactional analysis and management thing, and he gets shot down because the sergeant or the corporal doesn't use that vocabulary, and it puts them under pressure. So they might want to come up with new ways of doing things and initiative is suppressed. That's another big stress factor. [Int. 4]

> You find those just graduating from training school they appear to be highly motivated and often you know, express criticism that they are not getting, they are not getting enough challenges, they are not being challenged and they come with a kind of energy… enthusiasms toward work and towards solving all social problems…. [Int.1]

Emphasis on work, not welfare. Police officers are likely to better cope with the stressors of their job when they perceive that their supervisor understands their needs and are concerned about their welfare. However, there is a sense that supervisors are unsympathetic and unsupportive of the needs and concerns of their subordinates, or at least those needs are secondary. Interviewees highlighted that supervisors tend to focus on getting the job done without considering the effect that might have on their subordinates.

> The others and the largest percentage of officers are what we call rank and file, meaning the lower level officers, who they have to work, they have to do what we say, and we encapsulate that in a single phrase that says, you comply before you complain. We tell you to do something, get it done, you can tell us what hurts later on. [Int.4]

> Well, there is the tendency for the supervisors to not be mindful and just want things to be done irrespective…. [Int.3]

> …ironically at the lower level persons believe that the lack of management, proper management, the emphasis is really on work, there is hardly… very

little, very little understanding of welfare issues and persons safety and welfare. [Int.1]

Unfair treatment. Poor supervisory practices can also manifest itself in how inequitably subordinates are treated. Interviewees indicated that another stressor emanating from the supervisory relationship was lack of fairness which is underpinned by inequities in assigning duties and favouritism.

> So the issue of equity and how persons are treated… and very often I don't think managers are very good at it. It manifests itself in the type of duty too, because some duties are favoured over others. Some carry a lot of stress, some are favoured over the others. And the managers know so if, for example, you are not one his favourites he might just put you at a section or to perform a duty that you know most people don't want to perform. [Int.1]

> …ok so…(name removed) is your supervisor, and she sets you for duty eleven to seven for the entire week. But she sets her favourite people eight to eleven, and take a break and… who do you complain to? She? And she says hold on somebody has to work 11-7, you know, and she sets you for that next week again, and it becomes an issue for you, not that you don't mind doing it but when you compare with what others are doing, it adds to your frustration. [Int.4]

6.4.2. Transfers and deployments.

A second major theme extracted from the interviews related to how police officers are deployed, assigned duty and transferred within the organisation. Although upon joining the police force it is understood that police officers can be deployed to work in different departments and various locations, interviewees noted that these assignments can incur additional traveling costs, have psychological effects, disrupt normal routine, and place distance between police officers and their families. Furthermore, it was noted that decisions regarding assignments could be and sometimes are abused. The problems with transfers and deployment are illustrated in the following sub-themes.

Financial cost and distance from family. Interviewees noted that being deployed far away from home not only means being far from family but can also incurs additional

travel expenses. The resulting economic pressures and psychological effects of not being

close to family are likely to increase stress in officers.

> Because if you look at the map of Jamaica we pull youngsters from all
> parishes and there is no scientific way of assigning them. You assign them
> based primarily on needs so that we look at the crime patterns, the crime
> stats and determine where is it that firstly we need more what we call more
> boots on the ground. So if you are in a batch now, you're gonna end up in
> Montego Bay, that's where the problem is, forget the fact that you are from
> Port Antonio, forget the fact that that you have a little two-year-old girl or
> blah, blah, blah, you are going to Montego Bay, and that's stress because of
> course, you know the economics of it and the whole emotions kind of thing.
> [Int.4]

> It would be related to the fact that they have to travel far distances, they
> have to… their economic situation where they have to spend a little more
> for travelling, and you might find those who would like to be more close to
> their significant other. [Int.3]

Transfer as a management tool. Another source of stress articulated by

interviewees related to the practice of transfers being used as a form of informal internal

discipline measure. Although there was consensus among the persons interviewed that

transfer and deployment decisions ought not to be used as a tool of punishment, there was

agreement that this is a practice that occurs within the organisation.

> After a while you know, transfer within the police force had become a tool,
> a tool of, a tool of, punishment. Transfer itself is a tool of punishment and
> the distant to which you are transferred and where you are transferred are
> often indicative of the severity of the punishment. So that if you are
> transferred far, it means that you get a, what you say? a harsh punishment.
> And if you are transferred… and also within the constabulary, there are
> sections that are… sections that I would say are at different levels you
> know, so there are those sections that are largely revered and people there, I
> would say are at different strata, so you if you are transferred to the cells,
> detention, and court, that in itself is a punishment. You gonna wrap with
> prisoners and that's where you belong, so if you are transferred in uniform,
> it's seen as a demotion. Now if you are transferred to a plain clothes section
> it is seen as a promotion although it is still at the same level…. [Int.1]

> Now here's what adds to the pressure, we have 19 geographic divisions and
> six areas, and then we have what's called non-geographic. We are
> responsible to provide police service to every single one. Mounted troupe

where the horses are, canine where the dogs are, and the prime minister's residence, but if you are gonna be assigned to mounted troupe, they make it appear as if it's something terrible. They say to you, you know we going to dash you down [*translation: transfer you*] at mounted troupe or we are gonna transfer you to area 1. Now the truth is somebody has to work there but the psychological effect of it, it's like your mother will say to you know what I going to send you to foreign to school. Now you're saying what's wrong with that, but it's the way it is said. So I'm gonna send you to Oxford, you're thinking I wanna go. So that's how we do transfers, and that adds to added pressure. [Int.4]

6.4.3. Inadequate resources.

Police officers are likely to experience stress in an environment where there is high demand for performance and results but without the necessary resources to carry out the job. Certainly, in developing countries, shortage of personnel and lack of proper equipment might be an expected problem and indeed, these issues were highlighted in the interviews. Lack of adequate resources as an overarching problem in the police force was summed up by the following statement from one interviewee:

> ...resource is a big issue, resource is a big issue... there is the perception that one is given basket to carry water, so basically you are asked to do a job, but you are not given the requisite resources. So resource is a big issue. [Int. 1]

Consequences of resource inadequacies. The implementation of policies for efficient and safe policing at least, in part, depends on having adequate and high calibre equipment. It was highlighted that resource inadequacies have implications for the safety of police officers and how they are able to carry out their duties. The following two narratives illustrate the enormity of these concerns.

> So it's a headache because at the very top level we have the political directorate who wants to make grand announcements and they often do and it forces the practitioner or the hierarchy to implement policies and those things come with resources. So there is lack of resources, and there is the pressure to implement policies to deal with that. But you don't have the resources to deal with it, and there is a political imperative or expediency to make grand announcements. I can tell you some of them…there is the issue of body camera, that police should wear, that is topical now. There is the

issue of... human rights issues, right. We have often talked about police excesses. Now you have a policeman with a gun and a baton, that's his tool, but he might find himself in a situation that warrants him using a less lethal weapon, but he doesn't have it…. [Int.1]

… To me at the lower level, it's a little different, it's that you are forced to go on the road without body armour, in a violent situation, you are forced to drive in a vehicle that you know probably don't have on good tire, ineffective, broken down, damaged vehicle, you are forced sometimes to use your own initiative or your own resources to do police work. [Int.1]

6.4.4. Inadequate pay.

Without a doubt, police officers perform an essential function in society. In light of this, is it reasonable to expect that they would want to be compensated in a way that commensurates with the level of importance and the highly demanding nature of their work. However, low pay appears to be a major concern for these police officers. One interviewee indicated that the issue of financial strain because of poor salaries begins as early as training stages.

Every single recruit goes through financial hardship. Although I must boast that we are the only…. do they pay them in the army? But for the police, the basic salary in training is the same that you get when you graduate. Except that when you graduate you get two allowances but in terms of the basic, basic pay it is the same. When you graduate I think you get like housing allowance, I think special allowance. And then if you go on to get married you get some other allowance. But the financial strain during training… a lot of the recruits lose their cars, some end up losing their homes, most lose their families. [Int. 4]

Another interviewee suggested that the freeze on wages and benefits over the years because of the country's economic troubles has impacted on cost of living and has led to an increase in financial stress for police members.

well mainly… the main stress of my officers is financial because what you find, because of the economic situation that we are experiencing now and because of… so far back that we haven't received a pay increase, and you see what is happening each day the value that the money had five years ago,

it can't buy not even a quarter of what it used to purchase then, so that it is one of the… I would say one of the biggest stressors of members. [Int.5]

Having to worry about their financial situation because of poor salary can also be a distraction. As Interviewee 5 suggested, if officers are consumed with thoughts of economic hardship, this can reduce alertness which compromises safety on the job.

…policing is a very risky job, and you need to be on full alert, and you need have a lot of sensitivity within you because you have to interact with the public at all age, you have to interact with the little baby down here to the aged person, and so you need to be comfortable. And I'm saying can you imagine, you're on the street, you hear that down Jungle is under fire and they are calling for police, police on the way down there, doing what they have to do, and they have to keep watch there, and they are down there but while you there, you are wondering, my God, I wonder if they are going to cut off my light, you know. Boy, it looks like my child is not going to be able to go to school this week. You see these are some of the things. [Int. 5]

6.4.5. Frontline duty pressures and decision-making.

Police work requires that officers are often in violent and unpredictable situations. They also come in contact with hostile and unforgiving citizens. Nonetheless, officers are required to do their job effectively and without fear or rancour. However, the interviews highlighted that policing under these conditions can be taxing for police officers. This is demonstrated in the following sub-themes.

Fear/threat of being harmed. There is no getting around the fact that policing involves an increased risk of being exposed to dangerous and life-threatening situations. This is even more apparent when working in a violent policing environment. Persons interviewed supported the fact that the fear of being harmed is an intrinsic part of being a police officer and is a source of constant stress.

There is the fear of being killed because you are a police officer. There is that fear… that is a constant fear. So to me, that bring on some level of stress, you understand? [Int.1]

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Ok, law enforcement is tough terrain, its build that way. And then it gets added pressure because you are the ones… law enforcement officers are the ones who prevent people from carrying out their evil acts, whether or not it be a reprisal against somebody who hurt you or whether or not it be that you are in what we call crime for profit. So if somebody is hurt and they want to exact revenge and you get in the way you become a bad person. So that knowledge that you are in harm's way is pressure by itself. [Int.4]

Scrutiny and frontline decision-making. Another theme arising from the interviews related to how the police are perceived by the public and the pressure associated with making appropriate operational decisions under a cloud of scrutiny. As the following excerpts illustrate discordant expectations of the public makes finding the balance for legitimate action while carrying out policing duties difficult.

Well, there is the perception that the general public does not appreciate or even understand the nature of policing. So that on the one hand, when the police act, they become the subject of heavy criticism…and understandably so, for over-acting and high-handedness. On the other hand, if they don't act, then they are criticised for none action, and there is always a difficulty in striking a balance between both. [Int.1]

…also in terms... maybe they are not feeling the sense that they are not able to carry out their job as they would like, in that, they are very held back in how they would approach an individual because they don't want to be on the wrong side. [Int.3]

Also, as the following excerpt indicates, the fear of potential complaints against police actions can leave officers feeling powerless in life threatening or unpredictable situations.

…those that are operational have that stress as well as the direct fear, because when you are out there, when you are going on duties in some of these places, you are behind zinc fences, you don't know what's on the other side of you. And then the thing is this, you have to make a good judgment call when you are out there operationally, and then, not even how you try, you will miss at times. Because, can you imagine that you are out there and you're under fire, fire coming from you left right and centre… sometimes you don't even know where it is coming from but it's coming at you and if you make a bad judgment call in the fire back and it accidentally

hits who it's not supposed to hit, can you imagine what can happen? So you know these are some of the things... so the stress of the job ….[Int. 5]

6.4.6. Stress and job roles.

This theme is related to how stress may differ for police officers at different ranks, especially between those who are lower ranked and those in management positions. Many of the interviewees perceived that lower ranked officers, by the nature of the duties they perform (i.e, operational), are likely to be more impacted by job stress. However, they were also consistent in suggesting that stress affects all the officers but perhaps in different ways and are related to their various roles or responsibilities.

Stress at the lower rank. Some interviewees suggested that lower ranks are more likely to be impacted by job stress because they are the ones tasked with carrying out operational commands which involve putting themselves at risk. The following excerpts reflect this sentiment.

> You know, analysing it as we speak, the lower ranks would be more stressed, in that the stress that they are undergoing can more likely lead up to even the fear of death more than even anybody else. Because they are interfacing with the criminals out there. [Int. 5]

> I think the stress would be most impacting at the lower ranks… Because they are the ones who both physically and mentally have to be applying the expectations of the force. [Int.3]

Stress at the higher rank. For higher ranked officers stress is reportedly related to accountability. The interviews revealed that managers and supervisors are held accountable in two major ways: (1) keeping crime levels down in the divisions they command and (2) being responsible for the actions of their subordinates. The following narratives highlight the pressure to keep crime levels down.

...well the type of stress is faced... that would be faced by the hierarchy is what I mentioned before. The getting a job to do without the requisite tools, also you know, the general rate of crime and how it impact your division or your formation, you know, you are some often blamed for murders that you can't prevent… you know. So that comes with the stress. [Int.1]

The stress is always going to be different from a managerial perspective. When you are commanding officer, and you wake up with a triple murder in your division, and that perpetuates, and there is reprisal killing then that is going to cause stress for any officer. Right because he needs to keep his figures down. [Int. 2]

The following excerpts demonstrate how being accountable for subordinates and their actions can result in stress for police managers.

So the persons, the high-ranking persons, yes, they are stressed too because they are more accountable. And you know that if you are required to give an account for what your juniors do and you are not there at all times to analyse their judgment, but if I am an inspector and I have my constables, and they go out there and commit some… any breaches I would have to give an account for what happened. So you see that is also a stressful aspect. [Int.5]

Probably the least at risk are the middle managers, the paper pushers, who they just sit down and give orders. That's changing now slightly because of what we call vicarious liability so that if I'm responsible for this station it is my duty to ensure that you are properly briefed before you go on duty, it's my job to ensure that you carry the proper equipment, it is my job to ensure that, for example, let's take, if I am giving you a firearm I must also give you a less lethal option like pepper spray. If you go out there and the only thing you had is a firearm, and you use it I can be called to account. Did you do a risk assessment when you are sending that officer out? Did you give him options if he came under fire? And if the answer is no… [Int. 4]

Despite the argument that all police officers are likely to experience stress, albeit, from different sources, a point was made that the stress experienced by higher ranked officers might be counterbalanced because their positions in the organisation afford them the resources or leverage to manage stress better. The officer who has the resources to cope is likely to have a different reaction to stressful situations. The way in which access to coping resources at the various levels may result in a differential experience of stress is illustrated in the following narrative.

That is difficult because, to me, there are different levels of stress and the higher you are in the hierarchy, is probably the higher the level of stress, but also there is always the options of dealing with that. You have more option to deal with your stress there or to manage it at least. It's a different kind of stress at the lower level, but the options are really limited. [Int.1]

6.4.7. Work-home interface.

The nature of police work, for example, with its inherent long and irregular work hours, is likely to disrupt police officers' family lives. Further, police work is emotionally demanding and sometimes work experiences can carry over into home life. Pressures arising from family responsibilities can also affect how police officers function on the job. Some interviewees expressed the difficulties that officers encounter in finding a harmonious balance between home and work life. The following excerpts highlight the overarching theme of how the work and personal lives of police officers are uniquely intertwined.

From their perspective, so to speak, I find that personal stress, people not dealing with issues in their personal life and then it comes over into the work area and sometimes persons are having stressors in the work, and then they take it home. [Int.6]

Ok, for example, someone can be unhappy at home, but thinks that if they are transferred closer to home, then they get to spend much more time with their spouse hence that will reduce the amount of stress at work… [Int. 2]

Taking work home. It can be difficult for police officers to separate their work and family time. The following excerpt best illustrates how sometimes when officers take home work-related tasks, this can cause strain on the family.

Because I know for a fact that a policeman went home with his radio, and he went home and turned on the radio and that cause stress for the family. Because he comes home at two am in the morning, they want to sleep, and he wants to listen to his radio, so that causes stress. [Int. 2]

Police officers may also take home their 'police personas.' For instance, some interviewees indicated that they had heard reports where police spouses complain that their partners transferred hostility acquired from work, such as how they deal criminals, to their interactions at home.

> Look, for the females, for the wives, they believe that their husbands or their significant others have some level of authoritarianism, violent, violent propensity, you know, and there is not that separation between the work and the home. So that often times, he is talking to me like him think say him a talk to criminals. You know him a talk to me like him think a criminal him a talk to…. [Int.1]

> Like sometimes when people come in for marital counselling and the wife would say when he comes home he speaks to us like we are prisoners. [Int. 6]

Infidelity. Increased time away from work, pressures from work, and resulting frustrations from the conflict between work and home life can increase the possibility and opportunity for infidelity and sexual promiscuity. In some interviews, it was revealed that this is a common occurrence among police officers and is summed up in the following narrative.

> …and or course with the extended time on the job… and the transfer, it doesn't go well for police families, yeah police family, police have too much families. Too many families in different areas. And often times, it is when we have to arrange for their funeral we know the various dependents, you know. And these dependents begin to know the others because you know John Brown died, so you know everything come up here. Those to get death benefits, we know that wife thinks it's two kids that belong to her but there are five, six seven, eight out there.

6.4.8. Coping reactions and barriers to seeking help.

Coping and coping responses. Development and utilisation of coping mechanisms can help to alleviate the effects of stress. Narratives from the interviews, in one sense, suggest that whatever strategies officers employ, it is helping them to "carry on" and that

gives the impression that officers are managing the stressors of their job well. This perception is indicated in the following excerpts.

> Right, because people have found ways of coping with stress and managing stress right. I think the reason why persons believe that officers are always stressed is because of the type of work that we do but to say that an officer is always stressed is to say that he is not coping… or he or she is not coping and coping well, and if you look at our statistics, our officers cope fairly well. [Int. 2]

> I think that is a very tricky one in that the coping skills would vary with the individuals. But I find them to be coping pretty well, whatever coping skills they do use to carry on… I observe that what they do is to, well we can't change the policies, so we just have to be careful as what we do… And the work has to be done, so we just have to find a way to deal with the situation. [Int. 3]

However, while there may be the appearance of 'coping well', there is the question as to whether the coping strategies being employed are adaptive or maladaptive. Some methods may lead to short-term relief but are not effective and may exacerbate the problem over the long term. Further discussions revealed that while police officers may appear to be coping, they tend to use maladaptive methods including alcohol, smoking and sex or have multiple sexual relationships.

> Everybody is using something but is it positive or negative. If you talk to them they are all coping. Some cope by drinking, some cope by smoking, some cope by having illicit sex all over the place. Some cope by, well they talk with their friends, so they will tell you when they go to the bar them [*translation: they*] have them [*translation: their*] therapy sessions because them [*translation: they*] chat to them [*translation: their*] friends and when them [*translation: they are*] done they come out and go a them [*translation: they go to their*] yards. So they are coping, but are those methods positive. But for them, they are coping cause they don't need to come and talk to us because they have these other outlets that they use. So in their head, they are coping. But from a positive perspective, not a lot of them are coping because they are not using methods that will impact them in a positive way. A lot of the methods they use are negative, so it depends on how you look on the coping. [Int. 6]

Problem with many of our coping mechanisms is that it has moved away from the psychological treatment, and persons have turned to the bottles, meaning many persons use alcohol to maybe soothe their own stress, if you want to put a better word on it and also maybe having other relationships that are not stressful, that provides no amount of argument. [Int. 2]

Other coping responses to job stressors also develop over time. As highlighted in an excerpt from one interview, this may be reflected in officers who become detached or have reduced levels of work engagement.

Let me tell you, front line officers in stressful situations become I would say hardened" "Yeah, yeah, yeah so you know when you see… you get used to one thing over and over, it no longer affects you…Yeah, you no longer see it as stress, or even if you are having a headache or having any form of disorder, you don't make the connection because you are used to that. So you may have gone on a murder scene there and a murder scene there, you get used to it, and you work with it… [Int.1]

Well look, people report sick when they are not, they will call in sick, can't deal with the stress they call in sick. People will go on vacation as well. They will, as I say adopt this... you know... nonchalant, don't care posture, where you know, I'm not gonna go the extra mile, I'm not going to do anything because you know, they kinda watch the clock to ensure that their time is recorded. If the duty is set for eight, ensure that the time is recorded, eight o'clock and do little or nothing, or as much as possible. If they can get away with it, do little or nothing because it's very difficult to get trouble, and trouble is a kinda… very difficult to get trouble when you do nothing, but when you do something there is the likelihood of getting trouble. So they prefer to do nothing or to do the minimal, so those are coping strategies. [Int. 1]

Seeking help. The use of short-term fixes rather than finding long-term solutions in managing stress may partly be due to the sub-culture of police organisations which in some ways discourage help-seeking behaviour. Officers tend to be apprehensive in seeking professional help because of the stigma of appearing weak to their peers and superiors, and they see this as potentially damaging to their reputation and careers. The following narratives demonstrate that police officers are expected to behave in a certain

manner, which involves inhibiting the expression of negative emotions. This type of 'macho' expectation may then prevent them from seeking appropriate help.

> Because of the nature of the police person, we don't cry, we don't express emotions so we bottle it up until we just can't take it anymore; we do something that is off the books. In addition to that, because of the perception people have of us as officers we have to live out that perception, so that it hurts, but hush. And people will tell you that the officer is so strong, he is my rock and because people tell us that we don't become weak for that person until one day we just topple over and die. [Int. 4]

> Yes they do, they do because even what I find is like if a police, some police if they hear that another member is so stressed that they admit it, you know they start say, big man must whatever, whatever, you know, when they themselves stressed, you know. But then years gone by it was a vast amount of police who wouldn't acknowledge stress and all of that and that they are stressed. [Int. 5]

> Cause what is happening, an officer will tell you, if they come here it is seen in a negative light, so a lot of them don't want to seek the help because when they know they are coming they are going to say, well they are not strong enough and them nuh [*translation: they are not*] supposed to be police because they are weak. And that message, that transmission, starts from here on the training compound. And that's what we have to be fighting against. [Int. 6]

Another barrier that prevents police officers from accessing professional services is the issue of trust or the lack of it. Some interviewees suggested that it can be a challenge to overcome the perceptions held by police officers of the support services, particularly in relation to trusting that the information they disclosed will be kept confidential. The following narrative captures the issue of trust in seeking help from services within the organisation.

> Right, a lot of them, most persons don't want to come. They tell us straight, you are employed by JCF, you have an obligation to JCF, and I am wondering how much of what I say to you goes back to high command. All [*translation: even when*] you tell them that we are bound by confidentiality and we can't so and so, they say yes that's what you tell us now, but we don't know what will happen.. so it's an uphill task and it's a national thing, people don't seek help easily. [Int. 6]

6.4.9. Positive appraisals of work.

The love of the job. Police officers face many challenges in their work, and this can overshadow the positive aspects of policing. However, despite the difficulties, the interviews revealed that police officers also have positive experiences. There was the consensus from interviewees that most members of the force love policing and find pleasure in doing their jobs which help to keep them engaged despite the challenges.

> …majority of the persons who join this force, love what they do. They love what they do, that is what I've found out. Because the police will complain that they cannot respond to a call as soon as they want to because of the lack of vehicles, so what I take from that now, I would say if a person, if a police didn't like this work and didn't want to go on the job, they would be happy for that. [Int. 5]

> A large number of them, and I say that is why some of them stay. Those who love it will tell you, despite all that they are going through, they love what they do. And so you know sometimes you talk to them and they say they go to a community and such and such happened and you can hear that pride in the fact that I did my job and persons were grateful. Even if when they go back to base they are chewed out for whatever, that level of satisfaction being able to help somebody is what keeps a lot of them. So I think a good number of them stay because they love what they do. In every organisation, you are always going to have some who just in there for the money. But I think a good portion of them that I've interacted with, they love what they do. [Int. 6]

6.5. Discussion

The purpose of this study was to help construct a holistic understanding of the problems facing Jamaican police officers. Interviews were conducted with support service personnel to gain their perspective on police stress. Themes extracted from the data highlighted important elements of the police experience including major sources of stress (which can be broadly categorised as organisational and operational), the intertwining of work and home life, coping behaviours, barriers to help-seeking, and positive work

appraisals. Findings are synthesised and discussed in relation to previous research in the following sections.

6.5.1. Organisational-related stressors.

Reports of stressors emanating from the organisation itself included problems with supervisory relationships, inadequate resources and pay, and transfers and deployment of duties. Persons interviewed indicated that problems with supervisors' management of their relationships with subordinates are manifested through the abuse of authority and discriminatory management practices. Given the quasi-military hierarchical structure of police organisations and the perceived power associated with rank, it is not surprising that relationships between supervisors and subordinates are strained. Differences in power and the lack of respect or consideration for officers' needs may leave subordinates feeling vulnerable and impotent.

The discordant supervisory relationship as a source of stress for police officers is supported by prior police research. For instance, Crank and Caldero (1991) reported that police officers in their study saw their supervisors as not only unsympathetic but many viewed them in hostile terms. Ultimately, a strained supervisory relationship not only affects the officers' well-being but their enthusiasm and motivation. An officer who feels unsupported by their superior may be less responsive when assigned duties, and this can lead to deterioration in performance. Fostering better management practices can, therefore, have greater benefits for the police organisation as a whole.

Management of transfers and deployment of duty were also emphasised as a major source of stress. Current findings suggest that transfers are a major issue because it extends distance away from police officers' home-base which incurs additional travel costs and places strain on family relationships. The use of transfer and duty assignment as a tool of

punishment was also highlighted. Although police officers understand and expect that upon entering the police service transfers and change of duty is an inherent part of the job, interviews revealed that the management of these activities is susceptible to bias and abuse. The perception of having little control over decisions that affect major aspects of their lives and the feeling of being treated unfairly can prove arduous for officers. Although unfairness in transfers and duty assignment has not specifically received much attention in the police literature, research has shown that perceptions of being treated fairly and with respect was related to distress among police officers (Noblet et al., 2009b). Moreover, research indicates that officers' belief of having personal control over work-related issues are related to lower stress levels, high job satisfaction and better physical and psychological health (Brown, Cooper, & Kirkcaldy, 1996).

Police officers come under immense pressure when there is a directive to carry out their job but without the resources to do so effectively. Furthermore, knowing that you are working in a violent environment and not fully protected because of faulty equipment or gears will naturally increase anxiety levels. Current findings suggest that inadequate resources plague the police organisation and have negative implications for various aspects of police work. For instance, not having proper equipment and facilities can hinder the efficiency and effectiveness with which policies are implemented, and police work is executed. These findings are supportive of the quantitative research on the Jamaican police described Chapter 4, where, for example, inadequate or poor quality equipment and staff shortages were ranked as major stressors.

Feeling that your salary and benefits do not commensurate with the job you do can be discouraging. Police work is difficult and involves putting their lives on the line every day to serve and protect the public. Therefore, it is not unreasonable for them to expect fair compensation for their essential service to society. In the quantitative research presented in

Chapter 4, the perception of unfair compensation was at the top of the list of most frequently experienced and stressful problems the Jamaican police encounter. Findings from the current study are supportive of these observations. Data gathered from the interviews suggest that insufficient pay is not only a significant source of stress but financial difficulties that arise from inadequate wages and benefits can lead to distractions which can affect officers' ability to function effectively on the job.

6.5.2. Public criticisms.

Public scrutiny and criticism of police behaviour, particularly calls for accountability has been documented as a primary source of stress in prior research (Brown & Campbell, 1994). 'Experiencing negative attitude towards the police' was also ranked amongst the top 20 most intensely experienced events by Jamaican officers in the previous quantitative study (see Chapter 4).

Public scrutiny necessarily plays a role in holding police officers accountable for their actions. However, unfounded criticisms can lead to lengthy internal and external investigations and the burden placed on the officer to legally justify their actions can exacerbate stress (Kroes, 1976; Violanti et al., 2016). Current findings suggest that, on the one hand, police officers are apprehensive to take certain actions in carrying out their duties because they fear harsh criticisms. On the other hand, if they fail to act, they are also criticised for their non-action. Kroes (1976) best explains this predicament in his observations almost four decades ago:

> This added anxiety of not knowing where one stands complicates the officer's reaction to a situation in which his help is needed. Not infrequently, a policeman must make a split-second decision on the street. Knowing that there might be a future hearing to decide whether his actions were proper or not places the officer in a most difficult situation. In order to avoid future disapproval from superiors, officers sometimes avoid getting involved. By not stepping in, the officers allow lawlessness to grow. But can we blame the policeman for "not doing his duty? (p.17)

Certainly, this is not to say that police officers should not be reprimanded when they are operating outside the law, but a constantly antagonistic public, even in innocuous situations can make carrying out their job even more challenging than it already is. Therefore, the psychological effort required for exercising good judgment when interacting with citizens and when in critical situations can erode coping capacity and increase strain on officers. Earlier publications have emphasised how police stress and strain can result from poor community relations including disrespect and victimisation at the hands of citizens (Golembiewski & Kim, 1990; Territo & Vetter, 1981).

6.5.3. Operational-related stressors.

For police officers, particularly those working in high crime or violent environments, exposure to life-threatening situations is a real threat. Nevertheless, there is also the perception that this is an accepted part of policing and because of their rigorous training, officers come prepared to deal with challenges that arise from operational duties. However, this *a priori* knowledge of operational policing does not diminish the significance of its potential adverse effects. It was, therefore, not surprising to find this aspect of police work emerge as an important theme in the current study. Persons interviewed recognised that the threat of being harmed or injured is an issue that concerns many officers, especially given the harsh policing environment in which they operate. Current findings corroborate the evidence obtained in the previous quantitative study, in which, the threat of being killed and policing high crime communities were among the highest ranked policing concerns.

Still, the experience of immediate danger or trauma may be more salient for some groups of officers than others. In fact, previous research showed that lower ranked officers are more often affected by frontline duty stressors while higher ranked officers are subjected to stressors that are organisationally oriented (Brown & Campbell, 1990;

Gudjonsson & Adlam, 1985, Violanti & Aron, 1995). Similar observations were made in the current study. Interviewees acknowledged that though stress is a universal issue among police officers, lower ranks are prone to stress from carrying out operational policing and higher ranked officers experience stress that comes with being in positions of management such as being responsible for their subordinates and meeting performance targets.

6.5.4. Work-family conflict.

A significant finding from the current study that was echoed across interviews was the interplay of work and family life. Prior research has linked the taxing nature of police work to marital problems (Alexander & Walker, 1996; Toch, 2002). Police work has certain inherent features, such as working long or irregular hours which can take away from valuable family time. Also, demanding emotional situations, such as dealing with criminals or vicarious experience of trauma may foster undesirable attributes in the police, and lead to subsequent problems in family interactions (Abdollahi, 2000).

While much of the existing research has focused on how police work interferes with family life, current findings suggest a reciprocal relationship between work and home life, where work pressures interfere with officers' personal life and family pressures interfere with work. For instance, participants who have had first-hand interactions with spouses of police officers reported that wives or partners complain of infidelity issues (for example, as a consequence of spending time away from home) and a transfer of hostile behaviours from work into their relationships. Equally, findings also suggested that failure to appropriately manage personal problems can sometimes result in dysfunction at work. The intricate relationship between police work and home domains seems to inevitably develop into a cyclical one, where over time it becomes difficult to determine the actual catalyst of the presenting problem.

6.5.5. Coping and help-seeking.

Because of the stigma associated with displaying certain emotions in the police culture, police officers may not show visible signs of the effect of stress. This might lead to the perception that they are coping well with the challenges of the job. In the current study, police officers reportedly adopt maladaptive coping strategies such as the use of alcohol, smoking and having multiple sexual relationships, behaviours which might mask the effects of job stress. Interestingly, the police culture may even encourage these types of behaviours as favourable. However, while these are common coping mechanisms employed by police officers and such methods may be effective over the short term, over the long term they are likely to exacerbate stress rather than alleviate it. In fact, prior research has linked these behaviours to poorer psychological and emotional well-being (Alexander & Walker, 1994; Burke, 1998).

Police officers, after a period of being in the force, have also been found to develop certain traits such as suspiciousness, aloofness, cynicism and authoritarianism to cope with the stressors of the job (Evans, Coman, & Stanley, 1992). The current study found some support for this argument. It was highlighted that over time and after repeated exposures to job stressors, police officers sometimes become desensitised or detached and develop avoidance mechanism to help them cope with various aspects of their work.

In current stress management models the onus is on the police officer to take advantage of the available resources within or outside of the police organisation (Lanterman et al., 2010; Stinchcomb, 2004). However, in a broader national context, and specifically within a 'macho' police environment, where seeking help for mental health problems is frowned upon, it is not surprising that there is a challenge in officers using professional services. Indeed, two barriers to help seeking emphasised in the interviews

were the stigma attached to psychological and emotional problems and the lack of trust in services offered in some support units.

Findings suggest that in trying to maintain the 'macho' image that is perpetuated in the police culture, police officers are reticent in acknowledging that they have a problem and avoid seeking help for fear of appearing emotionally weak. This reluctance to get help, in part, is driven by the fear of disapproval from their colleagues and superiors. However, in trying to preserve this image, officers increase the likelihood of internalising and suppressing emotions which can prove detrimental to their health. Police officers also have difficulty trusting the 'system'. That is, there is a perception that information provided to support service professionals may not be kept confidential and can potentially be used against them. Some researchers suggest that police officers fear the negative perception that might be formed including being considered crazy, weak or incompetent which may then lead to unfavourable performance evaluations and being overlooked for promotions (e.g., Lanterman et al., 2010).

6.5.6. The rewards of police work.

Although policing is considered to be one of the most challenging occupations, there are many aspects of the job that can be rewarding. Current findings suggest that police officers have positive appraisals of their job despite its challenges. A common sentiment was that officers love what they do and take pride in situations when they receive positive feedback and recognition for their work. As pointed out by Hart et al. (1995), in an attempt to identify the detrimental effects of police work, the literature has mostly focused on the negative aspects of policing. The emphasis on the rewarding aspects of the job has received less attention. More research on these aspects of policing may provide an understanding of how we can promote positive well-being while simultaneously reducing the adverse effects of police work.

6.6. Study Limitations

This study, while providing useful information about the problems facing Jamaican police officers, is not without limitations. First, because of the small number of participants interviewed, results should be interpreted with caution. The fact that support service professionals are likely to come in contact with a small fraction of police officers who choose to access these services also means that one should exercise caution when drawing conclusions from these findings. Participants' accounts, based on their experience, may not be representative of the general police population and may be limited to certain officers. For instance, those who have: (1) sought assistance because of serious problems; (2) been referred for mandatory consultation; or (3) sought help because of specific reasons (e.g., relationship issues).

To the author's knowledge, this is the first study that has observed the perceptions of support service professional as it relates to police stress. The in-depth accounts gleaned from their narratives demonstrate that this may prove a useful perspective to explore in more detail in future research.

6.7. Chapter Summary

The aim of the current research was to help enhance our understanding of police stress as seen through the eyes of professionals who provide support to police officers. The study has been useful in generating additional and complementary information on the sources of stress affecting Jamaican police officers. These include stressors that originate from police organisation itself such as problems with supervision, management of transfers and duty assignments, and inadequate pay and resources. Public criticisms and operational stressors including the threat of being harmed were also underlined. Other noteworthy themes included work-family conflicts, coping responses, and positive job appraisals.

Overall, the study was especially useful in solidifying the areas of focus for future research as well as highlighting topics that were not previously considered.

Following up on the cumulative findings from this and previous studies described in the thesis, the next two chapters focus on examining occupational stress and well-being in the Jamaican police using an adapted research model.

<center>**Chapter 7**</center>

<center>**Stress and Occupational Well-being in the Jamaican Police Force**</center>

7.1. Overview of Chapter

The research in this (and the next) chapter builds on findings from previous studies in earlier sections of the thesis. As discussed in Chapter 4, organisationally oriented stressors were salient for the Jamaican police. Subsequently, the research in Chapter 5 sought to investigate main effect relationships between constructs that broadly encompass organisational challenges in occupational settings and well-being outcomes. The role of coping and personality characteristics in predicting well-being outcomes was also examined in independent models. However, no firm conclusions could be drawn from these preliminary findings. Results from the study were mixed, but in most cases proposed relationships were less supported in this sample of Jamaican police officers relative to prior research and a recent study on the UK police.

The current (and next) chapter, therefore, aims to further investigate these relationships using a larger, more representative sample of police officers from Jamaica. Cumulative findings across studies described thus far are coalesced to inform the enhanced framework adopted for this research. In this chapter, multivariate statistics are used to examine the relative contribution of different sets of antecedent variables on occupational well-being outcomes. This is followed by analysis of potential interaction and mediation effects. A description of the updated model and the specific aims for this chapter are provided in the following section.

7.1.1. The enhanced DRIVE model.

As discussed previously, the original DRIVE model (Mark & Smith, 2008) proposed three main hypotheses: (1) a main effect model which suggests that there are

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direct relationships between work characteristics (e.g., dimensions of DCS and ERI), individual differences and well-being outcomes; (2) a moderation model which proposes interactions similar to the DCS and ERI models and interactions between work characteristics and coping; and (3) a mediation model that proposes an indirect pathway for work characteristics through cognitive appraisals in predicting outcomes. The statistical analyses in this chapter are guided by the propositions above.

In addition to the antecedent variables examined in Chapter 5, the research described here expands the conceptual framework by including work-family conflict. The decision to include this variable was informed by findings derived from studies in Chapters 4 and 6. Further, though operational stressors including concerns about danger, injury or death are not considered especially intense relative to organisational factors, it should not be concluded that the perception of danger is not an issue that affects officers. In studies described in Chapters 4 and 6, elements of operational policing were identified as an area of concern for Jamaican officers. Therefore, operational experiences were explored by including a variable that measured exposure to assault or violence at the hands of citizens, hereby referred to as victimisation.

Overall, the research described in this chapter adopts a multi-dimensional approach that is embedded in transactional theories of stress, in predicting occupational well-being. The adapted model on which the main aims of the research is based is illustrated in Figure 7.1. Specifically, the aims of this chapter were to: (1) examine the unique predictive power of work factors, work-family conflict, coping styles, personality characteristics on perceived job stress and job satisfaction, adjusting for demographic variables; (2) test for interaction effects between adverse work conditions and work resources in predicting outcomes; (3) test for interactions between work factors and coping styles in predicting

outcomes; and (4) test for the mediation effect of perceived job stress on the relationship between work factors and job satisfaction.
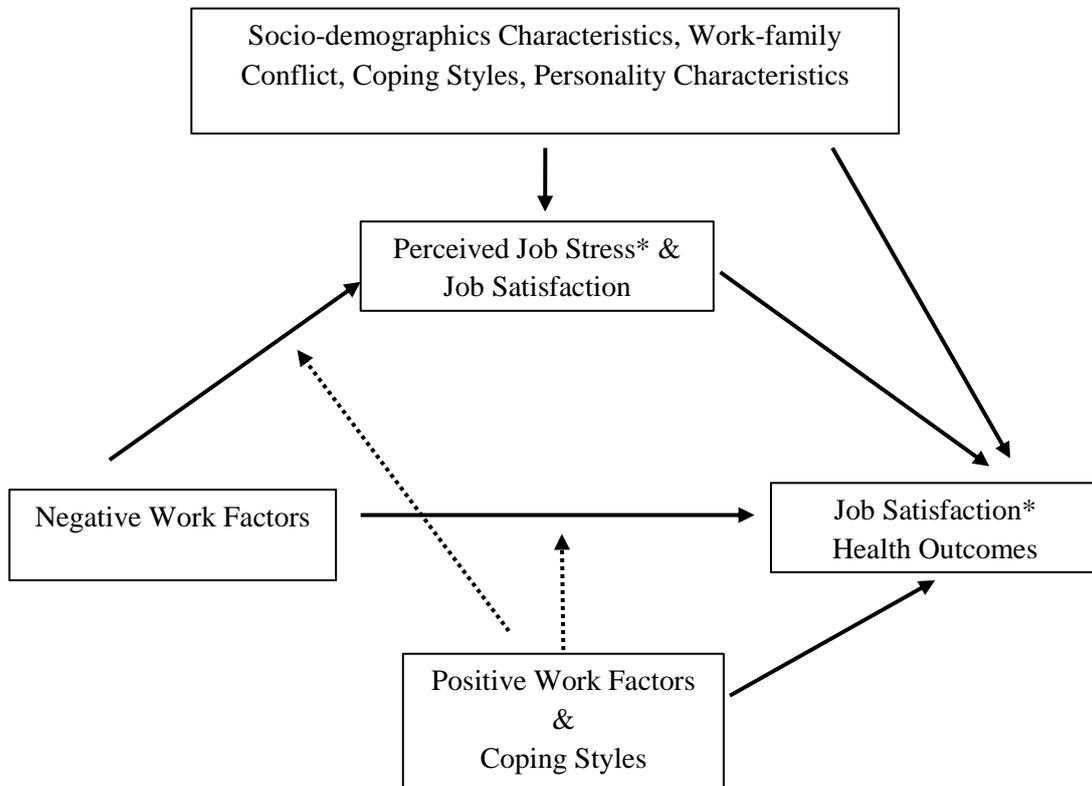
Figure 7.1. Adapted DRIVE Model.
Note. * Job stress also acts as a mediator between work characteristics and job satisfaction

7.2. Methods

7.2.1. Participants.

A description of the demographic characteristics of the sample was presented in Chapter 4 (section 4.4.2.1). The sample consisted of 578 police officers between constable and inspector ranks.

7.2.2. Materials.

A detailed description of the measures used for this study was provided in Chapter 3. To summarise, the independent variables of interest were demographic characteristics, organisational work characteristics, victimisation, coping styles, personality

characteristics, and work-family conflict. Occupational well-being outcomes were perceived job stress and job satisfaction.

Demographic variables of interest were gender, rank, job tenure, and relationship status. Relationship status was considered an important control variable in light of the fact that work-family conflict was now included in the model.

Organisational work characteristics, coping styles, core self-evaluations and perceived job stress were measured using single items from the WPQ (see Table 3.1). Single-item measures for work characteristics were formed from DCS, ERI and HSE models (e.g., demands, support, effort, reward). Five dimensions of coping were measured: problem-focused, seek support, avoidance, self-blame and wishful thinking. Measures of core self-evaluations included self-efficacy, self-esteem and optimism.

All other variables were measured using multi-items scales. The victimisation scale was measured using five items from an existing scale that assessed officers' exposure to verbal and physical assault. In Chapter 5, findings showed that the model fit with personality as predictors were consistently poor. Therefore, the decision was made to discontinue the use of single items for this set of variables. A short, validated scale (i.e. TIPI) that measures similar constructs of the Five Factor model was used in the current research. Using three items for each dimension, the work-family conflict instrument tapped into a bidirectional scale: work-to-family conflict (WFC) and family-to-work conflict (FWC). Lastly, based on previous findings, consideration was given to the fact that a single item may not be an adequate measure of job satisfaction in this population. Therefore, in the current research, job satisfaction was operationalized using the Warr-Cook-Wall (1979) job satisfaction scale.

7.2.3. Procedure.

The procedures followed to collect data were described in Chapter 3.

7.2.4. Analytic approach.

Similar to the previous studies, factor analysis was performed to reduce and refine the number of items measuring organisational work characteristics, coping and core self-evaluations. The victimisation and job satisfaction scales were summed to give an overall score. However, because the distribution was negatively skewed for the victimisation scale, it was subsequently dichotomized using a median split method. The lower category consisted of participants who experienced one or no incident of assault and the higher category, two or more incidents. The variables, rank and relationship status, were collapsed into two categories for multivariate analysis. That is, lower rank (constables) versus upper ranks (corporal to inspector) and no relationship versus being in a relationship respectively.

Pearson Product Moment correlations were used to examine preliminary relationships among study variables. Hierarchical regression analyses were used to determine the relative contribution of work-related factors, work-family conflict, coping styles, and personality characteristics on outcomes. Hierarchical regressions were also used to test moderation effects. Hayes PROCESS tool (Hayes, 2013) was used to examine the mediation effect of perceived job stress. The rationales for the statistical methods utilised were provided in detail in Chapter 3.

7.3. Results

7.3.1. Factor analysis of work characteristics.

PCA with Oblimin rotations revealed three components with eigenvalues exceeding 1, explaining 49.89%, of the overall variance in the data. Inspection of the scree

plot revealed a clear break after the third component. Examination of the factor loadings showed logical loading of items on each component except for component 3. This component included the items: reward, control and role ambiguity. Although this component is similar to that found in the preliminary study (see Table 5.9), in this case, the variables loaded in the same direction. This was not conceptually consistent with what would be expected given that role ambiguity refers to not having a clear understanding of one's role and would suggest a negative relationship with the other two items. Given the unusual loading of this item, it was excluded from further analyses.

A second PCA was conducted and again revealed three components, explaining 52.57% of the overall variance. The scree plot supported the extraction of three factors. All items loaded above .4 on each respective component. The item, bullying, loaded above .4 on two components but was considered based on its highest loading and evidence of its loading from studies described in previous chapters. Items loading onto Factor 1 accounted for 24.09% of total variability and were primarily related to support from supervisors and colleagues. Items loading onto Factor 2, accounting for 17.90% of the total variability, pertained to the adverse aspects of the job. The two items that loaded onto Factor 3 related to the positive features of the job and accounted for 10.60% of total variability. As in previous chapters, the factors were labelled: work support, negative job characteristics, and positive job characteristics respectively. Table 7.1 summarises the three-factor structure of the work-related factors.

Table 7.1. *PCA with Oblimin Rotation of the Three-Factor Solution of Work Characteristics*

	Rotated Factor Loadings		
Items	Work support	Neg. Job characteristics	Pos. Job characteristics
Supervisor support	**.78**	.09	
Supervisor relationship	**.76**	.04	.11
Colleague support	**.63**	.07	.04
Bullying*	**.48**	-.44	-.37
Work demands	.08	**.79**	-.11
Effort	.02	**.75**	-.11
Difficulty withdrawing	.21	**.66**	.00
Lack of consultation	-.32	**.49**	.04
Rewards	.04	-.09	**.71**
Control	.18	-.09	**.67**
Kaiser-Myer-Olkin			.68
Eigenvalues	2.41	1.79	1.06
% of variance	24.09	17.90	10.60

Note. * indicate that the item was reverse coded.

7.3.2. Factor analysis of coping styles.

Table 7.2 shows the results of the PCA of coping styles. Similar to previous studies, a two-factor solution was extracted. The data accounted for 59.16% of total variance. Examination of the scree plot supported a two-factor extraction. Items loading onto Factor 1, explaining 35.10% of the variability, pertained to the use of emotive coping. It was therefore labelled: emotion-focused coping. Factor 2 accounted for 24.06% of variability and consisted of items related to the use of active coping styles. This factor was labelled action-oriented coping.

Table 7.2. *PCA with Oblimin Rotation of the Two-Factor Solution of Coping Styles*

	Rotated Factor Loadings	
Items	Emotion-focused coping	Problem-focused coping
Wishful thinking	**.76**	.20
Self-blame	**.73**	-.07
Avoidance	**.69**	-.18
Seek social support	.02	**.82**
Problem-focused	-.04	**.78**
Kaiser-Myer-Olkin		.62
Eigenvalues	1.76	1.20
% of variance	35.10	24.06

7.3.3. Factor analysis of core self-evaluations.

The results for the PCA of single item measures of core self-evaluations are shown in Table 7.3. As before, PCA generated a single factor structure and explained 69.16% of the overall variance. The component was labelled positive self-evaluations.

Table 7.3. *PCA With Oblimin Rotation of the Factor Solution of Core Self-Evaluations*

	Rotated factor loading
Items	Positive self-evaluations
Self-efficacy	**.88**
Positive self-esteem	**.84**
Optimism	**.78**
Kaiser-Myer-Olkin	**.67**
Eigenvalues	**2.08**
% of variance	**69.16**

Overall, in terms of factor compositions, the results of the factors analyses in the present study are similar to those previously found in studies described in Chapter 5. This demonstrates that there is consistency in terms of factor structure across studies.

7.3.4. Bivariate analyses.

Pearson correlations for the study variables are presented in Table 7.4. Relationships between independent variables were weak to moderate and showed none over .8, suggesting no evidence of multicollinearity. Results showed that all work-related variables were significantly correlated with perceived job stress and job satisfaction. Negative job characteristics showed moderate correlations with both job stress, $r = .42$, $p < .01$ and job satisfaction, $r = -.37$, $p < .01$. However, work support, $r = .38$, $p < .01$; positive job characteristics, $r = .31$, $p < .01$, and victimisation, $r = -.24$, $p < .0, 1$showed stronger correlations with job satisfaction compared to perceived job stress.

Work-to-family conflict was positively associated with perceived job stress, $r = .38$, $p < .01$, and job satisfaction, $r = -.26$, $p < .01$. However, family-to-work family was only weakly association with job stress, $r = .14$, $p < .01$.

Emotion-focused coping showed significant but weak correlations with both job stress, $r = .12$, $p < .01$, and job satisfaction, $r = -.12$ $p < .01$, while action-oriented coping was significantly but weakly associated with job satisfaction, $r = .14$, $p < .01$.

Extraversion was the only personality characteristic significantly associated with both perceived job stress. $r = -.12$, $p < .01$, and job satisfaction, $r = .16$, $p < .01$. Positive self-evaluations, $r = .14$, $p < .01$; conscientiousness, $r = .10$, $p < .05$; agreeableness, $r = .11$, $p < .01$; and emotional stability, $r = .08$, $p < .05$, showed weak but significant relationships with job satisfaction.

Considering demographics, job tenure was significantly and positively associated with both job stress, $r = .09$, $p < .05$, and job satisfaction, $r = .17$, $p < .01$, while rank was positively associated with job satisfaction, $r = .19$, $p < .01$.

Table 7.4. *Pearson Product Moment Correlations Among Independent Variables and Perceived Job Stress and Job Satisfaction*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Job stress	-																		
2. Job satisfaction	-.38**	-																	
3. Negative job characteristics	.42**	-.37**	-																
4. Work support	-.14**	.38**	-.20**	-															
5. Positive job characteristics	-.15**	.31**	-.15**	.23**	-														
6. Victimization	.20**	-.24**	0.15**	-.19**	-.10*	-													
7. Action-oriented coping	-0.01	.14**	-.04	.24**	.05	-.12**	-												
8. Emotion-focused coping	.12**	-.12**	.30**	-.16**	.12**	.16**	.16**	-											
9. Extraversion	-.12**	.16**	-.09*	.11**	.08	-.05	.14**	-.17**	-										
10. Agreeableness	-.04	.11**	-0.14**	.18**	.06	.11**	.16**	-.15**	-.05	-									
11. Conscientiousness	.04	.10*	-.05	.14**	-.04	-.08	.18**	-.13**	.13**	.38**	-								
12. Emotional stability	-.06	.08*	-.13**	.14**	.04	-.12**	.22**	-.28**	.04	.51**	.35**	-							
13. Openness	.04	.03	.02	.08*	-.03	-.05	.21**	-.18**	.15**	.29**	.44**	.29**	-						
14. Pos. self-evaluations	.08	.14**	.05	.25**	.07	-.08	.31**	-.18**	.18**	.17**	.27**	.27**	.26**	-					
15. Work-to-family conflict	.38**	-.26**	.45**	-.10*	-.05	.17**	-.06	.28**	-.14**	-.09*	-.04	-.18**	-.05	-.08	-				
16. Family-to-work conflict	.14**	-.07	.24**	-.06	.01	.09*	-.09*	.25**	-.16**	-.16**	-.19**	-.25**	-.14**	.27**	-				
17. Years of Service	.09*	.17**	-.02	.18**	.19**	-.10*	.09*	-.02	.06	.14**	.15**	.14**	.09*	.05	-.08	-.03	-		
18. Gender	.01	-.02	.05	.04	.04	-	.10*	.01	.05	.07	.03	.00	.03	.04	.05	-.06	0.01	-	
19. Rank	.05	.19**	.02	.17**	.18**	-	.05	-.07	.05	.12**	.14**	.08	.05	.03	-.08	-.05	.73**	-	-
20. Relationship status	.05	-.04	-.04	.03	.04	-	.02	-.00	.01	-.01	-.02	-.03	-.01	.02	-.04	.01	.11**	-	-

Note. Gender: male = 0, female = 1. Rank: constable = 0, above constable = 1.Relationship status: 0 = not in relationship, 1 = in relationship

Victimisation: ≤ 1 incident = 0, 2 or more incident = 1+

*p<.01. **p<.001

7.3.5. Hierarchical regressions.

Hierarchical regression analyses were used to examine the relative contribution of work-related factors, work-family conflict, coping styles, and personality characteristics in influencing occupational outcomes after adjusting for demographics. For each of the outcome measures, the predictor variables were entered in blocks. Demographic variables were introduced in the first stage; work factors in block two; work-family conflict in block 3; coping styles in block 4; and personality characteristics in the final block.

7.3.5.1. Perceived job stress.

Table 7.5 shows the results of the hierarchical regression analysis for perceived job stress. In the first block, collectively, demographic characteristics did not significantly contribute to perceived job stress ($R^2 = .01$). After the entry of work-related variables in block 2, the total variance accounted for by the model increased significantly ($\Delta R^2 = .21$). Except for work support, all the other work variables significantly predicted job stress, with negative job characteristics being the most important variable by beta weight. The addition of work-family conflict in the third step resulted in another significant but small increase ($\Delta R^2 = .04$) in explained variance, which was mainly attributed to the influence of work-to-family conflict. Coping styles were entered in the fourth block, but did not result in a significant increase in variability in job stress ($\Delta R^2 = .00$). However, entering personality characteristics in the model resulted in a significant increment, but uniquely accounted for only 2% of explained variance in perceived job stress. Positive self-evaluations and extraversion were the only two personality characteristics associated with job stress.

The final model explained 28% of total variance in perceived job stress, $F(18, 538) = 11.78$, $p < .001$. Significant independent relationships with predictor variables and job

stress were noted in the final model. Job tenure ($\beta = .16$, $p < .01$), negative job characteristics ($\beta = .28$, $p < .001$), victimization ($\beta = .12$, $p < .01$), positive self-evaluations ($\beta = .14$, $p < .001$), and work-to-family conflict ($\beta = .22$, $p < .001$) showed significant positive relationships with perceived job stress. Extraversion ($\beta = -.08$, $p < .05$), work support ($\beta = -.09$, $p < .05$), and positive job characteristics ($\beta = -.08$, $p < .05$) were inversely associated with job stress.

Table 7.5. *Hierarchical Regression for Perceived Job Stress Regressed Against Demographics, Work Factors, Work-Family Conflict, Coping Styles, and Personality Characteristics*

	Model 1			Model 2			Model 3			Model 4			Model 5		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β	B	SE	β
Demographic Variables															
(Constant)	7.56	.22		4.95	.53		4.55	.52		4.37	.58		3.87	.80	
Gender	.08	.21	.02	.15	.20	.03	.10	.19	.02	.08	.19	.02	.09	.19	.02
Rank	-.12	.28	-.03	-.16	.25	-.04	-.09	.25	-.02	-.10	.25	-.02	-.11	.25	-.02
Relationship status	.20	.21	.04	.27	.19	.05	.28	.18	.06	.28	.18	.06	.28	.18	.06
Years of service	.03	.02	.10	.04	.02	.15**	.04	.01	.16**	.04	.01	.16**	.041	.01	.16**
Work-Related Factors															
Negative job characteristics				.1	.01	.38***	.07	.01	.28***	.08	.01	.29***	.07	.01	.28***
Work support				-.013	.01	-.05	-.01	.01	-.05	-.02	.01	-.06	-.02	.01	-.09*
Positive job characteristics				-.05	.02	-.09*	-.05	.02	-.10*	-.05	.02	-.09*	-.04	.02	-.08*
Victimisation				.59	.17	.13***	.49	.17	.11**	.51	.17	.12**	.52	.17	.12**
Work-family Conflict															
Work-to-family conflict							.06	.01	.22***	.06	.01	.23***	.06	.01	.22***
Family-to-work conflict							-.00	.01	-.01	.00	.01	.01	.01	.01	.02
Coping Styles															
Action-oriented coping										.020	.02	.04	.01	.02	.01
Emotion-focused coping										-.015	.01	-.04	-.02	.01	-.05
Personality Characteristics															
Positive self-evaluations													.05	.02	.14***
Extraversion													-.07	.03	-.08*
Agreeableness													-.01	.04	-.01
Conscientiousness													.04	.04	.04
Emotional Stability													-.02	.04	-.02
Openness													.00	.04	.00
F		1.29			19.27***			18.99***			16.04***			11.78***	
R^2		.01			.22			.26			.26			.28	
ΔR^2					.21***			.04***			.00			.02*	

Note. Gender: male = 0, female = 1. Rank: constable = 0, above constable = 1.Relationship status: 0 = not in relationship, 1 = in relationship

Victimisation: ≤ 1 incident = 0, 2 or more incident = 1+

*p < .05. **p < .01. ***p < .001

7.3.5.2. Job satisfaction.

Table 7.6 shows the results of the hierarchical regression with predictors of job satisfaction. Demographic variables, entered in the first block, made a significant though relatively weak contribution to job satisfaction ($R^2 = .05$). Rank was the only significant predictor of job satisfaction at this stage. The addition of work factors in the second block substantially increased the variance accounted for in job satisfaction ($\Delta R^2 = .28$). All four work variables were significantly associated with job satisfaction. Work-family conflict, coping styles, and personality characteristics entered in blocks three ($\Delta R^2 = .01$), four ($\Delta R^2 = .01$) and five ($\Delta R^2 = .01$) respectively, did not make a unique significant contribution to job satisfaction over and above that of demographics and work factors. However, WFC and extraversion were independent predictors of job satisfaction in the final model.

The model, as a whole, accounted for 35% of the variability in job satisfaction, $F(18, 538) = 16.06$, $p < .001$. Rank ($\beta = .15$, $p < .01$), work support ($\beta = .23$, $p < .001$), positive job characteristics ($\beta = .19$, $p < .001$) and extraversion ($\beta = .07$, $p < .05$) were positively associated with job satisfaction, whereas relationship status ($\beta = -.08$, $p < .05$), negative job characteristics ($\beta = -.27$, $p < .001$), victimization ($\beta = -.11$, $p < .01$) and work-to-family conflict ($\beta = -.09$, $p < .05$) were significant negative predictors.

Table 7.6. *Hierarchical Regression for Job Satisfaction Regressed Against Demographics, Work Factors, Work-Family Conflict, Coping Styles, and Personality Characteristics*

	Model 1			Model 2			Model 3			Model 4			Model 5		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β	B	SE	β
Demographic Variables															
(Constant)	42.61	1.31		44.48	3.03		45.17	3.06		42.22	3.39		39.10	4.75	
Gender	-1.29	1.30	-.04	-2.17	1.12	-.07	-1.94	1.12	-.06	-2.16	1.13	-.07	-2.29	1.13	-.07*
Rank	4.54	1.71	.16**	3.99	1.45	.14**	3.92	1.45	.14**	4.23	1.46	.15**	4.11	1.46	.15**
Relationship status	-2.00	1.29	-.07	-2.36	1.09	-.08*	-2.41	1.08	-.08*	-2.47	1.08	-.08*	-2.54	1.08	-.08*
Years of service	.11	.10	.07	-.03	.09	-.02	-.03	.08	-.02	-.05	.09	-.03	-.05	.09	-.03
Work-Related Factors															
Neg. job characteristics				-.47	.06	-.29***	-.42	.07	-.26***	-.44	.07	-.27***	-.44	.07	-.27***
Work support				.42	.06	.25***	.42	.06	.25***	.40	.07	.24***	.39	.07	.23***
Pos. job characteristics				.60	.11	20***	.60	.11	.20***	.59	.12	.19***	.59	.12	.19***
Victimisation				-3.27	1.00	-.12***	-3.06	1.01	-.11**	-3.00	1.01	-.11**	-3.08	1.01	-.11**
Work-family Conflict															
Work-to-family conflict							-.15	.07	-.09*	-.15	.07	-.09*	-.15	.07	-.09*
Family-to-work conflict							.09	.07	.04	.09	.08	.05	.11	.08	.05
Coping Styles															
Action-oriented coping										.23	.12	.07*	.20	.12	.06
Emotion-focused coping										.05	.08	.03	.06	.08	.03
Personality Characteristics															
Positive self-evaluations													.06	.10	.03
Extraversion													.40	.20	.07*
Agreeableness													-.05	.23	-.01
Conscientiousness													.26	.23	.05
Emotional Stability													-.31	.24	-.06
Openness													.02	.24	.00
F		6.97***			33.36***			27.38***			23.25***			16.06***	
R^2		.05			.33			.33			.34			.35	
ΔR^2					.28***			.01			.01			.01	

Note. Gender: male = 0, female = 1. Rank: constable = 0, above constable = 1. Relationship status: 0 = not in relationship, 1 = in relationship

Victimisation: ≤ 1 incident = 0, 2 or more incident = 1+

*p < .05. **p < .01. ***p < .001

7.3.6. Interactions.

Moderation analyses were performed to determine whether work support and positive job characteristics moderated the relationship between negative job characteristics, victimisation, and outcome variables. Similar analyses were also conducted to examine interactions between all four work variables and coping styles. The decision was made to explore these particular interactions because similarly moderated effects were emphasised in the original DRIVE model (see Mark & Smith, 2008). These specific analyses also provide a practical basis for directing potential stress management and intervention strategies.

Hierarchical regression analyses were used to investigate the interaction effects. In line with recommendations for dealing with collinearity issues that may arise from interaction terms, variables were centred before calculating their cross-product terms (Hayes, 2013). Also, since the primary focus of these analyses were to specifically examine interaction effects on work variables, the interaction models were kept simple. That is, except for the variables of interest and demographic characteristics as controls, other variables were excluded from the interaction models.

Results showed that there were no significant interactions between positive work factors (i.e., work support, positive job characteristics) and adverse work factors (i.e., negative job characteristics, victimisation) in predicting perceived job stress and job satisfaction. Similarly, no significant interactions between work factors and coping styles were observed.

7.3.7. Mediation of perceived stress.

Using Hayes PROCESS tool (Hayes, 2013), mediation analyses were performed to examine the intermediate role of perceived job stress in the relationship between all four

job factors and job satisfaction. The primary question here was "do the four work-related factors exert their effect on job satisfaction via perceived job stress?" Similar to the moderation models, the mediation analysis was performed using a base model including work factors and adjusting for demographic variables.

The bias-corrected bootstrap confidence intervals for the indirect effects based on 1000 bootstrap samples are considered significant when the confidence intervals do not contain zero. As shown in Table 7.7, negative job characteristics (b = -.14, 95% CI [- .21, - .09]), victimization (b = -.85, 95% CI [-1.61, - .04]), and positive job characteristics (b = .07, 95% CI [.01, .14]) indirectly influenced job satisfaction though perceived job stress. However, the indirect effect of work support on job satisfaction via perceived job stress was not significant (b = .02, 95% CI [-.01, .05]).

Table 7.7. *Model Summary of the Indirect Effect of Job Factors on Job Satisfaction through Job Stress*

			Perceived Job Stress
	Total effects	Direct effects	Indirect Effects
Neg. job characteristics	-.47***	-.32***	-.14, CI [-.21, -.09][a]
Work support	.42***	.40***	.02, CI [-.01, .05]
Pos. job characteristics	.60***	.53***	.07, CI [.01, .14][a]
Victimisation	-3.27**	-2.41*	-.85, CI [-1.61, -.38][a]

Note. CI, Confidence Intervals
*p < .05. **p < .01. ***p < .001.
[a] significant indirect effects

7.4. Discussion

Within the context of the police literature, few studies attempt to identify additional variables that may contribute to the explained variance in job stress and job satisfaction beyond demographics and work factors. Therefore, the first aim of the current study was to explore predictors of perceived job stress and job satisfaction extending possible determinants to include work-family conflict and individual differences. A second aim was

to examine whether positive work factors (i.e., work support and positive job characteristics) moderate the relationship between negative work factors (i.e., negative job characteristics and victimisation) and outcomes. Interactions between work variables and coping were also examined. Third, the study examined whether perceived job stress plays an intermediary role in the relationship between work factors and job satisfaction. Significant findings are summarised and discussed in the following sections.

7.4.1. Demographic characteristics and outcomes.

Altogether, demographic characteristics, entered in the initial stages of the models made a small but significant contribution to job satisfaction, but not to perceived job stress. However, job tenure emerged as a significant independent predictor of job stress in the final model, with results suggesting that the longer police officers were in the force, the more likely they were to appraise their job as stressful. This may not be surprising as it is argued that police officers usually exhibit much enthusiasm when they first enter the police service. However, as time passes and the demands of the job become relentless, and their expectations of the job are not met, their stress levels increase (Stinchcomb, 2004). Similarly, in Chapter 6, findings also suggested that police officers are likely to lose their enthusiasm and motivation as they become more integrated into the "police system."

In the final model, gender, rank, and relationship status showed a weak but significant relationship with job satisfaction. Though, it is possible that the relationship between gender and job satisfaction may be spurious, as the association was weak and significance only attained at the very last stage of the model. Interestingly, while job tenure was related to job stress and not job satisfaction, rank was positively related to job satisfaction irrespective of years in the force. The influence of rank on job satisfaction has shown consistency across the current and previous Jamaican studies. It is likely that job satisfaction is linked to promotional opportunities and the benefits that are associated with

being at a higher rank. Some of these were alluded to in Chapter 6, including having decision-making authority. Being at a higher rank also means an increase in compensation and benefits. Further investigations into the factors affecting lower ranked officers may help to clarify this relationship and provide insight on how to improve their levels of satisfaction especially given the fact that promotional opportunities may be few.

In addition, although a weak relationship, it is probable that being in a relationship or being married has the potential to affect how officers perceive their job. In this study, officers who reported being in a relationship were less satisfied with their job. This finding may be a further indication of challenges associated with balancing work and family lives.

7.4.2. Work factors and outcomes.

Taken together, the results suggest that conditions of work provide a substantially greater power in explaining job stress and job satisfaction relative to the other sets of variables. All four work variables significantly predicted the outcomes. Increased negative job characteristics and exposure to multiple incidents of assault and violence were associated with higher perceived job stress but lower job satisfaction. On the other hand, more support from work and positive job characteristics appear to reduce the perception of the job being stressful and enhance job satisfaction. It is noted, however, that the significant effect for work support on job stress was observed at later stages of the model, and the effect might be specious. Further observations of the standardised correlation coefficients suggest that the perception of the job being stressful is more strongly influenced by the presence of adverse work variables rather than the absence of positive work factors. However, work conditions seem to affect job satisfaction more evenly compared to job stress, though negative job characteristics were the most important predictor by beta weight in both cases.

Current findings in regards to perceived job stress are supportive of those found in the preliminary study (see Chapter 5). However, possible differences between the two studies regarding the findings for job satisfaction may suggest that assessing various aspects of the job may be a better measure of this variable for this population compared to using a global measure. Overall, findings from the present study are supportive of previous police research that have employed similar measures (i.e., work demands and work resources) in predicting job stress and job satisfaction (Allisey et al., 2013; Houdmont et al., 2012; Noblet et al., 2009a).

7.4.3. Work-family conflict and outcomes.

There has been growing interest in the interaction between work and home life, particularly in the wider occupational stress literature. Researchers have argued for considering the influence of both work-to-family and family-to-work conflict (Frone et al., 1992). Therefore, this study accounted for both. Work-family conflict, on a whole, made a small but significant contribution to job stress when added to the model, but the overall contribution to job satisfaction was not significant. However, in the final models for both outcomes, work-to-family conflict was a significant independent predictor, whereas family-to-work conflict was not statistically important in influencing either outcome.

Consistently across the studies in this thesis, there have been indications that the challenge of balancing work and personal life is a major stressor for police officers. This was further supported by current findings. Results showed that perceived interferences with family life due to work demands can affect how officers appraise their job. These findings add to the growing body of literature that shows that problems from work spilling over into home life can increase stress and reduce satisfaction levels among police officers (Burke, 1994; Howard et al., 2004). Moreover, similar to current findings, there is also evidence in the broader literature that shows work-to-family conflict is a stronger predictor

of work-related outcomes compared to family-to-work conflict (Allen et al. 2000; Frone et al., 1992).

7.4.4. Coping and outcomes.

The effect of coping on perceived job stress and job satisfaction was negligible, a finding that may not be surprising given prior indications from the initial study (see Chapter 5). These findings are, on one hand, in contrast to previous police studies on job stress (Gershon et al., 2009; Haar & Morash, 1999; Morash et al., 2008) but on the other hand, supportive of studies on job satisfaction (Burke, 1994; Kirkcaldy et al., 1995a).

One possible explanation for the differences found for the relationship between coping and job stress may be because of the use of different coping measures across studies. However, this conclusion remains tentative. For instance, in the UK study described earlier in Chapter 5, coping (though independent of other variables) accounted for a relatively small but significant amount of variance in predicting job stress and job satisfaction. However, as shown in that chapter, the coping models predicting these outcomes for the Jamaican sample did not reach statistical significance. Another explanation might be that the applications of coping strategies differ across different police groups, perhaps, based on culture or other inherent differences. For instance, data garnered from interviews suggest that Jamaican police may use short term, maladaptive strategies such as alcohol consumption, to manage stress. Current findings may, therefore, suggest that spending resources on programs aimed at addressing coping as measured here, may not yield as much benefit relative to modifying other factors, particularly, if the interest is to reduce job stress and enhance job satisfaction in this group of police officers.

7.4.5. Personality and outcomes.

Existing research has demonstrated that neuroticism (low emotional stability) and extraversion are important determinants of police stress and well-being (Hart & Cotton, 2002; Hart et al., 1995; Ortega et al., 2007). The UK study in Chapter 5 also seems to support these findings. However, the research in the current chapter shows that very little variance in job stress and job satisfaction was explained by personality characteristics, after controlling for all other variables. Previous observations that personality characteristics, on a whole, may not be important determinants of these outcomes were also noted in the preliminary study on Jamaican police (see Chapter 5).

Nonetheless, independent relationships were observed in the final models in the present research. Extraversion showed a relatively weak but significant association with job stress and job satisfaction. Participants who scored high on extraversion traits reported lower levels of job stress but higher levels of job satisfaction. Interestingly, positive self-evaluations showed a significant positive relationship with job stress. Although this finding appears counterintuitive and could reflect an anomaly in the sample, it is possible that the police officers who evaluated themselves positively (e.g., are more optimistic, and have higher self-esteem and self-efficacy) are also likely to take on or be assigned more demanding tasks and therefore report more stress. Another explanation might be that officers who have positive views of themselves are more self-aware and confident and therefore are not apprehensive to share that they are feeling stressed.

However, before any definitive conclusions can be drawn, more research might be needed to understand this relationship better. That is, to determine whether it is unique in this group of police officers or a spurious effect. For instance, as shown in the studies described in Chapter 5, positive self-evaluations were negatively and significantly

associated with job stress in UK sample. Additionally, while the association was not significant in the Jamaican sample, the relationship was in the expected direction.

7.4.6. Interaction and indirect effects.

The current research further expanded on the police stress literature by testing interaction effects and the intermediate role of perceived job stress in the relationship between job factors and job satisfaction. There was no support for moderation effects. That is, work support and positive job characteristics did not moderate the relationship between adverse work factors and outcomes and there were no moderation effects of coping styles.

However, there was some evidence for a mediation model. Specifically, the relationships between negative job characteristics, victimisation, positive job characteristics and job satisfaction were mediated by job stress. That is, higher levels of perceived job stress resulting from adverse working conditions and absence of positive job characteristics act to reduce satisfaction levels. These findings are supportive of the hypothesis proposed in the DRIVE model and suggest that perceived job stress is a cognitive mechanism through which work conditions can affect job satisfaction (Mark & Smith, 2008). That is say, it is not only the exposure to work factors that affect levels of job satisfaction but how the officer perceives these conditions.

There is some support for the intermediate linkage of perceived stress in the relationship between stressors and other work-related outcomes in the police literature. For instance, Allisey et al. (2013) found that perceived stress mediated the relationship between psychosocial work conditions and intention to quit in UK police officers. Similarly, Singh and Nayak (2015) using a sample of Indian police officers, found that the relationship between work-family-conflict and job satisfaction was mediated by perceived job stress. Overall, the evidence suggests that it is important to periodically monitor

perceptions of job stress, as it appears to be a precursor to other work-related outcomes including job dissatisfaction.

7.5. Chapter Summary

The research described in this chapter examined the additive effects of work and non-work factors on work-related outcomes using a comprehensive research framework. Based on current findings, there are some clear theoretical and practical implications. For instance, when assessing and attempting to enhance the perceptions of job stress and job dissatisfaction, work factors, on a whole, appear to be most important. Individual differences provided little explanatory power in predicting the work outcomes. Unlike much of previous police stress research, moderation and mediation effects were also examined in the current study. A moderation model estimating the buffering effect of the positive aspects of the job was not supported, and neither was a moderation model for coping. However, there was evidence for an indirect pathway through which work-related factors exert their effect on job satisfaction via perceived job stress.

In the next chapter, the research is extended with a focus on personal well-being outcomes. For instance, similar direct and moderated relationships are examined. Further, as proposed in the research model (see Figure 7.1), the role of job stress and job satisfaction as proximal variables through which working conditions exert their effects on personal well-being outcomes are also explored.

Chapter 8

Occupational Stress and Personal Well-Being in the Jamaican Police Force

8.1. Overview of Chapter

In this chapter, the final aspects of the empirical research that fulfils the second of two primary objectives of the thesis are examined. The research described here is focused on the important predictors of personal well-being outcomes. Similar to analysis in the previous chapter, the extent to which interactive models add to the prediction of personal strain is also examined. In the previous chapter, perceived job stress and job satisfaction were considered (occupational) well-being outcomes in their own right. However, in the comprehensive model, as shown in Figure 7.1, job stress and job satisfaction are also considered proximal variables. That is, these variables are possible intermediate linkages in the relationship between work conditions and personal well-being outcomes. Therefore, a mediational model with job stress and job satisfaction was also tested.

To summarise, the main aims of the chapter were to: (1) examine the relative contribution of work factors, work-family conflict, coping styles, and personality characteristics to personal well-being outcomes (i.e., psychological distress, positive well-being, general health, and psychosomatic symptoms) adjusting for demographic characteristics; (2) test for interaction effects between adverse work factors (i.e., negative job characteristics and victimisation) and positive work factors (i.e., positive job characteristics and work support) in predicting well-being outcomes; (3) test for interactions between work factors and coping styles in predicting well-being outcomes; (4) test for the mediation effect of perceived job stress and job satisfaction in the relationship between work factors and job satisfaction.

8.2. Method

8.2.1. Participants.

The demographic characteristics of the sample were presented in Chapter 5.

8.2.2. Measures.

Except for the personal well-being outcomes, all other measures pertinent to this chapter remain the same as in Chapter 7. Additionally, a detailed description of the measures used in this study is provided in Chapter 3. To summarise, single items were used to measure subjective feelings of depression, anxiety, happiness, and a global measure of general physical health. A short 5-item version of the Warwick-Edinburgh Mental Well-being Scale was used as a measure of positive well-being. Lastly, participants were asked to indicate whether they had experienced any of four categories of symptoms over the previous six months (i.e., feeling tired/exhausted, having pains, difficulty sleeping, and gastrointestinal troubles).

8.2.3. Procedure.

The procedures followed to collect the data were presented in Chapter 3.

8.2.4. Analytic approach.

PCA was performed on the items tapping into psychological well-being to refine and reduce them into manageable constructs for further analysis. The measure of general physical health was scored on a scale from 1 – 10, with higher scores indicating participants' perception of having good general health. The psychosomatic symptom items were summed to give an overall score of the number of symptoms experienced.

Pearson Product Moment correlations were used to specify preliminary relationships between predictor variables and outcomes. Hierarchical regressions were used to determine the relative contribution of antecedent variables and interaction effects

on well-being outcomes. Haye's PROCESS tool for SPSS (Hayes, 2013) was used to test for mediation effects.

8.3. Results

8.3.1. Factor analysis of psychological well-being outcomes.

The single items used as indicators of psychological well-being were subjected to PCA using Oblimin rotation. As shown in Table 8.1, PCA revealed two components with eigenvalues exceeding 1, explaining 61.31%, of the total variance. Inspection of the scree plot showed a clear break at the second component. Examination of the factor loadings showed logical loadings of items. Items loading onto Factor 1, accounting for 47.10% of the total variability, pertained to positive well-being and were labelled accordingly. Items loading onto Factor 2 accounted for 14.21% of total variability and related to negative well-being. This factor was labelled psychological distress. Similar factor loadings were observed in the preliminary studies (see Chapter 5).

Table 8.1. *PCA with Oblimin Rotation of the Two-Factor Solution of Psychological Well-Being*

	Rotated Factor Loadings	
Items	Positive well-being	Psychological distress
I have been feeling good about my relationships with others	**.82**	.11
I have been feeling useful and having good mental focus	**.80**	.00
I have been energetic and involved in things in my life	**.79**	-.02
I have been feeling in good spirits	**.76**	-.01
I have been feeling relaxed	**.56**	-.31
Depression	.01	**.86**
Anxiety	.08	**.84**
Happiness*	-.31	**.52**
Kaiser-Myer-Olkin		.85
Eigenvalues	**3.77**	**1.14**
% of variance	**47.10**	**14.21**

Note. * indicate that the item was reverse coded.

8.3.2. Bivariate analyses.

Table 8.2 summarises the correlations between predictor variables and the four well-being outcomes. All other predictor variables, except gender and relationship status, were significantly associated with psychological distress, positive well-being and general physical health in the expected directions. Correlation coefficients for psychological distress ranged from $r = -.11$, $p < .01$ (rank and job tenure) to $r = .41$, $p < .01$ (negative job characteristics); positive well-being from $r = -.16$, $p < .01$ (victimisation) to $r = .54$, $p < .01$ (positive self-evaluation); and general health from $r = .09$, $p < .05$ (openness) to $r = -.32$, $p < .01$ (work-to-family conflict). Except for action-oriented coping, openness, gender, rank, and relationship status, psychosomatic symptoms were significantly correlated with all other predictor variables. Correlation coefficients ranged from $r = -.09$, $p < .05$ (conscientiousness) to $r = -.41$, $p < .01$ (negative job characteristics).

Table 8.2. *Pearson Product Moment Correlations for Key Study Variables.*

	Psychological distress	Positive well-being	General health	Psychosomatic symptoms
Job Appraisals				
Perceived job stress	.28**	-.16**	-.23**	.34**
Job satisfaction	-.29**	.32**	.31**	-.32**
Work factors				
Negative job characteristics	.41**	-.23**	-.29**	.41**
Work support	-.26**	.28**	.17**	-.16**
Positive job characteristics	-.18**	.23**	.21**	-.15**
Victimization	.20**	-.16**	-.20**	.20**
Coping styles				
Emotion-focused coping	-.14**	.26**	.14**	.24**
Action oriented coping	.33**	-.21**	-.19**	-.06
Personality characteristics				
Extraversion	-.24**	.28**	.17**	-.19**
Agreeableness	-.18**	.25**	.11**	-.10*
Conscientiousness	-.14**	.21**	.10*	-.09*
Emotional stability	-.26**	.38**	.23**	-.21**
Openness	-.13**	.27**	.09*	-.07
Positive self-evaluations	-.30**	.54**	.30**	-.16**
Work-family conflict				
Work-to- family conflict	.37**	-.29**	-.32**	.40**
Family-to-work conflict	.35**	-.28**	-.16**	.19**
Demographics Characteristics				
Gender	-.02	.06	.00	-.07
Rank	-.11**	.17**	.11*	-.08
Years of service	-.11**	.17**	.15**	-.11**
Relationship status	.01	-.01	.03	-.02

Note. *p < .01. ** p < .001

8.3.3. Hierarchical regressions.

Similar to the analytic procedures in the previous chapter, hierarchical regressions were conducted to examine the relative contribution of work-related factors, work-family conflict, coping styles, and personality attributes in influencing well-being outcomes after adjusting for demographics. Variables were entered in blocks in the same order as described in the previous chapter.

8.3.3.1. Psychological distress.

As shown in Table 8.3, demographic variables in the first block, altogether, did not significantly contribute to distress ($R^2 = .02$). However, work factors jointly accounted for a significant increase in explained variance ($\Delta R^2 = .21$). Negative job characteristics, victimisation, and work support were significant predictors at this stage. In the third block, work-family conflict jointly accounted for a further significant increase in explained variance ($\Delta R^2 = .09$), with both dimensions being significant predictors of psychological distress. The introduction of coping styles in the fourth block resulted in a further significant, though small, increase in variance for psychological distress ($\Delta R^2 = .02$), but only emotion-focused coping had a significant independent effect. Personality characteristics entered in the fifth and final block also resulted in a significant increment, but only uniquely accounted for five percent of explained variance. This was largely accounted for by the significant influence of extraversion and positive self-evaluation.

Overall, the model accounted for 39% of explained variance in psychological distress. In the final model, negative job characteristics ($\beta = .21$, $p < .001$), emotion-focused coping ($\beta = .12$, $p < .01$), work-to-family conflict ($\beta = .11$, $p < .01$), and family-to-work conflict ($\beta = .20$, $p < .001$) showed significant positive relationships with distress, whereas positive job characteristics ($\beta = -.11$, $p < .01$), extraversion ($\beta = -.12$, $p < .001$), and positive self-evaluations ($\beta = -.19$, $p < .001$), showed significant negative associations with the outcome.

Table 8.3. *Hierarchical Regression for Psychological Distress Regressed against Work Factors, Work-Family Conflict, Coping, and Personality*

	Model 1			Model 2			Model 3			Model 4			Model 5		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β	B	SE	β
Demographic Variables															
(Constant)	15.14	.56		10.79	1.38		9.32	1.31		9.20	1.43		15.11	1.95	
Gender	-.04	.56	-.00	.15	.51	.01	.29	.48	.02	.27	.48	.02	.33	.46	.03
Rank	-.55	.73	-.07	-.90	.66	-.08	-.52	.62	-.04	-.31	.62	-.03	-.46	.60	-.04
Relationship status	.43	.55	.03	.60	.49	.05	.61	.47	.05	.58	46	.05	.58	.44	.04
Years of service	-.05	.04	-.07	-.01	.04	-.01	-.01	.04	-.01	-.01	.04	-.02	-.00	.04	-.01
Work Factors															
Negative job characteristics				.24	.03	.36***	.16	.03	.23***	.13	.03	.19***	.14	.03	.21***
Work support				-.10	.03	-.14***	-.10	.03	-.14***	-.08	.03	-.11**	-.05	.03	-.07
Positive job characteristics				-.10	.05	-.08	-.13	.05	-.10**	-.17	.05	-.13***	-.14	.05	-.11**
Victimisation				1.13	.46	.10*	.86	.43	.07*	.67	.43	.06	.72	.14	.06
Work-family Conflict															
Work-to-family conflict							.11	.03	.15***	.09	.03	.13**	.08	.03	.11**
Family-to-work conflict							.22	.03	.26***	.20	.03	.23***	.17	.03	.20***
Coping Styles															
Action-oriented coping										-.04	.05	-.03	.05	.05	.04
Emotion-focused coping										.14	.04	.16***	.10	.04	.12**
Personality Characteristics															
Positive self-evaluations													-.19	.04	-.19***
Extraversion													-.28	.08	-.12***
Agreeableness													-.01	.09	-.01
Conscientiousness													.05	.10	.02
Emotional Stability													-.15	.10	-.06
Openness													.02	.10	.01
F		2.36			19.99***			25.14***			23.19***			18.97***	
R^2		.02			.23			.32			.34			.39	
ΔR^2					.21***			.09***			.02***			.05***	

Note. Gender: male = 0, female = 1. Rank: constable = 0, above constable = 1.Relationship status: 0 = not in relationship, 1 = in relationship

Victimisation: ≤ 1 incident = 0, 2 or more incident = 1+

*p < .05. **p < .01. ***p < .001

8.3.3.2. Positive well-being.

Table 8.4 summarises the results of the hierarchical regression analysis for predictors of positive well-being. In the first block, demographic variables, altogether, were significant but explained only four percent of the variance in the outcome. However, none these variables made a significant independent contribution to well-being. The inclusion of work factors in the second block significantly increased the amount of variance explained in positive well-being by 13%. Except for victimisation, all other work variables had a significant influence on positive well-being. Work-family conflict, entered in the third block, uniquely accounted for an additional eight percent of the variance in positive well-being, with both dimensions being significant independent predictors. Introducing coping styles next also resulted in a small but significant increase in variance ($\Delta R^2 = .04$). Action-oriented coping was significantly related to positive well-being, though the significant effect disappeared after adjusting for personality variables. The addition of personality attributes in block five accounted for the largest unique amount of explained variance ($\Delta R^2 = .20$). Positive self-evaluations, extraversion and emotional stability, were the important predictors of positive well-being.

Overall, positive job characteristics ($\beta = .12$, $p < .001$), extraversion ($\beta = .15$, $p < .001$), emotional stability ($\beta = .19$, $p < .001$), and positive self-evaluations ($\beta = .38$, $p < .001$) were significantly and positively associated with well-being, while negative job characteristics ($\beta = -.10$, $p < .01$), work-to-family conflict ($\beta = -.11$, $p < .01$) and family-to-work conflict ($\beta = -.12$, $p < .001$) showed significant negative relationships. The model accounted for 49% of explained variance in positive well-being.

Table 8.4. *Hierarchical Regression for Positive Well-Being Regressed against Work Factors, Work-Family Conflict, Coping, and Personality*

	Model 1			Model 2			Model 3			Model 4			Model 5		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β	B	SE	β
Demographic Variables															
(Constant)	29.09	.91		28.44	2.33		30.75	2.25		26.39	2.44		3.90	2.92	
Gender	1.22	.91	.06	.87	.86	.04	.71	.83	.03	.39	.81	.02	.31	.69	.01
Rank	1.93	1.18	.10	1.68	1.11	.09	1.10	1.06	.06	1.32	1.05	.07	1.98	.90	.10
Relationship status	-.75	.89	-.04	-.94	.84	-.04	-.95	.80	-.05	-1.01	.78	-.05	-.88	.67	-.04
Years of service	.13	.07	.11	.06	.07	.06	.07	.06	.06	.05	.06	.04	-.01	.05	-.01
Work Factors															
Negative job characteristics				-.21	.05	-.19***	-.07	.05	-.07	-.07	.05	-.06	-.11	.04	-.10**
Work support				.24	.05	.20***	.24	.05	.20***	.18	.05	.15***	.08	.04	.06
Positive job characteristics				.24	.09	.11**	.28	.08	.13***	.31	.08	.15***	.24	.07	.12***
Victimisation				-1.09	.77	-.06	-.67	.74	-.03	-.33	.73	-.02	-.41	.62	-.02
Work-family Conflict															
Work-to-family conflict							-.19	.05	-.16***	-.18	.05	-.15***	-.14	.04	-.11**
Family-to-work conflict							-.31	.06	-.22***	-.27	.05	-.20***	-.16	.05	-.12***
Coping Styles															
Action-oriented coping										.40	.08	.18***	.07	.08	.03
Emotion-focused coping										-.09	.06	-.06	.06	.05	.04
Personality Characteristics															
Positive self-evaluations													.63	.06	.38***
Extraversion													.57	.12	.15***
Agreeableness													.06	.14	.02
Conscientiousness													-.21	.14	-.05
Emotional Stability													.72	.15	.19***
Openness													.29	.15	.07
F		6.24***			14.27***			18.05			17.99***			28.45***	
R^2		.04			.17			.25			.28			.49	
ΔR^2					.13***			.08***			.04***			.20***	

Note. Gender: male = 0, female = 1. Rank: constable = 0, above constable = 1. Relationship status: 0 = not in relationship, 1 = in relationship
Victimisation: ≤ 1 incident = 0, 2 or more incident = 1+

*p < .05. **p < .01. ***p < .001

8.3.3.3. General physical health.

Table 8.5 shows the results of the hierarchical regression for general physical health. The association between general physical health and demographic variables, altogether, was weak but significant ($R^2 = .03$). Job tenure was the only significant independent predictor of general health. When work factors were entered in block two, a significant increase in explained variance was observed ($\Delta R^2 = .13$). Work support was the only variable that was not significantly related to general health. Entering work-family conflict also resulted in a small but significant increment in explained variance ($\Delta R^2 = .05$), with work-to-family conflict accounting for a significant negative effect on general physical health. A further small, but significant increase in variance for physical health was observed when coping variables were entered ($\Delta R^2 = .01$). However, neither of the two coping styles were independent predictors of general health. The inclusion of personality characteristics resulted in an additional significant increase in variance for general physical health ($\Delta R^2 = .06$). This was mainly due to the positive influence of positive self-evaluations, emotional stability and extraversion.

In the final model, negative job characteristics ($\beta = -.13$, $p < .01$), victimization ($\beta = -.10$, $p < .05$), and work-to-family conflict ($\beta = -.18$, $p < .001$) showed significant negative associations with general physical health, whereas, positive job characteristics ($\beta = .13$, $p < .001$), extraversion ($\beta = .08$, $p < .05$), emotional stability ($\beta = .11$, $p < .05$), and positive self-evaluations ($\beta = .22$, $p < .001$) were positively associated with general physical health. The model as a whole explained 27% of variability in self-reported general physical health.

Table 8.5. *Hierarchical Regression for General Health Regressed against Work Factors, Work-Family Conflict, Coping, and Personality*

	Model 1			Model 2			Model 3			Model 4			Model 5		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β	B	SE	β
Demographic Variables															
(Constant)	5.67	.21		7.18	.54		7.65	.53		7.28	.58		5.17	.79	
Gender	-.02	.21	-.00	-.12	.20	-.03	-.10	.19	-.02	-.12	.19	-.03	-.13	.19	-.03
Rank	-.05	.27	-.01	-.07	.26	-.02	-.17	.25	-.04	-.17	.25	-.04	-.11	.24	-.02
Relationship status	.04	.21	.01	.01	.19	.00	-.00	.19	.00	-.01	.19	-.00	.00	.18	.00
Years of service	.04	.02	.17**	.03	.02	.12*	.03	.02	.12*	.03	.02	.12*	.03	.01	.10
Work Factors															
Negative job characteristics				-.06	.01	-.24***	-.03	.01	-.13**	-.03	.01	-.12**	-.03	.01	-.13**
Work support				.02	.01	.06	.02	.01	.06	.01	.01	.04	-.00	.01	-.01
Positive job characteristics				.06	.02	.12**	.07	.02	.14***	.07	.02	.15***	.06	.02	.13***
Victimisation				-.56	.18	-.13**	-.46	.17	-.11**	-.41	.17	-.10*	-.43	.17	-.10*
Work-family Conflict															
Work-to-family conflict							-.06	.01	.21***	-.06	.01	-.20***	-.05	.01	-.18***
Family-to-work conflict							-.03	.01	-.08	-.02	.01	-.06	-.01	.01	-.04
Coping Styles															
Action-oriented coping										.04	.02	.08	.00	.02	.00
Emotion-focused coping										-.02	.01	-.07	-.01	.01	-.02
Personality Characteristics															
Positive self-evaluations													.08	.02	.22***
Extraversion													.07	.03	.08*
Agreeableness													-.02	.04	-.03
Conscientiousness													-.02	.04	-.02
Emotional Stability													.09	.04	.11*
Openness													-.02	.04	-.02
F		3.78**			12.36***			13.54***			11.96***			10.85***	
R^2		.03			.15			.20			.21			.27	
ΔR^2					.13***			.05***			.01*			.06***	

Note. Gender: male = 0, female = 1. Rank: constable = 0, above constable = 1. Relationship status: 0 = not in relationship, 1 = in relationship

Victimisation: ≤ 1 incident = 0, 2 or more incident = 1+

*$p < .05$. **$p < .01$. ***$p < .001$

8.3.3.4. Psychosomatic symptoms.

Results for the hierarchical regression with predictors of the number of reported psychosomatic symptoms are shown in Table 8.6. Overall, demographic variables accounted for a small but significant amount of variance ($\Delta R^2 = .02$). However, none of these variables were independent predictors. Entering work factors in block 2 increased the variance accounted for in reported symptoms by 19%. Negative job characteristics and victimisations showed significant positive relationships with number of symptoms reported. Work-family conflict entered next, also accounted for a significant, though small amount of explained variance ($\Delta R^2 = .05$). However, only work-to-family conflict was significantly related to symptoms. Coping styles entered in block 4 did not significantly add to the amount of explained variance in symptoms. However, the addition of personality attributes in the last block accounted for a small but significant amount of variance ($\Delta R^2 = .02$), with extraversion and emotional stability showing a significant negative relationship with number of symptoms reported.

The final model accounted for 28% of the variability in number of symptoms reportedly experienced. Negative job characteristics ($\beta = .25$, $p < .001$), victimisation ($\beta = .11$, $p < .01$) and work-to-family conflict ($\beta = .20$, $p < .001$) showed significant positive relationships with number of symptoms reported while extraversion ($\beta = -.11$, $p < .01$) and emotional stability ($\beta = -.10$, $p < .05$) were negatively associated with number of symptoms.

Table 8.6. *Hierarchical Regression or Psychosomatic Symptoms Regressed against Work Factors, Work-Family Conflict, Coping, and Personality*

	Model 1			Model 2			Model 3			Model 4			Model 5		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β	B	SE	β
Demographic Variables															
(Constant)	2.38	.14		.70	.33		.38	.33		.40	.36		1.38	52	
Gender	.19	.13	.06	.23	.12	.08	.22	.12	.07	.22	.12	.07	.21	.12	.07
Rank	-.02	.18	-.01	-.06	.16	-.02	.01	.16	.00	.03	.16	.01	.00	.16	.00
Relationship status	.00	.13	.00	.04	.12	.01	.04	.12	.01	.04	.12	.01	.03	.11	.01
Years of service	-.02	.01	-.11	-.01	.01	-.06	-.01	.01	-.06	-.01	.01	-.07	-.01	.01	-.05
Work Factors															
Negative job characteristics				.06	.01	.37***	.04	.01	.25***	.04	.01	.24***	.04	.01	.25***
Work support				-.01	.01	-.04	-.01	.01	-.04	-.01	.01	-.03	-.00	.01	-.01
Positive job characteristics				-.02	.01	-.06	-.02	.01	-.07	-.03	.01	-.08*	-.02	.01	-.07
Victimisation				.38	.11	.14***	.31	.11	.12**	.29	.11	.11**	.30	.11	.11**
Work-family Conflict															
Work-to-family conflict							.04	.01	.23***	.04	.01	.22***	.03	.01	.20***
Family-to-work conflict							.01	.01	.06	.01	.01	.05	.01	.01	.03
Coping Styles															
Action-oriented coping										-.01	.01	-.02	.01	.01	.02
Emotion-focused coping										.01	.01	.06	.01	.01	.03
Personality Characteristics															
Positive self-evaluations													-.02	.01	-.07
Extraversion													-.06	.02	-.11**
Agreeableness													.02	.02	.04
Conscientiousness													.00	.03	.00
Emotional Stability													-.06	.03	-.10*
Openness													.01	.03	.02
F		2.40*			17.08***			17.98***			15.23***			11.33***	
R^2		.02			.21			.26			.26			.28	
ΔR^2					.19***			.05***			.00			.02**	

Note. Gender: male = 0, female = 1. Rank: constable = 0, above constable = 1. Relationship status: 0 = not in relationship, 1 = in relationship
Victimisation: ≤ 1 incident = 0, 2 or more incident = 1+

*p < .05. **p < .01. ***p < .001

8.3.4. Moderation analyses.

A series of hierarchical regression analyses were also performed to examine whether there were interactions between positive job factors (i.e., work support and positive job characteristics) and adverse work conditions (i.e., negative job characteristics and victimisation) in predicting outcomes. Interaction effects between work conditions and coping were also examined. Similar to previous analysis in Chapter 7, interaction models focused on the primary variables of interest and excluded all other variables for simplicity.

Results showed that except for interactions between two sets of work factors and positive wellbeing, no other significant moderation effects were observed. The significant interactions are summarised in the following sections.

8.3.4.1. Interactions for positive well-being.

As shown in Table 8.7, including the interaction terms in the model accounted for a small but significant increase ($\Delta R^2 = .03$) in explained variance for positive well-being. Results show that the interaction between negative job characteristics and work support, and victimisation and positive job characteristics were significant.

8.7. *Standardised Correlation Coefficients of the Interactions of Work Factors in Predicting Positive Well-Being*

	Model 1 β	Model 2 β	Model 3 β
Demographic Variables			
Gender	.06	.04	.04
Rank	.10	.09	.08
Relationship status	-.04	-.04	-.05
Years of service	.11	.06	.06
Work Factors			
Negative job characteristics		-.19***	-.19***
Work support		.20***	.14*
Positive job characteristics		.11**	.02
Victimisation		-.06	-.05
Interaction Terms			
Negative job characteristics x work support			-.12**
Negative job characteristics x pos. Job characteristics			.07
Victimisation x work support			.11
Victimisation x pos. Job characteristics			.14*
F	6.24***	14.27***	11.46***
R^2	.04	.17	.20
ΔR^2		.13***	.03***

Note. Gender: male = 0, female = 1. Rank: constable = 0, above constable = 1.
Relationship status: 0 = not in relationship, 1 = in relationship. Victimisation: ≤ 1 incident = 0, 2 or more incident = 1+
*p < .05. **p < .01. ***p < .001

The significant interaction effects are further illustrated using graphical plots. The simple slopes analysis in Figure 8.1 shows that there is a significant negative relationship with negative job characteristics and positive well-being at all levels of work support. However, positive well-being is lowest when work support is low and negative job characteristics are high.
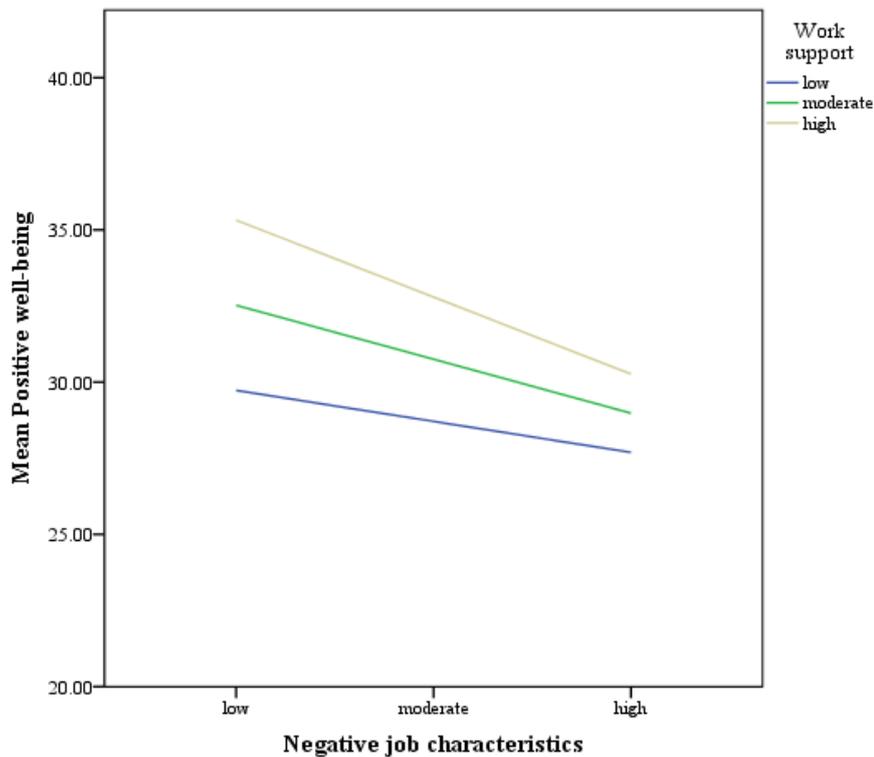
Figure 8.1. Simple slopes analysis for the regression of negative job characteristics on positive well-being at three levels of work support.

The results from the simple slopes analysis, as illustrated in Figure 8.2, showed that the effect of victimisation at moderate and high levels of positive job characteristics was not significant. However, there was a significant decrease in positive well-being when participants were exposed to multiple incidents of victimisation and low levels of positive job characteristics.
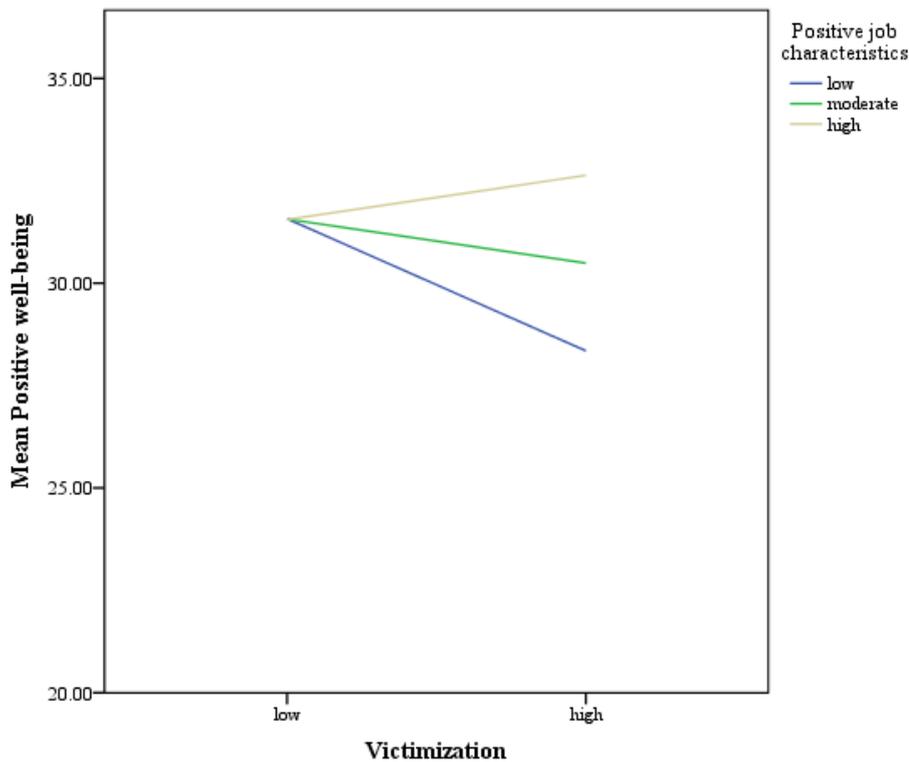
Figure 8.2. Simple slopes analysis for the regression of victimisation on positive well-being at three levels of positive job characteristics.

8.3.5. Mediation analyses.

The aim of the mediation analyses was to determine whether work conditions elicit their effect on well-being outcomes via an indirect pathway through perceived job stress and job satisfaction. Significant results are discussed in the following sections. As a reminder, the indirect effect is considered significant when the biased bootstrap confidence intervals based on 1,000 bootstrap samples do not contain zero.

8.3.5.1. Psychological distress.

Results showed that while there were significant indirect effects via perceived job stress, indirect pathways through job satisfaction were not significant for the relationship between work factors and psychological distress. There was a significant indirect effect of negative job characteristics, $b = .02$, 95% CI [.00, .05], victimization, $b = .13$, 95% CI [.01, .34], and positive job characteristics, $b = -.01$, 95% CI [-.03, -.00] on psychological

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distress through perceived job stress but not for work support, $b = -.00$, 95% CI [-.01, .01].

Mediation effects are summarised in Table 8.8.

Table 8.8. *Model Summary of Indirect Effect of Work Factors on Psychological Distress through Job Stress and Job Satisfaction*

			Perceived Job Stress	Job Satisfaction
	Total effects	Direct effects	Indirect Effects	Indirect effects
Negative. job characteristics	.24***	.21***	.02, CI [.00, .05][a]	.01, CI [-.01, .03]
Work support	-.10***	-.09**	-.00, CI [-.01, .01]	-.01, CI [-.03, .01]
Positive. job characteristics	-.10	-.08	-.01, CI [-.03, -.00][a]	-.01, C. [-.04, .01]
Victimisation	1.13*	.95*	.13, CI [.01, .34][a]	.05, CI [-.07, .25]

Note. CI, Confidence Intervals
*p < .05. **p < .01. ***p < .001.
[a] significant indirect effects

8.3.5.2. Positive well-being.

Results for the indirect effect of perceived job stress and job satisfaction was in reverse for positive well-being relative to psychological distress. That is, while there were significant indirect effects for job satisfaction, indirect pathways via perceived job stress were not significant in the relationships between work factors and positive well-being. As shown in Table 8.9, negative job characteristics, $b = -.05$, 95% CI [-.09, -.01], work support, $b = .04$, 95% CI [.01, .08], positive job characteristics, $b = .06$, 95% CI [.02, .13], and victimisation, $b = -.33$, 95% CI [-.77, -.08] all indirectly influenced positive well-being through job satisfaction.

Table 8.9. *Model Summary of Indirect Effect of Work Factors on Positive Well-Being through Job Stress and Job Satisfaction*

	Total effects	Direct effects	Perceived Job Stress	Job Satisfaction
			Indirect Effects	Indirect effects
Negative job characteristics	-.21***	-.16***	-.01, CI [-.04, .03]	-.05, CI [-.09, - .01][a]
Work support	.24***	.20***	.00, CI [-.00, .01]	.04, CI [.01, .08][a]
Positive job characteristics	.24**	.18*	.00, CI [-.02, .02]	.06, CI [.02, .13][a]
Victimisation	-1.09	-.73	-.03, CI [-.25, .20]	-.33, CI [-.77, - .08][a]

Note. CI, Confidence Intervals
*p < .05. **p < .01. ***p < .001.
[a] significant indirect effects

8.3.5.3. General physical health.

As shown in Table 8.10, statistically significant indirect effects for three of the four work factors on general physical health through job stress was observed, while all four work factors affected general health via job satisfaction. Results show that negative job characteristics, $b = -.01$, 95% CI [-.02, -.00], positive job characteristics, $b = .00$, 95% CI [.00, .01], and victimisation, $b = -.05$, 95% CI [-.13, -01] indirectly influenced general health through job stress. Similarly, job satisfaction acted as an indirect pathway through which negative job characteristics, $b = .01$, 95% CI [-.02, -.00], work support, $b = .01$, 95% CI [.00, .02], positive job characteristics, $b = .01$, 95% CI [.01, .03], and victimisation, $b = -.08$, 95% CI [-.17, -.02] influenced general health.

Table 8.10. *Model Summary of Indirect Effect of Work Factors on General Health through Job Stress and Job Satisfaction*

	Total effects	Direct effects	Perceived Job Stress Indirect Effects	Job Satisfaction Indirect effects
Negative job characteristics	-.06***	-.04***	-.01, CI [-.02, -.00][a]	-.01, CI [-.02, - .00][a]
Work support	.02	.01	.00, CI [-.00, .00]	.01, CI [.00, .02][a]
Positive job characteristics	.06**	.04*	.00, CI [.00, .01][a]	.01, CI [.01, .03][a]
Victimisation	-.56**	-.44*	-.05, CI [-.13, -.01][a]	-.08, CI [-.17, - .02][a]

Note. CI, Confidence Intervals
*p < .05. **p < .01. ***p < .001.
[a] significant indirect effects

Using the PROCESS tool, it is possible to test whether one indirect effect is statistically different from another in a parallel model. Given the fact that negative job characteristics, positive job characteristics, and victimisation all influenced general health through both job stress and job satisfaction, further analyses were conducted to estimate whether the indirect effects were significantly different from each other. The macro for SPSS created by Hayes (2013) generates an output that estimates the pairwise comparison by subtracting the specific indirect effect through one mediator (e.g., perceived stress) from the indirect pathway through the second mediator (e.g., job satisfaction). Similar to simple mediation models, bias-corrected bootstrap intervals for pairwise comparisons between the specific indirect effects are estimated. A confidence interval that does not contain zero indicates that the two specific indirect effects are statistically different from each other.

Examination of the indirect effect pair-wise contrast showed that the indirect effects of negative job characteristics, b = .00, 95% CI [-.01, .01], positive job characteristics, b = -.01, 95% CI [-.03, .00], and victimisation, b = .03, 95% CI [-.07, .13] on general health through perceived job stress was no different than the indirect effect through job satisfaction.

8.3.5.4. Psychosomatic symptoms.

Considering psychosomatic symptoms, negative job characteristics, $b = .01$, 95% CI [.01, .02], positive job characteristics, $b = -.01$, 95% CI [-.01, -.00]), and victimisation, $b = .06$, 95% CI [.02, .12] exerted their effects via job stress. Job satisfaction also acted as an indirect pathway for negative job characteristics, $b = .01$, 95% CI [.00, 0.01], positive job characteristics, $b = -.01$, 95% CI [-.01, -.00] and victimisation, $b = .03$, 95% CI [.01, .08]. Results are summarised in Table 8.11.

Table 8.11. *Model Summary of Indirect Effect of Job Factors on Psychosomatic Symptoms through Job Stress and Job Satisfaction*

	Total effects	Direct effects	Perceived Job Stress	Job Satisfaction
			Indirect Effects	Indirect effects
Negative job characteristics	.06***	.04***	.01, CI [.01, .02][a]	.01, CI [.00, .01][a]
Work support	-.01	-.00	-.00, CI [-.00, .00]	-.00, CI [-.01, .00]
Positive job characteristics	-.02	-.01	-.01, CI [-.01, -.00][a]	-.01, CI [-.01, -.00][a]
Victimisation	.38***	.29**	.06, CI [.02, .12][a]	.03, CI [.01, .08][a]

Note. CI, Confidence Intervals
*p < .05. **p < .01. ***p < .001.
[a] significant indirect effects

Further analysis was again performed to determine whether the indirect effects were statistically different from each other. Results showed that the magnitude of the indirect effect of negative job characteristics, $b = .01$, 95% CI [-.00, .02], positive job characteristics, $b = .00$, 95% CI [-.01, .01], and victimisation, $b = .02$, 95% CI [-.04, .09] on psychosomatic symptoms through the two pathways were not significantly different.

8.4. Discussion

There have been continuous calls by police stress researchers to improve our understanding of stress-strain relationships by including a variety of antecedent variables and examining specific pathways through which variables affect each other (Brough, 2005;

Burke, 1994). The research described in this chapter was guided by this argument. A comprehensive model framed within transactional theories of stress was used to investigate work stress and well-being in Jamaican police officers. The first aim of the current research was to investigate the relative contribution of work-related variables, work-family conflict, coping styles, and personality characteristics on well-being outcomes while adjusting for demographic variables. Second, the research examined moderation effects of positive work factors (i.e., positive job characteristics and work support) on negative work factors (i.e., negative job characteristics and victimisation) in predicting outcomes. Interactions between coping styles and work-related variables in predicting outcomes were also examined. Last, the research examined mediation effects with perceived job stress and job satisfaction acting as indirect pathways through which work factors exert their effect on the outcomes. The findings from the analyses are discussed in relation to existing literature in the following sections.

8.4.1. Demographic characteristics and outcomes.

Demographic variables, on a whole, had a negligible effect on personal well-being outcomes. None of the demographic variables showed any significant associations with psychological distress, positive well-being, general health or psychosomatic symptoms in the final models. These findings suggest that these dimensions of well-being did not differ across gender, rank, job tenure or relationship status.

8.4.2. Work factors and outcomes.

Results show that work factors, altogether, have a relatively strong effect on psychological distress, general health and psychosomatic symptoms. However, their relationship with positive well-being was relatively weaker after taking other variables into consideration. In terms of significant independent predictors, the results were mixed based on expected relationships.

Negative job characteristics were consistent in predicting all dimensions of well-being, though effects were stronger for negative outcomes (i.e., psychological distress and number of reported symptoms). Consistent with previous studies (Allisey et al., 2013; Gabarino et al., 2013; Houdmont et al. 2013; Noblet et al., 2009a, 2009b), these results suggest that the negative aspects of the work environment such as high demands mixed with difficulty withdrawing from work obligations and feeling that one is not consulted on decisions can be associated with poorer health outcomes. In contrast, the effect of victimisation on well-being outcomes was relatively weak. Interestingly, being exposed to multiple incidents of assault or violence was not significantly associated with psychological distress and positive well-being, but with indicators of physical health (i.e., general health and psychosomatic symptoms). The weaker influence of this "operational" variable adds to the body of literature that finds organisational factors have a stronger influence on well-being measures (Hart et al., 1995; Violanti & Aron, 1993), compared to operational stressors.

The weak influence of work support on personal health in the current study is inconsistent with previous police research (Allisey et al., 2013; Brough & Frame, 2004; Gabarino et al. 2013; Noblet et al., 2009a, 2009b). Support from work sources was not associated with general health or number of psychosomatic symptoms. Interestingly, while work support initially showed significant associations with psychological distress and positive well-being, the significant effect disappeared once personality characteristics were added to the models. The fact that its significant influence (i.e., for psychological distress and positive well-being) was lost when personality characteristics were accounted for, suggests that there might be a more complex interaction between dispositional factors and the perception of support from work sources. Also, given the weak associations found between work support and well-being outcomes in the preliminary study, it is within

reason to think that the research, on a whole, did not fully capture the forms of support that may be important or relevant for this group of police officers.

On the other hand, current findings suggest that other positive features of the work environment such as reward opportunities and job control are more stable and are likely to play an important role in determining well-being. Findings from the research discussed in Chapter 6 also suggested that decision-making authority and other reinforcing elements of the job are important for the Jamaican police. Evidence for the predictive capacity of these variables is also demonstrated in prior police research. For instance, Gabarino et al. (2013) and Noblet et al. (2009a, 2009b) in their studies on Italian and Australian police officers respectively, found strong support for the influence of similar dimensions of the DCS and ERI models.

In sum, the current research suggests that characteristics of the work environment exert a relatively strong influence on police officers' well-being, though some factors appear to be more variable than others and relationships may differ depending on the type of well-being being investigated. Addressing the modifiable characteristics of the work environment can be useful in reducing adverse outcomes while improving health, but understanding the nuances pertaining to the relationships between specific work factors and outcomes is also essential for targeted interventions.

8.4.3. Work-family conflict and outcomes.

Perhaps not surprising, work-family conflict accounted for a significant amount of additional variance in predicting all four outcomes. Police officers who reported that their job interfered with their family life and that problems at home spilled-over into their work were more likely to report higher levels of psychological distress and lower positive well-being. However, only work-to-family conflict was associated with general health and

psychosomatic symptoms. Current findings are consistent with previous police research that suggests that responsibilities from work and home are not mutually exclusive. That is, the work and non-work domains of police life are intricately intertwined and challenges in balancing the two can have adverse effects on health outcomes (Burke, 1994; He et al., 2002; Janzen et al., 2007a; Mikkelson & Burke, 2004). Taken together, these findings provide strong support for expanding the model on police stress-strain relationships to include stressors related to the interplay of work and family life. Furthermore, these results suggest that any approach to stress management must also include policies and intervention related to work-life balance. If the police organisation understands the importance of balancing work and home life, they will understand the need to provide additional support for officers in that area.

8.4.4. Coping and outcomes.

Coping, on a whole, accounted for a relatively small but significant amount of explained variance in personal well-being outcomes (except for psychosomatic symptoms). However, in the final models only emotion-focused coping had a significant independent influence and only on one outcome – psychological distress. Police officers who employed emotive coping in managing stress were more likely to report higher levels of psychological distress. Action-oriented coping was positively and significantly associated with positive well-being initially, but personality characteristics appear to have some influence on that relationship. The small effect of coping on health outcomes found in the current research are consistent with the preliminary results discussed in Chapter 5 and are similar to findings from previous research. For instance, Hart and Cotton (2002) in their study on Australian police officers, made similar observations and concluded that stress management approaches be less focused at the individual level (i.e., improving

adaptive coping and reducing maladaptive coping) but on interventions at the organisational level.

Indeed, the most common approach for addressing stress in police organisations is to train officers to recognise the source of stress and develop appropriate coping strategies for managing it (Stinchcomb, 2004). But as Stinchcomb emphasises, viewing stress as an "individual disorder" rather than an "organisational dysfunction" is likely to have little effect as this approach targets the symptoms of stress and not the causes. Consistently, the research outlined in this thesis has provided support for this argument. Current findings suggest that while, aiming to reduce maladaptive coping strategies may have some specific benefits, adopting a generalised stress management approach based on coping may not add as much value in reducing distress and enhancing well-being.

8.4.5. Personality and outcomes.

As mentioned in earlier chapters, studies using police samples have demonstrated that personality characteristics, particularly neuroticism and extraversion, play a role in predicting strain (Gabarino et al., 2013; Hart & Cotton, 2002; Hart et al., 1995). In the current research, personality characteristics added significantly to the explained variance in all four dimensions of personal well-being after controlling for all other variables. Though, the predictive capacity varied across the outcomes and only three personality dimensions consistently showed significant associations in the final models. Notably, personality characteristics, altogether, were the strongest predictor of positive well-being relative to all other variables.

Police officers who scored higher on the measure of positive self-evaluations were more likely to report lower levels of distress, higher levels of positive well-being and better general health. However, positive self-evaluation was not significantly associated

with psychosomatic symptoms. Extraversion was important for all four well-being outcomes, with officers scoring higher on extraversion being more likely to report higher levels of positive well-being, better general health, lower levels of distress, and fewer psychosomatic symptoms. Emotional stability also showed positive associations with positive well-being and general health but was negatively related to number of symptoms. These findings offer further evidence supporting the role of extraversion and emotional stability (low neuroticism) as important personality characteristics contributing to well-being in police officers. However, the results also demonstrate the importance of considering other personality dimensions such as measures of optimism, self-efficacy and self-esteem. Cumulatively, they were consistently (except for psychosomatic symptoms) the strongest predictors of well-being outcomes, by beta weight, compared to dimensions of the Five Factor model.

As noted by Hart and colleagues (1995), the relative importance of personality characteristics in influencing well-being outcomes raises some interesting practical issues regarding the stability of these variables and their amenability to change. For instance, from a stress management and intervention perspective, whereas changes can be made to improve the work environment, it may be difficult to change stable personality characteristics. Hart and Cotton (2002) suggests that, although it might be tempting to screen for certain personality profiles during recruitment and placement, it is debatable as to whether this is entirely a practical or an appropriate response. Nonetheless, awareness of the strong influence of certain personality characteristics on well-being can direct more systemic approaches to address well-being needs, rather than depending on simple solution fixes (Hart et al., 1995).

8.4.6. Interactions.

Along with examining the main effects of antecedent variables, the research considered whether the positive aspects of the job (i.e., positive job characteristics and work support) would moderate the relationship between adverse work conditions (i.e., negative job characteristics and victimisation) and well-being outcomes. There were few interaction effects found. However, results showed that positive well-being appeared to be at its highest when negative job characteristics were low and work support was high. Additionally, there was a significant decrease in positive well-being when victimisation was high and positive job characteristics were low. On a whole, finding few buffering effects of work resources (e.g., work support and positive job experiences) is not particularly surprising as there have been similar results in previous police studies (e.g., Noblet, et al., 2009a; Patterson, 2003) and indeed the broader literature (Hausser et al., 2010; van der Doef & Maes, 1999).

The current research also examined interactions with work factors and coping in predicting well-being outcomes. Although there is a paucity of police research examining interactions between work conditions and coping, some studies have found support for the moderating effect of coping in this occupation (Kirkcaldy et al., 1995a; Patterson, 2003). However, no significant interactions were observed in the current research.

8.4.7. Indirect effects.

The current research suggests that while work factors are directly related to personal well-being, they at least, in part exert their influence through the cognitive pathways of job appraisals. Interestingly, perceived job stress was an indirect pathway through which work factors (except work support) influenced psychological distress, but job satisfaction was not. Alternatively, job satisfaction mediated the relationship between work conditions and positive well-being, but perceived job stress did not. However, for the

relationship between work factors and general physical health and psychosomatic symptoms, both perceive job stress and job satisfaction played a similar intermediate role. Support for a mediated pathway through these variables has also been demonstrated in previous police research (Allisey, et al., 2013; Brough & Frame, 2004; Tyagi & Lochan Dhar, 2014; Violanti & Aron, 1993). Moreover, this finding is at least partially supportive of the cognitive-relational hypothesis of occupational stress models such as that proposed in the DRIVE model (Mark & Smith, 2008).

From a practical point a view, these findings provide important evidence that gives credence for periodically monitoring and auditing perceptions of stress and job satisfaction as they are likely precursors to subsequent health problems. Based on these periodic observations, efforts can be made to address antecedent factors that may ultimately affect health over a prolonged period. The specific pathways leading to "negative" psychological outcomes versus that for "positive" outcomes also provide insights as to how these effects may occur.

8.5. Chapter Summary

The aim of this chapter was to investigate the relative contribution of work-related factors, work-family conflict and individual differences to personal well-being outcomes. Findings demonstrated that work factors, on a whole, were most important in predicting psychological distress, general health, and number of reported psychosomatic symptoms. Personality characteristics were the strongest predictors of positive well-being and significantly contributed to the other well-being outcomes. Work-family conflict also added significantly to explained variance in the outcomes, but coping had little effect. Similarly, there was little support for the proposed interaction effects. However, there was substantial evidence for a mediation model with both perceived job stress and job

satisfaction serving as indirect pathways through which work factors exert their effect on personal well-being. Though, the significant mediation effects were in some instances contingent on the type of outcomes.

The research up to this point has taken the empirical aspects of the thesis to its logical end. Following from this, the concluding chapter presents an overall discussion of the research program in relation to the primary objectives of the thesis and significant research findings.

Chapter 9
Main Discussion and Concluding Remarks

9.1. Overview of Chapter

Chapter 9 presents an integrated discussion of the research described in this thesis. Firstly, the chapter provides an overview of the research undertaken. This is followed by a summary of the main empirical findings as it relates to the objectives of the thesis and research questions. Next, the theoretical and methodological implications of the research are considered. This discussion leads to the research limitations, followed by recommendations for future research and practical recommendations for the Jamaican police force.

9.2. Overview of Research

The research undertaken in this thesis sought to examine the nature and determinants of stress and well-being in Jamaican police officers, an understudied population. A comprehensive approach was employed, with the intent to assess a broad range of variables and integrate earlier and more recent stress models to obtain a holistic understanding of their stress experience. To achieve the research objectives, both quantitative and qualitative research methodologies were utilised.

First, preliminary quantitative data on the Jamaican police was collected and analysed concurrently with data from the UK, a large industrialised nation that has been the source of much of the existing research on police officers. This investigation provided initial evidence of important stressors and the opportunity to assess potential relationships between the main study variables, setting the foundation for further investigations. Specifically, the data provided insights into the different types of job-specific stressors that confront police officers and whether there were similarities across police jurisdictions.

Guided by a contemporary research framework, data from these early studies was also used to examine independent relationships between potential risk factors (i.e., work characteristics, coping styles, and personality characteristics) and well-being outcomes. This stage of the research was primarily aimed at gaining a basic understanding of the independent contribution of each component of the research model, prior to the advanced analyses that would follow. Based on findings from these analyses, some adjustments were made to more accurately represent relevant relationships between variables for the main research component of the thesis.

The second study was qualitative in nature and captured rich contextual data from support service professionals who serve the Jamaican police officers. Six individuals from four support service units were interviewed. The aim of these one-on-one interviews was to help enrich our understanding of police stress. Themes reflecting the perceptions of the participants were extracted using a six-step process recommended by Braun and Clarke (2006).

The third and main study comprised of a large-scale survey of Jamaican police officers. Specifically, this study provided clarification on the major sources of stress affecting the Jamaican police. Also, building on previous research, the main component of the thesis expanded the model of police stress using extensive multivariate analyses to examine direct relationships between key antecedent variables and well-being outcomes, and pertinent moderating and mediation effects.

9.3. Summary of Main Research Findings

9.3.1. Objective 1: To identify job-specific stressors commonly experienced by Jamaican police officers.

Research Question 1: What specific aspects of policing are frequently experienced and rated as most stressful by Jamaican police officers?

Research Question 2: Are the rankings (based on exposure and intensity) of policing events consistent with the existing literature? That is, are organisational stressors ranked higher than operational stressors?

Data collected from all three studies provided evidence in answering the first two research questions.

Study 1 (Quantitative)

The current UK study confirmed that organisational stressors remain a major problem for officers in this industrialised country. Initial findings also suggested that police officers in Jamaica were more likely to rate organisational stressors as their primary source of stress relative to operational stressors (see Chapter 4). Further evaluations were made considering highly ranked organisational stressors in both samples. Existing police studies from the UK show that the most important sources of organisational stress are related to workload, long hours, and organisational structure (Biggam et al., 1997b; Brown & Campbell, 1990). Data from the UK study in Chapter 4 was consistent with those findings. However, Jamaican police officers rated organisational stressors related to problems that may be more inherent to developing nations namely, inadequate compensation, inadequate resources, and poor working conditions, as more important. Similar job stressors were ranked highly in studies on police officers from other developing countries (Pienaar & Rothmaan, 2006; Suresh et al., 2013). Notably, time away

from family was considered to be a major source of stress for both the UK and Jamaican police. This is a finding that is consistent with previous studies on the police (Biggam et al., 1997b; Brown & Campbell, 1990; Pienaar & Rothmaan, 2006; Suresh et al., 2013) and suggests that police work interfering with family time may be a universal experience.

Study 3 (Quantitative)

Since data from the first survey was taken from a small sample of police officers, additional quantitative data collected from a larger, more representative sample of Jamaican police in Study 3 sought to clarify their primary sources of stress. Findings from this study (see Chapter 4) further established that organisational stressors related to inadequate pay and resources, poor working conditions, and time away from family were significant stressors for these police officers. Also ranked highly, were operational stressors related to threats of being harmed, specifically, seeing fellow officers injured/killed in the line of duty, policing high-crime communities, and the threat of being injured/killed. The high ratings on these stressors may be a reflection of the high crime environment in which these police officers operate.

Further investigations showed that police stress, to some extent, is influenced by certain demographic and occupational characteristics. While there were few relationships found based on rank, findings were supportive of previous research (e.g., Brown & Fielding, 1993) that shows differential role expectations for male and female police officers may result in differences in their stress experiences. The research also provided support for existing studies (e.g., Burke, 1989; Garcia et al., 2004; Violanti & Aron, 1995) that suggest that stress becomes more apparent for mid-career officers.

Study 2 (Qualitative)

The qualitative study in Chapter 6 provided additional support for organisationally related stressors being problematic for the Jamaican police. From the perspective of support service personnel, police officers often report stressors related to managerial practices (i.e., problems with supervisors, management of transfers and duty assignements) and inadequate pay and resources as particularly bothersome. While poor salaries and inadequate resources have been emphasised in the quantitative studies, issues with management and supervisory relationships were not rated highly relative to other stressors in those studies. Perhaps these interpersonal stressors are ones that would more likely come to the attention of persons in support units, as officers may seek help in trying to manage those relationships. However, when considered in relation to other stressors, they do not necessarily emerge with the same level of importance. Nevertheless, support service personnel described supervisory relationships as strained. Particularly supervisors were described as being authoritarian, unfair, and unsympathetic, characteristics which not only affect the police officers well-being but also their motivation and performance.

Transfers and change in duty assignments are common in police work, but if not managed appropriately, can leave police officers feeling frustrated and powerless. Although this was considered an independent theme, it is related to relationships with supervisors, as they are the ones who play an integral role in recommending and managing decisions regarding transfers and deployment. Persons interviewed suggested that transfers are sometimes used as a disciplinary tool where officers are relocated to work far from home or assigned what might be perceived as mediocre jobs as a form of punishment. Being transferred far from home has the added challenge of dealing with increased travel expenses and the tension of being away from family.

More broadly, police work disrupts family life because police officers are required to work long and irregular hours. Indeed, time away from family was consistently rated as

a major stressor for officers in the survey studies. Data from interviews also suggest that officers are having difficulty balancing the demands of work and home life. Findings suggest a reciprocal relationship, where work pressures interfere with home life, and family pressures interfere with work. In light of these results, work-family conflict was incorporated in subsequent research in this thesis.

An additional set of stressors police officers face involve their interaction with members of the public. Being in contact with uncooperative and hostile citizens can be demanding and requires flexibility and proper judgment under stress. For instance, though there are situations that necessarily require the use of force, police officers are often faced with prejudice and criticism for the manner in which they discharge their duties. Findings from the qualitative study in Chapter 6 suggested that overbearing public scrutiny and criticism of police behaviour is a major source of stress for the Jamaican police. These findings are consistent with previous research. For instance, Violanti et al. (2006) suggested that scrutiny from the public, police department, and judicial system arising from police actions, such shooting someone, is stressful because it can lead to lengthy and unfavourable internal investigations, even in innocuous situations. Having this psychological burden can cripple the actions of officers while carrying out their duties, which may further put their lives or that of the public they serve at risk.

Support service personnel also acknowledged that the threat of being harmed or injured is a constant concern for the Jamaican police. These findings are supportive of the results from the quantitative studies in Chapter 4 and confirm that working in a high crime environment put additional strain on this group of officers.

In sum, the research in Chapters 4 and 6 have provided relevant information about the types of stressors that are problematic for Jamaican police officers. Overall,

organisationally oriented stressors that involve inadequate pay and resources, poor working conditions, and improper managerial practices are most salient for the Jamaican police. Confrontations with harm or death, public scrutiny and criticism as well as stress from the interplay of work and family life are also important. To the extent that police officers can function optimally in providing service to their organisation and to the people they serve, these are important factors that should be considered in any stress reduction or intervention programme.

9.3.2. Objective 2: To use a contemporary conceptual framework to explain the relationships between work-related factors, individual characteristics, work-family conflict and occupational and personal well-being.

Research Question 1: What is the relationship between work conditions, coping styles, personality characteristics, work-family conflict and occupational and personal well-being in police officers?

Data from the preliminary studies (see Chapter 5) was used to examine initial direct relationships between independent sets of antecedent variables (except work-family conflict) and well-being outcomes. Relationships were first evaluated using a sample of police officers from the UK as a reference group. In general, results were in support of the main effect predictions as proposed by the DRIVE model (Mark & Smith, 2008). Findings showed that work characteristics, personality characteristics (particularly extraversion and positive self-evaluations), and coping styles, to a lesser extent, were reasonably predictive of well-being outcomes. With those encouraging findings in mind, similar analyses were performed using a relatively small Jamaican sample. However, results of this study showed weaker models and less consistent relationships between antecedent variables and outcomes. It was evident that further research was needed to clarify these relationships and establish whether the proposed model could be supported in this population.

Using the data from a larger survey of Jamaican police (see Chapters 7 and 8), more extensive multivariate analyses were performed to examine the extent to which police officers' well-being could be determined by work-related factors, coping styles, or their personality characteristics. On the basis of the findings noted in Chapters 4 and 6, work-family conflict was also included as an additional predictor of occupational and personal well-being outcomes.

Results demonstrated that multiple factors are relevant in obtaining a more realistic understanding of police stress and well-being. It is noted, however, that for some outcomes (e.g., job satisfaction), the inclusion of additional sets of predictors after work-related factors did not significantly improve the model. However, there were other cases where subsequently included variables were even more important than work factors (e.g., personality strongly predicted positive well-being). It is also important to note the patterns of relationships between the various predictors and well-being outcomes. These observations can help to improve the chances of success when stress management and interventions programmes are being designed. Table 9.1 presents a summary of the main effect results as observed in Chapters 7 and 8.

Table 9.1. *Summary of Predicted Main Effect Findings*

Independent variables	Well-being Outcomes					
	Perceived job stress	Job Satisfaction	Psychological distress	Positive well-being	General health	Psychosomatic symptoms
Demographics						
Gender						
Rank	*					
Relationship status		*				
Years of service	*					
Job factors						
Neg. job characteristics	*	*	*	*	*	*
Work support	*	*				
Pos. Job characteristics		*	*	*	*	
Victimisation	*	*			*	*
Work-family Conflict						
W-F-C	*	*	*	*	*	*
F-W-C			*	*		
Coping Styles						
Action-oriented						
Emotion-focused			*			
Personality characteristics						
Pos. self-evaluations	*		*	*	*	
Extraversion	*	*	*	*	*	*
Conscientiousness						
Agreeableness						
Emotional Stability				*	*	*
Openness						
% Variance	28%	35%	39%	49%	27%	28%

Considering work factors, the results, on a whole, are consistent with prior research that suggests that stressors emanating from the police organisation itself play an important role in contributing to the many facets of well-being. Moreover, findings of the predictive capacity of these work variables provide further support for the continued use of dimensions of contemporary stress models such as DCS, ERI and HSE. Well-being in this group of officers was determined by the presence and or absence of adverse job conditions

and reinforcing job elements. Except for job satisfaction, support from work sources was not as important in predicting well-being compared to other factors. Another interesting observation is that, while multiple aversive interactions with citizens (i.e., victimisation) may affect job appraisals and result in poorer physical health, associations with psychological health were weaker.

Expanding the research model to include work-family conflict confirmed that this component of stress is important in police research. Work-to-family conflict predicted all dimensions of well-being, while family-to-work conflict was only important for psychological well-being (i.e., distress and positive well-being). These findings suggest that research should continue to include similar measures in future stress-strain models, especially in this occupational group where it is impossible to ignore the intertwining links between work and family life.

In general, coping styles did not contribute significantly to predicting personal well-being outcomes. In fact, as shown in Chapters 7 and 8, the only significant relationship between coping and outcomes was between emotive coping and psychological distress. The very limited finding for the influence of coping perhaps suggests that these broad constructs may not be adequate indicators of coping strategies or these may genuinely not be predominant methods used by these police officers. In this research, coping was categorised as either problem-focused or emotion-focused, a distinction that has been described as too simple by some researchers (e.g., Carver, Scheier, & Weintraub, 1989). Perhaps, it would be beneficial to investigate more specific types of coping used by these officers to help us better understand coping as a part of the stress process.

The results for the direct effects of personality characteristics, at least in part, support the proposition of the research model. Significant associations were found between

extraversion and all six outcomes, while positive self-evaluations predicted all other outcomes except job satisfaction and psychosomatic symptoms. Emotional stability was important in predicting positive well-being, general health and psychosomatic symptoms. While to some extent, expected relationships (based on previous literature) were found for extraversion and emotional stability (low neuroticism), a key finding of this research is the significant influence of core self-evaluations (i.e., combined measures of positive self-esteem, self-efficacy and optimism). The latter personality dimensions are rarely explored in police stress literature. The evidence here suggests that this is an area that should receive more attention in future research.

Overall, the research provided strong empirical evidence in support of examining multiple factors when trying to understand occupational stress and well-being among police officers. Current findings underpin the importance of how this approach can challenge conventional thought about what should be areas of focus for stress management and intervention programmes. For instance, the results provided here add to the literature that questions the value of widely used approaches to stress management such as training police officers to cope with stressful work conditions.

Research Question 2: Do positive work factors moderate the relationship between adverse work conditions and well-being outcomes?

Research Question 3: Do coping styles moderate the relationship between work factors and well-being outcomes?

In keeping with the proposition of the DRIVE model (Mark & Smith, 2008), moderating effects of positive work factors and coping styles in predicting well-being were examined. However, there was little support for this component of the model, a finding which is not dissimilar to previous research (Noblet et al., 2009a; Patterson, 2003). With

the exception of positive well-being, findings in Chapter 8 demonstrated that neither positive job characteristics nor work support buffered the negative effects of adverse work conditions on other well-being outcomes. Similarly, coping styles neither exacerbated nor reduced the effects of work factors on any of the outcomes. In the case of positive well-being, a combination of low support and high negative job characteristics as well as high victimisation and low positive job characteristics appeared to reduce positive well-being. With relatively little research on positive well-being outcomes, these findings suggest that this may be an interesting area for future explorations.

Research Question 4: Does perceived job stress mediate the relationship between work factors and job satisfaction and personal well-being?

Research Question 5: Does job satisfaction mediate the relationship between work factors and personal well-being?

One of the important elements of transactional stress models is the inclusion of subjective appraisals of stressful encounters. In accounting for this component, the adapted DRIVE model proposed that job appraisals (i.e., perceived job stress and job satisfaction) are mediated pathways between work-related stressors and personal well-being outcomes. Support for the intermediate role of perceived job stress was found in the original DRIVE model (Mark & Smith, 2008) and later reinforced by other studies (Galvin & Smith, 2015; Williams, 2015). Though not originally in the DRIVE model, job satisfaction as an indirect pathway through which work conditions affect well-being outcomes is also supported in the literature (Allisey et al., 2013; Violanti & Aron, 1993).

Overall, findings in Chapter 8 provide support for the indirect effect of work factors through job stress and job satisfaction. A particularly interesting finding is that perceived stress, at least, partially mediated the relationship between work factors and

psychological distress while job satisfaction was more likely to mediate the relationship between work factors and positive well-being. The two cognitive pathways (i.e., job stress and job satisfaction) through which work conditions affect different dimensions of psychological well-being further highlight the fact that distress and well-being does not necessarily lie on the same continuum and suggest that an individual's psychological response to stressors is likely to operate through different mechanisms (Hart et al., 1995).

On the other hand, findings suggest a dual pathway by which work factors exert their effect on perceptions of physical well-being (i.e., general physical health and psychosomatic symptoms) via both job stress and job satisfaction. It also noteworthy, that perceive job stress mediated the relationship between some work conditions and job satisfaction (see Chapter 7). These results suggest that well-being is determined not only by one's exposure to conditions in the work environment, but also the appraisal of these conditions. This supports the validity of a process approach when investigating stress and well-being. The present research suggests that attempts to improve police officers perception of stress and enhance job satisfaction may likely have long-term beneficial effects on personal well-being outcomes.

To summarise, the research in Chapters 7 and 8 has presented several key findings on the nature of the stress-strain relationship in Jamaican police officers. The results demonstrate that: (1) work-related factors, work-family conflict, and personality characteristics (particularly, extraversion, positive self-evaluations and emotional stability) are important in determining both occupational and personal well-being; (2) there is little evidence in support of the proposed moderation effects; and (3) there is substantial evidence supporting the intermediate role of perceived job stress and job satisfaction in the stress-strain relationship. On a whole, these findings are supportive, as least in part, of major components of the proposed research model. Moreover, this research has helped to

reinforce some of the existing findings in the police stress literature and has provided some independent insights of its own.

9.4. Theoretical and Methodological Implications

The research undertaken in this thesis further extends research on police stress, specifically in the context of a developing nation, but no doubt occupational stress research in general. The research drew upon a transactional theory of stress, adopting the multi-dimensional approach of the DRIVE model, as the main conceptual framework. The model offered a flexible, yet comprehensive approach to the study of stress and well-being in police officers. Current research findings have found support for most of the proposed relationships and mechanisms hypothesised in the model.

A key finding of this research is embedded in the value of a multi-factorial approach to stress research, which is particularly limited in the police literature. In most police studies, work characteristics represent the most commonly assessed predictors of well-being. However, it is evident from the findings in Chapters 7 and 8 that work-related variables alone are insufficient in explaining well-being outcomes. As shown, personality characteristics are also important determinants of well-being. Further, expanding the model to include work-family conflicts also added to the explained variance in outcomes, and represents an important component to include in future research. The research has also provided valuable insights into the stress process by presenting evidence to support mediated pathways through job appraisals. Overall, the research shows that adopting methodology that sufficiently captures the complexities of the interactions between police officers' perceptions and their environment is crucial in determining well-being.

9.5. Summary of Research Limitations

The current research has some limitations which should be taken into consideration when interpreting findings. Firstly, the research used a cross-sectional design to achieve the research objectives. While, cross-sectional studies are efficient and less time-consuming than longitudinal methods, we are limited in establishing any firm conclusions about causal effects.

Another limitation of the research is the use of self-report measures as the primary data source. As discussed previously, self-report measures are quick, easy to distribute and are considered reasonable methods of assessing beliefs, feelings and behaviours. However, self-report measures are also open to biases in reporting. For instance, the police officers who participated in the surveys may have underestimated or overestimated their perceptions in response to the items. Also, though participants were guaranteed that their responses would be kept confidential, participants may not have answered completely honest on sensitive topics, particularly on questions that they feared could be used against them or place them in an unfavourable light. Using self-report measures may also inflate the relationship between variables and result in common method variance (CMV). However, CMV was unlikely, as this would have consistently resulted in high correlations (Spector, 2006) but this was not observed among the variables in research.

Some caution should also be taken in generalising the results of this research in relation to the Jamaican police population. The research employed a non-random selection procedure. Though efforts were made to recruit officers from different divisions and locations across the country to improve representativeness, one has to be careful with regard to extrapolating results to the general police population.

In addition, given some of the complexities of the relationships that were examined, more sophisticated analyses using structural equation modelling (SEM) in future research may be useful. However, some experts argue that although there are some advantages to SEM, it is not necessarily better or more appropriate than OLS regressions, particularly when testing mediation and moderation models (Hayes, 2013).

9.6. Recommendations for Future Research

As mentioned earlier, the design of the current research limits our ability to infer causation. Thus, attempts should be made to employ longitudinal designs in future studies to provide better evidence of causal relationships. To this researcher's knowledge, there is very little research in this respect in the police stress literature. Although time-consuming, costly and greatly dependent on the cooperation of police organisations, such studies are crucial in expanding our knowledge on the nature and development of stress and its relation to well-being over time.

While much of the literature on police stress tends to focus on work-related variables, the current research supports a multi-factorial model of stress. Notably, the role of work-family conflict and certain personality characteristics should continue to receive attention in future studies. Research considering a similar system of variables needs to be replicated in different police contexts to determine the stability of relationships among these variables. Further, the current research, underpinned by the DRIVE model has shown some interesting results with regards to the mediating role of perceived stress and job satisfaction in the relationship between work factors and well-being outcomes. Few police studies have investigated these mechanisms in stress-strain relationships. The validity and consistency of these findings should, therefore, be explored further.

Contrary to previous research, current findings suggest that work support was not as important in determining personal well-being compared to other variables. It is possible that other sources of support from outside the work environment may be more influential. Future research should consider different facets of social support (e.g., work and non-work support) and support functions to help clarify our understanding of how these resources influence police stress and well-being. For instance, researchers have suggested that for buffering effects of support to occur, there must be a match between the type of support and the stressors encountered (Cohen & Wills, 1985; Dewe et al., 2012). It is proposed here that support from work may assist police officers in resolving work-related problems whereas support from family and friends may be more instrumental in personal well-being outcomes.

The research in this thesis did not find much support for coping as a determinant of well-being. Previous studies have also shown that coping skills have relatively little effect on police well-being outcomes (Hart & Cotton, 2002; Ortega et al., 2007; Patterson, 2003). Perhaps these cumulative findings are an indication of our limitations in measuring relevant coping mechanisms in this occupational group. Findings from the qualitative aspect of the current research, for instance, suggest that Jamaican police officers tend to use coping strategies such as alcohol, smoking and sex. Therefore, it may be that officers use these and other types of coping strategies with more potency compared to the measures that were assessed here. Accounting for these and other aspects of coping (e.g., use of religion, exercise) in future studies may help to increase our knowledge about how police officers manage stress. Until the role of easily modifiable factors such as coping and support in stress-strain relationships is understood, the benefits of these factors cannot be exploited to their full potential. Given that it might be challenging to change the work content and requisite demands of police work, coupled with the rigidity and unwillingness

for organisational level change, it is important to fully explore other ways of mitigating stress and improving well-being.

Finally, very little research has examined the effectiveness of interventions designed to reduce stress and improve well-being in police officers. To obtain tangible evidence about whether recommendations from theoretical projections actually work, it is necessary to implement and evaluate intervention strategies over time. Police stress research, therefore, needs to move towards periodically monitoring police stress and its relation to well-being, then systematically implementing evidence-based strategies, and evaluating their effectiveness over time.

9.7. Practical Recommendations

The findings of the current research have provided valuable insights for the Jamaica Constabulary Force (JCF). For police management, it is important to recognise that the efficiency, effectiveness and overall quality of service delivery of any police department depend on the well-being of its officers. It is, therefore, incumbent on the police organisation to support their members in negotiating the stressors of their work environment. The most effective way of managing stress and its impact on health is for management to be proactive and target the major risk factors that make police officers particularly vulnerable. Furthermore, it needs to be understood that enhancing the well-being of police officers will require strong commitment and investment from the police organisation, keeping in mind that this will be a long-term process that will require resources and a change in the culture of operations.

As the research has shown, the approach to stress management has to be multifaceted, taking into consideration both organisational and individual level interventions. However, as recommended by other researchers (Hart & Cotton, 2002; Hart

et al., 1995; Stinchcomb, 2004) an organisational rather than individual approach may be more productive. This is primarily because at the organisational level, the focus is on the source of the problem while at the individual level the focus is on the outcome. Proactive approaches taken by the police organisation have to be focused on strategies to minimise the effect of adverse work conditions and improve the positive elements within the work environment. Regular stress audits and risk assessments will be necessary to determine problems within the workplace and vulnerable officers. By doing this, early detection of problematic areas can be addressed and police officers identified to be at risk can be supported. For instance, it may be necessary to rotate officers between duties that require varying levels of effort. Where possible, it might be necessary to redesign some work duties or functions so that the demand on any individual police officer is reduced.

Similar to other police organisations, the JCF has a rigid hierarchical structure which does not easily facilitate change and expects officers to comply with commands without question. In this type of work environment, there is a general lack of control and decision-making authority. Moving towards a more participatory management structure where officers are more involved in decisions and changes, especially those that directly affect them, is likely to enhance their appraisal of work and in turn, increase their personal well-being.

Findings from the qualitative study in Chapter 6 suggested that supervisors play a role in how officers appraise their jobs. Supervisors should be trained in human resource and supervisory management as they are important in creating a healthy work environment for those under their command. While it is important for the individual officer to be self-aware, supervisors should also be able to recognise officers who show signs of stress. They should be sensitive to the needs of their subordinates and support and encourage them in seeking proper treatment. Training in coaching and mentoring skills, rather than merely

technical management skills may also prove beneficial in fostering better relationships between supervisors and subordinates and improve psychological well-being and morale.

The issue of inadequate pay and resources is not an unknown problem to the police force and the government of Jamaica. Still, the empirical evidence provided in Chapters 4 and 6 confirms that these are major sources of stress. Admittedly, these problems may be difficult to address because, for the most part, it is out of the hands of the police organisation itself as they rely on the government's budgetary allocations. However, while current socio-economic conditions may pose a challenge in sufficiently addressing these problems, it is still incumbent on the police organisation and police representatives to lobby for their members as they have a role to play in protecting their health and well-being. Perhaps the data from this research may prove beneficial in petitioning the government to redirect additional funds to law enforcement.

Findings noted in Chapters 4 and 6 also indicated that operating in a violent environment puts additional strain on this group of officers. Therefore, the police must be trained in building their resilience to handle the inescapable threats to their lives, while the organisation provides the necessary support frameworks. It should be mandatory that police officers who are involved in shootings, witnessed another officer being shot, or similar traumatic events, receive counselling and attend a series of stress management seminars, not just singular debriefs. Furthermore, because these appear to be constant issues of concern, there should be ongoing compulsory evaluations of officers (particularly those on operational duty) which can lead to early detection of the effects of these stressors.

On entering the police force and periodically over time, police officers and their spouses should be encouraged to participate in stress seminars so both can understand the

expectations of the job and how police work can impact on the police officer and his/her family. Certainly, police officers who are having problems at work are likely to manage their stress better if they have understanding and supportive spouses or family members. Particularly, focus should be placed on building early awareness of potential changes that might occur in the officer's behaviour and disposition as well as developing self-monitoring skills. The police organisation can also help to foster stronger family units by encouraging participation of spouses in suitable police activities. For instance, promoting annual family oriented social activities and support groups. Furthermore, proper management of transfers and duty assignment can help reduce tensions associated with spending time away from family.

Findings from the qualitative study in Chapter 6 suggested that the "macho" image culture within the police force makes officers reticent in acknowledging emotional problems and is a deterrent to seeking help. On a broad level, the police organisation can take actions to sensitise officers on and build awareness about stress and its deleterious effects through regular ongoing stress seminars. The organisation, in having more conversations and sensitisation exercises, can help to influence the culture among police officers; for instance, by disavowing the "macho" image stigma associated with the fear of acknowledging psychological difficulties, expressing emotions, and help-seeking.

Finally, the JCF should consider expanding the services offered to their members. For example, employing additional professionals such as psychologists and psychiatrists and providing access to services throughout a wider cross-section of the island. The organisation is also encouraged to facilitate increased access to independent practitioners who are consultants or in private practice for officers who may not be comfortable accessing internal services, because of concerns about confidentiality or stigma. Furthermore, while clinical/counselling psychologists and psychiatrists are important in

treating the individual police officer, the police organisation may benefit from an occupational health and safety department. Adapting best practices in occupational health and safety from established frameworks applied in other countries such as the UK, Canada, USA, and Australia for use in the Jamaican context would be a step forward to addressing health and safety concerns in the Jamaica police service.

9.8. Concluding Remarks

The findings from this research serve as a benchmark for informed approaches to improving the work experience and quality of life of Jamaican police officers, as well as provide direction for subsequent research endeavours. Using a traditional method, the research was able to highlight the main sources of stress affecting the Jamaican police. Later, the DRIVE model provided a flexible, useful, yet comprehensive contemporary framework by which to conceptualise stress and well-being in this occupational group. As demonstrated in the research described in the thesis, the development of police stress and consequences for well-being are determined by a complex system of variables. Taking each component and the mechanisms by which they operate into account is likely to yield more success when applying stress management and intervention programs. Likewise, it must be understood that the effectiveness of any intervention will only be apparent if there is systematic assessment, monitoring and re-evaluation over time.

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Serial number

STRICTLY CONFIDENTIAL

POLICE SURVEY

STRESS AND WELL-BEING

School of Psychology — CARDIFF UNIVERSITY · PRIFYSGOL CAERDYDD

2015

GENERAL INSTRUCTIONS

Thank you for taking the time to fill in this questionnaire about stress, well-being and your interactions with citizens. It is very important that you fill this in even if you do not feel stressed at the moment. It will help us to find out about your experiences as it relates to your work.

We are trying to learn about many aspects of your life, from your work experiences, to your health, to how you feel about yourself, to how you interact with citizens in your day to day work. The questionnaire may look quite long, but it is very straightforward. The questionnaire takes approximately 30 minutes to complete.

Please answer the questions as accurately as you can. Our conclusions depend on your accuracy. The questionnaire does not ask for any identifying information and your answers will be kept **<u>completely confidential</u>**, and will only be used for the purpose of this study.

Once you have completed the questionnaire, please return it to the researcher (s).

Thank you for helping with this important study. If you have any comments or want to provide additional information, please write them at the end of the questionnaire.

1.0. To begin, here are some basic demographic questions so we can understand a little more about your background.

1. Please indicate your gender: $\square_0$ Male $\square_1$ Female

2. Please indicate your age in years: _____ years

3. Current Relationship Status: (please tick one box only)
   - $\square_0$ Single $\square_4$ Separated
   - $\square_1$ Living with a partner $\square_5$ Divorced
   - $\square_2$ I have a partner but not living together $\square_6$ Widowed
   - $\square_3$ Married

4. What is your rank in the Police Force?
   - $\square_0$ Constable $\square_2$ Sergeant
   - $\square_1$ Corporal $\square_3$ Inspector
   - $\square_4$ Other, specify _____

5. What is the highest level of education you have received?
   - $\square_0$ Secondary $\square_2$ Bachelor's degree
   - $\square_1$ Diploma $\square_3$ Master's degree
   - $\square_4$ Other, please specify _____

6. How many years have you worked in the police force? _____ years

7. Please indicate the division in which you work: $\square_0$ Non-geographic $\square_1$ Geographic

1.1 This section contains a list of job events that are commonly identified by police officers as stressful. Please read each event and in the appropriate column rate it on the following dimensions: (1) indicate whether you have personally experienced the event in the 12 months; and (2) IF YOU HAVE EXPERIENCED THE EVENT, indicate the relative amount of stress that you believe is associated with each event by selecting a number between 1 (indicating no stress at all) and 10 (very stressful).

		No	Yes	Not at all stressful									Very stressful
1	Overtime demands/long working hours	$\square_0$	$\square_1$	1	2	3	4	5	6	7	8	9	10
2	Threat of being injured/killed on the job	$\square_0$	$\square_1$	1	2	3	4	5	6	7	8	9	10
3	Not enough time to spend with family and friends	$\square_0$	$\square_1$	1	2	3	4	5	6	7	8	9	10
4	Inadequate support from supervisor	$\square_0$	$\square_1$	1	2	3	4	5	6	7	8	9	10

#	Stressor													
5	Seeing a fellow officer injured/killed in the line of duty	□0	□1		1	2	3	4	5	6	7	8	9	10
6	Reorganization and transformation within the organization (e.g. involving change in departments, change in supervisor, duties)	□0	□1		1	2	3	4	5	6	7	8	9	10
7	Policing high crime communities	□0	□1		1	2	3	4	5	6	7	8	9	10
8	Shooting/killing someone in the line of duty	□0	□1		1	2	3	4	5	6	7	8	9	10
9	Insufficient personnel to handle assignments	□0	□1		1	2	3	4	5	6	7	8	9	10
10	Inequitable sharing of responsibilities (e.g. fellow officers not doing their jobs)	□0	□1		1	2	3	4	5	6	7	8	9	10
11	Inadequate or poor quality equipment	□0	□1		1	2	3	4	5	6	7	8	9	10
12	Inadequate opportunity for advancement	□0	□1		1	2	3	4	5	6	7	8	9	10
13	Seeing criminals go free (e.g. because of lack of evidence, court leniency)	□0	□1		1	2	3	4	5	6	7	8	9	10
14	Having to handle large crowds or demonstrations	□0	□1		1	2	3	4	5	6	7	8	9	10
15	Attending to the scene of a serious/fatal road traffic accident	□0	□1		1	2	3	4	5	6	7	8	9	10
16	Inadequate training for the job you are required to do	□0	□1		1	2	3	4	5	6	7	8	9	10
17	Dealing with gangs/gang related activities/gang members	□0	□1		1	2	3	4	5	6	7	8	9	10
18	Responding to a "crime-in-progress" call	□0	□1		1	2	3	4	5	6	7	8	9	10
19	Experiencing negative attitude towards the police force from the public	□0	□1		1	2	3	4	5	6	7	8	9	10
20	Being involved in high speed chases	□0	□1		1	2	3	4	5	6	7	8	9	10
21	Exposure to situations involving children (e.g. violent death of a child, sexual battery, physical abuse)	□0	□1		1	2	3	4	5	6	7	8	9	10
22	Distorted or negative press accounts of the police	□0	□1		1	2	3	4	5	6	7	8	9	10
23	Assignment of increased responsibility	□0	□1		1	2	3	4	5	6	7	8	9	10
24	Pressure to produce results/solve cases	□0	□1		1	2	3	4	5	6	7	8	9	10
25	Lack of recognition from the police organization	□0	□1		1	2	3	4	5	6	7	8	9	10
26	Pursuit of an armed suspect	□0	□1		1	2	3	4	5	6	7	8	9	10
27	Participation in a narcotics raid	□0	□1		1	2	3	4	5	6	7	8	9	10
28	Ineffectiveness of the judicial system	□0	□1		1	2	3	4	5	6	7	8	9	10
29	Poor or uncomfortable working environment (e.g. poor facilities such as restrooms/shower, sleeping areas)	□0	□1		1	2	3	4	5	6	7	8	9	10
30	Making an arrest of a violent suspect	□0	□1		1	2	3	4	5	6	7	8	9	10
31	Job conflict (by-the-book vs. by-the-situation).	□0	□1		1	2	3	4	5	6	7	8	9	10
32	Feeling that you are not fairly compensation for the job you do (e.g. inadequate salary, non-remunerated overtime)	□0	□1		1	2	3	4	5	6	7	8	9	10

33	Handling a mentally/emotionally disturbed person	□0	□1		1		2	3	4	5	6	7	8	9	10
34	Poor communication within the organization	□0	□1		1		2	3	4	5	6	7	8	9	10
35	Given too many cases to handle in a single day	□0	□1		1		2	3	4	5	6	7	8	9	10
36	Bureaucracy involved in carrying out the essentials of the job	□0	□1		1		2	3	4	5	6	7	8	9	10
37	Performing tasks not related to your job description	□0	□1		1		2	3	4	5	6	7	8	9	10
38	Excessive paperwork	□0	□1		1		2	3	4	5	6	7	8	9	10
39	Physical aggression from the public	□0	□1		1		2	3	4	5	6	7	8	9	10

1.2 Please try and remember a stressful situation that you have experienced at work in the last two months. Now please read each of the following items and select the number that best shows how much you used each approach to try and deal with the stress and to make yourself feel better. Please note that the examples provided in the brackets are for guidance only, designed to help you understand what the statement is referring to, rather than a strict criteria.

1. When I find myself in stressful situations, I take a problem-focused approach (e.g. I take one step at a time, I change things about the situation or myself to deal with the issue, I don't let my feelings interfere too much).

   Disagree Strongly   1   2   3   4   5   6   7   8   9   10   Agree Strongly
   ----

2. When I find myself in stressful situations, I look for social support (e.g. I talk to someone to get more information, I ask someone for advice, I talk to someone about how I'm feeling).

   Disagree Strongly   1   2   3   4   5   6   7   8   9   10   Agree Strongly
   ----

3. When I find myself in stressful situations, I blame myself (e.g. I criticize or lecture myself, I realise I brought the problem on myself).

   Disagree Strongly   1   2   3   4   5   6   7   8   9   10   Agree Strongly
   ----

4. When I find myself in stressful situations, I wish for things to improve (e.g. I hope a miracle will happen, I wish I could change things about myself or circumstances, I daydream about a better situation).

   Disagree Strongly   1   2   3   4   5   6   7   8   9   10   Agree Strongly
   ----

5. When I find myself in stressful situations, I try to avoid the problem (e.g. I keep things to myself, I go on as if nothing has happened, I try to make myself feel better by eating/drinking/smoking).

   Disagree Strongly   1   2   3   4   5   6   7   8   9   10   Agree Strongly
   ----

1.3 The following statements refer to how you feel about different aspects of your job. On a scale of 1 to 10, please indicate how much you agree or disagree with the given statement. Please note that the examples provided in the brackets are for guidance only, designed to help you understand what the statement in referring to, rather than being strict criteria.

		Disagree strongly									Agree strongly
1.	I feel that I do not have the time I need to get my work done (for example: I am under constant	**1**	2	3	4	5	6	7	8	9	**10**

	pressure, interrupted in my work, or overwhelmed by responsibility or work demands)										
2.	I feel that I have been rewarded for my efforts (for example: The respect, role, and job prospects I receive are suitable for my efforts and achievements)	1	2	3	4	5	6	7	8	9	10
3.	I find it difficult to withdraw from my work obligations. (For example: work is always on my mind, I find it difficult to relax when I get home from work, people close to me say I sacrifice too much for my job).	1	2	3	4	5	6	7	8	9	10
4.	I feel that my work is too demanding (for example: I have to work very fast, I have to work very hard, I have conflicting demands)	1	2	3	4	5	6	7	8	9	10
5.	I feel that I get adequate control over my work (for example: I have a choice in what I do or how I do things, I am able to learn new things, I am able to be creative)	1	2	3	4	5	6	7	8	9	10
6.	I feel that I am supported by my colleagues (for example: there is a good atmosphere at work, I get along with my colleagues, my colleagues understand me)	1	2	3	4	5	6	7	8	9	10
7.	I feel that I have been subjected to bullying in the workplace in the past 12 months (for example: unjustified criticism, verbal/non-verbal threats, violence, humiliation or exclusion)	1	2	3	4	5	6	7	8	9	10
8.	I feel that I am not consulted about changes at work (for example: There is no opportunity to question managers about change, I am unclear about how change will work out in practice).	1	2	3	4	5	6	7	8	9	10
8.	I feel that I don't understand my role clearly (For example: I am not clear of what is expected of me and what tasks I need to perform)	1	2	3	4	5	6	7	8	9	10
10.	I feel that I get along well with my supervisor (For example: I know where I stand in terms of their opinion of me, my supervisor understands me, my supervisor recognises my potential)	1	2	3	4	5	6	7	8	9	10
11.	I feel that my supervisor supports me (For example: My supervisor helps me when I need it, my supervisor would use their power to help me)	1	2	3	4	5	6	7	8	9	10

1.4 The next set of items is related to your feelings about yourself. Please try and be as honest and accurate as possible.

1. On a scale of one to ten, how happy would you say you are in general?
   Extremely Unhappy   1   2   3   4   5   6   7   8   9   10   Extremely Happy

   ----

2. On a scale of one to ten, how depressed would you say you are in general? (e.g. feeling 'down', no longer looking forward to things or enjoying things that you used to)
   Not at all Depressed   1   2   3   4   5   6   7   8   9   10   Extremely Depressed

   ----

3. On a scale of one to ten, how anxious would you say you are in general? (e.g. feeling tense or 'wound up', unable to relax, feelings of worry or panic)

Not at all Anxious   **1   2   3   4   5   6   7   8   9   10**   **Extremely Anxious**

----

4. Overall, how stressful do you find your job?

Not at all stressful   **1   2   3   4   5   6   7   8   9   10   Very Stressful**

5. In general, I feel optimistic about the future (e.g. I usually expect the best, I expect more good things to happen to me than bad).

Disagree Strongly   **1   2   3   4   5   6   7   8   9   10**   **Agree Strongly**

----

6. I am confident in my ability to solve problems that I might face in life (e.g. I can usually handle whatever comes my way, If I try hard enough I can overcome difficult problems, I can stick to my aims and accomplish my goals).

Disagree Strongly   **1   2   3   4   5   6   7   8   9   10**   **Agree Strongly**

----

7. Overall, I feel that I have positive self-esteem (e.g. On the whole I am satisfied with myself, I am able to do things as well as most other people, I feel that I am a person of worth).

Disagree Strongly   **1   2   3   4   5   6   7   8   9   10**   **Agree Strongly**

1.5 The next set of items deal with various aspects of your job. Please indicate how satisfied or dissatisfied you feel with each of these features of your job.

		Very Dissatisfied						Very Satisfied
1.	The physical work conditions	1	2	3	4	5	6	7
2.	The freedom to choose your own method of working	1	2	3	4	5	6	7
3.	Your colleagues/fellow workers	1	2	3	4	5	6	7
4.	The recognition you get for good work	1	2	3	4	5	6	7
5.	Your immediate supervisor	1	2	3	4	5	6	7
6.	Your rate of pay	1	2	3	4	5	6	7
7.	Your opportunity to use your abilities	1	2	3	4	5	6	7
8.	Your chance of promotion	1	2	3	4	5	6	7
9.	The way your organisation is managed	1	2	3	4	5	6	7
10.	Your hours of work	1	2	3	4	5	6	7
11.	The attention paid to suggestions you make	1	2	3	4	5	6	7
12.	Your job security	1	2	3	4	5	6	7
13.	The amount of variety in your job	1	2	3	4	5	6	7
14.	Now taking everything into consideration, how do you feel about your job on a whole?	1	2	3	4	5	6	7

1.6 The next set of questions is about your general health. Please answer as accurately as you can.

Over the past 6 months I have been:

1. Feeling unaccountably tired and exhausted. $\Box_0$ No $\Box_1$ Yes

2. Having pains (e.g. headaches, backache, pain in chest). $\Box_0$ No $\Box_1$ Yes

3. Having difficulty sleeping. $\Box_0$ No $\Box_1$ Yes

4. Having gastrointestinal problems (e.g. heartburn/indigestion, nausea/vomiting, constipation). $\Box_0$ No

    $\Box_1$ Yes

5. Over the past 6 months, how would you say your physical health in general has been?

    Extremely poor   1   2   3   4   5   6   7   8   9   10   Extremely good

1.7 Below are some statements about your feelings and thoughts. Please circle the best response that describes your experience for each item over the last two (2) weeks.

1. I have been feeling in good spirits (e.g. I feel optimistic about the future, feel good about myself, and confident in my abilities).

    Disagree Strongly   1   2   3   4   5   6   7   8   9   10   Agree Strongly

    ----

2. I have been feeling good about my relationship with others (e.g. feeling close to people in my life, feeling loved those close to me).

    Disagree Strongly   1   2   3   4   5   6   7   8   9   10   Agree Strongly

    ----

3. I have been feeling energetic and involved with things in my life (e.g. I have energy to spare, been interested in other people, been interested in new things).

    Disagree Strongly   1   2   3   4   5   6   7   8   9   10   Agree Strongly

    ----

4. I have been feeling useful and having good mental focus (e.g. been dealing with problems well, been thinking clearly, been able to make up my mind about things)

    Disagree Strongly   1   2   3   4   5   6   7   8   9   10   Agree Strongly

    ----

5. I have been feeling relaxed

    Disagree Strongly   1   2   3   4   5   6   7   8   9   10   Agree Strongly

    ----

1.8 How well do the following statements describe you? You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

I see myself as….

		Disagree strongly						Agree strongly
1.	… extraverted, enthusiastic	1	2	3	4	5	6	7
2.	… critical, quarrelsome	1	2	3	4	5	6	7
3.	… dependable, self-disciplined	1	2	3	4	5	6	7
4.	… anxious, easily upset	1	2	3	4	5	6	7
5.	… open to new experiences, complex	1	2	3	4	5	6	7
6.	… reserved, quiet	1	2	3	4	5	6	7
7.	… sympathetic, warm	1	2	3	4	5	6	7
8.	… disorganised, careless	1	2	3	4	5	6	7
9.	…calm, emotionally stable	1	2	3	4	5	6	7
10.	… conventional, uncreative	1	2	3	4	5	6	7

1.9 Please indicate the degree of your agreement or disagreement with each statement. The word "work" refer to all work-related activities that you do as part of your paid employment. The word "family" refers to the following family roles that pertain to you including being a parent, being a spouse/partner, and overall home life.

1. When I get home from work I am often too frazzled to participate in family activities/responsibilities.

   Disagree Strongly   **1 2 3 4 5 6 7 8 9 10**   **Agree Strongly**

   ----

2. I am often so emotionally drained when I get home from work that it prevents me from contributing to my family.

   Disagree Strongly   **1 2 3 4 5 6 7 8 9 10**   **Agree Strongly**

   ----

3. Due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy.

   Disagree Strongly   **1 2 3 4 5 6 7 8 9 10**   **Agree Strongly**

2.0. Over the past 12 months, how often has this occurred? How often has a citizen/member of the public…

		never	1-5	6-10	11-15	>15
1.	Cursed, use abusive language or made verbal threats towards you?	$\square_0$	$\square_1$	$\square_2$	$\square_3$	$\square_4$
2.	Grabbed, pushed or shoved you?	$\square_0$	$\square_1$	$\square_2$	$\square_3$	$\square_4$
3.	Hit, punched, or kicked you?	$\square_0$	$\square_1$	$\square_2$	$\square_3$	$\square_4$
4.	Threatened you with a weapon (e.g. knife, machete, firearm)?	$\square_0$	$\square_1$	$\square_2$	$\square_3$	$\square_4$
5.	Actually used a weapon against you (e.g. shot at you)?	$\square_0$	$\square_1$	$\square_2$	$\square_3$	$\square_4$

2.1. **Please indicate the degree of your agreement or disagreement with each statement. Again, the word "work" refers to all work-related activities that you do as part of your paid employment. The word "family" refers to the following family roles that pertain to you including being a parent, being a spouse/partner, and overall home life.**

1. Due to stress at home, I am often preoccupied with family matters at work.

    Disagree Strongly   1   2   3   4   5   6   7   8   9   10   **Agree Strongly**

    ----

2. Because I am often stressed from family responsibilities, I have a hard time concentrating on my work.

    Disagree Strongly   1   2   3   4   5   6   7   8   9   10   **Agree Strongly**

    ----

3.   Tension and anxiety from my family life often weakens my ability to do my work.

    Disagree Strongly   1   2   3   4   5   6   7   8   9   10   **Agree Strongly**

Appendix B: Informed Consent

I understand that my participation in this project will involve completing a questionnaire on aspects of my well-being in relation to my work experiences, self-perception, attitudes and behaviours, and mental and physical health, which will take approximately 30 minutes of my time.

I understand that participation in this study is entirely voluntary and that I can withdraw from the study at any time without giving a reason.

I understand that I am free to avoid responding to any questions that I feel uncomfortable answering and that I can discuss my concerns with Kenisha Nelson (PhD Student) or Professor Andy Smith (supervisor) using the contact information provided.

I understand that the information provided by me will be anonymous and held confidential so that it is impossible to trace my responses back to me individually. I understand that this information may be retained indefinitely.

I also understand that at the end of the study I will be provided with additional information and feedback about the purpose of the study.

I_____ consent to participate in the study conducted by Kenisha Nelson (PhD student), School of Psychology, Cardiff University with the supervision of Professor Andy Smith.

Signed: _____

Appendix C: Debriefing Statement

Thank you for taking the time to complete the questionnaire in this study entitled: Stress and coping in the police force: implications for psychological well-being and attitudes toward the general public.

Previous research has suggested that police work is one of the most stressful occupations. The aim of this study is to investigate the sources of stress experienced by police officers and how your stress experiences may impact your health and well-being. The study also aims to examine whether there is an association between stress and police officers' attitudes and behaviours in their interaction with citizens.

Stress has been shown to have serious negative effects on quality of life and behaviour. We encourage you to learn more about possible options that may be available to you to better manage stress and/or access treatment that may help to improve overall wellbeing. If you should feel any distress as a result of completing this survey, you may contact the Medical Services branch at email: medicalbranch@jcf.gov.jm and telephone: 1876-749-0470 or the Chaplaincy at email: chaplaincy@jcf.gov.jm and telephone: 1876-984-2275.

Your responses to the questionnaire will be held totally anonymous, with no questionnaire traceable to any individual.

If you have any queries or concerns about the research, please contact either the researcher (Kenisha Nelson, PhD Student) or her supervisor (Andy Smith) using the contact details below.

Thank you again for your participation.

Contact Details

Researcher	Supervisor
Kenisha Nelson (PhD Student)	Prof. Andy Smith
Centre for Occupational & Health Psychology	Centre of Occupational & Health Psychology
School of Psychology	School of Psychology
Cardiff University	Cardiff University
63 Park Place	63 Park Place
Cardiff	Cardiff
CF10 3AS	CF10 3AS
Email: nelsonk1@cardiff.ac.uk	Tel: 029 2087 4757
	Email: smithap@cf.ac.uk

Appendix D: Interview Schedule

Introduction: I am interested in your experience as someone in the JCF offering support services. I will be asking a number of questions about your interactions with members of the JCF. Your name will not be recorded. Participation is confidential and voluntary, and you can refuse to answer questions if you don't feel comfortable. You can also withdraw from the interview at any time. Do you consent to me recording our conversation?

Interview #.................................. Support Unit……………………………….

Date of Interview………………… Start time………………………………..

End time…………………………...

Questions:

1. Based on your interactions with officers, what are the main sources of stress reported? That is, what areas of their work do they find most troubling?

2. Based on your interactions with officers, about what percentage would you estimate has stress related issues?

3. How often do officers come to you with stress related problems?

4. How do you think officers are coping with the demands of their job?

5. In your experience, what methods are officers using to cope with job related demands, whether reported or observed?

6. In your experience/ interactions with officers, what are the risk factors associated with stress and stress related issues? For example, who is more likely to report stress related issues? AND who are less likely to report stress related issues?

7. How regularly do officers present sick leave applications?

8. How often do you get reports of conflict between officers and their supervisors and officers and their colleagues?

9. How often do you get reports of harassment/ bullying? (e.g. threats, violence, humiliation, exclusion etc.)

10. In your estimation, are officers more or less satisfied with their job?

11. In your estimation, how do you think the police organisation can help enhance the well-being of their members?

This concludes our interview. Thank you for your time!

Appendix E: Logistic Regression Analyses for UK Sample

Work characteristics and psychosomatic symptoms

Table 1. Logistic regression predicting likelihood of reporting 5 or more symptoms based on job factors

Variables	B	S.E.	Wald	df	p	Odds Ratio	95% C.I. for Odds Ratio	
Gender	1.669	.511	10.663	1	.001	5.305	1.949	14.444
Rank	-.403	.503	.644	1	.422	.668	.249	1.789
Years of service	.023	.028	.669	1	.414	1.023	.969	1.080
Neg. job characteristics	.044	.044	.975	1	.324	1.045	.958	1.139
Work support	-.108	.035	9.552	1	.002	.897	.838	.961
Pos. job characteristics	-.118	.048	6.003	1	.014	.889	.809	.977
(constant)	2.905	1.589	3.339	1	.068	18.257		

Coping and psychosomatic symptoms

Table 2. Logistic regression predicting the likelihood or reporting 5 or more symptoms based on coping styles

Variables	B	S.E.	Wald	df	p	Odds Ratio	95% C.I. for Odds Ratio	
Gender	1.453	.460	9.967	1	.002	4.276	1.735	10.539
Rank	-.167	.433	.148	1	.700	.846	.362	1.978
Years of service	.030	.025	1.400	1	.237	1.030	.981	1.082
Action-oriented cope	-.158	.067	5.578	1	.018	.854	.748	.973
Emotion-focused cope	.042	.034	1.478	1	.224	1.043	.975	1.116
(constant)	.329	1.057	.097	1	.756	1.389		

Personality characteristics and psychosomatic symptoms

Table 3. Logistic regression predicting the likelihood or reporting 5 or more symptoms based on personality attributes

Variables	B	S.E.	Wald	df	p	Odds Ratio	95% C.I. for Odds Ratio	
Gender	1.434	.508	7.981	1	.005	4.195	1.551	11.345
Rank	-.132	.483	.075	1	.784	.876	.340	2.256
Years of service	.048	.029	2.705	1	.100	1.049	.991	1.111
Pos. self-evaluations	-.163	.056	8.555	1	.003	.849	.761	.948
Extraversion	-.138	.090	2.348	1	.125	.871	.730	1.039
Agreeableness	.083	.150	.310	1	.578	1.087	.811	1.458
Conscientiousness	-.019	.148	.017	1	.896	.981	.734	1.311
Emotional Stability	-.198	.153	1.683	1	.195	.820	.608	1.107
Openness	.217	.157	1.895	1	.169	1.242	.912	1.691
(Constant)	2.074	1.466	2.000	1	.157	7.954		

Appendix F: Logistic Regression Analyses for Jamaican Sample

Work characteristics and psychosomatic symptoms

Table1. Logistic regression predicting likelihood of reporting 5 or more symptoms based on job factors

Variables	B	S.E.	Wald	df	p	Odds Ratio	95% C.I. for Odds Ratio	
Gender	.893	.435	4.202	1	.040	2.442	1.040	5.733
Rank	-.894	.513	3.042	1	.081	.409	.150	1.117
Years of service	.010	.044	.049	1	.825	1.010	.926	1.101
Neg. job characteristics	.049	.034	2.094	1	.148	1.050	.983	1.122
Work support	-.001	.025	.002	1	.969	.999	.952	1.049
Pos. job characteristics	-.034	.040	.738	1	.390	.966	.893	1.045
(constant)	.093	1.170	.006	1	.937	1.097		

Coping styles and psychosomatic symptoms

Table 2. Logistic regression predicting likelihood of reporting 5 or more symptoms based on coping style

Variables	B	S.E.	Wald	df	p	Odds Ratio	95% C.I. for Odds Ratio	
Gender	.742	.439	2.856	1	.091	2.101	.888	4.971
Rank	-.937	.512	3.353	1	.067	.392	.144	1.068
Years of service	.018	.044	.162	1	.687	1.018	.934	1.109
Action-oriented cope	.005	.055	.008	1	.928	1.005	.903	1.119
Emotion-focused cope	.073	.033	4.828	1	.028	1.075	1.008	1.147
(constant)	-.598	.965	.384	1	.535	.550		

Personality characteristics and psychosomatic symptoms

Table 3. Logistic regression predicting likelihood of reporting 5 or more symptoms based on personality attributes

Variables	B	S.E.	Wald	df	p	Odds Ratio	95% C.I. for Odds Ratio	
Gender	1.000	.452	4.886	1	.027	2.718	1.120	6.597
Rank	-1.138	.527	4.657	1	.031	.320	.114	.901
Years of service	.032	.045	.499	1	.480	1.032	.945	1.128
Pos. self-evaluations	-.011	.049	.050	1	.823	.989	.898	1.089
Extraversion	-.017	.075	.053	1	.817	.983	.848	1.139
agreeableness	-.035	.094	.137	1	.711	.966	.803	1.161
Conscientiousness	.115	.108	1.125	1	.289	1.122	.907	1.387
Emotional Stability	.009	.109	.007	1	.935	1.009	.815	1.249
Openness	-.270	.129	4.361	1	.037	.763	.592	.984
(Constant)	2.256	1.409	2.564	1	.109	9.542		