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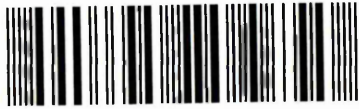
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Police Selection Via Psychological Testing: A United Arab Emirates Study

Omar Ebrahim Al-Ali

**A thesis submitted in partial fulfilment of the requirements of
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for the degree of Doctor of Philosophy**

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ABSTRACT

The selection of effective police officers is not a new concern, but in the UAE and many other countries, particularly in Arabic-speaking contexts, these issues have not been given considerable attention until recently. Most published studies appear to focus on the relationships between psychopathological personality tests and police performance, and very little has been written about other normal personality taxonomies (such as the Big Five). This study was therefore conducted to fill this gap, with its main goal to investigate the relationships between the five-factor model of personality, general cognitive ability, emotional intelligence (EI), and work-related behaviours (i.e., job performance, training performance, perceived job stress, coping with stress, and counterproductive work behaviours, or CWB) amongst a sample of current and newly hired police officers at the Abu Dhabi Police Force in the UAE.

More specifically, following an exhaustive literature review, a research gap has been identified, as there is little meaningful research available on the role of normal personality traits, cognitive ability, and EI in predicting work-related behaviours in police organisations, particularly within Arab countries. Accordingly, the main question in the present research was: "To what extent could the use of psychometric testing enhance the effectiveness of police officer selection processes in the UAE?"

Based on this objective, three different studies were conducted. Study One ($n = 30$) investigated existing processes of hiring police officers at Abu Dhabi Police in the UAE. Results have indicated that although the current processes of police officer selection may be simple and cost-efficient, there are several criticisms levelled against them, such as that they are less valid and less fair, and thus more likely to lead to negative outcomes, such as poor selection and low police performance levels. In addition, senior police managers believe that using psychometric tests such as personality and cognitive ability measures in the selection process may play a role in selecting the best entry-level police officers; and that Conscientiousness, Emotional Stability, and Extraversion are important dimensions for high performance police officers.

Results of Study Two (using cross-sectional research design, and based on current officers from the Abu Dhabi Police, $n = 310$) and results of Study Three (using longitudinal data collection methods, and based on newly hired officers at the Abu Dhabi Police, $n = 385$), showed that cognitive ability, Conscientiousness, Extraversion, Neuroticism, and emotional intelligence are all significantly correlated with job performance, training performance, perceived job stress, and CWB. Moreover, consistent support was found for the validity of cognitive ability, Conscientiousness, and emotional intelligence in predicting overall actual job performance.

These results suggest that measuring candidates' personality traits, cognitive ability, and emotional intelligence may enhance the police personnel selection process. It also supports the validity of selecting the best applicants, rather than screening out unfit candidates to enhance police outcomes. These findings were discussed in the framework of the Big Five and EI models, and their implications for police research were analysed particularly in the areas of personnel selection and training. Further research was also explored in light of the study's findings and potential limitations.

TABLE OF CONTENTS

ABSTRACT	2
TABLE OF CONTENTS	3
LIST OF TABLES	7
DECLARATION	10
DEDICATION	11
ACKNOWLEDGEMENTS	12
LIST OF PUBLICATIONS ARISING FROM THE CURRENT THESIS	13
CHAPTER ONE: INTRODUCTION AND BACKGROUND	14
1.1 Introduction	14
1.2 Research Problem	22
1.3 Context of the Research	24
1.4 Research Objectives	28
1.5 Significance of Research	30
CHAPTER TWO: LITERATURE REVIEW	33
2.1 An Overview of Psychometric Tests	33
2.1.1 Introduction	33
2.1.2 Criteria of Adequate Tests.....	34
2.1.3 Faking in Psychometric Tests	37
2.1.4 Evaluation of the Usefulness of Psychometric Tests	40
2.2 Personality	42
2.2.1 Introduction	42
2.2.2 Definition of Personality	44
2.2.3 Approaches to Personality Research	45
2.2.4 Trait Factor-Analytic Theories of Personality	49
2.2.4.1 Cattell's Theory	50
2.2.4.2 Eysenck's Theory	54
2.2.4.3 The Five Factors Model (The Big Five)	57
2.2.5 Personality and Workplace Behaviour	63
2.2.5.1 Personality and Job Performance	63
2.2.5.2 Personality and Training Performance	70
2.2.5.3 Personality and Job Stress	73
2.2.5.4 Personality and Counterproductive Work Behaviour	78
2.3 Emotional Intelligence	83
2.3.1 Introduction	83
2.3.2 Models of Emotional Intelligence	84

2.3.2.1 Ability Models of Emotional Intelligence	84
2.3.2.2 Mixed Models of Emotional Intelligence	90
2.3.2.2.1 The Goleman Model of Emotional Intelligence	90
2.3.2.2.2 The Bar-On Model of Emotional Intelligence	94
2.3.2.3 Summary of EI Models	98
2.3.3 Emotional Intelligence at Work	99
2.3.3.1 Emotional Intelligence and Job Performance	99
2.3.3.2 Emotional Intelligence and Job Stress	101
2.3.3.3 Emotional Intelligence and Counterproductive Work Behaviours	104
2.3.4 Criticisms of EI	106
2.3.5 The Role of EI in the Police	108
2.4 Cognitive Ability	112
2.4.1 Introduction	112
2.4.2 Cognitive Ability at Work	114
2.4.3 Explanations for the Role of Cognitive Ability in Police Work	117
2.4.4 Summary	122
2.5 Summary of the Literature Review	123
CHAPTER THREE: STUDY ONE	129
3.1 Introduction	129
3.2 Methods	134
3.2.1 Participants	135
3.2.2 Measures	136
3.2.3 Procedure	137
3.2.4 Ethical Considerations	138
3.2.5 Data Analysis	139
3.3 Results	139
3.3.1 Review of Existing Police Officer Selection Procedures at the ADP ..	139
3.3.2 Current Police Officers performance and Behaviours at the ADP	142
3.3.3 Using Psychometric Testing in Employee Selection	146
3.3.4 Results of the NEO Job Profiler	148
3.4 Discussion	151
CHAPTER FOUR: STUDY TWO	156
4.1 Introduction	156
4.2 Method	157
4.2.1 Participants	157
4.2.2 Measures	158
4.2.3 Procedure	168
4.2.4 Ethical Considerations	169
4.2.5 Statistical Analyses	170

4.3 Results	172
4.3.1 Descriptive Statistics	172
4.3.2 The FFM, Cognitive Ability, Emotional Intelligence, and Job Performance	175
4.3.3 The FFM, Cognitive Ability, Emotional Intelligence, and Perceived Job Stress	177
4.3.4 The FFM, Cognitive Ability, Emotional Intelligence, and Coping Strategies	179
4.3.5 The FFM, Cognitive Ability, Emotional Intelligence, and CWB	182
4.4 Discussion	186
CHAPTER FIVE: STUDY THREE	196
5.1 Introduction	196
5.2 Method	199
5.2.1 Participants	199
5.2.2 Predictor Measures	200
5.2.3 Criterion Measures	201
5.2.4 Procedure	201
5.2.5 Ethical Considerations	203
5.2.6 Statistical Analysis	204
5.3 Results	204
5.3.1 Descriptive Statistics	204
5.3.2 The FFM, Cognitive Ability, Emotional Intelligence, and Academic Performance	207
5.3.3 The FFM, Cognitive Ability, Emotional Intelligence, and Physical Training Performance	208
5.3.4 The FFM, Cognitive Ability, Emotional Intelligence, and Firearms Performance	210
5.3.5 The FFM, Cognitive Ability, Emotional Intelligence, and Discipline and Overall Behaviours at the Academy	211
5.3.6 The FFM, Cognitive Ability, Emotional Intelligence, and Overall Training Performance	213
5.3.7 The FFM, Cognitive Ability, Emotional Intelligence, and Actual Job Performance	214
5.3.8 The FFM, Cognitive Ability, Emotional Intelligence, and Objective Measurements of CWB	217
5.4 Discussion	219

CHAPTER SIX: GENERAL DISCUSSIONS AND CONCLUSIONS	225
6.1 Summary of the Main Findings	225
6.1.1 Current Officer Selection Procedures at the Abu Dhabi Police	225
6.1.2 Job Performance	227
6.1.3 Training Performance	229
6.1.4 Job Stress and Coping	231
6.1.5 Counterproductive Work Behaviour	233
6.2 Contributions of the Current Findings to Knowledge	236
6.3 Implications of the Current Findings	239
6.4 Strengths and Limitations of the Current Findings	242
6.5 Conclusions	249
REFERENCES	251
APPENDIXES	284

LIST OF TABLES

Table 1.1: Meta-analytic correlations between a number of selection tools, job performances, and training performances (Schmidt and Hunter, 1998)	18
Table 2.1: Sixteen primary factors and descriptors in Cattell's theory	52
Table 2.2: The Big Five dimensions and their facets	58
Table 2.3: Mayer and Salovey's (1997) model of emotional intelligence	85
Table 2.4: Summary of psychometric properties of the MSCEIT and the SREIT	87
Table 2.5: Goleman's (1998) model of emotional intelligence	91
Table 2.6: Goleman's (2001) model of emotional intelligence	91
Table 2.7: Summary of psychometric properties of the ECI	93
Table 2.8: Bar-On's (1997) model of emotional intelligence	95
Table 2.9: Summary of psychometric properties of the EQ-i	96
Table 2.10: Aamodt's (2004) meta-analysis results for cognitive ability in police	117
Table 2.11: Pulakos, et al.'s (2000)-eight dimensional taxonomy of adaptive performance	121
Table 2.12 Summary of the key past research	124
Table 3.1: Factors underlying high levels of job stress amongst police officers according to participants (n=30)	144
Table 3.2: The most common disciplinary problems committed by officers according to participants (n = 22)	145
Table 3.3: NEO job profiler weights for best entry-level police officers, as described by police supervisors (n = 30)	149
Table 4.1: Order of tests used in the current study	169
Table 4.2: Summary statistics for all variables of Study Two (n = 310)	172
Table 4.3: Correlations amongst study variables (n = 310)	174

Table 4.4: Correlations between the FFM, Cognitive Ability, EI, and Job Performance (n = 310)	175
Table 4.5: Job performance regressed on the FFM, cognitive ability and EI (n = 310)	176
Table 4.6: Hierarchical regression of job performance, cognitive ability (step 1), the FFM (step 2), and EI (step 3) (n = 310)	177
Table 4.7: Correlations between the FFM, cognitive ability, EI, and perceived job stress (n = 310)	178
Table 4.8: Perceived job stress regressed on the FFM, cognitive ability, and EI (n = 310)	179
Table 4.9: Means, Standard Deviations, and Alpha Coefficients of Brief Coping Subscales (n = 310)	179
Table 4.10: Factor Loadings for Brief Coping Subscales	180
Table 4.11: Correlations between the FFM, Cognitive Ability, EI, and Coping Strategies (n = 310)	181
Table 4.12: Correlations between the FFM, cognitive ability, EI, and CWB (n = 310)	183
Table 4.13: Self-reported CWB regressed on the FFM, cognitive ability, and EI (n = 310)	184
Table 4.14: Objective measurements of CWB regressed on the FFM, Cognitive ability, and EI (n = 310)	185
Table 5.1: Stages of data collocation in study three	203
Table 5.2: Summary of statistics for all variables in Study Three	205
Table 5.3: Correlations amongst study variables	206
Table 5.4: Correlations between the FFM, cognitive ability, emotional intelligence, and academic performance (n = 385)	207
Table 5.5: Academic performance regressed on the FFM, cognitive ability, and emotional intelligence (n = 385)	208
Table 5.6: Correlations between the FFM, cognitive ability, emotional intelligence, and physical performance (n = 385)	208
Table 5.7: Physical performance regressed on the FFM, cognitive ability, and emotional intelligence (n = 385)	209

Table 5.8: Correlations between the FFM, cognitive ability, emotional intelligence, and firearms performance (n = 385)	210
Table 5.9: Firearms performance regressed on the FFM, cognitive ability, and emotional intelligence (n = 385)	211
Table 5.10: Correlations between the FFM, cognitive ability, emotional intelligence, discipline, and overall behaviours at the Academy (n = 385)	212
Table 5.11: Discipline and overall behaviours at the Academy regressed on the FFM, cognitive ability, and emotional intelligence (n = 385)	212
Table 5.12: Correlations between the FFM, cognitive ability, emotional intelligence, and overall training performance (n = 385)	213
Table 5.13: Overall training performance regressed on the FFM, cognitive ability, and emotional intelligence (n = 385)	214
Table 5.14: Correlations between the FFM, cognitive ability, emotional intelligence, and job performance (n = 355)	215
Table 5.15: Job performance regressed on the FFM, cognitive ability, and emotional intelligence (n = 355)	216
Table 5.16: Hierarchical regression of job performance, cognitive ability (step 1), the FFM (step 2), and EI (step 3) (n = 355)	216
Table 5.17: Correlations between the FFM, cognitive ability, emotional intelligence, and objective measurements of CWB (n = 355)	218
Table 5.18: Objective measurements of CWB regressed on the FFM, cognitive ability, and EI (n = 355)	218
Table 6.1: Summary of reliability and validities of psychological variables used in the current thesis	235

DECLARATION

I declare that this thesis contains no material which has been submitted for the award of any other degree or diploma and to the best of my knowledge contains no material previously written or published by another person except where due reference is made in the text of the thesis.

DEDICATION

This thesis is dedicated to the men and women of law enforcement whom daily face perils of the mind and body the rest of us can neither know nor fully understand.

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LIST OF PUBLICATIONS AND INTERNATIONAL CONFERENCES PROCEEDINGS ARISING FROM THE CURRENT THESIS

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Al-Ali, O. E., Garner, I., & Magadley, W. (2010). An investigation of the effectiveness of using psychometric tests in the selection of police officers in the UAE. *Journal of Interdisciplinary Psychology*, 21, 104-131.

Al-Ali, O. E., Garner, I., & Magadley, W. (2010). Personality profile of effective police officers: An exploratory study. *Arabpsynet Journal*, 25, 174-180.

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Al-Ali, O. E., Garner, I., & Magadley, W. (2009). *An investigation of the relationship among personality, cognitive ability, emotional intelligence, and counterproductive workplace behaviors: Results from UAE Police*. Paper presented at the 8th Industrial and Organisational Psychology Conference (25-28 June), Sydney, Australia.

Al-Ali, O. E., Garner, I., & Magadley, W. (2009). *An exploration of the relationship between personality, cognitive ability, emotional intelligence, and job performance: Results from UAE Police*. Paper presented at the 14th European Congress of Work and Organisational Psychology (13-16 May), Santiago de Compostela, Spain.

Al-Ali, O. E., Garner, I., & Magadley, W. (2009). *Psychological Testing and the Selection of Police Officer at Abu Dhabi Police: An Exploratory Study*. Paper presented at the Second Conference of the International Association of Muslim Psychologists (2-4 February), Sharjah, UAE.

Chapter One: Introduction and Background

This research is about the measurement and prediction of employee performance in the police organization. It seeks to identify the personal characteristics that are needed for effective performance on complex, dangerous, stressful, and high customer contact job, namely police occupation. It seeks to establish theoretical and empirical associates between person and work variables. The preset research is a validation study of personality traits, cognitive ability, and emotional intelligence aiming to contribute to the theory and practice of employee selection in police force.

1.1 Introduction

The primary goal of selection is to establish an optimal match between the skills and talents of candidates and the requirements of the work (Sheehan, 2004). The police officer selection process is extremely important to law enforcement organisations. According to Detrick, et al. (2004), the main goals of pre-employment psychological evaluations in law enforcement are: (a) to identify job applicants who are well-adjusted and who possess the abilities and skills essential for functioning as effective police officers; and (b) to identify personality characteristics that are associated with low work performance, including vulnerability to stress and maladjustment. The multidimensional nature of police work, in addition to the rapid development of technology, the growth of organised crime, terrorist crimes, and cyber crimes, have also important implications for processes of police officer selection. Police organisations need to employ individuals with high skills and different abilities to effectively perform the complex and dangerous tasks of policing.

The selection of police officers, however, has become a difficult, complicated, and expensive process, due to: the large number of applicants from a great variety of backgrounds (Bartol and Bartol, 2004); negligent hiring practices (Perrone, 1999; Rostow and Davis, 2002; Shusman and Inwald, 1991); and the challenge of giving all applicants equal opportunities during the process of selection (Daniel, 2001; Gaines and Falkenberg, 1998). Consequently, police organisations need to establish effective procedures (i.e., reliable, valid, fairness, and cost-efficient) and clear criteria for personnel selection to identify individuals best suited for police work.

In the UAE Police, however, little research has been conducted regarding the validity of selection methods in predicting job performance (Qatan, 2003), although several recent studies (e.g. Abdel-Hamid, 2006; Emirates Center for Strategic Studies, 2006) have showed that the present process of police officers selection is of little value and needs a number of developments such as using psychometric tests in the pre-employment screening process as it will be reported in the the next sections.

The work of police officers is demanding and it is currently a difficult and confusing time for police agencies. On one hand, because of rapid technological developments and changes in political, economic, and socio-cultural environments, police organisations are required to expend much effort in order to meet the challenges of a rapidly changing environment and the development of organised crime, terrorist crimes, and cyber crimes (Al-Thakhri, 2005; Al-Zwaibi, 2005). On the other hand, the proficiency and the basic humanity of police officers are often questioned (Hooke and Krauss, 1971; Talib and Abu-Shamah, 1999). In other words, the recruitment, selection, and training of police officers have become important issues for police organisations because of the following challenges:

- There have been significant changes in the philosophy and nature of policing, particularly with the adoption of community- and problem-oriented policing philosophies (White and Escobar, 2008). Police forces, nowadays, are generally observed as social institutions helping to maintain public order. Police officers are not only enforcers of laws, but also educators of children and students, connections between the citizenry and the state, and role models and neighbours for society (McCafferty, 2003; Metchik, 1999; Nofziger and Williams, 2005).
- The terrorist attacks of 9/11 in the USA and other incidents around the world have made the prevention and investigation of terrorism a main responsibility for many police departments throughout the world (Ransley and Mazerolle, 2009).
- Working in multi-cultural societies has fundamentally changed the face of policing, with a growing emphasis on police prejudices and assumptions about inter-ethnic relations, minorities, race and culture, human and children's rights, cultural evolution, minority integration, and police ethics and behaviour (White and Escobar, 2008).

- Significant developments in technology (for example, DNA testing, eye and fingerprint databases, geographical information systems, CCTV systems, and crime mapping) have been a driving force behind changes and advancements in policing (Ransley and Mazerolle, 2009; White and Escobar, 2008).

Some previous research (such as Al-Muhaya, 2005; Cochrane, et al., 2003; Cortina, et al., 1992; Detrick, et al., 2004) emphasise improving selection procedures of new police officers for one important reason, namely to avoid the harmful impact of having inappropriate employees within police organisations. That is, hiring unsuitable officers can be dangerous to fellow officers, to members of the public, and to the public's trust in law enforcement agencies (Varela, et al., 2004). In addition, personnel recruitment and selection processes directly influence the quality of employees (Chien and Chien, 2008). Therefore, an effective personnel selection system can be very beneficial and helpful for any organisation in order to: increase employee productivity; reduce the direct costs of training; lead employees to long-term work within the organisation; and build a stable work environment (Cooper, et al., 2003; Gatewood and Field, 2001; Robertson, et al., 2002). In other words, the goal of a personnel selection procedure is to direct decisions that will contribute to an effective workforce (Lievens, et al., 2002). Robertson, et al. (2002:100), for instance, point out that "making good personnel selection decisions is important for employing organisations, because good decisions of that kind can provide significant improvements in productivity and minimise the direct costs of training and replacement due to unwanted staff turnover." Consequently, a valid selection of police officers is considered an important factor in helping the police force to protect individuals and prevent crimes (Al-Muhaya, 2005; Al-Mutairy, 2006).

Furthermore, several studies (such as Ainsworth, 2002; Hogg and Wilson, 1995) have demonstrated that the failure to properly select police officers can lead to a loss of resources, and negatively influence the police force by causing it to lose time, money and effort in additional training or reemployment. It can also lead to a drop in public confidence in and cooperation with the police; and it is perhaps a strong reason for troubles and conflicts between the public and the police, or amongst police officers themselves. Similarly, Gallagher, et al. (2001) have argued that the public's perceptions of how police treat them affect their willingness to obey laws and follow police guidance. As a result, the selection of police officers with the abilities and skills to

effectively communicate and deeply integrate with the community may play a significant role in boosting public confidence in and support for the police (Al-Zwaibi, 2005).

In addition, police work is one of the most challenging and dangerous jobs in modern civil society. Thus, the selection of fit candidates is particularly essential for police organisations, because law enforcement officers are entrusted with the responsibilities of fighting crime and protecting the public from harm. A number of studies (Al-Muhaya, 2005; Bannish and Ruiz, 2003; Cochrane, et al., 2003; Hogg and Wilson, 1995; Varela, et al., 2004) have reported the importance of pre-employment selection of law enforcement officers. First, disciplinary interviews add to department operating costs, and expend administrative time. Second, appropriate selection will help police organisations decrease absenteeism and lateness, which result in excessive overtime pay and a breakdown in confidence and cooperation amongst officers. Third, irresponsible or reckless officer conduct may lead towards poor publicity and court litigation. Finally, considering police duties, there is no space for error; police work sometimes requires rapid judgements, mostly under dangerous and stressful situations, and therefore, unfit officers are more likely to respond with poor decisions. Police officers are frequently placed in vital positions of trust where they are responsible for life and death circumstances, and police officers have the right to use force and firearms on others in some circumstances, as well as invade people's privacy. Therefore, law enforcement officers' misconduct can be detrimental to the police force, individual citizens, and society as a whole. For these reasons, selecting the best applicants for the position of police officer could help the police force avoid harming citizens or other officers (Al-Muhaya, 2005; Cimbura, 1999).

Correct employment decisions require knowledge of an individual's characteristics and ability to contribute to the success and development of an organisation. This information may be gained through measuring an individual's relevant knowledge, traits, abilities, skills, work styles, motivation, and interests (Robertson, et al., 2002). Moreover, a well-designed personnel selection system should be reliable, valid, cost efficient, legally justifiable, fair (treating all candidates equitably), and it must allow for flexibility and change in the environment. That is, it should be capable of collecting accurate data about applicants to select the most appropriate candidates in order to provide the organisation

with recruits who will improve its performance (Cooper, et al., 2003; Furnham, 2005; Robertson, et al., 2002; Taylor, 2006).

There are many methods available for selecting employees, such as conducting interviews, collecting biographical data, requesting references for job applicants, administering work sample tests, and developing assessment centres. However, based on a significant number of meta-analyses and validation studies crossing a variety of areas, psychological testing is most often used as an effective and efficient appraisal tool prior to employment, particular tests of personality and cognitive ability (Faraj, 2007; Gatewood and Field, 2001; Hirsh, 2009). In other words, psychological testing has been recognised around the world as one important factor in the selection procedure. Standard tests of cognitive ability and personality are employed in many organisations to identify applicants with significant psychological problems that may hinder effective performance and/or identify applicants' qualities that are essential for performing work effectively (Piotrowski and Armstrong, 2006; Smith and Smith, 2005). Schmidt and Hunter (1998), for example, conducted a meta-analysis of 85 years of research findings on the validity of numerous selection procedures for predicting job performance and training performance (see Table 1.1).

Table 1.1 Meta-analytic correlations between a number of selection tools, job performances, and training performances (Schmidt and Hunter, 1998)

Selection Tool	Validity for job Performance*	Validity for training performance*
Work Sample Tests	.54	-
Cognitive Ability	.51	.56
Structured Interviews	.51	.35
Peer Ratings	.49	.36
Job Knowledge Tests	.48	-
Job Tryout Procedures	.44	.56
Integrity Tests	.41	.38
Unstructured Interviews	.38	.35
Biographical Data	.35	.30
Conscientiousness Tests	.31	.30
Reference Checks	.26	.23

Job Experience (years)	.18	.01
Education (years)	.10	.20
Interests	.10	-
Graphology	.02	-
Age	-.01	-

*Validity coefficients include corrections for sampling error and unreliability

As can be seen from Table 1.1, psychological testing is one of the best tools for predicting how well an applicant may perform in training and on the job. Cognitive ability tests, for instance, are some of the best predictors of both training and work performance. Although personality shows moderate correlations with training and job performance, it should be noted that the emergence of the five-factor model of personality and the development of non-clinical personality tests have led to support the use of personality measures in selection. This subject will be discussed in the next chapter (Barrick and Mount, 1991; Furnham, 2005; Johnson, 2003).

Psychological testing has been used to help organisations distinguish between job candidates, with the hypothesis that certain scores on a determined test will be related to certain levels of job performance (Cimbura, 1999). The use of psychological testing in police organisations is not a new development, with references dating back to the 1920s. For instance, Terman (1917, cited in Ho, 1999:3) used the Binet-Simon Intelligence Scale, recommending a cut-off of an IQ score of 80 for police officer positions. As Hooke and Krauss (1971) have reported, personality evaluation techniques have an important role to play in the selection and promotion of workers in many types of jobs, including police work. In the long run, such types of testing will have a significant role in hiring personnel best suited for law enforcement occupations, not only through eliminating those clearly not suited for law enforcement, but also by identifying individuals with characters that make the best officers (Arrigo and Claussen, 2003; Ho, 2001; Rostow and Davis, 2002).

As Ainsworth (2002) has pointed out, psychological testing represents an attempt to bring higher levels of quality and objectivity into the process of selecting new police officers. According to Ho (1999), psychological testing can distinguish between successful and unsuccessful law enforcement officers by predicting future job difficulties

through identifying emotional instabilities and inappropriate behavioural patterns. Researchers have also proposed that such tests can provide other information about the future performance of a potential police officer. It has been proposed, specifically, that personality tests can also be used to screen out violent applicants, as well as to predict risks of corruption and the possibility of suicide (Arrigo and Claussen, 2003; Bannish and Ruiz, 2003; Violanti, 1997).

A review of the police literature shows that many police organisations worldwide use cognitive abilities and personality measures as an important part of their personnel selection procedures (Bannish and Ruiz, 2003; Barrett, et al., 2003; Lord and Schoeps 2000; Rabee, et al., 2004). For example, Cochrane, Tett and Vandecreek (2003) surveyed 355 personnel departments of municipal police agencies located throughout the United States. Of the 355 surveys distributed, 155 were returned. The researchers found that about 91% of respondents reported that they required psychological appraisal for all new police recruits. About 70% viewed data from the psychological assessment in terms of passing or failing the applicant. Similarly, by using the NEO Personality Inventory (NEO PI-R; Costa and McCrae, 1992), in addition to a cognitive ability test on a sample of 284 police recruits in New Zealand, Black (2000) found that the highest performing officers were: (a) more likely to be intelligent, reliable, determined, and dependable; (b) goal-oriented and with a preference to be busy, with high levels of self-confidence; (c) willing to consider new ideas; (d) forceful and assertive when required; (e) able to have a tolerance for personal frustrations; and (f) resistant to stress. Moreover, after reviewing job analyses that had been carried out in American police organisations, Pugh (1986) also found the following characteristics to be important requirements for law enforcement officers: problem-solving skills, initiative, alertness, maturity, stress tolerance, and common sense. Glasner (2005:59) alternatively found that “personality qualities least likely to lend themselves to successful careers in law enforcement are: excessive absences, tendency towards disciplinary infractions, derelictions, lack of assertiveness, a history of driving violations, civilian complaints, poor supervisor evaluations and time on restricted duty.” This identification of specific characteristics related to successful work-related outcomes has led to the generally accepted use of pre-employment psychological assessments for police officer candidates in many countries around the world (Cimbura, 1999; Kaczmarek and Jeanette Packer, 1996).

Overall, since some applicants are not appropriate for the police profession and may develop psychological problems as a consequence of police pressures, psychological evaluations of applicants for police officer positions can provide significant evidence of psychopathologies, abilities, and personality traits that may play an important role in affecting the psychological well being of both officers and organisations. The evaluations may therefore increase public confidence in and support for the police, and improve the quality and quantity of police work (Violanti, 1997; Barrett, et al., 2003; Al-Muhaya, 2005). In other words, the reasons to use pre-employment psychological assessments in law enforcement organisations may be summarised by the following: (a) to identify applicants who are well-adjusted and who have the abilities and skills essential for working effectively as police officers (Arrigo and Claussen, 2003; Detrick, et al., 2004); (b) to identify personality traits that are related to poor job performance, including poor resistance to stress, frustration, and maladjustment (Kop and Euwem, 2001; Lau, et al., 2006); and (c) to weed out candidates in danger of violence, corruption, and suicidal behaviours (Bannish and Ruiz, 2003; Violanti, 1997). Although this could be applicable for other jobs, it seems to be more important for police because of the nature of police works as discussed below.

First, police organisations are concerned with providing service and security to the community. Police job analysis studies consistently show a number of duties, tasks, and high-risk responsibilities that must be performed by police officers as a normal part of their daily and nightly functions (Gaines and Falkenberg, 1998). For example, in addition to preventing and fighting crime, police are expected to help and support individuals who are abused, injured, sick, lost, or abandoned (McCafferty, 2003).

Second, the scale, gravity, variety, and complexity of police operations mean that during duty, police officers have a high risk of being assaulted or killed. They also run a high risk of being involved in work-related accidents (such as vehicle crashes, falls during rescue operations, chases, and so on). Law enforcement officers frequently live in constant anxiety of physical danger; they have long work shifts; and they are often exposed to traumatic events. Such situations can have consequences with social and/or psychological implications, such as stress and family troubles (Rabee, et al., 2004). For instance, an officer's perception of having a heavy responsibility load, particularly coupled with the fear of failure, and worries about being in charge of other people's lives

and welfare, increases stress symptoms, frustration, and the risk of cardiovascular disease (Cimbura, 1999; Rabee, et al., 2004).

The final difficulty associated with police work is related to media pressure. The media often shows police officers in a critical light. This in reality creates huge pressure on the police force and leads it to struggle to control the images presented about its efficiency and morality, and forces it to expend resources and time to ensure positive portrayals and decrease hurtful information (Chermak, 1995; Rabee, et al., 2004). For this, the police force faces a great challenge concerned with the efficiency and effectiveness of their human resources (Abdel-Hamid, 2006).

1.2 Research Problem

In the ever more competitive world of today's labour force, there has been a growing focus on effective practices of staff recruitment and selection, training and promotion, and retention of excellent performers. The hiring of police officers are certainly not new concerns, but unfortunately in the UAE and many other countries, particularly in Arabic-speaking contexts, these issues have not been given significant attention until recently. As Sanders (2008: 143) has reported, regarding police selection practices, "finding the best individual officers and selecting those who will be the best is an enormous challenge and has not received enough attention from researchers or practitioners."

On one hand, a review of previous studies aiming to examine police officer selection processes in the Arabic-speaking contexts (such as Qatan, 2003; Talib and Abu-Shamah, 1999) indicates that: (a) in the majority of Arabic countries, the criteria for the selection of police officers are similar, and most studies have paid attention to the physical characteristics and ethical standards of police officers; (b) most previous studies have relied on methods of document analysis; and (c) many researchers have suggested the importance of conducting more research in the field of police officer selection. On the other hand, an investigation by Al-Muhaya (2005) found that the following were the most common problems in the selection of police officers in the Arabic-speaking contexts: mediation (i.e., external interventions in hiring decisions) (90%); lack of clarity in conditions and criteria of selection (75%); large numbers of applicants (70%); and the difficulty of pre-employment examinations and inappropriate testing (69%). These data

suggest that generally in the Arabic-speaking context there are no clear criteria for the process of personnel selection at police organisations, particularly with regard to using psychological tests as an assessment tool prior to employment. For instance, psychological assessments such as personality or cognitive ability assessments are not a standard part of the police officer selection process, and, in general, they are not used for any other purposes at the UAE Police.

In addition, although there are many past studies that investigated the validity of personality tests as a law enforcement selection process in many countries around the world, they are deficient in a major way namely in the use of psychopathological personality tests. That is, these studies depend largely on measures of psychopathological personality features that are generally used in personal selection processes to screen out unfit candidates rather than to select preferred candidates. Several researchers (such as Detrick and Chibnall, 2002; Forero et al., 2009; Metchik, 1999; Varela, et al., 2004) have suggested that normative personality traits, rather than pathological traits, may be more important in identifying the best police candidates, since they are more likely to influence individual behaviour at work, which in turn affect overall performance as it will be discussed in the literature review chapter. Furthermore, although emotional intelligence (EI, the ability to perceive, identify, assess, and manage the emotions of one's self and of others) has generated much research concerning its benefits in the workplace, such as increasing job performance (Christiansen, et al., 2010) job satisfaction (Sy, et al., 2006), and decreasing job stress (Nikolaou and Tsaousis, 2002) as it will be reported and discussed in the literature chapter, only a very few studies have examined the role of EI in police organisations (Aremu and Tejumola, 2008).

To summarise, the available data has shown that psychological testing has been used in many police organisations worldwide as an important part of the selection process, however, there is a lack of research examining the validity of psychological testing, particularly tests of personality and cognitive ability in predicting job performance in police organisations within the Arabic-speaking contexts in general and the UAE in particular. Additionally, while psychopathological tests may be helpful in weeding out applicants who are not fit for policing, they alone do not guarantee the selection of effective officers who will show high levels of job performance (Ainworth, 2002). Finally, further studies in the role of EI in predicting important police outcomes are

needed, particularly in Arabic-speaking contexts. Therefore, this study has responded to this lack of research in identifying the characteristics of successful police officers. More specifically, the present research has been conducted to investigate the role of specific individual differences, namely personality traits, general cognitive ability, and EI in predicting a number of important work outcomes, including job performance, training performance, perceived job stress, coping with stress, and CWB in the police force particularly in Arabic-speaking contexts.

The above discussion has identified the research problem and demonstrated a possible gap in police selection research. On the basis of the identified research problem, research context, objective, and the potential significance of the current research are addressed in the following sections.

1.3 Context of the Research

With the establishment of the federal state of the UAE in 1971, the government directed its efforts to build a modern police system based on two principles:

- 1) Establishing a Ministry of the Interior, consisting of all federal police institutions.
- 2) Keeping local police organisations as they were before the federation of the Emirates.

According to the above structure, all policing preparations were built on federal and local systems. The local organisations applied decentralisation in police organisation management, while the national affairs were managed centrally from the capital. Each Emirate (i.e. each city of the main seven cities in the UAE) tried to build its own system (the Abu Dhabi police, the Sharjah police, the Dubai police, the Ras Al Khaimah police, the Umm Al Qaiwain police, the Fujairah police and the Ajman police) (Al-Thakhri 2005).

In addition, police work in the UAE covers a wide range of responsibilities and tasks. According to police law in the UAE, the main aims or broad functions of policing in the UAE are:

- To uphold laws.
- To investigate incidents or offences.
- To fight and prevent crime.
- To control traffic (preventing or detecting traffic offences)
- To protect life and property (civil defence).
- To supervise prisons.
- To control immigration.
- To maintain community relations and deal with community-related problems.
- To maintain order in public places.
- To respond to reported crimes, enquiries, or requests for assistance.

As the capital, Abu Dhabi is the largest city in the UAE. The present research will focus on the Abu Dhabi Police force (ADP) as its main case study. The ADP was established in 1957 with about only 80 police officers, whose main job was to provide safety and protection to places such as the governor's house and markets. During the past five decades, however, the ADP has become a more professional police organisation, with more than 30,000 employees divided amongst over forty administrations under eight general departments.

Moreover, the ADP has become more concerned with its organisational development programme in order to be one of the most successful police organisations in the region. Therefore, a significant organisational analysis was carried out in 2005 to identify the strengths and weaknesses affecting the ADP's capabilities. The results revealed ten main weaknesses at the ADP, as follows:

- No work vision.
- No corporate strategy.
- No modern organisational structure.
- No top team and no integration between departments.
- No job descriptions/discretion.
- Reactive military and rigid bureaucratic system.
- No community policing practice.
- Limited intelligence systems.
- No partnerships with other agencies.

- Lack of qualified and skilful human resources.

On the other hand, there were several strengths at the ADP such as: support from the Abu Dhabi Government and ADP leadership; the availability of financial resources; and the availability of knowledge, particularly from foreign experts (O'Connell and Nouri, 2005).

Based on these weaknesses and strengths, many changes have been made at the ADP over the last five years. First, new job descriptions have been implemented. Second, a new organisational structure has been designed in order to achieve the new strategies. Finally, the ADP has developed new strategies to prevent and reduce crime rates, to increase the ADP's public image, and to avoid terrorist attacks. The ADP Strategic Plan for 2005-2010 classifies seven points of action during this five-year period:

- 1) Focusing all our operational efforts on reducing crime and disorder, and promoting reassurance and safety within our communities.
- 2) Building the trust and confidence of our communities by effective consultation and effective communication.
- 3) Improving the quality of our service and our overall performance
- 4) Achieving Best Value in the delivery of our service.
- 5) Developing the talents, skills and abilities of all members of the Abu Dhabi Police to achieve our professional goals.
- 6) Promoting corporate and individual honesty, ethics, and integrity.
- 7) Providing equipment, buildings, and technology that promote the delivery of effective and efficient services.

The current research aims to address the strategy of developing the talents, skills and abilities of all members of the ADP through investigating the present selection process and how can be improved to help selecting the best police candidates. Moreover, by selecting effective employees this could, generally, support the achievement of other strategies such as strategy number 2, 3, and 6.

Although the ADP established a new strategy to be able to meet the challenges of the rapidly changing environment and to implement community policing and crime prevention plans to maintain the country as an internationally recognised safe and stable society, several recent studies (such as Abdel-Hamid, 2006; Emirates Center for

Strategic Studies, 2006; Shawqi, 2002) have indicated a decline in the public's image of the police, and an increase in police officers' indiscipline.

First, according to a recent survey (Emirates Center for Strategic Studies, 2006) of 1200 persons of different ages, genders, nationalities, and backgrounds, and which aimed to provide an overview of the public image of Abu Dhabi Police, the ADP demonstrated its inability to meet public needs. The main results of this project showed the following: 48% of respondents believed that police officers discriminated in dealing with the public, and this opinion appeared to influence their willingness to follow the law and obey the police; 46.5% of respondents reported that they were not willing to report any crimes to the police, primarily because of the ADP's rigid system and employees; 40% of the sample believed that police officers working within the ADP were not skilled, effective, or well qualified; and the majority of the sample (80%) confirmed that police officers should be given appropriate training in order to deal with the public effectively and respectfully. These data suggest that, generally, officers working at the ADP are less effective in dealing and communicating constructively with the public which may result in a decline in public confidence in the police and their willingness to cooperate with officers.

In another study, Shawky (2002) investigated the attitudes of youth towards police officers, particularly regarding their efficiency and ethical standards, by conducting research on 336 students from the UAE University. The respondents were from both genders and from different faculties. The main results of this study showed the following: (a) regarding police efficiency, 60% reported having little confidence in the police in their living area; (b) a considerable majority of the students (83%) expressed negative attitudes about the ethical standards of police officers; and (c) males and students who had experience with the police viewed the police officers' conduct as rude and lacking in communication skills. These data also suggest that the police's public image of honesty, quality, and ethical standards was low.

Second, the ADP police statistics (2007, 2008) indicated that in the last few years the number of police officer indiscipline prosecutions had increased for reasons such as: absenteeism; serious disciplinary problems; refusals to take on assignments when asked by a senior officer or supervisor; and public complaints about officer conduct. Statistics show that absenteeism has been high throughout the force, particularly at the general directorate for establishments' protection, the general directorate for security affairs and

ports, the general directorate for policing operations, and at the correction and punishment institutions department. Moreover, with regard to the quality of working relationships, data revealed that there has been a lack of respect towards others and an increase in aggressive behaviours against both colleagues and the wider public. Third, resignations from the force have increased. In 2006, for instance, 10% of police officers working at community policing departments resigned during their first year of work. Finally, Tawaiha (2004) found the level of job-related stress amongst ADP officers to be high. He found six significant factors of work stress in the following order: (a) limited promotional opportunities; (b) non-participation in decision-making processes; (c) heavy work loads; (d) disputes at work; (e) role ambiguities; and (f) the difficult nature of police work. These causes of stress at the police organisations in the UAE have also been found in the Kingdom of Saudi Arabia and some other Arabic speaking countries by several researchers (for example, Al-Dossary, 2005; Al-Mutairy, 2006; and Al-Twaim, 2005).

As suggested in the above sections, police officers working at the ADP have demonstrated low levels of job performance, high levels of job stress, and high levels of indiscipline and misconduct. According to the researcher's experience, as well as the results of O'Connell and Nouri's organisational analysis of the ADP (2005), many police officers working at the ADP may not be equipped to carry out their responsibilities because they lack the skills and abilities essential to being effective police officers. These deficiencies may be due to poor employee selection practices, particularly in the use of psychological examinations as assessment instruments prior to hire. Nonetheless, more empirical research is necessary in order to review the current selection processes at the ADP, and to investigate the effectiveness of psychological testing in predicting outcomes significant to police work, such as job performance and discipline. The current research will aim to do this, as shown in the following section.

1.4 Research Objectives

A large part of the UAE's population is made up of culturally diverse foreign employees attracted by positive work opportunities. The UAE has been developed into an open, modern Arab and Islamic model for the region, with over 190 nationalities in its

workforce (UAE Yearbook, 2009). However, such a huge variety in population also has its challenges. There will be, for example, an increasing demand on police organisations in the UAE to select officers who are able to deal fairly and effectively with a wide range of citizens from diverse backgrounds.

In addition, as police work attracts applicants with diverse skills and abilities (Al-Muhaya, 2005; Bartol and Bartol, 2004; Daniel, 2001); the selection of suitable candidates has been an on-going challenge for police organisations for many years. It is clear that the literature in the Arabic-speaking context regarding the selection of police officers is limited. Therefore, in order to fill this gap in the Arabic-speaking context, this study has been conducted, with the main research question being:

“To what extent could the use of psychometric testing enhance the effectiveness of police officer selection processes in the UAE”?

In order to answer this research question, the following objectives have been formulated:

- 1) Reviewing previous studies about the association between personality traits, general cognitive ability, emotional intelligence, and work-related behaviour particularly amongst police officers.
- 2) Reviewing the current process of hiring police officers at the ADP.
- 3) Identifying personal characteristics of effective police officers as described by senior police managers at the ADP.
- 4) Investigating the relationship between the five-factor model of personality, general cognitive ability, emotional intelligence, and work-related behaviour (i.e., job performance, perceived job stress and coping, and counterproductive workplace behaviours) amongst a sample of current and newly hired police officers in the UAE.
- 5) Examining the relationship between personality, cognitive ability, emotional intelligence, and police training performance in a sample of newly hired police officers.

Based on these objectives, the structure of the current thesis incorporates five chapters, in addition to the present chapter. Chapter two features a literature review, including an overview of psychometric tests, personality traits, EI, and cognitive ability.) It also

provides a detailed review of previous studies about the associations between these variables and work-related behaviours, particularly amongst police officers. Chapter three presents the findings of study one of this thesis. This study investigates current practices in police officer hiring procedures at the ADP. This is important due to the lack of literature examining current selection processes at the ADP, including its advantages and disadvantages, and respondents' beliefs ($n = 30$) about the effectiveness of using psychometric tests for police officer selection. Chapter four presents the findings of Study two of this thesis, which investigates the relationship between personality traits, general cognitive ability, EI, and a number of work-related behaviours (i.e., job performance, perceived job stress, coping with stress, and CWB) amongst a sample of current police officers ($n = 310$). Chapter five presents the findings of Study three of this thesis, which seeks to replicate and extend Study two within a different population (i.e., the sample of Study three is based on newly hired officers, $n = 385$), and by using an additional dependent variable, namely training performance. Another major difference between Studies two and three is their respective research designs. While the former is based on cross-sectional design, the latter is based on longitudinal design for data collection. The final chapter provides a general discussion of the findings, their contributions to knowledge, their implications and limitations, and possible directions for future research.

1.5 Significance of Research

Human resources are key to an organisation's success, since employees are the ones who receive training, provide services, cooperate with colleagues, and play a critical role in reaching the strategic goals of the organisation. The quality of an organisation's workers determines the future of that organisation. Since the selection process contributes to the quality of employees that are hired, an effective personnel selection system can make a considerable contribution to the continual growth of an organisation (Hogg and Wilson, 1995). Sheehan (2004:4), for example, has argued that "selection tools that do not optimally match the person's skills to the job can be costly to the organization, resulting in increased training needs and decreased levels of performance." Consequently, the importance of the current research can be gathered from the significance of the employee selection process. The basic advantages of the present research are:

First, the current study will contribute to filling the gap in knowledge of police/psychological research in Arabic-speaking contexts, since very little research has investigated the importance of psychological assessments (tests of personality traits, cognitive ability, and emotional intelligence) in enhancing the effectiveness of the police officer selection process. Second, according to Hirsh (2009:753), "the consequences of choosing the wrong people are substantial, as they lead to increased turnover rates, recruitment costs, and training expenses, along with lost productivity and decreases in morale. The high costs associated with replacing poorly performing individuals make it all the more important to identify and select the best performers in the first place." Therefore, the current research could improve the quality of police officer selection criteria to help the ADP implement its strategies to be more operationally responsive to changes in the local environment. That is, it may assist in identifying those most appropriate for police work who can contribute to controlling job stress, increasing work performance, decreasing indiscipline, and improving the public's perception of the police. Finally, it may establish effective procedures and clear criteria for police officer selection to play a role in achieving equality between applicants during the process of selection (i.e. controlling mediation); and employing individuals best suited to law enforcement may help organisations to reduce their expenses related to training and replacement (Al-Muhaya, 2005; Cooper, et al., 2003; Robertson, et al., 2002; Taylor, 2006).

More specifically, this research has specific theoretical and practical importance. First, from a practical viewpoint, the results of the current research could help the ADP to improve its selection process to select the most appropriate applicants who may play a role in increasing work performance and decreasing the direct costs of training and replacement. Second, from a theoretical perspective, this study will contribute to filling the gap in knowledge in Arabic-speaking contexts with respect to the effects of personality dimensions, general cognitive ability, and emotional intelligence around work-related behaviours (i.e., job performance, training performance, perceived job stress and coping with difficulties, and counterproductive workplace behaviours) particularly within police organisations. Additionally, the present research will build on Western studies investigating the role of personality, cognitive ability, and emotional intelligence in the police. In other words, results from this research may strengthen the arguments in the existing literature by considering personality dimensions, cognitive

ability, and emotional intelligence as significant factors to examine when discussing job performance, job stress, coping with difficulties, and counterproductive workplace behaviour issues in police organizations, particularly from a cross-cultural perspective. Overall, the main value of the current research may be directed toward providing police communities, particularly in the UAE, a helpful instrument to assist selection and training administrators in hiring the best applicants.

Chapter 2: Literature Review

2.1 An Overview of Psychometric Tests

2.1.1 Introduction

Smith and Smith (2005: 187) have defined tests as “carefully chosen, systematic, standardized procedures for evoking a sample of responses from a candidate, which are evaluated in a quantifiable, fair and consistent way.” Psychometric tests refer to all techniques that have been created for measuring a feature of psychological functioning. These tests are derived from the psychometric model of human behaviour (Malim and Birch, 1998). According to this model, “all behaviour is explicable in terms of factors of ability, personality, motivation and state or mood together with the situation in which individuals find themselves” (Kline, 1992: 101).

Psychometric tests may be divided into three main categories. First, those measuring psychological characteristics, such as ability tests, personality tests, aptitude tests, and motivational tests (Malim and Birch, 1998; Smith and Smith; 2005). Second, those using different methods of measurement, for example in group versus individual tests, direct versus indirect ones, and typical versus maximal performance tests (Abbas, 1996; Fincham and Rhodes, 2005; Smith and Smith; 2005). Third, those measuring the qualifications of the user at four levels, ranging from very simple tests requiring minimal skills and knowledge, to specialised, intricate tests requiring long and specific training (Smith and Smith; 2005).

Cooper (2002) has argued that psychometric tests play a role in psychology, since theories of personality can be tested if individual differences can be measured precisely. Most modern models of individual difference are based on a psychometric method called “factor analysis,” as discussed later in this chapter. Many psychometric tests are used in applied psychology, in educational, occupational, and clinical settings. First, educational psychologists may use such tests to assess students’ achievements, to identify learning difficulties, to predict future performances of pupils and teachers, and so on (Abbas, 1996; Hambleton and Oakland, 2004). Second, tests can be used in clinical settings for prognosis and to assess treatment needs and progress (Abbas, 1996; Malim and Birch, 1998). Third, psychometric tests can be used in organisations for personnel selection by

making hypotheses about the ways people act and function, and to predict how they will behave in the future (Farag, 2007; Kaczmarek and Packer, 1997). Thus, psychometric tests may contribute to industrial/occupational psychology by providing organisations with data useful for employee selection and promotion, and for the determination and evaluation of training programs (Abbas, 1996; Ainsworth, 2002; Essawi, 2003; Gatewood and Field, 2001; Hambleton and Oakland, 2004).

2.1.2 Criteria of Adequate Tests

First of all, measuring instruments should be sensitive enough to be used to distinguish individuals' performance (Coolican, 2004; Malim and Birch, 1998). Insensitive measuring instruments will result in little or no variance, and candidates will be seen to have the same or similar scores. With insensitive measuring devices, it is very difficult to identify significant relationships, and therefore they should not be used, particularly for purposes of personnel selection (Smith and Smith; 2005). In addition, according to Cooper (2002), there are three main criteria for adequate psychometric tests including unidimensionality, reliability, and validity. First, unidimensionality refers to the fact that measuring tests should only assess one aspect of an individual or one underlying dimension at a time (i.e., these instruments should only measure one construct or dimension) (Cooper, 2002). "A construct is a theoretical representation of the underlying trait, concept, attribute, process, and/or structure that the test is designed to measure" (Ackerman et al., 2005: 38). For example, if a test were designed to measure the Conscientiousness dimension, it would be unidimensional if it measured this trait alone.

Second, reliability shows that the items of a psychometric test are consistent with each other and that the test can give constant results over time. Different results would mean that the test was inaccurate and that it was contaminated by error (Asskar, et al., 1992; Coolican, 2004; Malim and Birch, 1998; Smith and Smith; 2005). Kaczmarek and Packer (1997) have pointed out that unreliable tests should not be used for employee selection since they measure errors and unrelated variables rather than the variables that are supposed to be measured. There are a number of procedures for determining the reliability of a psychometric test. One common method is test-retest reliability, which is examined by applying the same instrument to the same group of respondents at two

different points in time (in general two weeks to one month is the accepted interval for retesting). A high correlation between the two scores indicates the stability of the test (Abdel-Khalek, 1996; DeVon, et al., 2007). The problems with this method are: (a) the time between the first and the second test is important since if the time is too long, significant changes may have happened to the respondents, or if it is too short respondents may remember their original responses; and (b) it is sometimes difficult and inconvenient to contact subjects twice (Asskar, et al., 1992; Cooper, 2002; Ozer, 1999; Smith and Smith; 2005).

Another technique for determining a test's reliability is parallel-forms reliability. According to this method, two versions of a measure are administered to a sample of subjects, and then the correlation between the two forms is computed. If the correlation between the two scores is high, this shows a high reliability of the measurement (Abbas, 1996; Ewen, 1998; Kaczmarek and Packer, 1997; Ozer, 1999). This technique also has some disadvantages such: respondents may become fatigued as a result of long tests, which may underestimate reliability; reliability may be overestimated because of poor administration or environment; it has a high cost and requires extra effort; and it is difficult to be sure that the two versions are actually parallel (Smith and Smith; 2005).

The coefficient of internal consistency is another type of test reliability. This indicates that the items of a test are measuring the same construct. Split-half reliability is one method applied to estimate the internal consistency of a test (Coolican, 2004; Farag, 2007; Kaczmarek and Packer, 1997). In this method the items of a measurement are divided into two comparable halves and the responses of each half are correlated. A strong relationship between the two scores indicates that the test is homogeneous; a weaker relationship indicates that the items of the measurement are not homogeneous (Essawi, 2003; Ewen, 1998). Although split-half reliability avoids the disadvantages of the previous methods, it has one main problem, namely its length. In other words, reliability is related to the length of the test, and therefore, this method will probably underestimate reliability (Asskar, et al., 1992; Mischel, 1999; Smith and Smith; 2005). In addition to the split-half method, there are several other techniques for estimating the internal consistency of a test, such as Kuder-Richardson's Formula 20, and Cronbach's Coefficient Alpha, probably the most widely used index of internal consistency (see Kaplan and Saccuzzo, 2005; Smith and Smith; 2005). Overall, according to Gatewood

and Field (2001), if a psychometric test is to be applied in an organisational setting, particularly for purposes of personnel selection, its reliability coefficient should be no lower than .85 which means that 85% of the test score is accurate and the other 15% may be caused by an error. This is important since the validity of a measurement depends on its reliability; it is also important for making accurate assessments and decisions about applicants seeking employment.

Third, validity is one of the most important criteria for adequate psychometric tests. Validity shows that the instrument is testing what it claims to be measuring. There are four main methods for examining whether or not a test is valid (Coolican, 2004; Cooper, 2002; Malim and Birch, 1998; Ozer, 1999). First, face validity refers to whether a test's items appear to be relevant to the test's purpose. While face validity is considered to be the weakest form of test validity since it is so subjective, face validity is important for tests used in organisational settings for a number of reasons, such as: if the items of the measurement seem irrelevant to its aims (e.g., selection and promotion) respondents may become irritated and complain about its meaning and usefulness, which in turn may lead to litigation; and perceived face validity is also essential for managers to believe that a test is appropriate (or related to workers' tasks) and thus support its applicability in their organisation (Gatewood and Field, 2001; Hammond, 2000). Second, content validity refers to whether or not a test contains items that relate to the evaluated characteristic, and whether or not such items are significant, meaningful and not too complicated for the test-taker (Hammond, 2000; Kaplan and Saccuzzo, 2005). A third type of validity is construct validity. Construct validity determines whether or not an instrument provides a correct and valid measure of a specific feature (Farag, 2007).

The final and the most important element for the present research is a criterion-related validity that relates to evidence of a correlation between the attributes in a measuring instrument with its performance on some other variable. There are two forms of criterion-related validity. First, concurrent validity is confirmed when scores on a test are correlated to a related criterion at the same point in time. This method, nonetheless, has some practical difficulties include: (a) test-takers may be less motivated since they are already working; (b) job experience can influence test-takers; and (c) the restriction of range is liable to lower the apparent validity, as will be discussed in Study Three later in this thesis. Second, predictive validity requires a longitudinal design, but it is a more

helpful type of criterion-related validity. Predictive validity is determined by examining the relationship between test scores and performance criteria, which are measured a period time after the tests have been administered (Asskar, et al., 1992; Coolican, 2004; DeVon, et al., 2007; Ewen, 1998; Kaczmarek and Packer, 1997). Although predictive criterion-related validity is by far the preferred method of test validation when using psychological tests for employee selection (Abdel-Khalek, 1996; Kaczmarek and Packer, 1997; Smith and Smith, 2005), it also suffers because it requires organisations to employ all applicants involved in the test regardless of their results; and the long time between the test and the collection of data may present another difficulty (Cooper, 2002; Kaczmarek and Packer, 1997; Smith and Smith, 2005). In the current research, however, both methods were used to test the validity of personality traits, cognitive ability, and EI in predicting a number of police work-related behaviours.

Finally, norms represent other important criteria for test evaluation because raw scores on their own are of limited value, since they show little information about test-takers (McKenna, 2006; Smith and Smith, 2005). Norming a measure involves collecting the distribution of test scores in a particular society to provide a suitable frame of reference for understanding the test scores. Norms, therefore, can be used to make comparisons between an individual's score and the scores obtained by an appropriate reference group (Farag, 2007; Kaczmarek and Packer, 1997). Test-takers should be compared with norms based on a sample (larger than 400 is required), which is representative of their community in terms of gender, age, education, and social background (Abbas, 1996; Kaczmarek and Packer, 1997). Therefore, the current research used measures that have been validated within Arabic-speaking contexts, and the data was collected from a large sample.

2.1.3 Faking in Psychometric Tests

Test-takers' faked responses represent one of the central issues that may affect the validity of psychometric tests. Distortion of responses may produce measurement errors that reduce the validity coefficient and lead to incorrect decision-making (Gatewood and Field, 2001; Griffith, et al., 2007; Sandal, et al., 2005). Robie, Brown and Beaty (2007: 490) define faking as "a conscious attempt to manipulate one's responses to create a

positive impression.” Faking can take two main forms: (a) “faking-good,” or presenting oneself in a more positive, impressive light; and (b) “faking-bad,” or presenting oneself in a more psychologically troubled or worse light (Abdel-Khalek, 1996; Furnham, 1990; Viswesvaran and Ones, 1999).

A considerable number of studies have been conducted on faking in psychometric tests, particularly with personality inventories (Rothstein and Goffin, 2006). Most research has attempted to answer four major questions; (a) Can people fake personality inventories?; (b) Do people fake?; (c) Does faking affect the criterion validity of personality questionnaire results?; and (d) What can be done to prevent or reduce faking and its effects? (Rees and Metcalfe, 2003; Robie, et al., 2007).

First, regarding whether or not personality inventories are capable of being distorted, a number of studies (Alliger and Dwight, 2000; Furnham, 2005; Krahe, 1989; Rees and Metcalfe, 2003; Sandal, et al., 2005; Viswesvaran and Ones, 1999) strongly support the notion that many personality tests are highly susceptible to a range of response biases, such as faking, extremity, social desirability, and acquiescence. For example, in a meta-analysis of faking abilities, Viswesvaran and Ones (1999) found that participants were able to change their responses by almost half a standard deviation. Similar results were reported by Alliger and Dwight (2000), who found that respondents were able to increase their personality-based integrity scores by a quarter to one half a standard deviation. These results may show that personality measures are susceptible to faking, but in general are only moderately vulnerable to distortion which may support the use of personality measures for personnel selection.

Second, earlier research examining the issue of whether or not people fake personality measures has not provided confident results (Griffith, et al., 2007). Some studies (Griffith, et al., 2007) have found evidence of faking on personality inventories. For example, a recent meta-analysis of faking in personality tests by job applicants has shown that applicants appear to purposely inflate their responses on personality measures and to score significantly higher than non-applicants on four of the Big Five dimensions, namely Conscientiousness, Emotional Stability, Extraversion, and Openness (Birkeland, et al., 2006). Nonetheless, one study (Rees and Metcalfe, 2003) found in an investigation about faking that 65% of participants (n = 190) indicated that they would not “fake-good” in a personality questionnaire when applying for a job. Smith and Smith (2005)

have pointed out that there are three major causes of faking behaviour including: the desire to achieve personal gain, such as getting a job; social desirability; and response sets encouraging people to answer yes or no to all questions. In general, research on the issue of job applicants faking personality or EI tests is scarce, and available results have been based on lab studies, mainly with students sample-acting as if they were applying for a desired position, and thus further studies on this subject are necessary (Ones, et al., 2007). Based on this information, faking on personality measures may be less of a concern in a selection situation.

Third, there is little agreement on the issue of whether or not faking has a negative impact on the usefulness of psychometric tests, particularly those measuring personality in a selection context (Griffith, et al., 2007). On one hand, several studies (Rosse, et al., 1998; Rothstein and Goffin, 2006; Topping and O’Gorman, 1997) have strongly supported the view that the validity of a self-reported personality measurement is affected by faking sets. Other researchers, on the other hand, have reported that faking does not have a serious negative impact on the validity of personality tests, and thus does not cause problems in personnel selection (Dalen, et al., 2001; Fincham and Rhodes, 2005; Hough, et al., 1990; Ones, et al., 1996). For instance, one study (n = 713) has found that applicant response distortion increases personality scale means by approximately 0.075 standard deviation units, which is in practice unlikely to generate a huge change in selection decisions (Ellingson, et al., 2007). This finding suggests that faking would make little difference in the applicants’ scores, which may have limited or no impact in selection decisions. In other words, faking does not largely damage the criterion-related or construct validity of personality scores in applied settings (Ones, et al., 2007; Sandal, et al., 2005).

Related information has been provided by Hogan, et al. (2007), who studied a large sample of actual job applicants (n = 5,266) who completed a five-factor model personality test twice over the course of six months as a part of a job selection process. They found that: 5.2% of the sample enhanced their scores on any scale on the second occasion; scale scores were as likely to change in negative directions as positive ones; only three applicants changed scores on all five scales beyond a 95% confidence threshold; the construct validity of the personality scales were not damaged across the two administration times; and for the small number of applicants whose scores changed

beyond the standard error of measurement, these changes were systematic and predictable using measurements of social skill, social desirability, and integrity. Such findings, based entirely on processes that employers actually use for personnel selection, clearly show that faking self-report measurements of personality is not a major problem in real-world selection settings.

Finally, according to Abdel-Khalek (1996) and others (Birkeland, et al., 2006; Rothstein and Goffin, 2006), there are several methods that can be used to prevent or reduce faking on personality inventories. First, tests can include validity scales designed to detect abnormal responses such as social desirability, or lie detectors (Coolican, 2004; Reid-Seiser and Fritzsche, 2001). Another technique to reduce faking is by writing test items that are difficult to distort, such as forcing respondents to repeatedly make choices between equally desirable personality descriptors (see Hirsh and Peterson, 2008; Zickar and Drasgow, 1996); developing forced-choice measures of personality may have the potential to simply not allow an applicant to give excessively positive views of him or herself (Birkeland, et al., 2006). Personality tests that have subtle items also are less susceptible to intentional distortion because individuals will find it difficult to determine the more positive answer (Ellingson, et al., 2007; Ganem, 2007; Viswesvaran and Ones, 1999). Furthermore, warning participants that faking could be identified may play a significant part in preventing faking (Ganem, 2007; Goffin and Woods, 1995; McFarland, 2003; Robie, et al., 2007). Finally, faking on personality tests has been also found to be less of a concern when these tests are used along with other valid predictors that are less susceptible to distortion, such as cognitive ability tests (Converse, et al., 2009).

2.1.4 Evaluation of the Usefulness of Psychometric Tests

Using psychometric tests at work for employee selection has its strengths and weaknesses. On one hand, psychometric tests have a number of advantages which make them useful and helpful in such contexts: (a) they provide organisations with numeric information, which makes it easy to compare people by using the same criteria; (b) these tests are mostly fair, since they play a key role in eliminating favouritism and corruption; (c) several of these tests can save time and money, since they are easy to use and explain

their results; (d) because they can cover many dimensions of personality and ability, many tests are more likely to be comprehensive in comparing between individuals characteristics; (e) they may play a role in promoting equal opportunities amongst applicants; and (f) numerous psychometric tests are valid, reliable, and sensitive enough to distinguish between individuals since they are empirically based on theoretical foundations (Abdel-Khalek, 1996; Farag, 2007; Furnham, 2005; Malim and Birch, 1998; McKenna, 2006).

On the other hand, among the main disadvantages of applying psychometric tests at work are that some of these measures are susceptible to faking; and the validity of some tests in predicting workplace behaviour, particularly job performance, is questionable (Cooper, 2002; Furnham, 2005; McKenna, 2006). There are, however, a number of responses to these disadvantages. First, regarding the problem of faking, it has been shown that this is not a major concern, because some available data has found faking to have low negative effects on criterion-related or construct validity of personality scores in applied settings. Additionally, faking, particularly “faking-good,” can only occur with self-reported tests, and thus does not affect cognitive ability and certain EI tests based on performance-based approaches. Moreover, as some investigators (Farag, 2007; Hogan, et al., 2007; Ones, et al., 2007) have concluded in regard to the issue of faking: (a) although some self-reported psychometric tests are susceptible to faking, this does not mean that people distort their response in actual settings; (b) even if some individuals fake personality tests, this does not largely harm the tests’ validity; and (c) faking can be identified, controlled, and reduced thorough a range of different techniques as previously reported. Second, although the validity of some psychometric tests at work may be low, a number of studies and meta-analyses provide strong evidence for the validity of cognitive ability and personality traits (such as the Big Five) in predicting various workplace criteria (for example, job performance, training performance, job stress, and CWB) as will be discussed later in this chapter.

Taken together, it is clear that psychometric tests are valuable for employers, particularly in the processes of employee selection and training. Goodstein and Lanyon, (1999: 318) have reported that “personality assessment is a vigorous and successful aspect of psychologists' contributions to the workplace.” For instance, a survey of 959 organisations from 20 different countries found that personality measures were found to

be the most popular technique in employee selection (Ryan, et al., 1999). Pre-employment psychological assessments, particularly measurements of personality and cognitive ability, were also widely used in police organisations, because of their validity in predicting key work outcomes such as job performance and deviant behaviours (Hughes, 2003; Weiss, et al., 2008). To summarise, research has shown that personality traits and general cognitive ability are important in determining how a person act and reacts within his or her working environment. These measurements assist organisations to utilise information collected during the hiring process in the most valuable ways, in order to select the best possible candidates. Psychometric testing is one instrument within the pre-employment selection procedure that could provide valid, efficient, and reliable predictors of high performance, and thus it has become one of the fastest-growing methods utilised to select effectual personnel within organisations (Carrigan, 2007).

2.2 Personality

2.2.1 Introduction

Since the emergence of occupational and organisational psychology after WWI, psychologists have persistently tried to categorise people, using those categorisations to predict behaviour in a variety of situations at work (Chan, 2004). Moreover, prior to the 1990s, the link between personality and work-related behaviour, particularly job performance, was found to be weak and inconsistent. Thus, personnel selection specialists tended to reject the use of personality testing in employee selection processes. This was mainly as a result of the pessimistic conclusions drawn by some researchers who concluded that personality tests did not show sufficient predictive validity to qualify their use in personnel selection (Chamorro-Premuzic and Furnham, 2010; Cook, 2005; Hurtz and Donovan, 2000).

Over the last two decades, however, there has been a surge of research about the associations between personality and job performance (Hogan and Holland, 2003). A substantial number of studies from different countries around the world (for example, Armstrong, 2003; Cottle and Ford, 2000; Goodstein and Lanyon, 1999; Kornor and Nordvik, 2004; Perrone, 1999; Robertson, et al., 2002; Smithikrai, 2007) have shown

personality to be a valid predictor of job and other work related behaviours, and consequently, it is one of the most significant individual difference characteristics used for selection purposes.

This change in the use of personality tests as an important tool for personnel selection may be a result of several main factors, including: (a) the use of meta-analysis techniques (new, quantitative methods that apply for summarising research findings) that resulted in numerous studies concluding that personality is a valid predictor of job and other work related behaviours; (b) the appearance of a general agreement about the taxonomy of personality variables, such as the emergence of the five-factor model of personality (the Big Five); (c) the fact that personality tests have very low adverse impacts compared with other tests such as intelligence assessments; and (d) the multidimensional conceptualisations of job performance which have affected the methods of defining and evaluating job performance (Furnham, 2008). Additionally, since personality tests assess individuals' differences that are largely independent of cognitive abilities, any information they provide may help improve work-related performance, particularly in an era where job performance depends on multiple factors (for instance, knowledge, abilities, skills, values, motivations, etc.) and where typical performance (i.e., employees are not always aware that their performance is being monitored, and supervisors observe performance over along period of time) may matter more than maximum performance (i.e., employees are aware their performance is being observed, exerting as much effort as possible, and the evaluation of performance takes place over a short period of time, Cascio and Aguinis, 2005) (Chamorro-Premuzic and Furnham, 2010).

Furthermore, according to Arrigo and Claussen (2003), the importance of personality in human resource selection processes should not be underestimated. Personality tests have three possible roles in employee selection, particularly within police organisations, including: it has the capacity to predict job performance; it is helpful in defining people who are able to work effectively together (i.e. characterising effective team work); and it has a role in identifying candidates who are able to deal successfully with the psychological pressures and emotional stressors of police work. In general, since police applicants possess a variety of personality characteristics, ranging from low anxiety, assertiveness, self-discipline, and emotional stability to arrogance, hyper-alertness, and social immaturity, personality measures can be used to distinguish between more

potentially effective and less potentially effective police officers (Lewis, 1999). Therefore, the next sections aim to review the literature on personality including; definition, theories and models, applicability for personnel selection, particularly in the police force, and evidence regarding the relations between personality traits and a number of workplace behaviours (for example, job performance, training performance, job stress, and CWB).

2.2.2 Definition of Personality

The word personality is derived from the Latin word *persona*, meaning “mask” (Hergenhahn and Olson, 2003). As Malim and Birch (1998) have pointed out, the concept of personality attempts to cover many different psychological processes and give a logical picture of an individual’s characteristic actions, thoughts, and feelings. In other words, personality theory attempts to describe and explain what humans are like (human nature), and how they are different (individual differences). There is, nonetheless, no single standard definition of the term “personality,” and there has been debate about every existing definition. This is perhaps due to different approaches in researching personality (Hergenhahn and Olson, 2003).

Personality has been defined by a number of psychologists in more than one way, for example: (a) "the dynamic organization within the individual of those psychophysical systems that determine his characteristic behavior and thoughts" (Allport, 1961, cited in Hjelle and Ziegler, 1981:284); (b) “the more or less stable, internal factors that make one person’s behavior consistent from one time to another, and different from the behavior of other people that would manifest in comparable situations” (Child, 1968, cited in Eysenck, 2002: 261); (c) “important, relatively stable characteristics within individuals that account for consistent patterns of behavior” (Ewen, 1998: 2); and (d) "the relative consistencies of style that people show in the way they think, act and feel as they respond to their environments" (Smith and Smith, 2005:32). Other researchers, particularly occupational and organisational psychologists, have defined the term as the unique organisation of all traits or characteristics of an individual that consistently distinguish him or her from other people, in terms of his or her essential tendencies to think, feel,

and behave in response to everyday situations (Furnham, 2005; Gatewood and Field, 2001).

These definitions have four key elements in common, including: stability, the extent to which personality is unchanging over time; characteristics, referring to all of an individual's traits in thoughts, feelings, and actions; consistency, the extent to which personality determines behaviour in a fairly constant way; and difference, showing how different people may have diverse responses to similar situations (Eysenck, 2002; Smith and Smith, 2005). For the purposes of the current study and based on the last elements, personality can be defined as the stable characteristics of individuals that determine their consistent ways of behaving, thinking, and feeling.

2.2.3 Approaches to Personality Research

A variety of approaches exist in the study of personality, which has been influenced by earlier schools of psychology. Theories of personality vary in their assumptions about psychological functions in human beings, personality development, and appropriate research methods to study personality (Malim and Birch, 1998). There are various perspectives associated with personality theories, including psychodynamic, social learning, humanistic, behaviourist, trait, and type approaches (see Ewen, 1998; Hergenhahn and Olson, 2003; Ryckman, 2006). However, according to Winter and Barenbaum (1999), personality is inherently complex and there is no single, clear-cut explanation for personality and its development. The main issue related to the goals of this current study is the appropriateness of applying these personality theories to organisations for personnel selection.

First, it can be argued that almost none of the personality theories based on these approaches can be used at work, particularly with regard to personnel selection, because most of these theories have based on the idiographic approach. In other words, as reported by Malim and Birch (1998), **idiographic** versus **nomothetic** techniques indicate one of the most important differences in which theories of personality may be used to emphasise the uniqueness of an individual. On one hand, an idiographic approach attempts to understand what is true about each individual, and to discover his or her functioning particularly through the case study method. Idiographic theorists tend to

consider personality development as a process that is capable of change. They take the view that people respond to their environment and to the others around them, and that these interactions play a significant role in shaping personality (Mallb, 2000). This approach aims to create a detailed picture of each person's personality and to capture the basics of the total personality (Chamorro-Premuzic, 2007; McKenna, 2006).

Nomothetic theorists, on the other hand, tend to gather evidence regarding personality traits in order to predict behaviour. They consider environmental and social influences to be minimal and personality to be largely inherited, consistent, and resistant to change (Mallb, 2000). A nomothetic approach may be used to discover what characteristics are common amongst a particular group of people. This approach is opposed to the idiographic approach because it aims to establish general laws of human behaviour, and it depends upon the use of statistics in the analysis of human behaviour. It is based on the idea that people have the same dimensions or traits of personality, but they differ in terms of the extent to which they may possess a trait (Hergenhahn and Olson, 2003; Ryckman, 2006).

Malim and Birch (1998: 741) have reported that "if the aim of personality theories is to predict human behaviour, idiographic approaches would allow predictions to be made for only one person at a time." Therefore, since personnel selection depends on the comparison between a large number of individuals at any given time, it is difficult to use a theory based on the idiographic approach for personnel selection, since it is too global and has a common disadvantage, namely the difficulty of measuring personality (Cooper, 2002; McKenna, 2006). In addition, no idiographic approach theories have been developed or used specifically as models for individual differences in work effectiveness by linking assessment to performance (Hogan and Holland, 2003; Poropat, 2004). Nomothetic approaches, in contrast, suppose that individual differences can be described, explained, and predicted in terms of predefined criteria (Chamorro-Premuzic, 2007). Consequently, they can be used for predicting work-related behaviours, and thus for personnel selection purposes.

Second, within this research, it is also important to distinguish between **normative tests** and **ipsative tests**. On one hand, normative tests (for example, Cattell's 16 PF, or the Eysenck Personality Questionnaire) depend mostly upon self-reported questionnaires and are used largely with nomothetic theories. On the other hand, ipsative tests (for example,

Kelly's Repertory Grid, or projective tests such as the Rorschach test) mainly use idiographic theories based on the idea that people are unique and can only be understood through the use of specific techniques (Abdel-Khalek, 1996; Malim and Birch, 1998).

Some investigators (Abbas, 1996; Saville and Wilson, 1991) believe that ipsative tests are better than normative tests because they are less prone to distortion. Nevertheless, many other researchers (for instance, Abdel-Khalek, 1996; Farag, 2007; Gatewood and Field, 2001; Kline, 1992; Malim and Birch, 1998; Smith and Smith, 2005), have argued that normative tests are better than ipsative tests because: (a) ipsative tests do not produce results that can be compared with norms, which may produce spurious results; (b) ipsative tests are completely insensitive to differences between individuals; (c) the reliability and validity of ipsative tests is generally poor; and (d) the results of ipsative tests are more likely to be affected by factors such as the attitude or the mood of the participant or tester. Furthermore, Abdel-Khalek (1996) has pointed out that there are numerous positive features of normative tests, including their objectivity; their accuracy in describing and distinguishing individuals; their status as one of the most important methods for gathering data about different aspects of one or more persons; and their effectiveness and efficiency in predicting a variety of life outcomes, including workplace behaviours. Therefore, normative tests could be used in organizational for personnel selection purposes.

There are also a number of disadvantages to several theories based on these personality approaches, limiting their validity in personnel selection because some (such as, Freud's psychoanalytic theory of personality) attempt to explain events after they have occurred, rather than predicting behaviour (Ewen, 1998; Hergenhahn and Olson, 2003). Some of these theories (for example, Skinner's theory of operant conditioning) assume that people's behaviours are caused entirely by external stimuli rather than internal psychological processes (Chamorro-Premuzic, 2007). In other words, the prediction of job outcomes, according to such theories, depends largely on the environment and conditions of work, and thus, the selection of employees based on their personality has a limited contribution to anticipating work performance.

Finally, tests such as the Myers-Briggs Type Indicator (MBTI), along with others based on this type of approach, have also been criticised. The MBTI was constructed and developed by Myers (1962 cited in Lorr, 1991: 1141) on the basis of Jung's theory of

personality type. The MBTI is published in different forms that contain items presented in a forced choice scale. It is most widely used in psychotherapy, leadership training, career counselling, and education (Furnham, 1996; Furnham and Stringfield, 1993; Gatewood and Field, 2001; Robbins, 2003).

Some studies have supported the validity and reliability of the MBTI (Furnham, 1996; Harvey, et al., 1995). Several researchers, however, have questioned the scientific basis of the MBTI. First, it has been reported that the practical validity of the MBTI classification scheme is weak or insignificant (Lorr, 1991). Second, Saggino, et al. (2001) performed a confirmatory factor analysis of the MBTI Form F, and found no support for its construct validity. Third, the reliability and predictive validity of the test has been found to be low (Pittenger, 2005). Robbins (2003) has also argued that it is generally hard to gather empirical supporting evidence that the MBTI is a valid means of measuring personality. In addition, previous research (Furnham and Stringfield, 1993) indicates that, in work settings, the MBTI is not a significant predictor of work performance. Furnham (2008) also found among human resource professionals in Europe ($n = 255$) that the value of the MBTI for the personnel selection was low (only 3.82 in ten believed that it was useful for selection purposes). Compared to other tests, such as the NEO-PI-R, based on the Big Five model (6.37), Cattell's 16 PF (6.16), the Eysenck Personality Questionnaire (5.25), and others, the MBTI has the lowest face validity for personnel selection.

Moreover, Gatewood and Field (2001) have pointed out that the MBTI is not an appropriate test for selection purposes because of its scoring style, which makes it difficult and not meaningful for determining the relationship between its results and job performance. Furthermore, it has been found that the MBTI test has neglected one of the largest and most significant factors of personality, namely emotional stability, which has been found to be one of the best predictors of work-related behaviour, as will be discussed later in this chapter (Furnham, 1996; Smith and Smith, 2005). Finally, a consistent criticism of the MBTI is that it is based on typological theory, which has faced a number of criticisms such as: Jung's theory has been criticised for being nonfalsifiable, incomprehensible, mystical, contradictory, and unclear (Hergenhahn and Olson, 2003; McCrae and Costa, 1989); and research confirms that individuals differ in the extent to which they show a particular characteristic rather than slotting tidily into a distinct type

(Malim and Birch, 1998; Smith and Smith, 2005). Therefore, type theories in general, and the MBTI test in particular, are less valid for applying in work contexts, especially for personnel selection.

To summarise, as Hammond (2000: 181) has concluded, "the idiographic approach has the drawback that comparisons between respondents are difficult if not impossible and the aggregation of idiographic data is meaningless." For these reasons, normative tests applied largely among trait factor-analytic theorists are seen to be better than ipsative tests, which should not be used in employee selection processes, because differences between applicants are the most essential aspects of selection (Farag, 2007; Fincham and Rhodes, 2005; Smith and Smith, 2005). In addition, according to Robertson and Callinan (1998: 321), "Although psychologists have identified a variety of different approaches to personality, only one approach, trait factor-analytic theory, has had a significant impact on the field of industrial and organizational psychology". That is, tests that based on trait factor-analytic models of personality have been used largely on the field of industrial/organizational psychology to predict and explain a range of work-related behaviours such as job performance, job stress, and job satisfaction. The next section, therefore, will aim to provide a review of the major trait factor-analytic theories.

2.2.4 Trait Factor-Analytic Theories of Personality

A trait can be defined as "an individual characteristic in thoughts feelings and action, either inherited or acquired, and refers to tendencies to act or react in certain ways" (McKenna, 2006: 703). Trait psychology is essentially based on the idea that personality consists of a number of characteristics. In addition, trait theories are derived from two self-evident ideas, namely that people's actions, feelings, and thoughts differ in a several dimensions; and these dimensions can be tested and measured (Smith and Smith, 2005). That is, the primary aims of trait theories, according to Cooper (2002), are to discover the main dimensions in which people differ; to confirm that people's scores on these dimensions stay reasonably constant throughout different situations; and to determine why and how these individual differences occur. Thus, trait theories of personality, on one hand, have played a role in establishing the major dimensions of personality in a way that allows people's personalities to be measured and compared. On the other hand,

many personality tests have been developed in light of trait theories. These tests of personality have had a significant contribution in describing, explaining, and predicting the behaviour of people at work (Cooper, 2002; Johnson, 2003; Smith and Smith, 2005). There are three trait factor-analytic theories that have significantly influenced the study of personality, including Cattell's theory, Eysenck's theory, and the Big Five model of personality (Furnham, 2005).

2.2.4.1 Cattell's Theory

Raymond Cattell (1905-1998) believed that every person has a set of traits that can initiate and direct his or her behaviour. He also argued that traits are often hereditarily based, but that they are subject to modification through learned experience. Trait is a key concept in Cattell's theory. He assumed that traits are the building blocks of personality, and that they are relatively stable (Hergenhahn and Olson, 2003; Ryckman, 2006).

Cattell distinguished between several types of traits. First, he divided traits into common traits, shared by a group of people, and unique traits, which are specific to one person. Second, the most important distinction that Cattell made is the difference between surface traits and source traits. Surface traits are collections of observable behavioural patterns that are correlated. Source traits, in contrast, are the underlying causes of behaviour, and they are responsible for the consistent actions of an individual. Source traits influence a number of surface traits that happen to match descriptions of personality in everyday contexts. (McKenna, 2006; Ryckman, 2006; Smith and Smith, 2005). Hergenhahn and Olson (2003) have pointed out that some source traits are determined by biology and are called constitutional traits, while other source traits are the result of experience by interactions with the environment, and are called environmental-model traits. Third, traits can be divided into ability traits, which refer to an individual's skill (for example, intelligence) in dealing with a complex situation to achieve a desired goal (Ryckman, 2006); temperament traits, which refer to a person's general style and the emotion, energy, speed with which an individual responds to a situation (Hergenhahn and Olson, 2003); and dynamic traits, which refer to motivations and interests which energise human behaviour towards specific goals. In other words, whereas ability traits determine how a person behaves in certain situations, and

temperament traits determine how well an individual responds to situations, dynamic traits determine why he or she responds in particular ways (Ewen, 1998; Hergenhahn and Olson, 2003).

Cattell also argued that discovering the main source traits, or primary factors of personality, must start with all traits that can be used to describe people (Cooper, 2002; Ryckman, 2006). Thus, he applied what is known as the fundamental **lexical hypothesis**. According to Eysenck (2002), the fundamental lexical hypothesis refers to the hypothesis that languages (i.e. dictionaries) contain words or adjectives describing all of the major personality traits. People usually use different words to describe them in their everyday language. Language, consequently, can provide personality researchers a window into the essential structure of human personality by studying the words used for describing individual differences (Poropat, 2004).

Based on the work of Allport and Odbert, who found 4,500 words out of 17,953 that could be used to describe personalities, Cattell began by reducing the 4,500 trait names to a list of 171 trait words through: eliminating synonyms, or those that were figurative, vague, or rarely described; grouping semantically similar names; and removing unfamiliar words (John and Srivastava, 1999; Ryckman, 2006; Winter and Barenbaum, 1999).

Cattell and his co-workers also tried to reduce these 171 terms by using three different kinds of data collection techniques: (a) L data, or “life data,” refers to the process of observers’ ratings of people on these traits; (b) Q data refers to self-reported questionnaires; and (c) T data refers to data collected through administering a number of objective tests to a large group of people under controlled conditions. Through the use of these techniques, Cattell identified sixteen major source traits, or primary factors (Eysenck, 2002; Cooper, 2002; Malim and Birch, 1998; Ryckman, 2006) (see Table 2.1).

Table 2.1 Sixteen primary factors and descriptors in Cattell's theory

High score description	Factor	Low score description
Affectia: warmhearted, outgoing, easy-going, socially adjusted	A - Warmth	Sizia: reserved, socially hostile, indifferent
Intelligence: alert, thoughtful, imaginative, wise	B - Reasoning	Unintelligent: dull, unimaginative, stupid
Higher Ego Strength: unworried, mature, patient, stoic	C - Emotional Stability	Lower Ego Strength: anxious, infantile, impatient, worried
Dominantion: confident, assertive, competitive, boastful	E - Dominance	Subordinant: modest, unsure, humble, accommodating
Surgency: talkative, happy-go-lucky, cheerful, genial, responsive	F - Liveliness	Desurgency: serious, depressed, seclusive, silent
High Super Ego Strength: conscientious, loyal, responsible, persevering	G - Rule-Consciousness	Low Super Ego Strength: unscrupulous, irresolute, frivolous, undependable
Parmia: carefree, adventurous, overtly interested in sex	H - Social Boldness	Threctia: shy, careful, overtly disinterested in sex
Premsia: sensitive, introspective, sentimental, intuitive,	I - Sensitivity	Harria: practical, insensitive, self-sufficient, logical
Protension: wary, suspicious, sceptical, jealous	L - Vigilance	Alaxia: trustful, unsuspecting, credulous, gullible
Autia: imaginative, eccentric, complacent, self-absorbed	M - Abstractedness	Praxernia: practical, poised, conventional, earnest
Shrewdness: socially alert, calculating, expedient, insightful regarding others	N - Privateness	Artlessness: socially clumsy, apathetic, crude, indifferent
Guilt Proclivity: moody, worried, timid, depressed	O - Apprehension	Guilt Rejection: self-confident, secure, self-sufficient, cheerful
Radicalism: encourages change, free-thinking, rejects convention	Q1 - Openness to Change	Conservatism: traditional, rejects change, disgusted by foul language
Self-Sufficiency: independent, resourceful,	Q2 - Self-Reliance	Group Adherence: group dependent, seeks social approval

High Self-sentiment strength: sensitive to uncertainty, organised, compulsive, controlled	Q3 - Perfectionism	Low Self-sentiment strength: careless, flexible, impulsive, uncontrolled
High ergic tension: tense, impatient, driven, frustrated	Q4 - Tension	Low ergic tension: relaxed, composed, tranquil, patient

(Source: Hergenhahn and Olson, 2003).

Cattell and his colleagues originally developed the Sixteen Personality Factor Questionnaire (16PF) in 1949 to measure the sixteen dimensions of personality. The questionnaire contains 185 questions that offer the test-taker three answers to choose from (i.e. three-point Likert-type scale), requiring 35-50 minutes to complete. The reliability and validity of the test has been found in several studies to be adequate (see Furnham, 2005; Jenkins and Griffith, 2004; Kaczmarek and Packer, 1997; Oakes, et al., 2001).

Cattell's theory has been used largely in the area of work, particularly with respect to occupational selection and counselling (Malim and Birch, 1998; Oakes, et al., 2001). First, this theory has been applied to occupation selection by specifying the most important characteristics that can affect work performance, so that the most appropriate applicant may be selected (Furnham, 2005; Shelton, 2004). One study (Austin, et al., 2000) found that successful police officers were higher in factors C, E, G, and H. In other words, police officers tended to be unworried, patient, stoic; confident, assertive, competitive; conscientious, loyal, responsible, persevering; adventurous, uninhibited, and carefree.

Ewen (1998) has argued that Cattell's work contributed to psychology by making it more scientific through the use of quantitative procedures. Moreover, his attempts to study personality through combining data using various methods were systematic (Eysenck, 2002). The main criticisms of Cattell's theory, by contrast, centre on his use of the factor analysis technique, since this technique requires a number of relatively subjective decisions, such as how many factors are enough (Poropat, 2004). Furthermore, some psychologists have reported that there are fewer personality traits than the number suggested by Cattell (Cooper, 2002). Another criticism of Cattell's theory is of his argument that intelligence should be conceptualised as part of the human personality and

measured by self-reported tests, which is inconsistent with most intelligence theories (Chamorro-Premuzic, 2007).

Several researchers (for example, Ones, et al., 2005; Salgado, 2003) have suggested that Five-Factor model (FFM) based inventories advance the validity of personality measurements, and are better for work settings for personnel selection purposes since: (a) non-FFM inventories could be poorer predictors of supervisory ratings, because their item content is less occupationally related than the measures based on the Five-Factor Model; (b) the possibility of misclassification of validity coefficients is efficiently minimised when using FFM-based measures; and (c) non-FFM inventories were not originally constructed to assess the Big Five that have been found to show high validity in predicting a variety of work-related behaviours, as will be reported and discussed throughout this chapter. Therefore, they support the use of FFM-based measures in the workplace.

2.2.4.2 Eysenck's Theory

Like Cattell, Hans Eysenck (1916-1997) believed that biological factors were involved in the determination of personality. Eysenck, however, differed noticeably from Cattell by concluding that the core personality consisted of three main “supertraits” (Ewen, 1998; McKenna, 2006).

Eysenck used the technique of factor analysis, leading him to propose that personality could be described by two basic dimensions of personality: Extraversion/Introversion and Neuroticism/Stability. It is important to note that these dimensions of personality relate to the extreme ends of a scale, and that very few people would fit them precisely. In his subsequent research with psychiatric patients, Eysenck postulated a third dimension of personality that he called Psychoticism, which was unrelated to Extraversion and Neuroticism, and was not widely distributed amongst the population (Malim and Birch, 1998; McKenna, 2006).

Extraverts are sociable, impulsive, those who frequently seek exciting activities, thrive on human company, and have many friends. They are optimistic, restless, generally like change, lose their temper quickly, and are not always reliable. Introverts are typically

reserved and serious individuals who prefer solitary actions. They are quiet, cautious, introspective, pessimistic, restrained, orderly, and slow to lose their temper, and they place great value on ethical standards. Highly neurotic individuals, on one hand, tend to be more prone to worries and anxieties, and are often sensitive and irritable. They are more likely to suffer from headaches and experience eating or sleeping difficulties. They are also more liable to develop disorders under highly stressful conditions. On the other hand, highly stable individuals tend to be relatively calm, even-tempered, and controlled, and they are less likely to have strong emotional responses. High scorers on the psychoticism scale tend to be hostile, aggressive, insensitive, and cruel (Abdel-Khalek, 1996; Hergenhahn and Olson, 2003; Ryckman, 2006).

As reported by Malim and Birch (1998), in support of his idea of the three dimensions of personality, Eysenck offered a hierarchical model of personality that consisted of types, traits, and habits. Each higher order type (for example, extraversion) included a number of correlated traits. Each trait (for example, sociability) was inferred through intercorrelating habitual responses. Habitual responses (for instance, going to parties) were based on specific responses (such as talking to someone). Eysenck also suggested that by identifying an individual's score on one of the dimensions at the type level, it was possible to predict that individual's traits, habitual responses, and specific responses in relation to that specific dimension (Abdel-Khalek, 1996; Hergenhahn and Olson, 2003; Malim and Birch, 1998; Ryckman, 2006).

Ewen (1998) has pointed out that while most psychological investigators believe that about 20% to 50% of personality is genetically determined, Eysenck believed that about two-thirds of the variation in extraversion-introversion was due to genetic factors. According to Eysenck, heredity influenced the reactions of parts of the physiological system. Extraverts, consequently, seek external stimulation to increase their arousal levels because they are considered to be less easily aroused than introverts. By contrast, because introverts have high levels of cortical arousal that will become painful if increased, they usually avoid noise and crowds. Moreover, cortical arousal is controlled by activity at the base of the brain, known as the ascending reticular activating system (ARAS), which is easily activated in introverts, but reacts more slowly in extraverts (Malim and Birch, 1998).

Eysenck and Eysenck (1975) constructed the Eysenck Personality Questionnaire (EPQ) to measure the three dimensions of personality: Extraversion (E), Neuroticism (N), and Psychoticism (P), as well as a Lie scale aiming to measure tendencies to “fake good” (Roger and Morris, 1991). The EPQ is a 90-item yes/no personality questionnaire that takes 10-15 minutes to complete. The EPQ has been found in many studies to be a reliable and valid measure of personality (Burbeck and Furnham, 1984; Furnham, 2005). The EPQ has been translated into many different languages, including Arabic, and the cross-cultural factorial similarity of its four factors, Extraversion (E), Neuroticism (N), Psychoticism (P), and Social Desirability (L), has been supported (Alansari, 2002; Cheung, 2004).

Eysenck’s theory of personality has been applied to a wide range of actions in everyday life, including criminality, learning, health, and occupational behaviour (Hergenhahn and Olson, 2003). For example, an investigation by Burbeck and Furnham (1984) using the EPQ on a sample of 319 applicants to the police force found that successful applicants differed considerably from unsuccessful ones in that they were more extraverted and less neurotic, as will be discussed in following sections.

Eysenck’s theory influenced a number of subsequent studies and also provided a helpful model for personality studies. There is considerable evidence that Neuroticism and Extraversion are key personality traits (Eysenck, 2002; Malim and Birch, 1998). The first criticism of Eysenck’s theory, nonetheless, is the use of the technique of factor analysis, as with Cattell’s theory (Ewen, 1998). Eysenck (2002) has also been criticised for the theory that heredity plays a less significant role in determining individual differences, and there is little support for the physiological bases suggested by Eysenck. Other problems with Eysenck’s theory relate to its complexity and the difficulties in testing some of its hypotheses (Chamorro-Premuzic, 2007). Finally, regarding the use of the EPQ in personnel selection, Kaczmarek and Packer (1997) conclude that it has limited ability because the three personality factors are too broad, not allowing for the degrees of discrimination that are required for selection. In addition, the EPQ lacks a direct means of measuring the Conscientiousness dimension, which has been found to be the most important personality trait in predicting job performance in many contexts, as will be discussed in this chapter. Therefore, the EPQ may not be used largely for personnel selection because of its gaps in the Conscientiousness scale, which is considered by

selection psychologists and managers to be an extremely significant predictor when evaluating and deciding on the employability of job applicants (De Fruyt and Mervielde, 1999).

2.2.4.3 The Five Factors Model (The Big Five)

Over the last three decades, a model of personality called the Five-Factor Model, or the Big Five, has generated great interest amongst trait theorists. The main principle of the FFM is that personality can be well described through five fairly independent trait dimensions. This model has been derived from factor-analytic studies of much larger sets of traits (Digman, 1990; Hergenhahn and Olson, 2003; John and Srivastava, 1999). The Big Five dimensions are Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness (see Table 2.2).

Table 2.2. The Big Five dimensions and their facets

Dimension	Description	Facets
Neuroticism	Refers in general to a lack of positive psychological adjustment and lack of emotional stability (i.e., the tendency to experience the world as safe and within one's own control)	Anxiety Angry-Hostility Depression Self-Consciousness Impulsiveness Vulnerability
Extraversion	The tendency to be sociable, outgoing, warm-hearted, gregarious, and talkative	Warmth Gregariousness Assertiveness Activity Excitement-Seeking Positive Emotions
Openness to Experience	Refers to the degree to which an individual is open to new experiences, who is interested in learning new things in new settings (i.e., receptivity and openness to change and innovation)	Fantasy Aesthetics Feelings Actions Ideas Values
Agreeableness	This trait is associated with aspects of social perception, cooperativeness, the tendency to adhere to the norms of other people, and to get along with others	Trust Straightforwardness Altruism Compliance Modesty Tender Mindedness
Conscientiousness	Refers in general to socially prescribed impulse control that aids task and goal directed actions (i.e., the tendency to comply with rules, standards, policies, and norms such as prioritising responsibilities, thinking before acting, planning, and organising)	Competence Order Dutifulness Achievement-Striving Self-Discipline Deliberation

Source: Barrick, et al. (2001), Chan (2004), Furnham (2005), Huang, et al. (2005).

Based on Cattell's work and the availability of a small list of variables, several investigators have tried to examine the dimensional structure of trait ratings (John and Srivastava, 1999). Fisk (1949, cited in Poropat, 2004: 30) produced a five-factor solution by conducting an orthogonal factor analysis on the same scales as Cattell. In 1961 (reprinted in 1992), Tupes and Christal reanalysed correlation matrices from large samples of different people. They also found five strong and recurrent personality factors. Similar factors were subsequently found by a considerable number of studies

over a period of decades. According to John and Srivastava (1999), these five dimensions symbolise personality at the broadest level of abstraction, and each factor summarises a vast number of personality characteristics. In addition, these five dimensions have been found to be stable and robust (Judge, et al, 1999; Piedmont and Weinstein, 1994).

The NEO PI-R Personality Inventory-Revised, containing 240 five-point scale items, was developed by Costa and McCrae (1992b) to measure differences in personality traits based upon a FFM of personality. The NEO PI-R not only measures the Big Five elements of Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness, but also six "facets" (subordinate dimensions) of each of the Big Five elements. Previous studies have supported the reliability and validity of the NEO PI-R (Dollinger and Orf, 1991; Kaczmarek and Packer, 1997; Kornor and Nordvik, 2004). Moreover, cross-cultural studies have indicated the worldwide applicability of the FFM (Cheung, 2004; Costa, et al., 1991; Farag, 2007; Robertson, et al., 2002; Tong, et al., 2004).

Costa and McCrae (1992a: 653) have argued that FFM represents basic dimensions of personality based on several evidential factors: (a) many studies show that these five factors are continuing dispositions that are noticeable in patterns of behaviour; (b) traits associated with each of the factors are found in a range of personality systems and in the natural language of trait description; (c) even though these factors may be differently expressed in diverse cultures, they are found in different races, ages, genders, and language groups; (d) these five dimensions were all independent or unrelated to each other; and (e) evidence suggests that genetic factors play a significant role in producing individual differences in all factors.

“As a standard framework for the classification of traits, the FFM is comprehensive, efficient, and integrative” (Grant and Langan-Fox, 2007:20). The Big Five personality traits have all been extensively validated and evaluated in a variety of cultures, languages, age groups, and employment settings (John and Srivastava, 1999). Various types of validity (for instance, construct, content, and criterion-related) of the FFM have also been found to be satisfactory (Cook, 2005). The five factors are relatively enduring, and transcend individual differences in, sex, race, and age; and there is evidence to

support that all five dimensions have a biological– inheritable basis (Grant and Langan-Fox, 2007).

First, several studies investigating the construct validity of the Big Five have found it to be acceptable (Cook, 2005). Cattell (1995), for instance, found that a factor analysis of the 16PF and the NEO-PI resulted in the five facets of the revised NEO Personality Inventory that correlated with the 16PF scales. Byravan and Ramanaiah (1995) also accomplished similar results by examining the factor structure of the 16 PF (fifth edition) from the perspective of the Big Five model. They found strong support for four of the Big Five factors (Neuroticism, Extroversion, Openness to experience, and Conscientiousness) and moderate support for the Agreeableness factor.

Second, regarding the stability of the five factors over time, longitudinal studies using Big Five measures of personality have shown that similar results for an individual are found throughout the lifespan (Piedmont and Weinstein, 1994). In a longitudinal study following 163 men for over 45 years, three traits (Neuroticism, Extroversion, and Openness) were found to exhibit significant correlations across the 45-year period (see Cook, 2005). This conclusion has been supported by other longitudinal studies. Judge, et al., (1999: 646) concluded that “the longitudinal consistency of these traits helps explain why behaviors reflected in the Big Five constructs are able to predict career success up to 50 years later.”

Third, cross-linguistic and cross-cultural studies suggest that the FFM provides a replicable representation of the main dimensions of personality (John and Srivastava, 1999; Poropat, 2004). McCrae and Costa (1997), for example, investigated the cross-cultural generalisability of the FFM using data from six different languages, including Portuguese, German, Hebrew, Chinese, Japanese, and Korean. They found that there was support for a common human structure of personality based on such a model. This result has also been supported in Kazem's (2001) study with Arabic-speaking samples. Moreover, in a recent global study (Schmitt, et al., 2007), the five-dimensional structure was found to be robust across major regions of the world, including in Arabic-speaking contexts. Benet-Martinez and John (1998) also explored the generalisability of the Big Five factor structure in Latin cultural groups. They concluded that "the Big Five dimensions represent an even broader level of abstraction, aggregating across numerous

more specific trait domains. Thus, it is possible that at the broad trait level, personality structure is quite general, even universal, across cultural groups" (1998: 746).

The Big Five model has been established as a viable personality model with various applications (Ewen, 1998). That is, this model has prompted a considerable number of studies on the relationships between personality and work-related behaviours, especially job performance, training performance, job stress, deviant workplace behaviours, and levels of job satisfaction (Goodstein and Lanyon, 1999; Hough and Furnham, 2003; McKenna, 2006). A meta-analytic review by Judge, et al. (2002) has found that workers who are extraverted, conscientious, and emotionally stable are more liable to be satisfied with their occupation. Furnham (2005) has pointed out that the traits of Conscientiousness and Extraversion are useful predictors of job proficiency, and Neuroticism is also a helpful negative predictor of work success. Kornor and Nordvik (2004) have also found that effective leaders are more likely to score higher on Conscientiousness and Extraversion. Related information has been provided by Smithikrai (2007), who used multiple occupational groups ($n = 2518$) in his study of the influence of each facet of the FFM on job success in Thailand. The study found that while Conscientiousness and Extraversion were significantly positively correlated with job success in all occupational groups, Neuroticism was found to be negatively correlated with job success. Meta-analyses of the criterion-related validity of personality variables, particularly the Big Five, have also demonstrated the usefulness of using personality dimensions in predicting job performance (Johnson, 2003), as will be discussed in the next sections.

The FFM, therefore, has been accepted as a sufficient categorisation of personality constructs, and growing evidence suggests that it is a model that could contribute to the process of personnel selection (Arrigo and Claussen, 2003; DeGroot and Kluemper, 2007; Kornor and Nordvik, 2004). For instance, in a study conducted by Salgado (2003) aiming to compare the validity of the Big Five personality traits when evaluated using FFM-based measures and non-FFM-based measures, the results indicate that: (a) FFM-based inventories advanced the validity of personality measures in predicting work-related outcomes; and that (b) the FFM may be used to significantly help organisations in personnel selection decisions.

There are, however, a number of frequently cited limitations of the FFM. First, it has been argued that the FFM does not explain all aspects of human personality, such as the failure to explain motives, feelings, and interpersonal behaviours (Hough, 1992). For example, Becker (1999) found after several factor analyses that the five-factor model was not comprehensive, since a sixth factor called hedonism/spontaneity could be replicated. In reply to this criticism, Saucier and Goldberg (1998) provided evidence that almost all clusters of personality-relevant adjectives could be counted under the FFM. Additionally, the evidence for the six-factor model has been criticised as questionable and weak (see Kaplan and Saccuzzo, 2005).

Second, another criticism of the FFM is that the five dimensions are not fully orthogonal to one another, in that some of the five traits or factors are correlated and not independent of each other (Block, 1995; Cooper, 2002). One study (DeYoung, 2006) has suggested that correlations amongst the Big Five are substantively existent and possess a significant higher-order structure. DeYoung found that Conscientiousness, Emotional Stability, and Agreeableness formed one factor, labelled Stability, and Extraversion and Openness formed a second factor, labelled Plasticity. Nonetheless, in response to this criticism, some investigators (for example, Al-Reouitea, 2007; Chamorro-Premuzic, 2007; Poropat, 2004) have pointed out that inter-correlations between the Big Five factors may be a result of scale construction (including the scale items that may have two or more meanings that can measure more than one dimension) rather than as a result of the process in which the FFM was developed, or as a result of common method variance, in that people tend to present themselves in sociably desirable ways. Additionally, one of the main disadvantages of the FFM is that it is fundamentally descriptive, and fails to provide a sufficient explanation of the processes underlying the diverse factors (Ewen, 1998; Eysenck, 2002). For example, the Big Five researchers have not paid adequate attention to issues of personality development, particularly in childhood (John and Srivastava, 1999). Finally, similar to Eysenck's theory and Cattell's theory, the FFM has been criticised for its use of the technique of factor analysis.

Despite these criticisms and the fact that the FFM is a structural model of personality rather than a theoretical framework, it provides a very useful framework for predictive purposes and for exploring the relationship between personality and different criteria of interest, such as job performance (Chamorro-Premuzic, 2007; Ewen, 1998; McCrae and

Costa, 1997; Poropat, 2004; Ryckman, 2006). According to Barrick and Mount (1991), the Big Five model of personality provides a clear measurement framework for organising research, and a direction to the comprehensive evaluation of individuals that may be valuable to educational, organisational, and clinical psychologists. As Piedmont and Weinstein (1994: 256) have concluded, “because the five-factor model represents constructs abstracted at higher levels than traits, this model provides a larger framework for understanding the many individual differences variables that describe personality.”

2.2.5 Personality and Workplace Behaviour

The next sections will aim to provide a review of research addressing the validity of personality dimensions in predicting a number of work-related behaviours (for example, job performance, training performance, job stress, and counterproductive work behaviours), particularly in police organisations. Additionally, some of the mechanisms suggesting that personality dimensions are significantly related to police work will also be reported.

2.2.5.1 Personality and Job Performance

Although work psychology has many criteria of interest, job performance is perhaps the most important one. Performance prediction is at the core of much research in the area of personnel selection. Selecting individuals who will perform well on the job is the fundamental goal of such a selection process. Basically, performance may be defined as the degree to which an individual will assist an organisation to reach its objectives (Motowidlo, et al., 1997). On one hand, Campbell (1990) has defined job performance as behaviour that is related to the purpose of the organisation and that can be measured in terms of the level of the personnel's contribution to those objectives. Performance criteria, on the other hand, are the standards used to evaluate employees in order to determine the value of their behaviours to significant organisational outcomes. "Performance criteria are operational definitions of important performance requirements that permit assessments of individual differences in performance levels" (Borman, 1990: 276).

Whilst some investigators (for instance, Emmerich, et al., 2006; Jackson and Corr, 1998; Nikolaou and Robertson, 2001; Surrence and Serafino, 2003;) have found little or no correlations between personality traits and job performance, a considerable number of studies have clearly shown that personality is a valid and useful predictor of work-related behaviours such as job performance, training performance, job satisfaction, job stress, and accident proneness (Barrick, et al., 2001; Berg and Feji, 2003; Furnham, 2008; Goodstein and Lanyon, 1999; Judge, et al., 1999; Motowidlo and Van Scotter, 1994; Ones, et al., 2005; Piedmont and Weinstein, 1994; Rothstein and Goffin, 2006; Salgado and Rumbo, 1997; Tett, et al., 2003; Vasilopoulos, et al., 2007).

Furnham (2005) also has reported that there are at least three reasons for the weak correlations between personality traits and job performance in previous studies. First, since different traits relate to different behaviours at work, traits will mainly predict job performance of some jobs. Second, the use of low valid inventories to measure personality. Third, there may be weak measurements of occupational behaviour (for instance, attendance records as a measurement of performance). Other factors that may contribute to the weak association between personality and job performance include: (a) fairly weak analytic techniques; (b) inappropriate measurements of personality (or most frequently used psychopathology inventories); (c) a lack of acceptable theoretical frameworks on which to base research findings (Barrick, et al., 2001; Furnham, 2005; Johnson, 2003); and (d) since different jobs require different personality profiles, it is necessary to use a personality-based job analysis when choosing a personality test; and narrow traits should be chosen when narrow aspects of performance are required (Gatewood and Field, 2001; Jenkins and Griffith, 2004). All of these factors, which will be considered in the current research, may result in weak relationships between personality dimensions and job performance, as found in some previous studies.

Meta-analyses of the criterion-related validity of personality variables, particularly the Big Five, have demonstrated the usefulness of using personality dimensions in predicting job performance (Johnson, 2003). For example, Barrick and Mount (1991) conducted a meta-analysis of 117 validity studies investigating the relations of the FFM elements (Conscientiousness, Emotional Stability, Agreeableness, Extraversion, and Openness to Experience) to three job performance criteria, including job proficiency, personnel data, and training proficiency for five occupational groups (professionals, managers, police,

salespeople, and skilled/semi-skilled labourers). Findings indicate that: Conscientiousness was found to be a valid predictor of all five occupational groups and also of all three types of performance criteria; Emotional Stability was found to be valid predictor for police work; Extraversion was a valid predictor across all types of performance criteria for two professions involving social interaction, namely salespeople and managers; Agreeableness was observed to be a valid predictor for two jobs (police and managers); and Openness to Experience predicted training proficiency criteria.

In another meta-analysis, Hurtz and Donovan (2000) also investigated the relationship between the Big Five personality dimensions and job performance. Conscientiousness and Emotional Stability were found to have the highest validity of the Big Five for predicting overall job performance across jobs and across criteria dimensions. They also found that for jobs requiring interpersonal interactions, Agreeableness had a slight but consistent impact on performance. For sales and managerial jobs, Extraversion was found to impact performance. Finally, Openness to Experience was found to affect performances in customer service jobs. Most of these results were also reported by several researchers using meta-analysis techniques (for example, Barrick, et al., 2001; Hough, et al., 1990; Salgado, 1997; Tett, et al., 1991). For instance, after reviewing a large database consisting of American as well as European validity studies of the Big Five personality dimensions as predictors of overall job performance, Salgado (2003: 334) concluded that "conscientiousness and emotional stability showed criterion validity for predicting job performance, that they are not affected seriously by intentional distortion, and that they have no adverse impact on minorities." These results illustrate that personality traits are valid predictors of job performance, particularly Conscientiousness and Emotional Stability traits.

Despite the significant contribution of previous studies regarding the reliability and validity of personality dimensions in predicting job performance, it can be argued that many conclusions about the role of personality tests as an important contributor to the prediction of job performance had been based largely on meta-analysis techniques which were inappropriate, particularly when using results in the context of police selection processes. Rothstein and Goffin (2006: 157) have reported that the "selection of personality measures based on meta-analytic findings must ensure that results are based on relevant samples and appropriate tests and performance criteria, especially in the

context of police selection." Differences in samples and performance evaluation processes make it crucial to establish the generalisability of past meta-analytic findings with respect to performance prediction in police organisations. The performance evaluation criteria used in police forces may be largely different in essential conceptual ways from criteria used in other organisations, which makes it imperative to re-evaluate past results on the associations between personality traits and job performance in police contexts (Detrick and Chibnall, 2002).

With respect to the relationship between personality traits and job performance in the police force, limited studies have investigated this issue by using tests based on the FFM. Available research, nonetheless, supports the validity of other personality tests (for instance, the Minnesota Multiphasic Personality Inventory MMPI, the California Psychological Inventory CPI, and the Inwald Personality Inventory, IPI) in predicting police officers' job performances. For example, Varela, et al. (2004) conducted a meta-analysis of 78 published and unpublished studies examining the predictive validity of personality testing in police organisations. They found a modest but statistically significant association between personality test data and law enforcement officer job performance. As they concluded, personality tests can help improve police personnel selection processes.

Additionally, one study (Sanders, 2008) examined the relationship between the Big Five factors and police job performance. The findings showed that the Big Five traits of Openness, Agreeableness, Extroversion, and Neuroticism did not predict good performance, and Conscientiousness provided little in the way of explaining variation in individual police officer performance scores. However, a number of limitations may account for the lack of significant associations between the Big Five factors and police job performance in this study. First, it was based on a small sample ($n = 96$) from eight municipal police departments in the USA, and thus the effects of the sampling error may have strongly influenced the size of the coefficients reported. Second, there was a limitation in the measure of job performance, such as the lack of variation in performance evaluation ratings, in that most officers were deemed by their supervisors to be above average. Another key performance issue is that some criteria of effective performance at a number of departments (for instance, making a high number of arrests or issuing a significant number of tickets) may be evaluated as indicators of poor

performance at other smaller or non-urban departments which may results in weak relationships between personality factors and job performance.

Finally, another major disadvantage of Sanders' (2008) research was its range restriction. In other words, according to several police research investigators (Detrick and Chibnall, 2002; Cimbura, 1999; Lewis, 1999; Metchik, 1999; Shusman and Inwald, 1991), available studies on the role of psychometric tests for police officer selection have depended mainly on the samples of police officers who had already successfully passed pre-screening procedures, including psychometric tests, for becoming police officers. Consequently, many individuals with less desirable characteristics were not included in these studies, which may have resulted in an underestimation of the role of psychometric tests (and thus personality and cognitive abilities) in predicting the criterion variables (performance and workplace deviance).

Overall, there are a number of key findings regarding the relationship between personality traits and job performance that are worth noting: (a) previous research demonstrates that Conscientiousness and Emotional Stability are significant predictors of job performance for many jobs, including police work (Barrick and Mount, 1991; Detrick and Chibnall, 2006; Mount and Barrick, 1998); (b) Extraversion and Agreeableness have been found in some studies to be correlated significantly with police performance (Barrick and Mount, 1991; Burbeck and Furnham, 1984); and (c) the validity of the FFM in predicting job performance in police agencies has been understudied, especially in Arabic-speaking contexts, and prior research that used the FFM in police contexts has focused mainly on training and academic performances rather than on field performances (Forero, et al., 2009).

Although personality tests not based on the FFM (such as the MMPI) are commonly used in law enforcement selection processes, they are deficient in a number of ways. First, these tests are mostly designed to measure psychopathological personality features, and thus are not particularly relevant to the prediction of police performance (Detrick, et al., 2004). According to Arrigo and Claussen (2003), the MMPI, for example, was developed to assess a variety of psychological disorders, including numerous items that seem unsuitable or strange when asked in a personnel selection context. Second, they are generally used in personal selection processes to screen out unfit candidates rather than to select preferred candidates. Finally, these tests fail to measure the construct of

Conscientiousness, which has been reported to be one of the best predictors of job performance and other work-related behaviours (Arrigo and Claussen, 2003). Several researchers (such as Detrick and Chibnall, 2002; Forero et al., 2009; Metchik, 1999; Varela, et al., 2004) have suggested that normative personality traits, rather than pathological traits, may be more valuable in identifying the best police candidates, since they are more likely to influence individual behaviour at work, which in turn affect teamwork, task proficiency, discipline, and overall performance.

Taken together, while psychopathological tests may helpful in weeding out applicants who are not fit for policing, they alone do not guarantee the selection of effective officers who will show high levels of job performance. As Cimbura (1999: 33) notes, "...the psychological screening process typically employed by police agencies continues to 'screen out' unsuitable applicants but has had less success differentiating between candidates who will excel on the job and those who will perform in the average range."

To summarise, evidence from studies exploring the relationship between the FFM and job performance suggests, on the one hand, that Conscientiousness is a valid and strong predictor of work performance for a variety of jobs, including police work (Barrick and Mount, 1991; Goodstein and Lanyon, 1999; Judge, et al., 1999; Piedmont and Weinstein, 1994; Robbins, 2003; Smithikrai, 2007). According to Arrigo and Claussen (2003), Conscientiousness affects performance in two key ways: positively, through its associations with goal setting, and negatively, through its relationship with counterproductive behaviours. Additionally, Ones and Viswesvaran (1996) have suggested a theory for the importance of Conscientiousness at work. They have claimed that highly conscientious employees show greater productivity than less conscientious individuals since: (a) they obtain high levels of job knowledge; (b) they avoid counterproductive workplace behaviours; (c) they go beyond role requirements at work; (d) they spend more time on duties and work hard at tasks they are assigned; and (e) they set goals individually and persevere in following and accomplishing them. Barrick, et al. (2003) has also argued that conscientious employees are more likely to exert considerable task efforts and maintain those efforts over an extended period of time, which may positively affect their performance. For instance, it has been found that individuals high in Conscientiousness are able to persist at tedious tasks for a longer time than those lower in Conscientiousness (Jensen-Campbell, et al., 2007).

These factors confirm that Conscientiousness is of great value for police agencies. Police officers, for example, perform a number of duties both during the day and at night, such as preventing crime and investigating accidents, handling domestic disturbances, intervening in disputes, and responding to many other requests from the public. Thus, they need to respond punctually to all assignments and demonstrate substantial efforts and motivation levels while on duty. Conscientious employees tend to be helpful and organised, obey rules, follow procedures, exert more effort and time on their tasks, and show more persistence and attention to detail (Fisher and Boyle, 1997). Thus, Conscientiousness could aid in the selection of the best applicants to effectively carry out police responsibilities.

Neuroticism (or low emotional stability), on the other hand, has been found in many studies to be negatively correlated with job success (Hogan and Holland, 2003; Judge, et al., 1999; Loveland, et al., 2005; Piedmont and Weinstein, 1994; Robie, et al., 2001; Smithikrai, 2007). According to Cook (2005) and Judge, et al. (2008), neurotic employees are more likely to be less successful, particularly in highly stressful jobs since: (a) they may avoid or withdraw from some tasks that they perceive as stressful or anxiety producing; (b) they may exert less effort in completing their tasks; (c) they may hold negative views about the importance of risk taking, achievement, working hard, and persisting in the face of obstacles; and (d) they may not be able to effectively handle normal levels of workplace stress and strain. One study (Kelly, 2002) has found that high anxiety individuals spend more time performing tasks. High levels of Neuroticism have been shown to negatively relate to self-efficacy motivation, contributing to the belief that one is incapable of successfully performing a given activity (Parks and Guay, 2009). Others (Barrick, et al., 2003; Furnham, 2008) have reported that neurotic employees generally have low levels of motivation at work, low levels of self-confidence, are prone to work stress and depression, and are frequently distracted by worries.

Based on such data, it is clear that neurotic people are unfit to be successful police officers. This is mainly since the police profession is very stressful, dangerous, and requires individuals with high levels of motivation, self-confidence, and the capacity to make quick and accurate decisions, particularly in difficult and stressful circumstances. Therefore, evaluating applicants on Neuroticism traits could serve as an important

mechanism for identifying candidates that may be unable to maintain their responsibilities in the police environment.

Finally, Extraversion has been found to be a significant predictor of job performance, particularly for professions requiring social skills, including police work (Mount, et al., 1994; Piedmont and Weinstein, 1994; Smithikrai, 2007). Extraversion appears to be important for law enforcement work since it primarily involves interacting with people (Burbeck and Furnham, 1984). Although Agreeableness and Openness to Experience have been found to be valid predictors of job performance in some occupations (Kaczmarek and Packer, 1996; Loveland, et al., 2005; Nikolaou and Robertson, 2001; Nikolaou, 2003), their validity in predicting police performance has not been consistently supported (Detrick and Chibnall, 2006). Therefore, further studies in police selection using normative personality trait tests, primarily ones based on the FFM, are needed, particularly in Arabic-speaking contexts. The current research, consequently, aims to fill this gap in knowledge.

2.2.5.2 Personality and Training Performance:

Personnel selection should not only focus on selecting individuals with qualities necessary to be successful at work, but it also should focus on hiring people who would benefit from academic and training courses (Ainsworth, 2002). In other words, although employees are selected on the basis of their abilities, traits, and skills, they also need to be trained during their working lives, in order to retain old skills, develop new ones, and to acquire new concepts, rules, or attitudes that could contribute to improving their job performance (Colquitt and Simmering, 1998; McKenna, 2006).

Training is also extremely crucial for those working in law enforcement agencies. First, police training programs are important for providing the knowledge and skills required to prepare new recruits to be effective police officers after graduating and joining the force. Second, officers need to be trained periodically throughout their working lives since police work involves a multiplicity of different tasks and, therefore, police need a wide range of knowledge, abilities, and skills (Howitt, 2002); officers need to be informed of changes in procedure and laws (Ainsworth, 2002); and continuing with learning and training is a critical part of police organisations, in order to meet the challenges of a

rapidly changing environment and the development of organised crime, terrorist crimes, and cyber crimes (Al-Zwaibi, 2005). Thus, in processes of police selection it is essential to consider applicants who not only will perform effectively at work, but also who will benefit from academic and training programs provided by the Police Academy prior to joining the force. Such qualities would aid police organisations through identifying recruits at risk of failure or of showing poor performance at the Academy, and thus help the police force in selecting applicants who would be likely to take full advantage of training courses offered.

Previous meta-analytic studies on the relationship between personality and training performance show that: Conscientiousness, Neuroticism, and Openness to Experience are valid predictors of training proficiency (Barrick and Mount, 1991; Hough, et al., 1990; Salgado 1997); Extraversion has been found in some studies to be a valid predictor of training performance (Barrick and Mount, 1991); and a relationship between Agreeableness and training proficiency has been reported in other studies (Salgado, 1997). In another meta-analytic review, Barrick, et al. (2001) found similar results in that Conscientiousness, Openness to Experience, and Extraversion were significant predictors of training performance. Similar results have been shown in a recent study by Skyrme, et al. (2005), who found that four of the five factors, namely Openness to Experience ($r = .42$) Conscientiousness ($r = .28$), Emotional Stability ($r = .26$), and Extraversion ($r = .25$) were significantly correlated with training performance.

Within academic settings, recent research has suggested that personality traits are effective in predicting academic performance (Di Fabio and Palazzeschi, 2009). One study (Furnham, et al., 2003), a longitudinal project using a sample ($n = 93$) of British university students, investigated the relationship between the Big Five personality traits and academic performance (examination grades) as well as seminar performance (essay marks, behaviour in class, and attendance records). This study found that Conscientiousness (positively) and Extraversion (negatively) are significantly associated with both criteria. Neuroticism has been found in another study to be negatively related to academic performance (Chamorro-Premuzic and Furnham, 2003). Moreover, Dollinger and Orf (1991) found Conscientiousness and Openness to Experience to correlate significantly with academic outcomes. Busato, et al. (2000) also found in a sample of first-year psychology students ($n = 409$) that Conscientiousness was a

consistent positive predictor of academic success. These empirical results led to the belief that personality traits may play a significant role in predicting success in training and academic performance, particularly the traits of Conscientiousness (positively) and Neuroticism (negatively).

Of particular interest for the present study are Black's (2002) findings on the associations between the Big Five personality traits and Police Academy performance. By using the NEO Personality Inventory (NEO PI-R; Costa and McCrae, 1992) on a sample of police recruits in New Zealand ($n = 284$), Black found a significant correlation between Conscientiousness, Neuroticism, Extraversion, and a global test of performance that included academic performance, physical performance, firearms performance, and driving skills. Conscientiousness was found to add significant incremental validity above cognitive ability in predicting global training performance, attaining a multiple correlation of .42. In another investigation, Detrick, et al. (2004) examined the validity of the Big Five personality traits in predicting academic, firearms, physical, and disciplinary aspects of Police Academy performance, as well as Academy graduation in a sample of police officers in the USA. They found that: (a) officers higher in Values (a facet of the Openness to Experience domain) and lower in Excitement-Seeking (a facet of the Extraversion domain) did better academically; (b) recruits lower in Anxiety (a facet of the Neuroticism domain) had higher firearms skills; (c) officers lower in Deliberation (a facet of the Conscientiousness domain) and Fantasy (a facet of the Openness to Experience domain) and higher in Activity (a facet of the Extraversion domain) did better in physical training; (d) recruits higher in Excitement-Seeking (a facet of the Extraversion domain), Ideas (a facet of the Openness to Experience domain), and lower in Values (a facet of the Openness to Experience domain) predicted disciplinary problems; and (e) non-graduating recruits scored higher on Depression and Impulsiveness (facets of the Neuroticism domain), and lower on Competence (a facet of the Conscientiousness domain). These results suggests that personality traits are a valid predictors of police training performance.

Moreover, in an earlier study, Cortina, et al. (1992) found that Conscientiousness, Neuroticism, Extraversion, and Agreeableness correlated significantly with training success, in a sample of 314 police officers. These findings show that, on the whole, there is agreement that personality traits are valid predictors of academic and training

performance amongst police officers. More specifically, individuals high in Conscientiousness and low in Neuroticism show high levels of performance in the Police Academy, particularly with respect to academic achievement and overall success in training. Therefore, since training is very important to law enforcement agencies, selecting applicants high in Conscientiousness and low in Neuroticism could help recruits benefit from academic and training programs provided at the Police Academy, which in turn could improve their performance in actual police jobs after their graduation.

2.2.5.3 Personality and Job Stress

The police profession is usually pictured as one of the most dangerous and stressful occupations (Cattle and Ford, 2000; Hogg and Wilson, 1995; Hollin, 1989; Richardsen, et al., 2006). Several researchers have reported an increase in stress amongst police officers over the last two decades as a result of recent terrorist attacks (Bartol and Bartol, 2004; Ransley and Mazerolle, 2009). Feldman (1993: 101) has defined stress as “physiological and/or psychological strain, usually lasting for a period of time, which threatens the ability of a person to go on coping with a given situation.” Although many other jobs are often characterised as stressful, such as the work done by teachers and doctors (Al-Noshan, 2003), stress in the police force may be different and more dangerous for a number of reasons: (a) the impacts of stress on police officers are usually delayed, and can result in burnout or post traumatic stress disorder (Ainsworth, 2002; Violanti and Aron 1995); (b) there is no steady source of stress, in that police officers go from periods of absolute calm to periods of high action with sudden events and unexpected tasks (Hollin, 1989; Tawaiha, 2004); and (c) the variety of risk factors that can lead to police stress result in some police forces being characterised by semi-military structures and environments that support authoritarian approaches to leadership (Feldman, 1993; Ganster, et al., 1996; Rabee, et al., 2004).

A growing body of research has investigated the influences of police stress on both organisations and officers. On one hand, police officers’ exposures to high levels of stress are more likely to give rise to high blood pressure, marital problems, and alcohol abuse. Additionally, continuous job stress often results in burnout, which can lead to

cynicism, loss of motivation, reduced self-esteem, and even chronic disease (Al-Noshan, 2003; Manzoni and Eisner, 2006; Mayhew, 2001; Toch, 2002). Bannish and Ruiz (2003) have reported that an overload of stress may lead some police officers to drift towards deviant behaviour. One study (Arter, 2008), for instance, found amongst a sample of police officers those officers who reported higher levels of job-related stress also reported a larger number of deviant responses to such stress, such as rude behaviour towards citizens, excessive use of force, and misfeasance. Suicide is also one of the more serious implications of police work stress (Feldman, 1993; Pienaar, et al., 2007; Storch and Panzarella, 1996; Violanti, 1997). Job stress can also negatively affect the quality of police work, due to increased absenteeism, sickness absences, resignations from the force, work accidents, and aggressive behaviour (Al-Twaim, 2005; He, et al., 2002; Kapardis, 2003; Lynch and Tuckey, 2004; Mayhew, 2001). Research by Al-Dossary (2005) has also found negative correlations between work stress and organisational commitment, as well as job satisfaction. Such findings illustrate the importance of studying the problem of police stress since it may negatively impact the performance and well being of officers.

With respect to the factors underlining job stress amongst police, research in both Western and Middle Eastern countries, including the UAE (see Ainsworth, 2002; Al-Twaim, 2005; Amaranto, et al., 2003; Ganster, et al., 1996; Tawaiha, 2004) has categorised sources of law enforcement stress into three groups. First, findings of previous police studies (Al-Dossary, 2005; Collins and Gibbs, 2003; Ganster, et al., 1996; Violanti, 1997; White, et al., 1985) have found that organisational stressors are the most common sources of police stress, including: a lack of confidence in management; continuous organisational changes; poor pay; bureaucracy; excessive paperwork; insufficient training, lack of essential equipment; limited opportunities for promotion; lack of participation in decisions, and lack of administrative support.

Second, external stressors that may increase the levels of stress on police officers include: poor representation by the media, and political interference and frustration with the criminal justice system (Al-Noshan, 2003; Lynch and Tuckey, 2004). Disparaging public attitudes and alienation from an often hostile public have also been reported as sources of stress for law enforcement officers (Bartol and Bartol, 2004; Hogg and Wilson, 1995). Moreover, according to Howie (2007), the threat of terrorism has become

an external factor, which possibly increases the level of job-related stress in many different organisations, including the police. Finally, police work by its nature is highly stressful. Stressors related to the duties required of police officers may include shift work, physical threats, and exposure to danger (Al-Twaim, 2005; Amaranto, et al., 2003; Bartol and Bartol, 2004; Mayhew, 2001; White, et al., 1985). Law enforcement officers also suffer stress through constant exposure to corruption and riots, serious injury and death, bombings, and critical incidents such as being shot at or shooting at someone (Howitt, 2002; Kapardis, 2003; McCafferty, 2003; Storch and Panzarella, 1996; Violanti, 1997).

Another variable in the stressor-strain relationship is the existence of poor coping strategies. According to Pienaar, et al. (2007), poor coping skills appear to be a considerable predictor of stress experienced in police work. Folkman and Lazarus (1984) have pointed out that coping refers to cognitive, behavioural, or perceptual responses that are employed to avoid, manage, or control situations that could be regarded as stressful or difficult. They define coping as “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (1984: 141).

There are a number of ways to classify coping strategies. A recent study has revealed more than 100 coping classification methods (Skinner, et al., 2003). Nevertheless, most approaches have distinguished between: (a) Adaptive Coping strategies (sometimes called Problem Focused Coping) that emphasise developing specific strategies to face and actively reduce sources of stress, such as generating and planning solutions and then following them; and (b) Maladaptive Coping strategies (sometimes called Emotion Focused Coping) that intend to minimise negative emotions through strategies such as denial, emotional expression, and avoidance (Connor-Smith and Flachsbart, 2007; Folkman and Lazarus, 1984; He, et al., 2002). Furnham (2005) has argued that whether or not people, particularly at work, experience stress, is largely dependent upon their use of coping strategies. Thus, individuals who can effectively use such strategies, particularly Adaptive Coping ones, are less likely to suffer from stress.

It has been argued that employees experience stress as a normal part of their jobs, but that some workers experience more stress than others. This suggests that individual differences play a role in how people perceive and deal with occupational stress

(Cimbura, 1999). In other words, although job characteristics (such as role ambiguity, chronically difficult work, high demands, role conflicts, and low resources) can be factors that cause job stress, why two employees in very similar works and environments may report different levels of stress and exhaustion. Chan (2004: 27) has proposed that, "stress and symptoms of burnout are caused by a combination of environmental as well as individual factors". Consequently, since reactions to stress are often influenced by an individual's personality (Fincham and Rhodes, 2005; Hogg and Wilson, 1995), a considerable number of researchers (Al-Noshan, 2003; Lau, et al., 2006; O'Driscoll and Cooper, 2002) have reported that personality traits are an important element in job-related stress resistance, and the role of individual differences in the ability to cope with stress has significant implications for the selection of individuals better suited to specific kinds of working patterns. Therefore, one possible way for police forces to reduce the negative effects of job stress is to select applicants who are less prone to work stress, and who will be able to cope successfully with pressure resulting from police work.

Several studies have examined the relationship between stress and personality traits in general (Grant and Langan-Fox, 2007), and law enforcement officers' personalities in particular (Lau, et al, 2006). Researchers have attempted to determine the traits of police officers who are more prone to experiencing stress on the job and/or who are less able to cope with stress. For example, one study (Mostert and Rothmann, 2006) of 1794 police officers in South Africa reported that high levels of Neuroticism (indicating an individual who tends to have unreasonable ideas, a poor ability to cope with stress, and a low ability to control impulses), and low Conscientiousness (demonstrating low perseverance, achievement-orientation, and dependability) were present amongst police officers vulnerable to work stress and burnout. Lau, et al. (2006) also conducted a comprehensive survey of 3272 Norwegian police workers at all ranks. They found that personality traits characterised by high values of Extraversion and low values of Neuroticism, reported lower values on perceived stress compared to others. They also found that personality traits sharing a combination of high Conscientiousness and high Extraversion had higher values in Active Coping strategies.

Another study by Bishop, et al. (2001) investigated the relationship between coping styles as measured by the COPE (Carver, et al., 1989) and personality traits as measured by the NEO PI-R (Costa and McCrae, 1992b) in a sample of police officers (n = 243).

The results demonstrated that: (a) problem solving, consisting of active coping, restraint coping, the suppression of competing activities, planning, and active social support, was positively associated with Conscientiousness; (b) avoidance coping, which included behavioural and mental disengagement, focusing on the venting of emotion and denial, was found to be positively related to Neuroticism but negatively related to Conscientiousness; and (c) Extraversion, Agreeableness, and Openness were found to be positively related to positive reappraisals (for example, turning to religion, seeking emotional social support, embracing positive reinterpretations and growth, and acceptance of the problem). Similar findings were also reported by Burke, et al. (2006), who found that Neuroticism had significant positive relationships with overall levels of stress; Neuroticism was also associated positively with the use of focus, the venting of emotions, and denial; and all three disengagement strategies were associated negatively with active coping, positive reinterpretation, planning, restraint, and acceptance. Conscientiousness had significant positive associations with the use of active coping, planning, and positive reinterpretation, and significant negative correlations with the use of denial and behavioural and mental disengagement.

Although much research indicates a strong relationship between personality dimensions, coping, and job stress, the great majority of these investigations have been conducted in North America and Europe, which makes it difficult for these results to be generalised to other cultures, particularly in light of the vast differences between cultures in terms of social behaviour and responses to events and situations (Bishop, et al., 2001). In other words, there have been several studies on stressors and coping strategies amongst police in Western cultures, such as those generally high in individualism and emphasising individualistic orientations such as achievement, personal responsibility, and the use of personal initiative with more inward concerns based on the self and the family (McKenna, 2006). However, this type of research is more limited in Arabic-speaking contexts, or those high in collectivist mentalities emphasising group unity, cooperation, consultation, harmony, conventionality, and interdependence (Rees and Althakhri, 2008). Accordingly, since it has been argued that culture could influence coping strategies and their relation to stress (see Morash, et al., 2008), making research findings based on Western cultures applicable to Arabic cultures is questionable.

To summarise, these results suggest that police officers scoring high in Neuroticism, low in Conscientiousness, and low in Extraversion are more susceptible to stressors and experience more strain. A number of studies, accordingly, have argued that police forces should endeavour to employ individuals who have high emotional capacities (or high levels of Emotional Stability, Extraversion, and Conscientiousness) to cope with the demands and pressures of police functions (Bishop, et al., 2001; Pienaar, et al., 2007; Qatan, 2003). Individuals who are high in Neuroticism and low in Conscientiousness traits are more likely to see events as stressful, and less likely to effectively cope with job stress and thus, may be unsuitable for police work since they are more likely to respond negatively to stressful situations. Therefore, the employee selection process based on these traits may serve as an important tool in reducing the incidence of psychological strain amongst police officers resulting from highly stressful work. Nevertheless, there is a need for further research investigating and extending previous studies of the relationship between personality dimensions, coping, and job-related stress amongst police officers in Western cultures, as compared to those in Arabic cultures.

2.2.5.4 Personality and Counterproductive Work Behaviour

Counterproductive work behaviour (CWB) has emerged as an important area of concern amongst researchers and managers from different organisations and countries (Spector, et al., 2006). It is perhaps one of the most serious organisational problems that negatively affect organisations and employees' well being (Mount, et al., 2006). Therefore, several researchers (Cullen and Sackett, 2003; Miles, et al., 2002; Mount, et al., 2006; Rotundo and Sackett, 2002) have suggested that CWB is an important class of behaviour representing one component of employees' job performance. CWB can be defined as any volitional behaviour damaging or intending to harm organisations or people in organisations, such as aggression, hostility, sabotage, theft, and withdrawal (Lau, et al., 2003). The study of CWB began by investigating specific acts, such as absenteeism and theft, and developed into an examination of the pattern of relationships between behaviours, such as production deviance and property deviance. Property deviance refers to behaviours that involve the misuse of company properties, such as theft. Production deviance, in contrast, includes behaviours that violate work norms, such as lateness or slow working rates (Hollinger and Clark, 1983).

Robinson and Bennett (1995) proposed a framework for classifying CWB, by suggesting two dimensions for deviant work behaviours: interpersonal versus organisational deviants, and minor versus serious deviants. The first dimension shows the extent to which deviant behaviours are harmful to employers (organisational deviants, such as those who damage or misuse company properties), or harmful to other people in the organisation (interpersonal deviants, such as those engaging in harassment, playing pranks, or verbal abuse). The second dimension representing deviant behaviours ranges from minor to serious offences. Spector, et al. (2006) has reported five dimensions of CWB: (a) abuse that consists of physically or psychologically harmful behaviours directed toward employees and other people, such as making nasty comments, threats, or undermining someone's ability to work effectively; (b) production deviance, reflecting a purposeful failure to perform job tasks and responsibilities effectively as they are supposed to be performed; (c) sabotage, reflecting acts that intend to deface or destroy physical property belonging to an organisation; (d) theft by employees from an organisation or co-workers; and (e) withdrawal, consisting of acts that limit the amount of time working to less than what is required by the employer, such as arriving late or leaving early, absences, and taking longer breaks than authorised.

For at least two reasons, organisations should take into consideration the problem of CWB particularly that of interpersonal deviance and do something about it. An organisation has a social responsibility to provide a good quality of working life for its employees (Armstrong, 2003). Laws also have ensured the occupational health and safety of employees at work (Bartol and Barto 1, 2004; Fletcher, et al., 2000). CWB, on the other hand, has several harmful influences, not only on victims, but also on organisations (Beswick, et al., 2006). First, amongst workers, violence can generate post-traumatic stress disorder (Agervold and Mikkelsen, 2004; Fletcher, et al., 2000; LeBlanc and Barling, 2004). Briggs, et al. (2004), for example, found that emotional and/or health effects are some of the most reported results of experiencing aggressive behaviours at work. Second, amongst organisations, CWB takes millions out of annual budgets. For instance, 75% of employees have reported having stolen from their organisations at least once, which can cost organisations between \$6 and \$200 billion annually, and may account for 20% of failed businesses (Mount, et al., 2006).

Moreover, CWB can harmfully affect working environments by generating fear, low morale, depression, and anger. This may result in low self-esteem, low self-confidence, poor organisational relations, lower levels of effectiveness, higher rates of employee turnover, absenteeism, and lawsuits (Beswick, et al., 2006; Briggs, et al., 2004; Furnham, 2005; Grandey, et al., 2004; LeBlanc and Barling, 2004; Mount, et al., 2006; Perrone, 1999). Overall, a significant negative relationship between job performance and CWB has been found in previous research (Sackett, 2002).

Hershcovis, et al. (2007: 229) have reported that “individuals do have stable predispositions to engage in certain behaviours..., and that the manner in which an individual interprets a situation can vary as a function of these stable individual differences..., suggesting an important role for individual differences in predicting workplace aggression.” Research has indicated that there are some individual variables that could explain why some people are more likely to behave aggressively in the workplace than others. Personality dimensions can play a role in defining people who are at risk of engaging in CWB, particularly in frustrating or stressful situations. In other words, Conscientiousness, emotional stability, and Agreeableness have been found in a number of studies to be predictors of the absence of deviant behaviours at work (Arrigo and Claussen, 2003; Fincham and Rhodes, 2005; Jones, 2008; Ones and Viswesvaran, 2001).

More specifically, when a victim of CWB is accounted for, previous research has shown that Agreeableness best predicts interpersonal CWB, and Conscientiousness and Neuroticism best predict CWB directed toward an organisation (Berry, et al., 2007; Mount, et al., 2006). Conscientiousness generally has been found to be the strongest predictor of CWB. For instance, Salgado (2002) conducted a meta-analysis investigating the relationship between the FFM and CWB. He found that Conscientiousness ($r = -.26$), and Agreeableness ($r = -.20$) were valid predictors of deviant behaviours (for example, theft, aggression, and substance abuse). A recent meta-analysis by Dalal (2005) based on 25 studies and a sample size of 6,106, also showed that Conscientiousness was negatively associated with CWB (uncorrected correlation $-.29$).

Furthermore, in a recent experimental study, Jensen-Campbell, et al. (2007) found that Conscientiousness was negatively associated with anger, and also moderated the associations between anger and aggression. Similar findings were reached by Sarchione,

et al. (1998), who discovered amongst a sample of law enforcement officers that Conscientiousness was a valid predictor of dysfunctional job behaviours (for example, sexual harassment, theft of agency property, and verbal violence). They argued that individuals scoring low on the Conscientiousness factor were characterised as careless, impulsive, and irresponsible, as well as more prone to risk-taking and disobedient behaviours. They also tended to be unpredictable and excitement seeking, making them more likely to misbehave at work.

The trait of Agreeableness is defined as consisting of kindness, trust, and empathy, as opposed to distrust, selfishness, and hostility. Individuals high in Agreeableness traits are considerate, honest, forgiving, cooperative, and mild mannered. Low scorers on Agreeableness tend to be irritable, intolerant, argumentative, unsympathetic, and tough-minded (Driskell, et al., 2006; Fincham and Rhodes, 2005). Many researchers, accordingly, have argued that Agreeableness is one of the best predictors of CWB, particularly for interpersonal deviance. A number of studies (Colbert, et al., 2004; Mount, et al., 2006; Sackett, et al., 2006) have strongly supported this argument by indicating that employees who are agreeable are less likely to exhibit deviant behaviours, particularly against other people within an organisation.

Moreover, Extraverted people exhibit warmth, sociability, assertiveness, and social interest. Thus, individuals higher in Extraversion may be less likely to behave aggressively (Fincham and Rhodes, 2005; Jensen-Campbell, et al., 2007). This argument has been supported by other studies in the area of human aggression. For example, research has found that the aggression trait (as measured by the Aggression Questionnaire, Buss and Perry, 1992) was negatively correlated with Extraversion, Agreeableness, and Conscientiousness, dimensions and positively correlated with Neuroticism (Sharpe and Desai, 2001). Kasten and Dayan (2006) also found in a sample of police officers that aggressiveness had the highest correlation with negative future conduct taken on the job and disciplinary complaints.

Upon closer examination of this literature, several limitations, however, may be revealed. First, the most proximal limitation of some previous research (for example, Jones, 2008) concerns the sample in that it depended mainly on students and part-time workers. The variety of certain demographic and organisational variables (age, marital status, weekly hours worked, and job tenure) associated with a sample of students is more likely to be

different from those that would be found amongst a general population of working adults. This fact gives rise to concerns about the generalisability of these results to other working groups. Therefore, previous findings should be tested using samples that are more representative of the working population, especially in police contexts.

Another limitation is that much previous research (for example, Mount et al., 2006) on personality/CWB relationships depends only on self-reported measures of CWB. The most threatening problem associated with self-reported measures of CWB is that it requires participants to report behaviours that are harmful to an organisation and to others. Therefore, it is possible that respondents tend to underreport conduct that could be seen as illegal or socially unacceptable (Hammond, 2008; Jones, 2008). Accordingly, more research is required to support the validity of the FFM in controlling deviant behaviours amongst police officers, particularly in Arabic-speaking contexts and by using objective measures of CWB.

Overall, these results suggest that the FFM can be used to predict behaviours such as CWB, which are considered to be detrimental to an organisation or to employees at work (Shelton, 2004). More specifically, highly neurotic, highly introverted, and less conscientious police officers may be at risk of being violent at work since they might be less able to cope with stress, or because of their lack of emotional stability or effective communications skills. The dimensions of Extraversion and Conscientiousness have been found to be positively correlated with successful and good interpersonal relations amongst employees at work, and the dimension of Neuroticism has been found to be negatively correlated with adequate interpersonal relations at work (Piedmont and Weinstein, 1994). Thus, to prevent or reduce the possibility of CWB from occurring within the police force, officers should be self-confident, good communicators, dependable, emotionally controlled, resistant to stress, and have high levels of tolerance for personal frustration, as well as high levels of organisational commitment (Black, 2000; Detrick and Chibnall, 2006).

Police organisations, accordingly, should perhaps pay attention to the use of personality tests based on the FFM as an important part of their personnel selection procedures for identifying individuals more suited to police work, those who are less likely to get stressed, angered or frustrated easily, and those who may consequently be less prone to aggressive workplace responses or to engaging in CWB. In the UAE, for example,

personality tests are not used in police officer selection. Considering these findings, this lack of personality assessment during the selection process may contribute to indiscipline problems and poor relationships amongst officers reported by police agencies in the UAE, as discussed in the background chapter.

2.3 Emotional Intelligence

2.3.1 Introduction

In the last fifteen years a great interest has been shown about the topic of emotional intelligence (EI), as stimulated by Goleman's (1995) book, and in particular the claim that EI explains a higher amount of variance in individual success than IQ (Dulewicz, et al., 2003). The first formal definition and empirical model of EI was formulated and revised by Salovey and Mayer (1990), who defined EI as "the ability to monitor one's own and others' emotions, to discriminate among them, and to use the information to guide one's thinking and actions" (1990: 189). According to Zeidner, et al. (2004), this definition is perhaps the most widely accepted definition of EI, since it identifies emotional information processing as an essential precursor of emotional regulation.

The idea that there are more ways of measuring intelligence than with an IQ test, nonetheless, is not a new one (Hedlund and Sternberg, 2000). The concept of EI can be traced to the research of Thorndike (1920), followed by the work of Moss and Hunt (1927), Vernon (1933), and Gardner (1983), who all discussed and developed the related concept of social intelligence (see Carmeli and Josman, 2006; Farag, 2007). Thorndike, for instance, proposed a theory of intelligence that divided an individual's mental capacity into three parts: (a) the ability to understand and manage ideas (abstract intelligence); (b) the ability to understand and manipulate concrete objects (mechanical intelligence); and (c) the ability to understand and manage people, and to act or behave wisely in social contexts (social intelligence) (Armstrong, 2007; Carmeli and Josman, 2006). Moreover, Gardner (1983) proposed a theory of multiple intelligences, which included two non-cognitive intelligences, namely an intrapersonal and an interpersonal intelligence. Intrapersonal intelligence, on one hand, is the ability to identify and understand oneself, to express feelings, to use them as a guide for behaviours, and to behave in ways that are suitable to one's goals, needs, and abilities. Interpersonal

intelligence, on the other hand, is the ability to understand other people, particularly their intentions, motivations and desires, and to act on such an understanding (Armstrong, 2007; Hedlund and Sternberg, 2000).

As indicated in the introduction chapter, EI has generated much research concerning its benefits in the workplace, however, only a few studies have examined the role of EI in police organisations (Aremu and Tejumola, 2008). One way to determine the relevance of EI to the police occupation would be to identify the commonalities between the specific skills that police agencies most value in their officers, and to consider the extent to which EI is related to these areas. Therefore, the following sections aim to explore various issues surrounding EI, including: models and means of measuring EI, evidence regarding the links between EI and a number of workplace behaviours (job performance, job stress, and CWB), criticisms of EI, and whether or not EI is important and necessary for police work.

2.3.2 Models of Emotional Intelligence

Since 1990, several concepts, models, and measures of EI have emerged. However, several authors in this field (Alkhedr, 2006; Mayer, et al., 2008) have categorised EI models into two main approaches, including: the ability approach, as seen in the Salovey and Mayer model, and the mixed approach, as seen in the Bar-On model and the Goleman model. In the current review, these two approaches will be reviewed.

2.3.2.1 Ability Models of Emotional Intelligence

Salovey and Mayer (1990) first introduced the concept of EI as a type of social intelligence that was independent from general intelligence. They argued that the mental processes involving emotional information included the appraisal and expression of emotion, the regulation of emotion, and the utilisation of emotions. This model was revised by Mayer and Salovey (1997) to emphasise the cognitive components of EI, and to emphasise its potential for emotional and intellectual growth (Gardner, 2005). Thus, Mayer and Salovey (1997) proposed a four-branch model of EI that views it as operating

across both cognitive and emotional systems (see Table 2.3). They define EI as "the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth" (1997: 10).

Table 2.3 Mayer and Salovey's (1997) model of emotional intelligence

Dimension	Description
Perception, appraisal, and expression of emotion	The ability to recognise emotion in others' facial and postural expressions
Emotional facilitation of thinking	The ability of emotional events to assist thinking
Understanding and analysing emotions and employing emotional knowledge	The ability to analyse emotions, recognise their possible trends over time, and understand their outcomes
Reflective regulation of emotions to promote emotional and intellectual growth	This branch reflects the management of emotions in the context of an individual's self-knowledge, goals, and social awareness

Mayer, et al. (2004) have claimed that the order of the branches represents the degree of integration between emotional ability and an individual's overall personality. They have also argued that their model shows EI operating across both cognitive and emotional systems in a mainly unitary approach, though it is still sub-divisible into four branches, as indicated in Table 2.3. The ability model of EI is hierarchically organised. In other words, the complexity of emotional ability increases from lower to higher levels, and thus, an individual completes a lower branch before progressing to the next stage. Those who have higher levels of EI are supposed to progress through these stages more quickly than those with lower levels of EI (Lindebaum, 2008).

Furthermore, to measure EI in light of their model, Mayer, Caruso, and Salovey (1999) developed the Multifactor Emotional Intelligence Scale (MEIS). However, the MEIS suffered from low reliability and scoring problems on a number of subscales. Therefore, the Mayer, Salovey, and Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, & Caruso, 1999) was developed as a revision. Both the MEIS and MSCEIT were developed in light of intelligence test development methods. The MSCEIT comprises

eight tests that consist of 141 items designed to yield an overall EI score as well as the four branches. Moreover, two methods have been used for scoring. The general consensus method states that the correct answer is the answer of the majority opinion of respondents from the same culture. For instance, if 60% of the normative sample selected "B" as a response, this score would yield a score of .60 for that item. The second method that has been used to determine the most correct answer in the MSCEIT is expert scoring, which involves deciding the correctness of an answer by comparing it to the majority judgment of experts in the field.

Another measure that has been based on ability models of EI is a self-reported emotional intelligence test (SREIT) developed by Schutte, et al. (1998). This test uses Salovey and Mayer's (1990) model of EI as its conceptual basis. It consists of 33 items with three subscales: EI-Appraisal and expression of emotions (13 items), EI-Regulation of emotions (10 items), and EI-Utilisation of emotions (10 items). All items range from 1 (strongly disagree) to 5 (strongly agree), and thus scores may range from 33 and 165, with higher scores showing higher levels of emotional intelligence. Several studies have examined the psychometric properties of these two measures (see Table 2.4).

Table 2.4 Summary of psychometric properties of the MSCEIT and the SREIT

Psychometric properties		The MSCEIT (Mayer, et al. 1999)	The SREIT (Schutte, et al. 1998)
Reliability	Internal consistency	Moderate	High
	Test retest	Moderate	Moderate
Validity	Content validity	Moderate	Moderate
	Face validity (for staff and managers at work)	Low	Moderate
	Convergent Validity (with intelligence measures)	High	Low
	Divergent/Discriminate Validity (from personality measures)	High	Low
	Factor structure	Supported	Not supported
	Predictive validity at work	Low	Moderate
Others	Measure type	Performance-based	Self-reported
	Susceptible to faking good	No	Yes
	Scoring procedures	Typical	Standard
	Difficulty of administration	Yes	No

Source: Brackett and Geher (2006), Conte (2005), Livingstone and Day (2005), McEnrue and Groves (2006), Muya (2009), and Tett, et al. (2005).

It clear from the table that both tests have their strengths and weaknesses. For example, the MSCEIT is not susceptible to “faking good,” since it is based on the idea of measuring how well individuals perform on tasks such as solving emotional problems and dealing with emotional circumstances, rather than simply using self-judgment. Yet while it has convergent and divergent validities, its reliability and usefulness at work are questionable (Føllesdal and Hagtvet, 2009; Joseph and Newman, 2010). In contrast, the SREIT has good reliability and shows good criterion-related validity at work, such as job performance (Carmeli and Josman, 2006) and organisational citizenship behaviour (Korkmaz and Arpac, 2009), but it suffers from significant overlaps with the Big Five personality traits, and it is susceptible to socially desirable responding (Joseph and

Newman, 2010). Consequently, several investigations (for instance, Brackett and Geher, 2006; McEnrue and Groves, 2006) have highlighted the importance of conducting further research on the psychometric properties of these measures, in order to develop them.

The main advantages of Mayer and Salovey's (1997) model of EI are that it is well conceptualised and it has practical descriptions of the construct (Daus and Ashkanasy, 2005). Evidence from many studies suggests that the ability model appears to be distinct from existing personality traits, and that it is moderately related to other intelligences but not redundant with them (Van Rooy, et al., 2005). Alkhedr (2006), for instance, developed an ability measure of EI based on Mayer and Salovey's (1997) model, and found support for its convergent and divergent validities within an Arabic-speaking context (n = 265). In another recent study of an Arabic-speaking sample in Sudan (n = 410), Osman and Kaleefa (2009) developed a self-reported measure of EI based on Mayer and Salovey's (1997) model, and found EI to be discriminated from other psychological constructs (personality and cognitive ability) but still affiliated with mental abilities. The authors concluded by supporting the ability model of EI and the possibility of using self-reported measures to evaluate it. These studies appear to support Mayer and Salovey's (1997) model of EI from cross-linguistic and cross-cultural perspectives. Therefore, this model appeared to provide a new psychological construct that could be measured and that could show incremental validity in predicting a number of life outcomes, such as relationship satisfaction (Mayer, et al., 2008) supervisor ratings of job performance (Carmeli and Josman, 2006), academic performance (Di Fabio and Palazzeschi, 2009), leadership effectiveness (Rosete and Ciarrochi, 2005), and socially deviant behaviour and alcohol use amongst males (Brackett, et al., 2004).

The major criticisms of this model have centred around its methods of measurement. The MSCEIT has been criticised because of its scoring methodology (Conte, 2005), and its low face validity for managers and employees at work (McEnrue, and Groves, 2006). First, the method of consensus and expert scoring have been subject to significant criticism, such as how 'experts' were selected when determining the correct answers for different items. Consensus scoring methods were also in "contrast to traditional measures of intelligence where an objective measure of truth is considered" (Matthews, et al., 2002: 186). Criticisms of the MSCEIT also include the charge that consensus and expert

scoring appear to be distinct and in some cases independent from each other; and are different in their relationships with sex and ethnic groups (Roberts, et al., 2001). Identifying the correct answer for higher-order processes, such as emotion regulation, are also problematic, since the correct decisions will differ according to variations in cultural norms and personality (Warwick, et al., 2010).

Moreover, Brody (2004) has claimed that as a result of its scoring method, the MSCEIT tests emotional knowledge but not the ability to perform tasks associated with the knowledge evaluated. He also has criticised predictive studies using the MSCEIT by arguing that most of these studies: (a) have not been published in peer-reviewed journals; (b) have not controlled for intelligence and personality traits; (c) rely on self-reported measures for the dependent variable investigated; and (d) have sometimes reported in terms of the total score of EI and sometimes reported in terms of one or more of the branch scores. This increases the likelihood of incorrectly reporting significant associations, since there are five different test scores that can relate to any dependent measure.

Furthermore, according to Føllesdal and Hagtvet (2009), results of the MSCEIT do not differentiate adequately between higher levels of EI, since an individual will achieve high scores when answering easy questions correctly, but low scores when answering difficult questions correctly. They have argued that "the modal response for an easy question will likely have a high consensus value, as most people will detect the correct response. The modal response for a difficult question, however, will likely have a low consensus value as many alternative responses might seem plausible, making it more difficult to choose. Thus, a correct response on a very easy item..., will contribute more to the EI score, and thus reflect more EI, than a correct response on a difficult item. An incorrect response on an easy item, however, will imply a loss of an otherwise large increase in the EI score" (2009: 95).

Second, the content and face validity of the MSCEIT items may show low validity for managers and employees at work, since several items appear to be unrelated to workplace behaviours. More specifically, the content of the test makes it unclear that scores are associated with performance or any other important outcomes at work. For instance, asking people to identify the extent to which an emotion such as surprise represents three feelings (cold, blue, sweet) appears irrelevant to the EI of managers and

other employees at work (McEnrue, and Groves, 2006). Taken together, although the ability approach to EI is distinct, has shown adequate psychometric properties, and demonstrated evidence of both predictive and incremental validity, available data does not recommend the use of the MSCEIT at work, particularly for personnel selection (Joseph and Newman, 2010; Van Rooy, et al., 2005).

2.3.2.2 Mixed Models of Emotional Intelligence

Several models can be categorised under mixed models of EI, which conceptualise EI as a combination of motivational, cognitive, and affective constructs (Whitman, 2009). However, the Goleman model and the Bar-On model are the most significant contributions to the field of EI (Dardeer, 2004).

2.3.2.2.1 The Goleman Model of Emotional Intelligence

Goleman (1995) pointed out that his interest in EI was largely influenced by the work of Salovey and Mayer (1990) and Mayer and Salovey (1993). His model is based on the belief that IQ is not sufficient for predicting success in life. He claimed that EI explains about 80% of variance in individual success in life. Goleman (1998) defined EI as "the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and our relationships" (1998: 317). He also presented a model of EI with twenty-five competencies arranged in five clusters (see Table 2.5).

Table 2.5 Goleman's (1998) model of emotional intelligence

Dimension	Emotional Competencies
Self-awareness	Emotional awareness, accurate self-assessment, and self-confidence
Self-regulation	Self control, trustworthiness, conscientiousness, adaptability, and innovation
Motivation	Achievement drive, commitment, initiative, and optimism
Empathy	Understanding others, developing others, service orientation, leveraging diversity, and political awareness
Social skills	Influence, communication, conflict management, leadership, change catalyst, building bonds, collaboration, cooperation, and team capabilities

Based on further work, Goleman (2001) revised his EI model. Goleman's new model outlined four main EI constructs with twenty competencies (see Table 2.6).

Table 2.6 Goleman's (2001) model of emotional intelligence

Dimension		Emotional Competencies
Personal competencies	Self-awareness	Emotional self-awareness, accurate self-assessment, and self-confidence
	Self-management	Self-control, trustworthiness, conscientiousness, adaptability, achievement drive, and initiative
Social competencies	Social awareness	Empathy, service orientation and organisational awareness
	Relationship management	Developing others, influence, communication, conflict management, leadership, change catalyst, building bonds, teamwork, and collaboration

According to Goleman (2001), emotional competencies are not innate talents, but rather learned capacities that should be worked on and developed to accomplish high levels of performance. Goleman hypothesised that people are born with a general EI that establishes their potential for learning emotional competencies. Additionally,

competencies are not organised randomly under the various constructs; they instead appear in clusters that support and assist each other (Stys and Brown, 2004).

Goleman (1995; 1998; 2001) strongly asserts the significant role of EI in nearly every aspect of everyday life, including social relationships, health, academic performance, and workplace success. He argued that EI is a very important competence for success in any job. He also suggested that an emotionally intelligent organisation (i.e., organisations with high EI staff) would be better prepared to succeed and survive than one that is not. Goleman also hypothesised that the dimension of self-awareness is critical in being able to identify one's own strengths and weaknesses, and this would lead to better performance in the workplace. Finally, Goleman believed that all twenty emotional competencies in his recent EI model were job skills that could be learned through training (Gardner, 2005).

Based on the Goleman EI model, the Emotional Competency Inventory (ECI) was developed as a test of EI that was also based on an earlier measurement of competency for executives, managers, and leaders (i.e., the Self-Assessment Questionnaire, SAQ) (Boyatzis, et al., 2000). The ECI contains 110 multiple-choice items that assess twenty competencies, offering a 360-degree measurement (providing self, peer, and supervisor ratings). A summary of the psychometric properties of the ECI is presented in Table 2.7.

Table 2.7 Summary of psychometric properties of the ECI

Psychometric properties		The ECI (Boyatzis, et al., 2000)
Reliability	Internal consistency	Moderate
	Test retest	Moderate
Validity	Content validity	Low
	Face validity (for staff and managers at work)	Moderate
	Convergent Validity (with intelligence measures)	Low
	Divergent/Discriminate Validity (from personality measures)	Low
	Factor structure	Not supported
	Predictive validity at work	Moderate
Others	Measure type	Self-report
	Susceptible to faking	Yes
	Scoring procedures	Standard
	Difficulty of administration	No

Source: Brackett and Geher (2006), Conte (2005), McEnrue and Groves (2006), and Muya (2009).

According to Table 2.7, the structural validity of the ECI has not been supported (Brackett and Geher, 2006). Moreover, ECI competencies appear to overlap significantly with four of the five factors in the model of personality (Conscientiousness, Neuroticism, Extraversion, and Openness) (Conte, 2005). Criticisms of the ECI also include that it appears to evaluate competencies that are not necessarily emotional, such as serving as a change catalyst, or flexibility in handling change (McEnrue and Groves, 2006). Finally, although some research has found ECI to predict a number of work-related outcomes such as job performance (Brackett and Geher, 2006), very few independent, peer-reviewed evaluations of the reliability and validity of the ECI have been undertaken and published, which has prevented the ECI from being considered a valuable measure of EI (Conte, 2005).

Although Goleman's model is largely accountable for the widespread nature of the EI topic, his model of EI has been strongly criticised. First, it has been criticised for its

failure to sufficiently define EI, which makes his model vague, as it includes a number of broader qualities that are more closely associated with personality traits, attitudes, and beliefs (Epstein, 1998). Consequently, Goleman's model does not appear to adequately differentiate traditional personality traits from competency models, and thus may offer nothing new to our understanding of human behaviour (Armstrong, 2007; McCrae, 2000; McEnrue and Groves, 2006).

Second, Goleman's claims that EI is better than IQ for explaining a higher amount of variance in individual success have not been scientifically validated (Mayer, et al., 2000). For example, according to Landy (2005), Goleman provides conclusions about the value of EI in predicting leadership effectiveness, but he does not support these conclusions through raw data or inferential analysis. Finally, Mayer, et al., (2000) have reported that Goleman's argument about EI's potential to be developed through training is doubtful. This is because his model shows significant overlaps with many personality traits that may have genetic, biological, and/or early learning contributions, which make them very difficult to change, as indicated by many researchers in the field of personality.

Overall, with a lack of empirical studies supporting the validity and reliability of Goleman's model of EI, particularly his claims that EI is more important than IQ, and that EI can be improved, it is perhaps difficult to accept his model as a valid construct. In other words, the present state of EI research according to Goleman's model can be characterised as carrying important potential but poor scientific validity. Therefore, continued conceptual and practical contributions towards Goleman's model of EI, mainly its construct and predictive validity, are required to improve its validity as a valuable construct, particularly for organisational research.

2.3.2.2.2 The Bar-On Model of Emotional Intelligence

A second mixed model of emotional intelligence was proposed by Bar-On (1997). He pointed out that his work with the concept of EI began in 1980 when he was trying to determine why some individuals are more successful than others and have higher levels of psychological well being than others. Bar-On (1997) defined EI as "an array of non-cognitive capabilities, competencies, and skills that influence one's ability to succeed in

coping with environmental demands and pressures" (1997: 14). Moreover, in his model of EI, Bar-On outlines five components of EI with 15 subscales (see Table 2.8).

Table 2.8 Bar-On's (1997) model of emotional intelligence

Component	Subscales
Intrapersonal	Self-Regard
	Emotional Self Awareness
	Assertiveness
	Independence
	Self Actualisation
Interpersonal	Empathy
	Social Responsibility
	Interpersonal Relationship
Adaptability	Reality Testing
	Flexibility
	Problem Solving
Stress Management	Stress Tolerance
	Impulse Control
General Mood	Optimism
	Happiness

Bar-On (1997) described his model as multifactorial, with EI relating to the potential for performance and success rather than success itself. He indicated that his model of EI is considered process-oriented rather than outcome-oriented. Bar-On (1997) also argued that high EI individuals are generally more effective in meeting environmental demands and pressures than others, since they are able to use emotional knowledge to deal with their immediate circumstances. He also pointed out that a lack of emotional intelligence abilities could lead to a lack of success.

Emotional Quotient Inventory (EQ-i) was developed by Bar-On (1997) to measure his model of EI. This self-reported test consists of 133 items, providing a total Emotional Quotient (EQ) score, scores on the five composite factors, and scores on 15 subscales. Items are measured on a five-point scale ranging from 1 (Very seldom/Not true for me) to 5 (Very often/Often true for me). A summary of the psychometric properties of the ECI is presented in Table 2.9.

Table 2.9 Summary of psychometric properties of the EQ-i

Psychometric properties		The EQ-i (Bar-On, 1997)
Reliability	Internal consistency	Moderate
	Test retest	Moderate
Validity	Content validity	Moderate
	Face validity (for staff and managers at work)	Moderate
	Convergent Validity (with intelligence measures)	Low
	Divergent/Discriminate Validity (from personality measures)	Low
	Factor structure	Not supported
	Predictive validity at work	Moderate
Others	Measure type	Self-report
	Susceptible to faking	Yes
	Scoring procedures	Standard
	Difficulty of administration	No

Source: Brackett and Geher (2006), Conte (2005), Livingstone and Day (2005), McEnrue and Groves (2006), Muya (2009), and Tett, et al. (2005).

As indicated in Table 2.9, the EQ-i has a number of strengths, but also a number of weaknesses. For instance, although some research has found EQ-i to predict a number of work-related outcomes such as job stress and job performance (Slaski and Cartwright, 2002), the structural validity of the EQ-i is questionable, since both exploratory and confirmatory factor analyses of the test have yielded different results, including solutions with one, six, ten, thirteen, and fifteen factors (Brackett and Geher, 2006; Tett, et al., 2005; Petrides and Furnham, 2001). Additionally, the EQ-i appears to assess positive results of EI (such as building satisfying relationships and working constructively with others) but not components of EI itself (McEnrue and Groves, 2006).

Similar to the Goleman model of EI, the Bar-On model has been criticised for several reasons. First, the hierarchical associations between the fifteen factors, the five clusters, and the overarching EI factors are unclear and unconfirmed (Armstrong, 2007). Second,

one of the primary criticisms of the Bar-On model of EI is that its components theoretically map onto measures of personality (Matthews, et al., 2002). For example, Mayer, et al. (2000) have argued that some components of Bar-On's EI model are similar to dimensions of one of the omnibus measures of personality, namely the California Psychological Inventory (CPI) that was published several decades before the EQ-i. The CPI includes a number of dimensions (Self-Assurance, Interpersonal Effectiveness, Self-Acceptance, Self-Control, Flexibility, Reality Testing, and Empathy), which are similar to components in Bar-On's EI model. In another study, Brackett and Mayer (2003) found that all the Big Five factors (Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness) significantly contributed to the prediction of the EQ-i ($R = .75$). Consequently, these similarities suggest that the Bar-On model does not seem to represent a new concept, but rather, comprises constructs of personality measures that already have been used for decades. Thus, its utility in predicting certain psychological and organisational criteria beyond these personality measures is weak and questionable.

Moreover, another main limitation of Bar-On's EI model lies in the fact that it includes several irrelevant factors (problem solving, independence, and reality testing), whilst ignoring numerous related components fundamental to an EI measure (such as perception, and the expression and regulation of emotions) (Lindebaum, 2008). "Logically..., why Bar-On defines problem solving, flexibility, or reality testing as social and emotional competencies is not clear. There appears to be no theoretical justification for including or excluding these or any other phenomena from his framework (such as exercising influence or active listening" (McEnrue and Groves, 2006: 23). Finally, as Conte (2005) has concluded, while the EQ-i shows sufficient reliability and some validity evidence, it is lacking in discriminate validity support, and limited studies have examined whether or not it provides incremental predictive validity above the contribution of well-established predictors, such as cognitive ability and personality traits. The available data, therefore, does not support the use of the EQ-i as a selection tool.

2.3.2.3 Summary of EI Models

Although the three models of EI reviewed in this chapter seem different, they share a number of broad themes: (a) these three models share a common core of fundamental concepts, even if the terms used to explain them may be dissimilar (for example, the use of emotion to assist cognitive and decision-making processes); (b) all of the reviewed models agree that there are certain critical components to EI, and there is even some agreement on what those components are (for instance, the regulation of emotion); (c) all of the three models aim to identify and determine the elements involved in the recognition and regulation of one's own and others' emotions; (d) all reviewed models propose that the components of EI can be improved through efficient training and development programs; and (e) it has been claimed that EI is an important predictor of life successes, such as job performance, academic achievement, and life satisfaction (Gardner, 2005; Goleman, 2001; Stys and Brown, 2004).

Despite these similarities, there is one main difference between them. The primary difference between these EI models can be found in the type of measuring methods used to evaluate EI. On one hand, measuring EI through self-reported questionnaires (such as the ECI or the EQ-i), leads to the operationalisation of the construct as a personality trait. On the other hand, measuring EI through maximum performance tests (such as the MSCEIT) leads to the operationalisation of the construct as a cognitive ability (Alkhedr, 2006; Petrides, et al., 2004a).

Overall, since 1995, EI has attracted a great deal of attention from the academic community, applied settings, and mainstream society (Stys and Brown, 2004). Yet according to Brackett and Geher (2006), research on EI is still in its early stages and there is much to be learned about its components and measurements. The central question, nevertheless, concerns which model best describes EI as a construct related to both emotions and intelligence, as well as distinct from personality traits.

While there is no absolute answer to this question yet, it is clear that of the two EI approaches (ability vs. mixed) reviewed in this chapter, the models of EI based on ability appear to be the most well-conceptualised and practical descriptions of the construct. On one hand, many researchers (Alkhedr, 2006; Brackett and Geher, 2006; Daus and Ashkanasy, 2005; McEnrue and Groves, 2006) have suggested that the ability model

clearly holds the most promise for research on EI. They have argued that the ability approach to EI clearly showing adequate psychometric properties, distinguishing validity from personality measures, and demonstrating evidence of both predictive and incremental validity. Models of EI based on the mixed approach, on the other hand, do not provide valid constructs in the area since they consist of attributes (such as flexibility and assertiveness) that are not part of the EI concept. They also empirically show considerable overlaps with other commonly studied personality traits (such as the Big Five) (Mayer, et al., 2008). Thus, mixed models of EI do not appear to be sufficiently different from traditional personality models, suggesting that they offer limited scientific information to add to our understanding of individual differences.

2.3.3 Emotional Intelligence at Work

It has been argued that EI may predict central aspects of workplace performance better than cognitive ability and personality traits. It has also been suggested that in the workplace, job performance depends on many different factors, including interpersonal relationships, acceptance, adaptability, and teamwork; and it has been proposed that EI represents the building blocks for these important interpersonal workplace behaviours (Gardner, 2005). Nonetheless, to what extent does empirical research support these claims? The next section aims to provide a review of the empirical studies that have examined the role of EI in the workplace (in relation to job performance, job stress, and CWB), and some of the mechanisms that may imply that EI may be significantly related to police work.

2.3.3.1 Emotional Intelligence and Job Performance

Although a growing number of studies have investigated the contribution of EI to job performance, the results are generally limited and often contradictory (Zeidner, et al., 2004). Several studies have shown that EI contributes positively to job performance (for example, Dulewicz, et al., 2003; Kulkarni, et al., 2009; Lam and Kirby, 2002; Schutte, et al., 2001). In contrast, a number of studies have found little or no correlations between EI and job performance (e.g., Amelang and Steinmayr, 2006; Day and Carroll, 2004).

However, according to Christiansen, et al. (2010), numerous problems face the reviewer evaluating this literature, such as: (a) many of the EI measures used to examine criterion-related validity, particularly job performance, do not possess high psychometric properties; (b) few of these studies have been published in peer-reviewed journals; and (c) some of the criteria used are not related to or representative of actual job performance (such as self-reported job performance, academic performance, teacher ratings of students acting as employees, problem-solving, decision-making, and the estimated general social recognition of professions).

Moreover, previous studies on the associations between EI and job performance finding either positive or negative results are also deficient in a number of respects, as they mostly rely on small sample sizes of managerial groups (e.g., Rosete and Ciarrochi, 2005), students, or part time employees (e.g., Christiansen, et al., 2010) particularly in the private sector. The limited range in participants' ages may be another limitation in some of these studies (e.g., Rode, et al., 2007) particularly with the argument that EI should increase with age (e.g., Sy, et al., 2006).

Some studies, nevertheless, have avoided these limitations. For example, Law, et al. (2004) found in a sample of 165 employees that peer ratings of EI were a significant predictor of job performance. Even after controlling for demographics, loyalty for supervisors, trust in supervisors, and the Big Five personality dimensions, EI was still found to account for more than 10% of the variance. Support for this finding was found by Sy, et al. (2006), who investigated the associations between EI and job performance in a sample of 187 food service workers. They found a significant correlation between EI and job performance ($r = .28, p < .01$). They also found that EI positively predicts job performance (R^2 of .03, $p < .05$) after controlling for the Big Five personality factors (R^2 of .13, $p < .001$). In a sample of 215 employees, Carmeli and Josman (2006) also found a positive relationship between EI and supervisor ratings of job performance ($r = .47, p < .001$). With respect to research within police organisations, very few studies have examined the associations between EI and police performance. However, in his unpublished doctoral thesis, Lev (2005) found EI as measured by EQ-i (Bar-On, 1997) to be a valid predictor of several job performance criteria amongst police officers, including success at the assessment centre, success during the training stage, and successful functioning in the police unit.

Although these findings appear promising, these studies remain limited for a number of reasons. First, these studies have not controlled for both personality traits and intelligence in the same analysis. It has been argued that if EI assessments are to be used in the workplace, they must first show incremental predictive validity (Landy, 2005). In other words, measuring EI is only cost-effective for organisations, particularly for personnel selection, to the extent that it provides additional information to that provided by tests of established intelligence and personality constructs (Zeidner, et al., 2004). If EI does not explain a considerable amount of variance after controlling for personality traits and cognitive ability, then its significance and utility as a psychological construct is questionable (Rossen and Kranzler, 2009). Second, since very limited studies have been conducted within police organisations in general and in Arabic-speaking contexts in particular, the generalisability of these results may be of great concern, especially with the significant differences between Arabic and Western cultures (Rees and Althakhri, 2008), as well as between the work of police forces and that of other organisations (Rabee, et al., 2004).

A recent study by Sharma, et al. (2009) was also consistent with this argument. This study aimed to empirically examine the construct of EI cross-culturally amongst a sample of 200 participants from two different cultures (Germany, high in individualism and low in power distance; and India, high in collectivism and high in power distance, Hofstede, 1991). The study concluded that the construct of EI is more likely to be culture-specific rather than culture-general. Accordingly, the value of EI can be seen as a product of the society where it is developed and limited to the culture in which it is investigated. Taken together, past investigations on EI/job performance relations may be suggestive rather than decisive in their results, particularly when applying them to police in Arabic-speaking contexts.

2.3.3.2 Emotional Intelligence and Job Stress

Police work includes a number of general and specific stressful factors that have been found to negatively impact an officer's ability to effectively carry out day-to-day responsibilities and dealing with difficult circumstances or risky situations. However, it has been suggested that emotionally intelligent people are more successful at meeting the

demands of stressful circumstances as a result of their ability to better perceive, appraise, and regulate their emotions (Bastian, et al., 2005). A number of studies, accordingly, have investigated the relationship between EI and job stress. In one study, Slaski and Cartwright (2003) found a significant negative relationship between EI and stress in a group of managers ($n = 60$). Support for this finding has also been reported by Dulewicz, et al. (2003) who found in a sample of middle-managers ($n = 59$) a strong negative association between EI and job stress ($r = -.60$, $p < .01$). Hunt and Evans (2004) also investigated the role of EI in predicting traumatic stress and found that emotionally intelligent individuals ($n = 414$) are more likely to be able to deal effectively with circumstances in their environment without becoming distressed. They also recommended the use of EI measures in the selection of personnel for jobs involving stressful situations, such as emergency services. Moreover, Nikolaou and Tsousis (2002) studied the relationship between EI and occupational stress amongst a sample of employees working in mental health institutions ($n = 212$). They reported strong negative correlations between EI and occupational stress ($r = -.59$, $p < .01$).

The above studies appear to be promising, but remain limited, needing further research. First, some studies (e.g., Dulewicz, et al., 2003; Slaski and Cartwright, 2002) were limited in two ways. On one hand, they measured job stress by asking participants about a single item (the extent to which they believed their life to be stressful at that point in time). As Gardner (2005) highlights, the construct of job stress is very complex, and to assess it using only one question may result in a loss of significant information related to the construct, and thus misrepresent its association with other variables. On the other hand, their studies were based on a small sample size of managers from the private sector. Second, limitations of other studies concern unreliable samples. Nikolaou and Tsousis (2002), for example, based their sample on mental health employees, the majority of whom were females, which is problematic as previous research shows that females generally tend to score higher than males on EI tests (Stys and Brown, 2004). As a result, generalisations of these results for other organisations and groups, particularly police agencies, are difficult, since sources and levels of stress in police agencies are largely different from those in other organisations, and the majority of employees in police forces are male.

Research on EI and stress amongst police samples is lacking. Nevertheless, one study (Bar-On, et al., 2000) has explored the relationship between EI and occupational stress amongst a sample of two groups, namely police officers ($n = 85$) and health care professionals ($n = 81$). The results of this study showed that police officers scored significantly higher than other groups on most of the primary EQ-i scales, suggesting that police officers are able to be more conscious of themselves and of other people, to accurately focus and appraise the immediate situation, to efficiently deal with problems, making them more adaptable to stressful situations, and to use effective coping strategies. Ricca (2003) provides similar results after exploring the validity of EI in predicting job burnout amongst a sample of 50 police officers in the USA. She found that emotionally intelligent officers have low levels of job burnout and high levels of belief in individual ability to successfully alleviate negative moods. Although there are some disadvantages with the findings of these papers, mainly due to the facts that they are based on small sample sizes and do not control for other psychological constructs that have been found to critically predict job stress (e.g., personality traits), they demonstrate some of the first attempts to examine the relationship between EI and police job stress, which provides a foundation for further research into this area.

Several ways in which EI might be associated with job stress have been identified. One related mechanism that has been provided that may link EI to job stress is coping. More specifically, emotionally intelligent individuals are more likely to perceive low levels of stress, since they tend to have high levels of active positive coping strategies (Saklofske, et al., 2007). For example, upon reviewing the available literature on the relationship between EI and coping, Zeidner, et al. (2006) found EI to be positively related to problem-focused strategies and negatively related to emotion-focused and avoidance strategies. Similar information has been provided by Bastian, et al. (2005), who found in a sample of 246 participants (90% were first-year psychology students) that a higher EI was correlated positively with higher levels of life satisfaction, better perceived problem-solving abilities, lower anxiety levels, and better perceived coping abilities. Consistent with this, Chan (2008) reported in a sample of 273 Chinese teachers that EI as measured by the SREIT (Schutte, et al. 1998) positively predicts active coping strategies (R^2 of .22, $p < .01$) as measured by the Ways of Coping Questionnaire (Folkman and Lazarus, 1988).

Another mechanism that might account for the proposed negative associations between EI and stress is that emotionally intelligent individuals are more likely to make more positive perceptions and situational evaluations to find opportunities for personal growth (Zeidner, et al., 2006). Support for this has been provided by Mikolajczak and Luminet (2008), who found in a sample of 60 undergraduate students that high EI individuals exhibit greater self-efficacy to cope with stressful conditions, and a higher likelihood of appraising situations as challenges rather than threats.

Two main issues, however, may limit the generalisation of these findings, particularly in relation to job stress for police: (a) most of these studies were limited to the use of student samples; and (b) these findings were limited to the cultures and occupations in which they were found, as discussed earlier. Despite these disadvantages, available empirical research provides some evidence of the negative associations between EI and job stress, and indicates that high EI individuals are better at handling stressful events and using adaptive coping strategies. If previous results can be replicated within police samples, it will be clear that emotionally intelligent individuals are of interest for police organisations, since their work is stressful and requires high levels of adaptive behaviours.

2.3.3.3 Emotional Intelligence and Counterproductive Work Behaviours

The relationship between EI and CWB thus far has received little research attention. The limited research that does exist, nonetheless, provides some support for this association. For instance, Deshpande, et al., (2005) found in their investigation that emotionally intelligent participants perceived CWB to be less ethical than those with low EI, which suggests that employees with high EI tend to be better corporate workers and show high levels of ethical attitudes towards their organisations. Support for this was provided by other studies (for instance, Azib, 2006; Brackett, et al., 2004; Khalid, et al., 2009; Poole, et al., 2008), which found a significant negative relationship between EI and deviant behaviour. They further claimed that EI could serve as a buffer against engaging in deviant behaviours at work.

A number of vexing issues are associated with these studies, which limit the significance of their findings, particularly for police agencies, such as: (a) some of these studies (e.g.,

Brackett, et al., 2004; Khalid, et al., 2009) investigated deviant behaviours amongst students in academic settings rather than amongst employees of organisations; and (b) they only use self-reported measures of CWB (e.g., Azib, 2006). As such, the validity of EI in predicting CWB needs to be developed over multiple studies with various samples, methods, and occupations, including the police.

With respect to deviant behaviour amongst police officers, Bar-On (1997) reaches similar results in his case study of a 31-year old officer who was dismissed from the police because of his aggressive behaviour in the workplace and his tendency to use excessive force in the line of duty. By using an EI measure (i.e., the EQ-i), Bar-On found that the officer had an overall low level of EI, and scored low on empathy, social responsibility, problem-solving abilities, reality testing, stress management, and impulse control subscales. Taken together, the negative and aggressive conducts of the dismissed officer may relate to his lack of understanding and appreciation of how others feel, and to his difficulty in evaluating complex situations and dealing with stress. This study, however, is also not without limitations. More specifically, the main criticisms of this study may include its reliance on only one case, and its neglect of additional psychological factors (e.g., personality profile, Caillouet, et al. 2010) that have been found to be valid predictors of aggressive and deviant behaviours amongst police officers. Notwithstanding these limitations, Bar-On's results demonstrate the potential usefulness of EI in police agencies, particularly in preventing or reducing deviant behaviour amongst officers.

Despite the scarcity of studies on this topic, EI seems to be a facilitating factor against engaging in deviant behaviours at work. In other words, according to the available research presented above, emotionally intelligent individuals are better able to control themselves and avoid engaging in CWB or acting in ways that would harm their organisations. Theoretical negative links between EI and CWB may be proposed. First, as Lopes, et al. (2006: 133) has argued, "... emotional abilities, such as perceiving and understanding emotions, also contribute indirectly to the quality of emotional experience by helping people to identify and interpret cues that inform self-regulatory action. Therefore, emotional intelligence should contribute to positive affect and attitudes at work." Accordingly, EI may indirectly affect CWB, since emotionally intelligent individuals have high emotional control abilities and are able to identify and manage

undesirable emotions, negative affects, and stressful situations, and are less likely to be paralysed by fear, negative emotions, and anxieties (Lam and Kirby, 2002), all of which have been found to be predictors of CWB (Penney and Spector, 2005).

Second, other possible explanations of a negative EI/CWB association include: (a) "individuals with good social skills, who actively engage in emotion appraisal and regulation, are less likely to experience and externalize distress through antisocial behaviors" (Petrides, et al., 2004b: 289); (b) people with low EI may engage in CWB since they have relatively lower moral standards (Khalid, et al., 2009); and (c) emotionally intelligent employees are better able to understand and follow organisational norms and rules, and show high levels of sensitivity towards informal behavioural opportunities at work (Carmeli and Josman, 2006). Overall, EI appears to be important for police organisations, since they need officers with high moral standards and who are better able to recognise and follow organisational laws, norms, and rules. However, more research is required to support the validity of EI in controlling deviant behaviours amongst police officers.

2.3.4 Criticisms of EI

EI research has been subject of a number of criticisms. First, opponents of EI have argued that its definition is continually changing, and that it is defined so broadly that it has no comprehensible meaning (Locke, 2005). According to Lincoln (2009), there are no generally accepted definitions of EI and thus, it is unclear what EI tests actually measure and what their associations imply. Second, a number of investigators (e.g., Landy, 2005; Waterhouse, 2006) have reported that EI research is characterised by poor design and demonstrates weak incremental validity over traditional models of personality and cognitive ability. For example, several EI studies, particularly in the workplace, have been based on cross-sectional research designs, student samples, have not been published in peer-reviewed journals, and have not controlled for personality traits or cognitive abilities, which may limit the value of their findings (Christiansen, et al., 2010). Other critics have questioned the measurements of EI, charging available EI measures with: using different types of measurements that use different response formats and approaches

for the same construct; and lacking proper psychometric measurement properties (Conte, 2005; Nafukho, 2009).

Ashkanasy and Daus (2005) have reviewed some of these criticisms and pointed out, in contrast, that: (a) EI research is grounded in recent scientific advances in the study of emotion; (b) EI is distinct from, but positively linked to, other intelligences; (c) EI is an individual difference, whereas some individuals are more capable, and others are less so; (d) EI develops over the life span and can be learned and improved through efficient training and development programs; and (e) EI involves, at least in part, an individual's abilities to successfully identify and perceive one's own and others' emotions, as well as the possession of the skills to effectively understand and manage those emotions. Cherniss, et al. (2006) has also addressed some of these criticisms, reporting that although more research is needed on the relation between EI and work-related outcomes, available evidence favours such a relation. For instance, in a meta-analysis of the relationship between EI and performance outcomes ($K = 59$, $N = 9522$), Van Rooy and Viswesvaran (2004) found EI to have a validity of (.23). In spite of the controversial opinions on issues around EI research, this meta-analysis and others (e.g., Joseph and Newman, 2010; Whitman, 2009) show that EI is an important predictor of job performance, and that it is a psychological construct valuable for future research in organisational settings.

Despite certain criticisms of EI and its methods of measurement, the current literature review indicates that a relationship exists between EI and several work-related behaviours, such as job performance, job stress, and CWB. As Petrides, et al. (2004a) points out, present research on EI is highly valuable, interesting, and increasing, which suggests the potential worth and significance of EI in occupational and other settings. After reviewing 18 years of research on EI, Mayer, et al. (2008: 526) concluded, "we believe that the concept has proven a valuable addition to contemporary science and practice. Consideration of EI theory and assessment has proven beneficial to the study of emotions and the study of intelligence, and raised awareness of the importance of emotional components in diverse domains of human abilities and their application in people's lives." Continued empirical contributions toward EI validity, however, are required to support its position within the field of organisational studies. One area that has not been investigated accurately is the effect of EI in police work. In other words, is

EI important for police? Since research on the role of EI in police is lacking, the following section will aim to determine the relevance of EI to the police occupation by identifying commonalities between the specific skills that police agencies value most in their officers. It will also consider the extent to which EI relates to these areas.

2.3.5 The Role of EI in the Police

Despite limited research on the role of EI in the police, there are some theoretical explanations indicating that EI may be significantly related to police work. First, previous studies show that EI is important in jobs requiring contact with other people, both inside and outside an organisation. For example, in a recent meta-analysis of the relationship between EI and performance ($K = 118$, $N = 30,077$), Joseph and Newman (2010) found EI to positively predict job performance, particularly for high emotional labour occupations (i.e., jobs in which there are frequent customer/interpersonal interactions, and where showing positive emotion is a part of the job requirement). Other researchers (e.g., Daus and Ashkanasy, 2005) have argued that EI is important for effective police performance, given that there is a high need for officers to manage their own and others' emotions. By using quantitative data as well as qualitative data (i.e., intensive semi-structured interviews with patrol officers and their supervisors, dispatchers, investigators, and police chiefs), Daus and Ashkanasy reported that certain aspects of EI are important for police officers to effectively perform their functions.

Police work is clearly a job that significantly depends on an ability to deal with others. Aremu and Tejumola, (2008), for instance, theoretically proposed that EI is essential for police officers, since their job is largely based on human contact; and for a satisfying interaction, the person making the contact must have an appropriate understanding of the situation. In other words, the ability to communicate effectively is a major personal attribute that has been found to be critical for police officers (Sanders, 2003). Many police studies have shown that for performing some police work such as establishing local knowledge of a specific patrol area, establishing good relationships with a community, dealing with aggressive people, and interviewing witnesses or victims of crimes, officers require good communication skills, interpersonal relation skills, and a capacity for empathy (Howitt, 2002; Kaczmarek and Packer, 1996; Qatan 2003).

There is also growing evidence that EI may predict performances in jobs involving regular interpersonal contacts with people, where such contact forms the basis for their effectiveness (Caruso, et al., 2006). The appraisal and expression of emotion, for example, is a facet of EI that has been described as the ability to recognise emotion in others' facial and postural expressions (Mayer and Salovey, 1997). It also refers to the ability to discriminate between appropriate and inappropriate, as well as honest and dishonest, expressions of emotion. The ability to accurately interpret another's emotional state, particularly from non-verbal cues, is important for consistent communication. Expressing emotions is also a critical part of interpersonal relationships, since it motivates and enhances emotional connections, and promotes a deeper understanding of other people (Mayer, et al., 2000; Whitman, 2009).

Empathy is another main aspect of EI, falling under the category of appraisals and expressions of emotion. This facet of EI refers to being aware of others' feelings, concerns, and needs. It also involves taking an active interest in other peoples' concerns and feelings, and being able to react to spoken and unspoken feelings (Gardner, 2005). This ability appears to be important for police officers, particularly when dealing with and interviewing victims or witnesses. Communicating empathy will help the witnesses or the victims to feel more comfortable and make them feel that their problems are understood, which may encourage them to cooperate with the officer (Ainsworth, 2002). Thus, EI may contribute significantly to police effectiveness in communicating with the public, in that officers who possess the ability to appraise and express emotions may be able to create environments supporting the development of trust and collaboration, which also supports their performance in fighting crimes. Additionally, since some police organisations are constantly being examined and criticised regarding the manner in which their officers interact and deal with the people they serve, it seems that the concept of EI could provide several potential benefits to law enforcement organisations (Burnette, 2008).

A second mechanism that may provide evidence for the significance of EI for police is that emotionally intelligent individuals may have high abilities in monitoring their own and others' emotions, and in controlling these emotions by tempering negative emotions and by enhancing pleasant emotions. That is, emotion regulation is the mechanism through which people can produce and retain positive affective states, which has been

suggested to benefit work behaviour (Gardner, 2005; Joseph and Newman, 2010). As Aremu and Tejumola (2008) have reported, this quality is important for police officers, since they need to correctly value themselves by having a high self-concept. Some police agencies are undervalued by the public, particularly when the media demonstrate negative attitudes towards the police. This dynamic may generate a lack of respect towards the police, which may negatively affect officers' self-presentations (Abdel-Hamid, 2006; Aremu and Tejumola, 2008). However, it has been suggested that EI measures individual differences in the extent to which they are able to successfully control moods and emotions in oneself and others (Lindebaum, 2008). Thus, emotionally intelligent individuals will be able to manage their own emotions, including controlling distress, efficiently dealing with negative situations, and intentionally extracting unpleasant emotions. Consequently, this will help them avoid being cognitively or behaviourally impaired by the negative results of these situations (Gardner, 2005; Mayer, et al., 2004). It also has been proposed that high EI individuals are better able to successfully function within society than others with low EI, since emotionally intelligent individuals may possess complex understandings of their positive emotions, and apply this knowledge to efficiently respond to negative stimuli (Tugade and Fredrickson, 2002).

Third, some research has indicated some useful applications of EI for the police, in that teaching police officers how to manage their emotions could help them better regulate their own reactions and those of others, particularly in dangerous and difficult situations of conflict (Cherniss, 2000). According to Mayer and Salovey (1997), high EI individuals are proposed to be more successful in resolving conflicts through their ability to perceive, understand, and analyse emotions, and to employ emotional knowledge to manage their own and others' emotions. These abilities may aid in the negotiation of decisions that better gratify the involved peoples' needs, and may therefore lead to better results. This ability to manage and control emotions in oneself and others is important for police, particularly in conflict circumstances, since: (a) officers are routinely in the first line of response for situations dealing with emotionally stimulated citizens in crisis (Bartol and Bartol, 2004); (b) many police injuries occur while performing in circumstances involving conflicts (Burnette, 2008); and (c) such an ability will help reduce the use of force and firearms, which may result in deaths of officers or citizens (Howitt, 2002). Police organisations thus may place value on emotionally intelligent

officers, since they are better able to control conflicts in a way that leads to creative conclusions with limited or no harm to officers, citizens, or organisations.

Furthermore, teamwork is a vital part of police functions. For example, the UAE Police Law indicates that it is compulsory for a police officer to coordinate hard work and demonstrate effective efforts in working with other officers; showing a failing to cooperate with others is considered a serious violation. It is clear that the ability to participate in teams is important for being an effective police officer (Kaczmarek and Packer, 1996). Moreover, it has been suggested that team members' characteristics play a great role in the selection of high quality teams (Campion, et al., 1993). According to Whitman, (2009), EI is one factor that has been found to be correlated with team performance, since EI preceded and assisted the cognitive processes that accurately evaluate other team members' emotions and needs. The ability to understand one's own and others' emotions and feelings when they occur, as well as the ability to regulate them, seem to be essential for teams. More specifically, team performance depends upon effectively working with others with different traits, abilities, skills, attitudes, ideas, and opinions; thus, EI may support collaboration and harmony within a team (Kulkarni, et al., 2009).

In other words, according to Jordan and Troth (2004), teams consisting of members with higher levels of EI achieve better on tasks than teams whose members have lower levels of EI. They have argued that EI may contribute to a team's problem-solving abilities through individual team members' abilities to effectively resolve conflicts that have been found to negatively impact team performance. They have also noted that "...the ability to deal with one's own emotions may be more inclined to listen to alternative viewpoints and seek superior solutions without feeling threatened by the possibility of being wrong. This requires emotional self-control" (2004: 211). Another possible explanation of the EI/teamwork positive relationship may be that high EI individuals are more successful at communicating their ideas, intentions, and goals in assertive, articulate, and interesting ways, which may be closely associated with social skills required for teamwork (Zeidner, et al., 2004). According to Burnette (2008), teams with high EI members have higher problem-solving capabilities, are more effective in providing creative solutions and ideas, and are more capable of making better decisions, which clearly represents a significant set of skills for high quality teamwork in police.

Notwithstanding that very few studies have studied the validity of EI in policing, police officers logically appear to require high levels of EI, since their work is based on human contact, effective teamwork, and the necessity of a high ability to deal with negative affect. In addition, since police organisations in the UAE are frequently criticised about the manner in which their officers interact and deal with the public, as discussed in the background chapter, it appears that employing officers with high EI may increase the public's positive view of the police. The goal of the present study, therefore, is to examine the criterion-related validity of EI in predicting a number of work-related outcomes (i.e., job performance, training performance, job stress, coping with stress, and CWB) amongst a sample of police officers. The present study will also investigate the incremental validity of EI, particularly the contribution of EI in predicting these criteria beyond what can be predicted by other constructs, namely personality traits and cognitive ability.

2.4 Cognitive Ability

2.4.1 Introduction

Task analyses performed by police agencies in many countries around the world, including the UAE, show that there is a core of crucial job-related cognitive abilities that must be performed by police officers in the normal course of duty. More specifically, police work is generally complex and includes many different tasks requiring high levels of cognitive ability (Howitt, 2002; Rabee, et al., 2004). For example, police tasks include investigating accidents and offences, establishing local knowledge of patrol areas, maintaining records and other information, deciding if a physical arrest or the chase of a suspect is necessary, and utilising problem-solving techniques (Kaczmarek and Packer, 1996). Investigating crimes is one of the most critical aspects of police work, which includes "identifying the occurrence of offenses, compiling reports on the circumstances surrounding the occurrence, interviewing witnesses and suspects with the objective of identifying the offender, and gathering sufficient evidence to allow prosecution to proceed" (Simms and Petersen, 1991: 216). Report writing is another fundamental function of police officers, with the estimation that officers spend 20-30% of their time writing reports. Many police reports are used as strong evidence in court cases. Thus,

high quality police reports are important, since they may assist in successful criminal prosecutions (Stolp, 2002). The inability to effectively perform such tasks would clearly endanger officers themselves, their organisations, and the general public.

It is clear that most of these duties are extremely mentally challenging. A number of studies (Aamodt, 2004; Ford and Kraiger, 1993; Hughes, 2003; Mohamed and Pauleen, 2005; Qatan, 2003; Sanders, 2003), therefore, have reported cognitive ability as one of the most critical characteristics of an effective police officer. For instance, Hughes (2003: 299) has argued for the importance of cognitive ability in police work, noting, "The complex nature of police tasks and the substantial amount of interpersonal communication involved in policing would appear to require above-average intelligence." Hughes also found amongst a sample of expert police officers ($n = 65$, average experience in policing = 17.9 years) that all respondents strongly agreed that some people are not intelligent enough to perform police work. 89.2% of participants believed that intelligence was one of the most important qualities of a good police officer; and 73.4% of respondents strongly agreed that more intelligent recruits make better police officers. These results indicate that cognitive ability has a high acceptability amongst police managers to be used as an important criterion in the selection of new officers.

Deductive reasoning, problem-solving abilities, high memory abilities, writing abilities, and decision-making abilities are critical for police work (Kaczmarek and Packer, 1996). A police officer by nature is someone who must frequently make serious decisions, particularly under ambiguous or stressful situations. Responsibilities include:

- Determining the priorities of required actions, and establishing what evidence is to be secured and collected as part of an investigation at accident or crime scenes.
- Deciding the need for continuing or stopping the chase of a suspect (e.g., determining the safety of the situation).
- Determining the cause of accidents and the need to close roads, evacuate, etc.
- Deciding whether or not other officers need help in certain circumstances ("What is happening?"; "What is already being done?"; "Do I have to do something?").
- Deciding whether citations, warnings, or the use of force is necessary in certain circumstances.

- Determining the need to control situations by physically securing a suspect or a vehicle (Radziewicz, 1998).

All these decisions and others would require an officer with a high cognitive ability. Furthermore, there is evidence that individuals with high cognitive abilities are better and faster at: (a) prioritising between conflicting rules; (b) adapting old procedures to distorted situations; (c) learning new procedures, particularly as a job changes over time; and (d) creatively meeting unexpected problems (Hunter, 1986). General cognitive ability has also been found to be important in predicting the likelihood of success in complex jobs (i.e., work that requires information-processing and problem-solving abilities, such as compiling and combining information, reasoning, analysing, and planning) (Furnham, 2008; Gottfredson, 2002). Accordingly, since police work is difficult, complex, requires learning a number of laws and procedures, is based on information-processing, and requires high levels of problem-solving abilities (Howitt, 2002; Rabee, et al., 2004), the general cognitive ability of police officers is expected to be positively and strongly related to their job performance.

Based on this argument, it seems necessary, when discussing the characteristics of effective police officers, to consider cognitive ability as one of the most important attributes. The next section, thus, will aim to review research investigating the validity of cognitive ability in predicting a number of work-related behaviours, particularly in police organisations; and to provide possible explanations for the role of cognitive ability for police.

2.4.2 Cognitive Ability at Work

The subject of cognitive ability is considered to be one of the most important aspects of individual differences attracting public and scientific attention (Fincham and Rhodes, 2005). Nonetheless, there is a disagreement about the meaning of cognitive ability. Roberts, et al. (2001), for instance, defines general intelligence as "a person's overall capacity for adaptation through effective cognition and information processing. It may be seen as a general competence of the mind (mental ability) or of higher order faculties such as understanding, reasoning, problem solving, and learning, especially of complex, structured material" (2001: 197). Eysenck (2002), however, points out that, in general,

there is an agreement amongst most psychologists that people who have high abilities in abstract reasoning, problem solving, and decision making are more intelligent than people who do not have these abilities. The current research will take Eysenck's statement as the definition of cognitive ability.

General cognitive ability tests have been used as predictors in personnel selection for over 80 years (Viswesvaran and Ones, 2002). Cognitive ability has been found to be the best general predictor of performance across a variety of jobs (Hunter and Schmidt, 1996) and, as a result, has frequently been used as a predictor of performance for employee selection (Smith and Smith, 2005). In other words, a number of studies have found strong positive correlations between cognitive ability and work-related behaviours, particularly job performance and training performance (Furnham, 2005; Ree, et al., 1994). An early meta-analysis of over 400 studies by Hunter and Hunter (1984) showed the validity of general cognitive ability to be .57 for high-complexity jobs, .51 for medium-complexity jobs, and .38 for low-complexity jobs. They also found that cognitive ability has a mean validity for success in training of about .55 across all known jobs, including police work. These validity coefficients support the effectiveness of cognitive ability tests for police personnel selection.

A number of recent meta-analyses have critically evaluated the role of cognitive ability in predicting work-related outcomes, particularly job performance and training performance. Various meta-analyses from different countries such as the European Community (Salgado, et al., 2003), the USA (Schmidt and Hunter, 2004), the UK (Bertua, et al., 2005), and Germany (Hulsheger, et al., 2007) have shown that cognitive ability tests are valid predictors of overall job performance and training performance. This validity is applicable across jobs, situations, and settings. The meta-analytic research clearly demonstrates that general cognitive ability tests can be a valuable instrument in making employment decisions, and there is little controversy on this point (Ottz, 2002).

The importance of cognitive ability in predicting police officers' performances has also been supported by several studies (for example, Aamodt, 2004). One study (Brewster and Stoloff, 2003) found in a sample of police officers that cognitive ability (as measured by the Wechsler Adult Intelligence Scale-Revised) was significantly correlated with supervisor ratings of performance after one year on the job ($r = .38$). In an earlier study,

Ford and Kraiger (1993) conducted a predictive validation study of the role of cognitive ability in police using a sample of 165 officers. In this study, cognitive ability was tested by a measure designed specifically for law enforcement (i.e., Multijurisdictional Police Officer Examination). Three main criteria were included in this study, including: (a) supervisory ratings of overall job performance, consisting of nine performance dimensions: criminal investigation; basic patrol procedures; traffic maintenance and accident investigation; apprehension and follow-up; police communication; judgment, discretion, and common sense; response to domestic problems and stressful situations; professional orientation; and internal relations; (b) training Academy performance scores (a total of five multiple-choice exams of police knowledge given at the Police Academy); and (c) negative work behaviours (such as car accidents, citizen complaints, and the use of unnecessary force). Results of this study showed a significant relationship between the cognitive ability test and supervisory ratings of performance ($r = .23$), training Academy performance ($r = .65$), and negative work behaviours ($r = -.19$).

Furthermore, in a recent study of cognitive ability by Cuttler and Muchinsky (2006), using the Wonderlic Personnel Test, a significant difference was found between police candidates who had completed a law enforcement training program, and candidates who failed to complete this training program, suggesting that general mental ability is a critical predictor of success in law enforcement training. They also found general mental ability to be significantly correlated with an objective measurement of dysfunctional job behaviours, including sexual misconduct, substance abuse, insubordination or supervisory problems, embezzlement of property, motor vehicle violations, inappropriate verbal conduct towards the public, the ability to complete required assignments, and the fulfilment of duty obligations.

Support for the negative associations between cognitive ability and CWB amongst police officers was reported in a recent study by Dilchert, et al., (2007). In a sample of 1,799 officers, they found that cognitive ability correlated negatively with an objective measurement of CWB ($r = -.19$). According to Chamorro-Premuzic and Furnham (2010), the negative relationship between cognitive ability and CWB may result from protective effects of high level cognitive ability that enables people with high scores in mental ability to test better, or to expect or foresee the negative consequences of engaging in CWB, and thus do not engage in these types of negative or deviant behaviours. This idea

seems to provide a highly potential explanation for the negative association between cognitive ability and CWB, since employees' deviant behaviours, particularly in police organisations, tend to be ones of extreme intolerance. The UAE Police Law, for example, has prohibited a number of inappropriate or deviant conducts, and also set several penalties for officers breaking this law, ranging from warnings to dismissals from work. Therefore, officers with high cognitive abilities may refrain from breaking these laws in order to avoid being punished.

Finally, in a recent large meta-analysis, Aamodt (2004) investigated the relationship between cognitive ability (as measured by either general cognitive ability tests or cognitive ability tests designed specifically for law enforcement) and job-related behaviours in police organisations (e.g., Academy grades, job performance, and discipline problems). Most studies included in this analysis were recent, published between 1970 and 2003. Aamodt reported (after correcting for range restriction and attenuation in both the predictor and criterion) that cognitive ability had validity coefficients of 0.27 for supervisor ratings of job performance, 0.62 for academic performance, and -0.11 for discipline problems (see Table 2.10). These validity coefficients reported in Aamodt's meta-analysis support the usefulness of cognitive ability tests for police personnel selection.

Table 2.10 Aamodt's (2004) meta-analysis results for cognitive ability in police

Criterion	K	N	<i>r</i>	<i>P</i>
Supervisor Ratings of job performance	61	16,231	.16	.27
Police Academy Grade	61	14,437	.41	.62
Discipline Problems	13	4,850	-.06	-.11

K = number of studies, N = sample size, *r* = mean correlation, *p* = mean correlation after correcting for range restriction and attenuation in both the predictor and criterion.

2.4.3 Explanations for the Role of Cognitive Ability in Police Work

Although a number of studies have shown cognitive ability to be the best general predictor of performance across a variety of jobs, the mechanism by which cognitive ability impacts job performance has not been completely explained. Several attempts,

nevertheless, have been made to explain how cognitive ability predicts job performance. Learning about job knowledge and skills is one of the key mechanisms by which cognitive ability affects job performance (Furnham, 2008). Previous research (see Hunter, 1986) has pointed to the direct impacts of cognitive ability on job knowledge. In other words, according to Schmidt and Hunter (2004), employees with higher cognitive abilities are faster and more capable of acquiring more job knowledge and skills, which leads to higher levels of job performance. Research has shown that people with high cognitive abilities are more likely to be successful in learning new tasks, since they are better able to integrate, process, and apply new information than people with lower cognitive abilities (Kanfer and Ackerman, 1989).

Ree, et al. (1995), for example, conducted a longitudinal study to investigate the causal roles of general cognitive ability and prior job knowledge in a complex sequential-training environment. They found that general cognitive ability directly influenced the acquisition of job knowledge during training and influenced work samples through job knowledge; and prior job knowledge had a weak influence on subsequent job knowledge, but directly influenced the early work sample. Another study by Oakes, et al. (2001) in a sample of 9,793 trainees, was also consistent with these results. They claimed that "for an individual to acquire the knowledge and skills required to successfully perform the duties of an air traffic controller, that person needs the ability to acquire, comprehend, and apply new, highly specialized information" (e.g., cognitive ability) (2001: 541).

These results can largely be applied to police studies addressing the relationship between cognitive ability and job performance. More specifically, police work involves a multiplicity of different tasks. Police research, accordingly, has determined that officers require a significant base of knowledge and skills in order to carry out their tasks (Ainsworth, 2002; Howitt, 2002). On one hand, police officers must have an understanding of criminal law, civil law, traffic law, arrest procedures, and patrol policies and procedures. On the other hand, the skills important for performing police work include the use of firearms, the use of operational and communications equipment, the ability to collect physical evidence, the ability to interview victims, witnesses and suspects, the ability to search properties, buildings, vehicles, and surroundings for evidence, and knowledge about using safety-awareness techniques (Radziewicz, 1998). Most of these abilities must be gained over a very short period (about 6 months).

Consequently, recruits with high cognitive abilities may effectively benefit from training programs, and more rapidly acquire the skills and knowledge essential for performing police work and having a high job performance.

Furthermore, the validity of cognitive abilities in predicting job performance is moderated by the complexity of each job. Research has indicated that as job complexity increases, the predictive validity of cognitive ability tests also increases (Chamorro-Premuzic, 2007; Hunter and Schmidt, 1996). According to Kuncel, et al. (2004), more complex jobs: (a) require an employee to acquire a larger amount of complex knowledge; and (b) require more advanced information processing skills. Additionally, more complex jobs are linked with a high degree of reasoning, judgment, and planning (Hunter and Schmidt, 1996). Therefore, a high cognitive ability (i.e., the ability to acquire, organise, apply, identify, select, and update the most important work-related information) is a predictor of better job performance in more complex jobs (Furnham, 2008; Gottfredson, 2002).

Police work is unquestionably complex. Police work analyses consistently show that a number of duties, tasks, and responsibilities must be performed by police officers as a regular part of their daily functions (Gaines and Falkenberg, 1998). There are two main core police responsibilities that are particularly complex, namely preventing and investigating crimes and accidents; and interacting and dealing with people. On one hand, dealing with people may be complex in that police officers in many countries around the world deal with people from different cultural, social, and economic backgrounds, and with different types of people, such as victims, witnesses, suspects, and offenders. Working in multi-cultural societies has greatly influenced policing, requiring more of an emphasis on tolerance, human and children's rights, cultural evolution, minority integration, and police ethics and behaviour (White and Escobar, 2008). Demonstrating cultural adaptability, as a result, is very important for police officers working in multi-cultural communities. Such a characteristic includes the ability to learn new languages, values, and traditions, and to respond to the complex needs of others.

On the other hand, the investigation of crimes and accidents is based on collecting, documenting, identifying, analysing, and evaluating ambiguous information and complicated evidence (Rabee, et al., 2004). Effective police investigators, therefore, should possess a number of general abilities, such as learning abilities, problem-solving

abilities, abilities to face obstructions, deductive reasoning abilities, abilities to reach conclusions based on evidence, abilities in the use of scientific support, and abilities in delaying judgment until strong evidence is available (Mohamed and Pauleen, 2005). This list of abilities provides support for the argument that cognitive ability is related to an individual capacity for effectively performing police work that is complex and involves difficult information processing abilities, and requires high degrees of reasoning, judgment, and planning.

Finally, another possible explanation for the links between cognitive ability and job performance is adaptability, which in recent years has received increased consideration as a central factor of job performance. In other words, cognitive ability has been found to predict adaptive performance, which in turn affects overall job performance (Furnham, 2008; Pulakos, et al., 2002; Tucker and Gunther, 2009). Adaptive performance has been defined as "the proficiency with which a person alters his or her behavior to meet the demands of the environment, an event, or a new situation" (Johnson, 2003: 91). Pulakos, et al. (2000) have established an eight-dimensional taxonomy of adaptive performance (see Table 2.11).

Table 2.11 Pulakos, et al.'s (2000)-eight dimensional taxonomy of adaptive performance

Dimension	Description
Solving problems creatively	Solves atypical, ill-defined, and complex problems
Dealing with uncertain or unpredictable work situations	Adjusts and deals with unpredictable situations, shifts focus, and takes reasonable actions
Learning new tasks, technologies, and procedures	Anticipates, prepares for, and learns skills needed for future job requirements
Demonstrating interpersonal adaptability	Adjusts interpersonal style to achieve goals working with new teams, co-workers, or customers
Demonstrating cultural adaptability	Performs effectively in different cultures learning new languages, values, traditions, and politics
Demonstrating physically oriented adaptability	Adjusts to various physical factors such as heat, noise, uncomfortable climates, and difficult environments
Handling work stress	Remains calm under pressure, handles frustration, and acts as a calming influence
Handling emergencies or crisis situations	Reacts appropriately and decisively to life-threatening or dangerous situations

Some studies (e.g., Church, et al., 1985; Pulakos, et al., 2002) have found that tests of general cognitive ability were significantly correlated with tests of adaptive performance, suggesting that individuals with high cognitive abilities are more able to adapt to stressful, unpredictable, frustrating, and changing situations. This finding strongly indicates that cognitive ability is important for jobs requiring high levels of adaptive performance. Adaptability is especially important for police officers, as they need to be more flexible and tolerant of uncertainty and complexity in order to successfully perform in stressful, unpredictable, and frustrating circumstances (Lewis, 1999; Talib and Abu-Shamah, 1999).

More specifically, since police officers often face complex situations while performing their duties, their ability to make effective decisions and take serious actions at the right time and location, particularly in the absence of direct supervision, seems to play a role in the successful achievement of these duties. Accordingly, officers with high cognitive abilities can: (a) perform more effectively in response to complex situations; (b) take

appropriate action even without having all the facts at hand; (c) adjust priorities or plans to deal with changing or unexpected circumstances; (d) successfully handle frustration and work stress; (e) perform more effectively with people from different cultures; and (f) learn new tasks, technologies, and procedures better and faster (Rabee, et al, 2004). All these abilities and skills are considered of great value for police organisations, since the failure to perform effectively, particularly in stressful situations and dangerous circumstances, may have serious negative consequences, not only for the police officers themselves, but also for police organisations and the larger public.

2.4.4 Summary

For police organisations to perform effectively and efficiently, it is important that they select employees who are best suited to the complex work of policing (Ainsworth, 2002). It has been shown in the literature that cognitive ability is one of the best (if not the best) general predictor of job performance across a variety of jobs, including police functions. Although some research has shown that the relationship between cognitive ability tests and police performance is weak (e.g., Burbeck and Furnham, 1985), a great number of predictive studies and meta-analyses have demonstrated the opposite, by showing that cognitive ability is extremely important for police officers. Studies that have found no, or low, validity correlations between cognitive ability and police officer performance have been criticised for some reasons, including: (a) there may have been range restrictions in the predictor measures, in that applicants with low cognitive abilities were not hired; and (b) weaknesses in measuring job performance (such as poorly defined criteria for effective police work, or supervisory ratings errors such as leniency and central tendencies) (Furnham, 2008; Pynes, 2001). Taken together, the role of cognitive ability in police work should not be underestimated, and tests of cognitive ability should be considered serious and important tools for hiring new officers.

It can be argued that in recent years, policing has become less routine in nature, as it has moved towards new concepts and philosophies, including community and problem-oriented policing programs encouraging police officers to implement higher powers of judgement and analysis in identifying and solving problems of great concern to a community. This new approach towards policing appears to require better

communication skills, problem solving abilities, and critical thinking abilities, which provide evidence for the role that cognitive abilities may play in predicting police performance, particularly under these new policing methods (Hughes, 2003; Pynes, 2001).

In conclusion, there are a number of key findings that are worth noting: (a) tests of general cognitive ability have consistently been found to successfully predict police training and job performance; (b) cognitive ability measuring devices developed specifically for police selection, as well as other general cognitive ability tests, have similar predictive validities in police contexts; (c) in addition to training and job performance, cognitive ability tests also predict CWB and negative behaviours amongst working police officers; and (d) most of these studies have been done in non-Arabic-speaking contexts. In the UAE, for instance, cognitive ability measurements are not used as a part of the police selection process. Considering these findings, this lack of cognitive ability assessments in the selection of police officers may contribute to several performance problems reported by police agencies in the UAE, as discussed in the background chapter. Therefore, investigating the effects of cognitive ability on police performance in the UAE appears to be important, particularly for the development of the police officer selection process.

2.5 Summary of the Literature Review

As the above review has indicated, most information about the personal characteristics important for effective job performance in police work comes from more general service literature, particularly within non Arabic-speaking contexts. Although the literature review suggests that normal personality traits and EI are of high relevance and prime importance for police officers, only a few studies have investigated their role within the police force.

Table 2.12 Summary of the key past research

Study	Objective	Main finding	Limitations
Varela, et al. (2004)	To examine the predictive validity of personality testing in police organisations.	A significant association between personality tests data and law enforcement officer job performance was found.	Based on measures of psychopathological personality features. Focused on screen out unfit candidates rather than to select preferred candidates.
Sanders (2008)	To investigate the relationship between the Big Five factors and police job performance.	Weak correlations between the Big Five factors and police officer performance scores were found.	Limitation in the measure of job performance. Range restriction. Cross-sectional study design using a small sample (n = 96).
Lau, et al. (2006)	To investigate the relationship between the Big Five factors, coping strategies, and perceived job stress among a sample of police officers.	They found that officers high on Extraversion and low on Neuroticism, reported low level of perceived job stress; and that officer high on Conscientiousness and Extraversion show high level of active coping strategies.	Cross-sectional study design. Based on non Arabic sample
Salgado (2002)	To meta-analytically investigate the relationship between the Big Five factors and CWB.	Conscientiousness and Agreeableness were found to be valid predictors of deviant behaviours.	Much previous research on personality/CWB relationships depends mainly on self-reported measures of CWB.
Law, et al. (2004)	To investigate the associations between EI and job performance.	A significant correlation between EI and job performance has been reported on the three studies.	These studies have not controlled for both personality traits and intelligence in the same analysis. Cross-sectional studies design. Based on non police and non Arabic sample.
Carmeli and Josman (2006)			
Sy, et al. (2006)			
Ricca	To investigate the	Emotionally intelligent	Cross-sectional study

(2003)	relationship between EI, and burnout amongst a sample of police officers.	officers have found to show low levels of job burnout and high levels of belief in individual ability to successfully alleviate negative moods	design using a small sample (n = 50).
Brackett, et al. (2004)	To examine the relationship between EI and deviant behaviour.	A negative significant relationship between EI and deviant behaviour has been found on the three studies.	Cross-sectional studies design. Based on non police and non Arabic sample. They only use self-reported measures of deviant behaviour.
Poole, et al. (2008)			
Khalid, et al. (2009)			
Aamodt (2004)	To meta-analytically investigate the relationship between cognitive ability and job-related behaviours in police organisations.	Cognitive ability has been found to be valid predictors of academic performance, job performance, and discipline problems among police officers	Range restriction. Based on non Arabic sample.

It may be clear from the literature review that the utility of the Big Five in predicting a variety of workplace behaviours has been supported by several previous studies, particularly with respect to job performance (Johnson, 2003), job stress (Lau, et al., 2006), and CWB (Cullen and Sackett, 2003). The importance of cognitive ability in predicting police job performance has also been supported by earlier studies (Aamodt, 2004). Despite the significant contributions of previous studies regarding the reliability and validity of personality dimensions and cognitive abilities in predicting a range of police officer behaviours at work, it has been reported that many conclusions about the relations between personality traits and job performance have been based largely on meta-analysis techniques, which may be considered unsuitable, particularly when using results in processes of police officer selection (Rothstein and Goffin, 2006). Additionally, available studies on the role of psychometric tests (i.e., tests of personality and cognitive ability) for police officer selection processes have one major disadvantage, namely range restriction, as discussed earlier in the current chapter.

Furthermore, previous police research has not significantly investigated the role of normal personality traits in predicting job performance. That is, most of this research has been directed towards establishing relationships between personality and police

misconduct, where personality is measured through tests of psychopathological personality features. Moreover, most of this research has been targeted towards screening out inappropriate applicants, rather than towards selecting in the best candidates who would contribute significantly to an organisation's success. Additionally, significant research about the FFM/job performance relations has been conducted in Western countries, but there have not been sufficient studies in Arabic-speaking countries examining the validity of personality traits and cognitive ability in predicting work outcomes, particularly within police organisations (Qatan, 2003; Sharea, 1999; Talib and Abu-Shamah, 1999). Consequently, there appears to be a gap in the literature concerning the cross-cultural validity of the FFM in the UAE and Arabic regions in general; and the validity of the FFM in predicting police outcomes, particularly job performance.

With respect to research on the stress of police work, while past results indicate a strong relationship between personality traits and abilities to cope with stress, the majority of these investigations have been also conducted in Western cultures. This fact raises concerns about the validity of generalising their results to other cultures, particularly in light of the vast differences between cultures in terms of social behaviour and responses to stressful events and difficult situations (Bishop, et al., 2001). At present, little research in the UAE or other Arabic countries has been conducted to explore the effects of personality traits on perceived job stress and abilities to cope with stress, particularly within police organisations, since most studies of job stress have focused on organisational stressors, rather than personality factors (Tawaiha, 2004). Moreover, regarding CWB literature, little research has investigated the links between cognitive ability, EI, and CWB, and there is a strong need for further investigations in this area (Dilchert, et al., 2007). Other limitations of previous CWB research include: (a) it depends too much on students and part-time workers; (b) it only uses self-reported measures of CWB; and (c) very few studies of CWB have been done in Arabic-speaking contexts (Hamid, 2008; Hammond, 2008; Jones, 2008)

Although they have significantly contributed to the growing research on the role of EI in the workplace, previous studies offer limited evidence regarding associations between EI and job performance, particularly within police organisations. There is a general lack of research attempting to empirically investigate the role of EI within the police, and few studies have examined the relationship between EI and criterion variables (e.g., CWB

and occupational stress) other than job performance. Moreover, very few studies to date have considered the degree to which EI contributes to predicting and understanding work outcomes in Arabic-speaking regions. For example, Suliman and Al-Shaikh (2007: 218) have suggested that "further studies are required in this field, especially in the Arab world, before reaching some general conclusions about the issue of EI and how it affects work outcomes."

Finally, although much Western research has demonstrated the utility of personality traits and general cognitive abilities in predicting academic and training performance (Furnham, 2008; Warr, 2002), very little research has been done on the relationship between these factors and academic and training performance in Arabic-speaking contexts, and very little research has examined the validity of EI in predicting training performance, particularly within police organisations (Al-Muhaya, 2005; Burnette, 2008; Rasol and Kazem, 2005). Upon reviewing the available literature, for instance, Armstrong (2007) reported that "There appear to be no peer-reviewed empirical studies that have explored relations between EI and the ability to learn new ways to perform one's job, to adjust to new work processes, procedures, and equipment, or the propensity to search for and participate in work assignments that require one to develop new skills" (2007: 222). Limitation of previous police research on training is the failure to explain the relationship between EI and training performance. To date, most of the empirical work addressing individuals' features as predictors of learning and training achievement has focused on personality traits and cognitive ability in Western cultures.

To summarise, following an exhaustive literature review, a research gap has been identified, as there is little meaningful research available on the role of normal personality traits, cognitive ability, and EI in predicting work-related behaviours in police organisations, particularly within Arab countries. Accordingly, several questions arise from the current literature including: (a) to what extent normal personality traits can predict job performance and discipline among police officers?; (b) does cognitive ability have the same validity in predicting job performance and training performance within Arabic speaking context as within western context?; (c) does EI have a valuable application for police organizations?; and (d) what is the incremental validity of personality traits and EI in predicting job outcomes over cognitive ability?

Three different studies in the current thesis have therefore been conducted to fill this gap, featuring investigations of the relationship between the five-factor model of personality, general cognitive ability, EI, and work-related behaviours (i.e., job performance, training performance, perceived job stress, coping with stress, and counterproductive workplace behaviours) amongst a sample of current and newly hired police officers in the UAE. More specifically, the first study examines current practices in police officer hiring procedures at the ADP mainly to investigate its advantages and disadvantages, and respondents' beliefs ($n = 30$) about the effectiveness of using psychometric tests for police officer selection. Study two of this thesis, which examines the relationship between personality traits, general cognitive ability, EI, and a number of work-related behaviours (i.e., job performance, perceived job stress, coping with stress, and CWB) amongst a sample of current police officers ($n = 310$). Study three of this thesis aims to replicate and extend study two within a different population (i.e., the sample of Study three is based on newly hired officers, $n = 385$), and by using an additional dependent variable, namely training performance. Another major difference between studies two and three is their respective research designs. While the former is based on cross-sectional design, the latter is based on longitudinal design for data collection. The final chapter provides a general discussion of the findings, their contributions to knowledge, their implications and limitations, and possible directions for future research.

Chapter 3: Study One

3.1 Introduction

The main goal of Study One was to provide a review of contemporary police officer selection procedures in the UAE such as its advantages and disadvantages, and the respondents' beliefs about the effectiveness of using psychometric tests for police officer selection.

It has been shown in the introduction chapter that the process of personnel selection is very important, particularly for law enforcement organisations. Identifying job applicants who are well adjusted and possess the abilities and skills critical for working effectively as police officers would help police organisations in a number of ways. First, it would help police forces reduce expenditures of time and money in training officers who would not benefit from this training, or who would leave the force through resignations or terminations. Second, the selection of fit candidates is particularly essential in police organisations, since police officers are entrusted with responsibilities to enforce laws, fight crime, and protect people's lives and property from harm. Thus, the inability to effectively perform these tasks may endanger officers themselves, their organisations, and the general public. Third, police work is one of the most stressful, challenging, and dangerous jobs in modern civil society (Gaines and Falkenberg, 1998). Selecting the individuals most suitable for police work, therefore, would contribute to controlling job stress, increasing work performance, decreasing indiscipline, and improving the public's perceptions of and trust in the police. For these reasons and others, as noted in the introduction chapter, police officer selection procedures should be made more valid and reliable. Therefore, study one was aim to provide a review of contemporary officer selection procedures in the UAE.

According to Police Law in the UAE, individuals applying for the position of police officer must meet the following requirements:

- Applicants must have completed secondary school or above (i.e., grade 9 +).
- Applicants must be UAE nationals.
- At the time of application, applicants must be at least 18 years of age.
- Applicants must have suitable physical builds, hearing, and eyesight.

- Applicants must have no convictions of felonies or misdemeanours, as described in UAE Criminal Law.
- Applicants must not have been disreputably discharged from the military or other jobs.

Statistics from the Abu Dhabi Police's (ADP) Selection and Recruitment Department demonstrate that about 5000 individuals apply for police officer positions each year, but only 1000-1500 are selected and employed each year, according to its human resources strategies. These statistics indicate that a great number of people desire to join the ADP each year, providing an ample pool of high quality candidates for selection. At the ADP, however, only five procedures are used in the selection of new police officers. According to Police Law in the UAE, the applicant screening process consists of the following phases:

- The completion of an application form that consists mainly of questions about demographics and background information.
- Extensive criminal record checks, including juvenile records.
- An oral, unstructured interview that frequently includes at least four people to evaluate attributes such as decision-making skills, oral communication skills, and overall conduct.
- Physical fitness tests.
- A medical exam.

The selection process takes three months, and successful applicants are then trained for six months. No psychological assessments (e.g., personality or cognitive ability assessments) are required for police recruits during this selection process. No psychological assessments are used for any other purposes at the ADP.

This process of police officer selection shows that the system is much less effective than it could be. A comparison of selection procedures in the UAE and some other developed countries, for instance, suggests a gap between police officer selection practices in the UAE and those in the other countries. On one hand, police organisations in other developed countries use a number of different procedures to evaluate their candidates. Cochrane, et al. (2003), for example, has found that police agencies in the USA use at least nine different tools when selecting new officers, as indicated in the introduction

chapter. More specifically, the selection mechanisms used by police organisations in the USA are quite similar, and generally include: an application, a written test, a psychological test, an oral interview, a drug test, a polygraph test, a physical fitness test, a medical examination, and a background check. During this process, a police applicant is not allowed to proceed to the next stage if he or she fails to meet the minimum standards of an earlier test. This large and multiple-hurdle approach intends to improve the value and efficiency of the selection procedure, and enhances the quality and accuracy of the hiring decision (Burnette, 2008; Ho, 1999).

It has been found, on the other hand, that many police agencies use personality and cognitive ability measurements as an important part of their personnel selection procedures (Bannish and Ruiz, 2003; Barrett, et al., 2003; Hughes, 2003). A number of previous studies, as demonstrated in the literature chapter, support the usefulness of the Big Five dimensions, particularly Conscientiousness, Emotional Stability and Extraversion, for predicting a number of police job-related behaviours (Barrick and Mount, 1991; Black, 2000; Cortina, et al., 1992). Detrick and Chibnall, (2006), for instance, found by using the NEO PI-R Form R (observer form) that field training officers described the “best” entry-level police officers they had supervised as generally low in Neuroticism, high in Conscientiousness, and high in Extraversion. They also found similar results by comparing the Big Five personality profiles of very high- and very low-performing entry-level officers.

In addition, Costa, et al. (1995) conducted a study to identify the personality requirements of police officers according to experts in police and trained psychologists working in the area of police selection. Results show that: (a) the experts suggested that the ideal entry-level police officer should score high in Conscientiousness and Extraversion, and score low in Neuroticism; and (b) candidates recommended by psychologists for police officer positions obtained significantly higher scores in Conscientiousness and lower scores in Neuroticism than the non-recommended candidates. This result, which was based on the view of experts police officers as well as trained psychologists working in the area of police selection, suggests that Conscientiousness and Emotional Stability are two important characteristics of desirable police officers.

With respect to cognitive ability, research on police selection measures has illustrated that cognitive ability tests are valid predictors of Academy and job performance (Aamodt, 2004), as reported in the literature review. Accordingly, many police agencies use personality, cognitive ability, and other psychological measures as a significant part of their personnel selection process (Bannish and Ruiz, 2003; Barrett, et al., 2003; Bartol and Bartol, 2004). The development of selection procedures and the implementation of appropriate psychological testing instruments serve to identify highly qualified candidates who are mentally and psychologically fit for police work, which has been described as some of the most difficult, stressful, challenging, complex, and dangerous work in modern civil society (Ainsworth, 2002; Ho, 1999).

According to Police Law in the UAE, the unstructured interview is one of the main tools for selecting new officers at the ADP. Nonetheless, in reviewing the literature about the effectiveness of interview methods in personnel selection, several researchers (Chamorro-Premuzic and Furnham, 2010; Gatewood and Field, 2001; Smith and Smith, 2005) have concluded that interviews, and particularly unstructured interviews, are not particularly effective techniques for evaluating the characteristics of applicants. Taylor, et al. (2002) have reported similar findings, claiming that (a) the validity and reliability of unstructured interviews for personnel selection are generally low; (b) higher reliability and predictive validities of interview methods can be gained from structured employment interviews; and (c) worldwide, there has been greater success in using psychological tests for selecting staff.

Moreover, a recent European study (Furnham, 2008) of 255 human resource professionals showed that the validity, cost, legality, and practicality of personality and cognitive ability tests for personnel selection were found to be satisfactory. These results suggest that, in addition to relying mostly on unstructured interviews, the lack of personality and cognitive ability measurements in the ADP's police officer selection process may negatively influence the validity and reliability of the process, and result in lower quality and less reliable hiring decisions. This lack of validity in the selection process may contribute to several of the ADP's workplace problems (e.g., low levels of job performance, and high levels of indiscipline and perceived job stress) as noted in the background chapter.

Additionally, the UAE has witnessed significant changes over the last decade, including increased populations and businesses, developments in technology, and a rise in crime patterns and terrorist attacks in the local area (Abdel-Hamid, 2006). Thus, in 2004 the ADP established new strategies for meeting the challenges of this rapidly changing environment, and for implementing community policing and crime prevention plans to maintain the country as an internationally recognised safe and stable society (Al-Thakhri, 2005). Although the ADP's new strategies seriously considered addressing its processes of police officer selection, there has been limited research examining the efficiency of current police officer selection practices in the UAE. On one hand, the topic of police officer selection has been largely ignored even though it appears to be important for finding the best entry-level officers. On the other hand, hardly any Arabic countries have paid much attention to the use of psychometric tests as an additional assessment tool prior to employment (Al- Muhaya, 2005). Consequently, study one will aim to provide a review of the current police officer selection process at ADP, to explore its effectiveness and appropriateness. The main question of the research is:

Is the current police officer selection system at the ADP effective?

In order to answer this research question, the following objectives have been set:

- 1) To examine the advantages and disadvantages of current police officer selection practices at the ADP.
- 2) To identify present police officers' performance levels according to respondents' perceptions. This is important since any evaluation of the adequacy of the selection program should be made in terms of job performance (Gatewood and Field, 2001).
- 3) To determine respondents' beliefs about the effectiveness of using psychometric tests for police officer selection.
- 4) To determine respondents' perceptions about the problems of job stress and indiscipline amongst police officers.

- 5) To identify personality traits of effective police officers as described by senior police managers.

3.2 Methods

As Taylor (2006: 478) has observed, “analyses of recruitment and selection based on detailed qualitative, interpretive research provide a more meaningful basis for scholars and practitioners to understand recruitment and selection processes.” Based on this idea, study one employed a semi-structured interview method. Semi-structured interviews have been chosen for several reasons: (a) this method is concerned with people’s perceptions and experiences of a given situation (Coolican, 2004); (b) it helps provide a detailed account of what is happening in an investigated setting; (c) it is also powerful in providing rich answers for questions starting with “why” and “what” (Bryman and Bell, 2003); (d) interviews possess a certain degree of flexibility, which gives the researcher an opportunity to explain research objectives and questions more deeply to participants, helping to clarify any misunderstandings or ambiguities (Asskar, et al., 1992; Eysenck, 2002); (e) this method is useful when a given situation is not clear (Collis and Hussey, 2003); and (f) it is also helpful when studying more sensitive issues which cannot be easily researched in the public (Coolican, 2004).

Moreover, interviewers have greater flexibility in using their expertise, knowledge, and interpersonal skills to investigate unexpected or interesting ideas or subjects reported by participants, which can help to add depth to the data obtained (Bryman and Bell, 2003; Saunders, et al., 2003; Gray, 2004). Additionally, a small sample may be considered suitable in order to establish different perspectives about a given set of circumstances, such as those within the ADP (Saunders, et al., 2003). In line with the above advantages and suggestions, the semi-structured interview method was chosen in order to obtain richer information about managers’ attitudes, opinions, feelings, and values towards the ADP in relation to current practices of police officer selection.

3.2.1 Participants

Access to participants was gained through the snowball sampling technique. In this method, respondents are recommended by others familiar with the problem or subject investigated, or by other interviewees (Coolican, 2004). Consequently, in the current research (Study One) some respondents were recommended by the ADP's Executive Manager, and by some other interviewees. Interviews were conducted with full-time officers at the ADP in the United Arab Emirates ($n=30$), including 28 males and 2 females. The participants were a senior group with an average age of 35.5 ($SD = 5.4$) (the minimum age was 28 and the maximum was 48) and an average experience of 15 years ($SD = 4.8$) in police services (the minimum experience was 8 years and the maximum was 31 years). Officers' educational backgrounds varied: two respondents had Ph.D.'s, five participants had Masters degrees, and the rest had Bachelors degrees. In order to gather data from different perspectives, as well as from samples familiar with the research theme, officers were selected from four different grades, including three Colonels, six Lieutenant Colonels, four Majors, and seventeen Captains. Interviewees were consisted of sixteen executive level officers and fourteen mid-level officers.

Moreover, for Study One and for the sample to be representative of police work covering a wide range of tasks and duties, the interviews were carried out with officers from seven different departments. This decision was made in order to gain more detailed information, and to build a deeper understanding about the topic. These departments included: the Selection and Recruitment Department ($n=6$), the Department of Strategic and Performance Development ($n=5$), the Department of Investigation ($n=5$), the Prison Department ($n=4$), the Community Policing Department ($n=4$), the Ports and Airports Security Police Department ($n=3$), and the Traffic and Patrols Department ($n=3$). These departments were selected for the following reasons: (a) these departments were all involved in active police work, particularly in the area of crime fighting and prevention; and (b) one of the most important features of working at these departments was integration and dealing with the public. The Selection and Recruitment Department and the Department of Strategic and Performance Development were selected because they held positions of power, and had the authority to drive changes within the ADP; they were responsible for planning, implementing and evaluating strategic processes in all of the other ADP departments.

3.2.2 Measures

A semi-structured interview was developed to investigate current police officer selection practices, as well as the job-related behaviours of present police officers at the ADP (a copy of the interview questions may be seen in Appendix 1). The interview questions were piloted with a sample of five full-time police officers from the ADP. As a consequence of the feedback obtained from the pilot sample, changes were made to the phrasing of some interview questions.

The interview consisted of closed questions and open-ended questions, which gave participants the freedom to talk about issues of particular significance within each topic. In addition to demographic data, the final interview consisted of ten questions divided among a number of subcategories: current selection procedures; current police officer performance and behaviours; and the use of psychometric testing for police officer selection purposes.

The NEO Job Profiler, which consists of a set of descriptions of the 30 traits measured by the NEO Personality Inventory (NEO PI-R; Costa and McCrae, 1992), using clear language for lay-people, was also employed (see Appendix 2). This tool was developed by Costa, McCrae, and Kay (1995) to allow a comprehensive and standardised quantitative assessment by experts (such as job analysts, supervisors, and successful members of the occupation being profiled) of trait desirability for particular jobs. These judges would evaluate the importance and desirability of each of the 30 personality traits for specific jobs. The NEO Job Profiler allows for the mapping of personality traits and requirements for different jobs (De Fruyt and Mervielde, 1999).

The NEO Job Profiler is a 30-item inventory measuring six middle-order traits embedded within each of the Big Five factors of Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness. The facet scores include Anxiety, Angry Hostility, Depression, Self-Consciousness, Impulsiveness, and Vulnerability in the Neuroticism domain; Warmth, Gregariousness, Assertiveness, Activity, Excitement-Seeking, and Positive Emotions in the Extraversion domain; Fantasy, Aesthetics, Feelings, Actions, Ideas, and Values in the Openness to Experience domain; Trust, Straightforwardness, Altruism, Compliance, Modesty, and Tender Mindedness in the Agreeableness domain; and finally Competence, Order, Dutifulness, Achievement-

Striving, Self-Discipline, and Deliberation in the Conscientiousness domain. Costa, et al. (1995) pointed out that all five factors and all 30 facets have validity coefficients over .30, a value considered to be the upper limit of validity in personality measurement. In a recent global study (Schmitt, et al., 2007), the five-dimensional structure was found to be robust across major regions of the world, including Arabic-speaking contexts, as indicated in the literature chapter.

Since this measure was to be used in the UAE, the questionnaire had to be translated into Arabic (the official language in the UAE) by a professional translator (see Appendix 3). The professional translation was then translated back into English by the researcher, to ensure that the original Arabic translation had been correct and that the meanings of the items had not changed. This technique is considered a basic method for attaining semantic equivalence in different language versions of a measuring tool (Hambleton, 1993). Additionally, Cheung and Cheung (2003) have suggested that an interview with a small sample can provide in-depth insights into possible misunderstandings of translated items, and point to any cultural differences or difficulties in the interpretation. Therefore, in order to judge that the translated items highly corresponded to the original items both linguistically and psychologically, the researcher showed the two copies of the questionnaire (one in Arabic and one in English) to a sample of five full-time police officers in the ADP who had sufficient knowledge of the two languages, in order to determine if there were any differences in their meanings. The result was that the two versions (the English version and the Arabic version) were confirmed to have the same meaning, and the Arabic version was made very clear.

3.2.3 Procedure

Interviews were conducted with participants in September and October 2007, with typical interviews lasting between 25 and 35 minutes. Face-to-face data were collected from the participants in their offices in Abu Dhabi, the capital of the UAE. The interviews were taped (except in some cases where the interviewee did not want this), in order to control bias and to obtain reliable data (Saunders, et al., 2003). Recorded interviews were transcribed verbatim by the researcher after the completion of each interview. Each respondent was informed about the nature of the study, the importance

of the research, how the information was to be used, and finally asked what he or she wanted to keep confidential. Generally, interviews took place in a relaxed and friendly atmosphere, and all interviewees were willing to provide truthful information, because the topic of the study was related to their work, and they felt that the results could help improve the ADP, particularly in light of its new strategies.

The interviews were held in Arabic, which is the native language of both the researcher and the respondents. The interviews were then translated from Arabic into English by the researcher, who: (a) has adequate knowledge of the two languages to understand and translate them (the researcher studied English for twelve years and possesses a Masters degree from a British University); (b) has a deep and solid understanding of the culture involved (the researcher is a citizen of the UAE); and (c) possesses knowledge about the field of investigation (the researcher has extensive experience working as a full-time police officer at the ADP).

3.2.4 Ethical Considerations

There were several steps to consider regarding the ethical considerations of the present research (Study One). These are as follows:

Before beginning the study, the researcher obtained permission from the Executive Manager of the ADP to begin collecting data (see Appendix 4). The research question and objectives were explained to the Executive Manager in order to give him a general understanding of the study. Given that the purpose of the study was to examine attitudes, values and opinions towards the current situation in the ADP, it was assumed that some interviewees might give information about political or cultural factors that would require confidential and careful handling in order to avoid any negative consequences for participants in the future. Thus, all data was and will be handled confidentially and in line with the Code of Conduct published by the British Psychological Society. Furthermore, it was stressed that participation was optional for officers, and that they were free at any time to withdraw without giving any reasons and without suffering any consequences.

3.2.5 Data Analysis

Responses to open-ended questions could contain a range of meanings, and should not be treated as self-explanatory. Qualitative data can provide valuable and rich information; nevertheless, it is complex and often difficult to analyse (Hagar, 2003). According to Collis and Hussey (2003: 253), “the main challenge to qualitative data analysis is that there is no clear and accepted set of conventions for analysis corresponding to those observed with quantitative data.” They have consequently suggested that categorising, sorting, prioritising, and interrelating data are essential features of the analytical process in qualitative research.

Thus, data from open-ended questions were analysed by the coding method (see Myers, 2009). First, specific words, sentences, and paragraphs related to a given question were identified by the researcher. Categories were then developed to reflect the individual responses given by interviewees (Hagar, 2003; Saunders, et al., 2003). This was completed by examining respondents’ statements separately for each interview question, and breaking down these statements into several possible elements (where an element suggests one particular, unique item of information). Some elements were then grouped together; merging those with similar meanings, despite different terminologies (Gray, 2004).

3.3 Results

Results have been organised into four main sections, including: a) current police officer selection procedures at the ADP; b) effectiveness of the current police officers at the ADP (i.e., their overall job performance, job stress, and discipline); c) the use of psychometric testing for police officer selection; and d) the results of the NEO Job Profiler.

3.3.1 Review of Existing Police Officer Selection Procedures at the ADP

The existing police officer selection procedures were examined in the interview by asking participants what the advantages and disadvantages of the current selection procedures were.

Participants cited three main positive elements of the current police officer selection procedures. First, the majority of respondents (a total of 23 out of 30) reported that there were two advantages of the existing selection system, namely that it was cost efficient and fast. That is, the present selection process did not cost the organisation massive amounts of time or money, particularly given the high number of applicants each year. Typical responses were as follows:

"I think the present police officer selection procedures have two important uses, including the saving of time and money, particularly as the selection of new police officers occurs three times per year, and there are large numbers of candidates" (Interviewee: male, Selection and Recruitment Department).

"Because of the large numbers of applicants..., the current system is suitable for its low costs and time" (Interviewee: male, Traffic and Patrols Department).

Moreover, the use of locally accepted methods was identified most frequently by several participants as one of the advantages of the current police officer selection procedures. These participants believed that this system of selection was utilised not only at the ADP but also at many other public sector organisations throughout the UAE. They also pointed out that making the selection procedures easy and simple was important for the process of nationalisation (i.e., the process of employing Emirates citizens). In the words of one respondent:

"There is a political trend towards nationalising the public sectors in the United Arab Emirates, and because of this I believe that the current system of employee selection at the ADP is useful in making procedures easy; it is also socially accepted within the community, because it is similar to practices within other public sectors in the UAE" (Interviewee: male, Department of Strategic and Performance Development).

There were, however, a number of serious criticisms about existing police officer selection procedures, which raised some doubts about its contributions to police officer selection. First, of the 30 officers interviewed, 25 stated that the system was less effective in selecting the best candidates because it was limited to comparing individuals (and therefore less valid in clearly showing the applicants' characteristics) and did not do a good job of predicting future job performance. Second, according to many participants (n = 21), many problems develop when new recruits are distributed in different

departments, since special qualities and different functions are not considered. In other words, while different functions require different skills and abilities, there are no clear standards for police functions requirements at the ADP; the selection is general and the distribution of new officers amongst different departments is also general, lacking considerations of the skills and abilities required for each job.

Furthermore, many respondents believed that the existing police officer selection process is not cost-efficient. That is, they indicated that the loss of time, money, and energy in additional training (i.e., the rise of training costs) was another problem in the existing selection process. They insisted that many new recruits lacked the basic police skills that would maximise the direct costs of training and replacement due to unwanted turnover. A number of participants also raised concerns about the fairness of the selection system. They reported that the current police officer selection procedures did not treat all candidates equitably, since there were no clear standards or structured processes applied to all candidates. Typical answers were as follows:

“Certainly, the present selection system does not help with the recruitment of the best candidates, particularly with the absence of clear criteria for high performance police officers,...this can result in a loss of time, money and energy in training and can lead to a poor distribution of new officers in different departments” (Interviewee: male, Ports and Airports Security Police Departments).

“Police work is stressful and difficult and thus, requires specific skills and abilities..., unfortunately, the current selection procedures depend largely on the interview, which is not enough to make a comparison between the applicants..., therefore, mostly unsuitable individuals are hired in ways that do not support the rapid changes happening in the ADP, and which lead to the a higher need for training and a decrease in overall performance” (Interviewee: male, Department of Strategic and Performance Development).

“The current police officer selection procedures are random; consequently, I believe this can result in two main disadvantages: (a) the system is not successful in selecting the best candidates; and (b) one of the main problems with the process is that it does not treat all applicants fairly because its procedures are not consistent” (Interviewee: male, Selection and Recruitment Department).

3.3.2 Current Police Officers Performance and Behaviours at the ADP

Respondents were asked whether or not their departments tended to select appropriate individuals for working effectively. A total of 26 out of the 30 respondents indicated that their departments did not hire suitable employees for doing the work sufficiently and effectively. Only four participants believed that their departments had effective staff. It is clear that the vast majority of interviewees (87%) were not satisfied with the abilities and skills of police officers working in their departments, particularly when it came to new officers. The most commonly cited reasons for this were a lack of clear and appropriate criteria for best entry-level police officers, and the random distribution of new recruits in different departments. Typical responses were as follows:

“I believe that new officers who are selected each year are not as effective as we expect..., many of them are not suitable for police work and they do not have the basic skills or requirements for law enforcement positions that require high levels of intelligence, loyalty, dedication, discipline, and hard work..., to be honest with you, this is not surprising, since there are no clear and suitable criteria for the selection of applicants” (Interviewee: male, Ports and Airports Security Police Departments).

“A common belief among members of the public is that police work is simple; but in my opinion this is wrong..., good police officers should possess specific skills (such as high-level communication skills) and abilities (such as problem solving abilities) to perform well..., the current selection system, nonetheless, does not help in identifying and measuring these special characteristics and the differences between individuals, so I believe that poor personnel selection is one of the most important factors of low-level job performance and several other disadvantages amongst current officers” (Interviewee: male, Investigation Department).

“In spite of the fact that the new officers receive intensive training at the Police Academy and several specialist training sessions, I am not satisfied with their performance..., I think this is because they lack basic skills for police work, such as the ability to work effectively with others..., some of these abilities and skills need to be considered during the selection process, but unfortunately this does not happen in the current system of personnel selection” (Interviewee: male, Traffic and Patrols Department).

Additionally, over two-thirds of the respondents reported that they had complained to their supervisor about the police officer selection process because they believed it was weak and did not aid in the selection of the best applicants who could contribute to the organisation's success. Typical comments were as follows:

"Yes, I have complained several times to the Executive Manager of the ADP about the process of police officer selection, because it is not effective and needs many modifications..., many new recruits unfortunately lack the basic requirements for performing police work, particularly as community police officers need high levels of abilities and skills in dealing constructively with the public" (Interviewee: male, Community Policing Department).

"Human resource management builds on several factors, including training, motivation, appraisal...etc. Before that, the process of employee selection has become one of the most important factors..., the system of selection at the ADP is very poor and I think that the current police officer selection procedure is one of the main reasons for low performance, and does not help the ADP to be more operationally responsive to changes in the local environment, and thus I am personally not happy with it" (Interviewee: male, Department of Strategic and Performance Development).

"Several complaints come to us every year from different departments about the overall weakness of new officers, and I believe that the poor selection procedure is an essential reason for that" (Interviewee: male, Selection and Recruitment Department).

Moreover, participants were asked to make a judgement about the overall performance of police officers in their departments on the following job performance ratings: (1) Poor; (2) Below average; (3) Average; (4) Above average; and (5) Excellent.

Of the 30 respondents, nine reported that they believed that overall performance of police officers in their department was below average, and three reported that performance level was above average. About half of the respondents (twelve out of 30) reported that the performance of police officers in their department was average, and a total of six out of the 30 interviewed officers stated that they believed that the overall performance of police officers in their department was poor. None of the interviewees reported that performance was excellent. The overall result indicated that performances were perceived as between below average and average ($N=30$, $Mean=2.40$, $SD=0.93$,

Median=2.50, Range=3). It is clear from these statistics that senior police officers agreed that the job performance level of current police officers at ADP was not high and did not match the present process of changes and developments taking place at the ADP.

Respondents were also asked about the subject of job stress amongst police officers at the ADP using a five-point scale (Strongly agree, Agree, Not sure, Disagree or Strongly disagree). The question was phrased as follows: *“To what extent do you agree that stress is a serious problem amongst police officers at the ADP?”*

The majority of the interviewees (a total of 24 out of the 30 respondents) reported that they strongly agreed that stress was a serious problem amongst police officers at the ADP, and the rest (n=6) of respondents reported that they agreed. Since all participants were in agreement that stress was a serious problem at the ADP, they were asked to identify the factors underlying the high levels of job stress amongst police officers. They could select any number from a list of nine causes (see Table 3.1). Several studies of the Middle East (Al-Dossary, 2005; Al-Mutairy, 2006; Al-Twaim, 2005; Tawaiha, 2004) have found these factors to be the most important factors underlying high levels of job stress amongst police officers.

Table 3.1 Factors underlying high levels of job stress amongst police officers according to participants (n=30)

The factor	Number of responses	Percent
Poor coping strategies	25	83%
The nature of police work	22	73%
Role ambiguities	17	56%
Work load	15	50%
Non-participation in decision making	10	33%
Lack of administrative support	6	20%
External stressors	3	10%
Limited promotional opportunities	3	10%
Disputes at work	1	3%

As illustrated in Table 3.1, a number of factors were highlighted by respondents as main factors that increased stress amongst police officers at the ADP. However, poor coping strategies and the nature of police work were most often cited as important causes.

Respondents were also asked about the problem of indiscipline amongst police officers at the ADP using a five-point scale (Strongly agree, Agree, Not sure, Disagree or Strongly disagree). The question was phrased as follows: *“To what extent do you agree that indiscipline is a serious problem amongst police officers at the ADP?”*

The results show the following: (a) over half of the interviewees (a total of eighteen out of the 30 respondents) reported that they agreed that indiscipline was a serious problem amongst police officers at the ADP; (b) four of respondents reported that they strongly agreed; and (c) only five respondents were not sure; and (d) the rest disagreed. Participants who agreed were further asked to identify the officers’ most common disciplinary problems. They could select any number from a list of six indiscipline behaviours (see Table 3.2). These behaviours were reported by the Human Resource Department as the main reasons for police officer prosecutions at the ADP.

Table 3.2 The most common disciplinary problems committed by officers according to participants (n=22)

Disciplinary problems	Number of responses	Percent
Absenteeism, coming late to work, or leaving work early without permission	20	91%
Lack of respect between officers, such as verbal abuse of a co-worker	16	72%
Public complaints about officer conduct	14	63%
Refusal to take on an assignment when asked	12	54%
Purposely doing work incorrectly or disobeying instructions	11	50%
Misuse of authority	9	41%
Others	8	36%

As demonstrated in Table 3.2, participants highlighted a number of indiscipline behaviours as the most common forms of misconduct amongst police officers at the ADP. Absenteeism, coming late to work or leaving work early without permission, lack of respect between officers, such as verbal abuse of a co-worker, and public complaints about officers' conduct were the most widespread behavioural problems amongst officers at the ADP, according to participants. Other disciplinary problems, such as refusing to help someone else at work, starting or perpetuating damaging or harmful rumours at work, and doing personal work whilst on duty were also reported as less frequent violations committed by officers.

3.3.3 Using Psychometric Testing in Employee Selection

Respondents were asked for their opinions about the usefulness of psychometric testing in the employee selection process, and whether or not they thought it would enhance the quality of police officer recruits. First of all, to be sure that police officers interviewed had an adequate knowledge about the theme of psychometric tests, they were asked the following question: *“To what extent are you familiar with the concept of psychometric testing?”* Criteria for possessing sufficient information about psychometric tests included knowing about some of them, and showing an understanding of the reliability and validity of psychometric tests. Of the 30 officers interviewed, eighteen showed an adequate understanding of the topic of psychometric testing.

All participants ($n = 18$) who were familiar with the subject of psychometric testing agreed that using psychometric tests (such as intelligence and personality tests) in the employee selection process could enhance the quality of recruits, and may play a significant role in aiding the best selection of entry-level police officers. The most commonly cited goals for using psychometric tests in selection practices were to improve objectivity, validity, and fairness, and to avoid potential police officers' problems, such as absenteeism and resignations. Typical answers were as follows:

“Using psychometric tests in the selection procedure will help recruit the best candidates through screening out inappropriate individuals, such as those with high anxiety levels who are extremely unsuitable for police work, and it will also help in fit people for police work, such as individuals who have the ability to deal with stressful

situations and interact positively with others” (Interviewee: male, Selection and Recruitment Department).

“Psychometric tests are used for employee selection in numerous organisations around the world...; I believe that using valid tests in the United Arab Emirates as a selection tool would have a positive influence in developing the process of police selection” (Interviewee: male, Ports and Airports Security Police Department).

“...it would play an important role in recruiting the most appropriate individuals for police work, and this, in my opinion, would contribute to decreasing several problems that happen as a result of poor selection practices, such as resignations, public complaints about officers’ behaviours, etc.” (Interviewee: male, Traffic and Patrols Department).

Finally, all participants were asked about the obstacles to police officer selection in general, and the use of psychometric testing for selection in particular. First, a large number of participants (a total of 26 out of the 30 respondents) pointed out that mediation or external interventions in hiring decisions often serve as major obstacles in the process of police officer selection. Nevertheless, some respondents believed that might be because of the lack of clear and appropriate criteria for hiring the best entry-level police officers.

As one participant put it: *“The tribal system plays a major role in the society of the United Arab Emirates, so mediation or 'wasta' is one of the main obstacles facing the selection process, and it will be a major challenge for those wanting to use psychometric tests in the selection process” (Interviewee: male, Selection and Recruitment Department).*

Another respondent expressed it this way: *“Clearly, external interventions in the decision of employment is one of the biggest problems negatively influencing the police officer selection process; however, in light of the new strategies of the Ministry of the Interior in the United Arab Emirates, the issue of mediation will be controlled because of the fear of hiring incompetent individuals” (Interviewee: male, Department of Strategic and Performance Development).*

The second main difficulty of attempting to use psychometric testing in the selection process is due to its lack of acceptability in society. 21 of the 30 interviewed officers identified this difficulty. Psychometric tests do not fit with the prevalent social and cultural trends in the UAE, where there is generally an element of fear surrounding the use of such tools. Moreover, many interviewees reported that the large number of applicants every year (over 5000), particularly in light of the high costs of applying some type psychometric tests, could also hinder their use. Some other respondents believed that since there were no clear criteria for selecting the best entry-level police officers, the general levels of support for psychometric tests would be low. Typical comments were as follows:

“Actually, there are several difficulties facing the introduction of new policies, particularly in certain organisations such as the police..., with respect to psychometric tests, I think the main obstacle of using them in the selection process would be the refusal of the community, particularly since there is a lack of clarity in the selection conditions and criteria” (Interviewee: male, Prison Department).

“...in my opinion, the high cost of using psychometric tests in the selection process would hinder the administration’s agreement with the significance of this practice” (Interviewee: male, Investigation Department).

3.3.4 Results of the NEO Job Profiler

The NEO Job Profiler has been used: (a) to determine senior police managers’ perceptions of essential and desirable personality characteristics for a police officer position; and (b) to test the acceptability or face validity of the ‘Big Five’ model of personality in predicting work performance. Thus, all participants (n=30) were asked at the end of the interview to complete the NEO Job Profiler, and describe characteristics desirable of entry-level police officers. Scores ranged from +2 for very desirable, to -2 for very undesirable (see Table 3.3).

Table 3.3 NEO job profiler weights for best entry-level police officers, as described by police supervisors (n = 30).

NEO PI-R facets	Mean	SD	Median	Range
Anxiety (N1)	-1.7333	.4498	-2.0000	1.00
Angry Hostility (N2)	-1.8000	.4068	-2.0000	1.00
Depression (N3)	-1.9333	.2537	-2.0000	1.00
Self-Consciousness (N4)	-.5333	1.1059	-1.0000	3.00
Impulsiveness (N5)	-1.5333	.6288	-2.0000	1.00
Vulnerability (N6)	-1.7000	.4661	-2.0000	1.00
Warmth (E1)	1.0333	1.0662	1.0000	4.00
Gregariousness (E2)	1.6333	.4901	2.0000	1.00
Assertiveness (E3)	1.5667	.5040	2.0000	1.00
Activity (E4)	1.9333	.2537	2.0000	1.00
Excitement-Seeking (E5)	.0000	1.2034	1.0000	3.00
Positive Emotions (E6)	1.2333	.8976	1.0000	3.00
Fantasy (O1)	-1.1667	.9129	-1.5000	2.00
Aesthetics (O2)	.1667	.5307	.0000	2.00
Feelings (O3)	-.4000	1.1919	-1.0000	4.00
Actions (O4)	.5000	1.3326	1.0000	4.00
Ideas (O5)	.9667	1.0334	1.0000	4.00
Values (O6)	.7000	1.1188	1.0000	4.00
Trust (A1)	-1.0333	.9994	-1.0000	3.00
Straightforwardness (A2)	.8667	.9371	1.0000	3.00
Altruism (A3)	1.3667	.6687	1.0000	3.00
Compliance (A4)	1.3000	.8367	1.0000	3.00
Modesty (A5)	-.1000	1.1250	.0000	3.00
Tender-mindedness (A6)	.8667	1.0417	1.0000	4.00
Competence (C1)	1.9333	.2537	2.0000	1.00
Order (C2)	1.8667	.3457	2.0000	1.00
Dutifulness (C3)	1.9333	.2537	2.0000	1.00
Achievement striving (C4)	1.9667	.1826	2.0000	1.00
Self-discipline (C5)	1.9667	.1826	2.0000	1.00
Deliberation (C6)	1.8000	.4068	2.0000	1.00

Table 3.3 displays the scores and profiles of the personality characteristics of the best entry-level police officers. Respondents reported that effective police officers were thought to be characterised by low scores on N1: Anxiety, N2: Angry Hostility, N3: Depression, N5: Impulsiveness, and N6: Vulnerability; and high scores on E2: Gregariousness, E3: Assertiveness, E4: Activity, C1: Competence, C2: Order, C3: Dutifulness, C4: Achievement Striving, C5: Self-Discipline, and C6: Deliberation.

Based on the Five-Factor Model of personality (Costa, et al., 1995; Costa and McCrae, 1992) police managers identified the characteristics of effective police officers on the NEO Job Profiler as follows:

First, participants concluded that an effective police officer should have high levels of Emotional Stability, and be calm, comfortable, unworried, not sensitised to potential difficulties or problems (low Anxiety), easygoing and slow to anger (low Angry Hostility); happy, imperturbable, confident, predisposed away from depressive influences (low Depression), self-controlled, resistant to temptation (low Impulsiveness), self-sufficient, and able to cope well with crises and stress (low Vulnerability). Second, participants concluded that an effective police officer should be Extraverted,, as well as friendly and sociable (high Gregariousness), fond of being in charge, forceful and assertive (high Assertiveness), and energetic, lively, and active (high Activity). Third, participants concluded that an effective police officer should be a Conscientious individual who is capable, well-prepared, prudent (high Competence), organised, tidy, meticulous; demanding and fastidious (high Order), scrupulous, moralistic, a stickler for rules (high Dutifulness), a goal setter with high ambitions and determination to meet those goals (high Achievement-Striving), a self-motivator who perseveres and does not procrastinate (high Self-Discipline), and finally precautious, thoughtful, and someone who makes careful plans (high Deliberation).

In general, police managers believed that Conscientiousness, Emotional Stability, and Extraversion were important dimensions for effective police officers, particularly Conscientiousness and Emotional Stability. Regarding the dimensions of Openness to Experience and Agreeableness, there were disagreements between police officers as to whether or not they were significant characteristics of effective police officers. These disagreements may reflect the variations in the type of police work amongst departments, as different characteristics are crucial or desirable for different positions in each

department. For example, Agreeableness may be an important dimension for effective police officers working at the Community Policing Department, but it is relatively undesirable in a police officer working at the Ports and Airports Security Police Department. Therefore, future studies that assess actual job performance would be helpful in determining the relation between Agreeableness and police performance. This will be one objective of the next investigations within the present thesis.

3.4 Discussion

As mentioned previously, the primary purpose of Study One was to investigate the existing police officer selection practices at the ADP, to gauge the appropriateness of using psychometric testing for officer selection, and to identify the profile of effective police officers as described by senior police managers. Results indicated that although the existing process of police officer selection is simple and may cost efficient, there are several criticisms levelled against it, such as the fact that it is less valid and less fair than other methods. Therefore, it appears more likely to lead to negative outcomes, such as poor selection and low levels of police performance. Findings show that although the current system helps save money and time during the staff selection process, the procedure is less effective, not only in selecting high-quality candidates, but also in saving organisations time and money in the long run. That is, what is the point of saving time and money during the selection procedure if they are consumed in the training process without valuable benefits? These findings corroborate those of previous research (e.g., Al-Muhaya, 2005; Cochrane, et al., 2003; Cortina, et al., 1992; Detrick, et al., 2004) emphasising the importance of developing effective selection procedures for new police in order to avoid the detrimental impacts of having unqualified officers; and selecting the best applicants in order to provide considerable improvements in productivity and reduce the direct costs of training.

Furthermore, many previous studies (see McKenna, 2006; Robertson, et al., 2002; Smith and Smith, 2005) have shown that the validity of interviews, particularly unstructured interviews, is low. This has also been supported by the findings of the present study, in that unstructured interviews were reported to be less effective in selecting the best candidates. The present research also shows that psychometric tests (e.g. cognitive

ability and personality tests) appear to be valued in the selection process. More specifically, the acceptability of using psychometric testing for police officer selection was found to be high among the sample. This result mirrors the findings of several previous studies that support the importance of psychometric testing in personnel selection particularly for police force (see Cochrane, et al., 2003; Goodstein and Lanyon, 1999; Piotrowski and Armstrong, 2006).

Regarding the problem of job stress, a number of researchers (e.g., Al-Twaim, 2005; Bishop, et al., 2001; Burke, et al., 2006; Lau, et al., 2006) agree that an effective use of coping strategies by law enforcement officers makes them less likely to suffer from stress. Findings of the current research also highlight the significant impacts of poor coping strategies on raising the level of job stress exposure by police officers at the ADP. This is also compatible with He, et al.'s (2002) research on the effects of positive coping strategies (e.g., making a plan of action and following it, seeking help and advice from friends or relatives) in reducing exposure to job stress amongst police officers. Other reasons for high levels of work stress amongst police officers at the ADP include: the nature of police work, role ambiguities, heavy work loads, and non-participation in the decision making process. These findings match those in Tawaiha's study (2004) of the causes of job stress at the ADP. Nonetheless, some of his results (e.g., that limited promotional opportunities are a major source of job stress) were not replicated in the current study, with data here suggesting that poor coping strategies are the main sources of stress. An explanation of this difference may trace back to the different methods used, particularly in regard to the research samples. Another reason may be due to the implementation of the ADP's new strategies, which emphasise the offering of many developmental and promotional opportunities.

Respondents were also asked about the problem of indiscipline amongst police officers. A number of disciplinary problems (absenteeism, coming late to work or leaving work early without permission, the lack of respect between officers, such as verbal abuse of a co-worker, and public complaints about officer conduct) were highlighted by participants as the most common forms of misconduct amongst police officers at the ADP. This suggests an important area of study that has not been investigated at the ADP, namely CWB. Therefore, one aim of the current thesis is to investigate the relationship between personality traits, cognitive ability, EI, and indiscipline amongst police officers by using

self-reported and objective measurements of CWB as will be shown in the next two studies. This will help identify the characteristics of police officers less likely to engage in CWB, which in turn could help to select applicants with higher levels of discipline.

Moreover, consistent with findings from earlier studies in Arabic-speaking contexts (e.g., Al-Muhaya, 2005), data in the present study show that mediation, or external interventions in hiring decisions, presents major obstacles in the selection of police officers. This result is in line with Whiteoak, et al. (2006), who has argued that the use of mediation is widespread throughout the Arab world and plays a role in many significant decisions (such as employee selection). Nevertheless, as some respondents in the present study have reported, this might be because of the lack of clear and suitable conditions for the best entry-level police officers. Thus, one solution for this would be to determine the knowledge, skills, abilities, and personal characteristics required for a high performance police officer. Additionally, the lack of social acceptability in using psychometric tests in the selection process could be solved by identifying the importance and usefulness of psychometric tests both for organisations and applicants (Abbas, 1996; Abdel-Khalek, 1996).

One of the significant aims of this investigation has been to identify the personal characteristics of effective police officers as described by senior police managers. It is clear from the current data that low scores on N1: Anxiety, N2: Angry Hostility, N3: Depression, N5: Impulsiveness and N6: Vulnerability; and high scores on E2: Gregariousness, E3: Assertiveness, E4: Activity, C1: Competence, C2: Order, C3: Dutifulness, C4: Achievement striving, C5: Self-Discipline, and C6: Deliberation; are very desirable characteristics of entry-level police officers. This result supports similar findings in previous research that used observer-rated profiles (Costa, et al., 1995; Detrick and Chibnall, 2006) to show that Conscientiousness, Emotional Stability, and Extraversion play a significant role in predicting police performance, and that they are advantageous characteristics of police officers.

There are likely differences between departments in terms of specific functions, responsibilities, and the amount of time and effort necessary for performing different tasks. However, Conscientiousness, Emotional Stability, and Extraversion have been determined by senior police managers to be basic qualities for effective police officers doing police work that (a) primarily involves dealing with people (high Extraversion

needed); (b) deals with more stressful situations (high Emotional Stability desired); and (c) requires a great deal of discipline, obligation, motivation, and hard work (high Conscientiousness required) (Ainsworth, 2002; Burbeck and Furnham, 1984; Gaines and Falkenberg, 1998).

Furthermore, police work is often stressful, difficult, and dangerous. A number of qualities, therefore, have been indicated by senior police managers in the current study as important factors for performing police functions effectively, such as: the ability to deal constructively with others, the ability to face dangerous situations and to control job stress, and the ability to maintain high levels of intelligence, loyalty, dedication, discipline, emotional stability, and motivation. This finding is compatible with much previous research (Ainsworth, 2002; Kaczmarek and Packer, 1996; Qatan, 2003) regarding psychological characteristics that are required to perform police work.

These findings, however, have a number of limitations. First, it is significant to note that this research has not involved a full evaluation of the current police officer selection system at the ADP. Consequently, a more complete assessment of the system would be crucial. It should be also acknowledged that although the officers were selected in order to reflect the maximum variation in types of police work, the pool of participants does not represent a generalised portrait of all police functions. Additionally, there are some criticisms of using the semi-structured interview method, as it is highly dependent upon the researcher's own analysis of the data collected. In other words, interview data, particularly open-ended questions, are perhaps more subjective than closed questions, since the researcher decides which quotes or particular examples to report (Coolican, 2004; Gray, 2004). Furthermore, the researcher mainly interviewed officers of senior rank. Thus, a potential limitation is that senior officers may have been unwilling to tell the whole truth, for fear of losing face, or they may have tended to provide socially desirable answers.

To summarise, the results of study one demonstrate that in the opinion of senior police managers the existing process of police officer selection is not as effective as it could be, and needs several improvements. The findings support the problems at the ADP by showing that police officers' performance are low and that stress and indiscipline are serious concern. Moreover, using psychometric tests, such as cognitive ability and personality tests in the selection process, could play a significant role in selecting the

best entry-level police officers. ADP senior police managers also believe that Conscientiousness, Emotional Stability, and Extraversion are significant dimensions for effective and high performance police officers. Finally, the acceptability of using psychometric tests in selection, namely measurements of cognitive ability and the Big Five, has been found to be high amongst senior police managers.

Taken together, the process of police officer selection seems to be one of the most important steps towards building an effective police force. This process should be based on a number of valid procedures for selecting the best applicants who have the ability to perform police work effectively. One tool that has been found to be a valid and reliable predictor of police work is psychometric testing, particularly the measurement of personality and cognitive ability, as shown in the literature review. Therefore, the following two studies will aim to test criterion-related validity of a number of psychometric tests (i.e., measurements of the FFM, cognitive ability, and EI) in predicting a number of work-related behaviours amongst police officers (i.e., job performance, training performance, perceived job stress, coping with stress, and CWB) in an Arabic-speaking context in general, and in the UAE police in particular.

Chapter 4: Study Two

4.1 Introduction

The main goal of study two was to examine the relationship between the Big Five factors of personality, general cognitive ability, EI, and a number of workplace behaviours (job performance, perceived job stress and coping, and CWB) in an Arabic-speaking context in general, and within police organisations in particular.

Following an exhaustive literature review, a research gap has been identified, as there is little meaningful research available on the role of normal personality traits, cognitive ability, and EI in predicting work-related behaviours in police organisations, particularly within Arab countries as reported in the literature review. The primary motivation for this study, therefore, is to fill the gap in knowledge about the associations between personality dimensions, cognitive abilities, EI, and police outcomes. More specifically, the main goals of Study Two are: (a) to investigate the relationship between the Five Factors model of personality, general cognitive ability, EI, and work-related behaviours amongst a sample of police officers (i.e., job performance, perceived job stress, coping with stress, and CWB); and (b) to examine the incremental validity of EI and personality in predicting job performance over cognitive ability. On the basis of previous research findings, the following hypotheses have been proposed:

H1a: There will be a positive correlation between Conscientiousness, Extraversion, cognitive ability, EI, and job performance.

H1b: Neuroticism is expected to have negative associations with job performance.

H2a: Cognitive ability is expected to be a better predictor of job performance than the Big Five dimensions and EI.

H2b: Personality factors and EI are expected to add incremental validity to predicting job performance over cognitive ability.

H3a: There will be a negative correlation between Conscientiousness, Extraversion, cognitive ability, EI and perceived job stress.

H3b: Neuroticism is expected to have positive associations with perceived job stress.

H4a: There will be a negative correlation between Conscientiousness, Extraversion, Agreeableness, EI, cognitive ability, and CWB.

H4b: Neuroticism is expected to have positive associations with CWB.

4.2 Method

The research design implemented in Study Two was that of a quantitative research approach. It was conducted according to a cross-sectional questionnaire/correlational research design to assist the quantitative nature of the study (i.e., data were collected through scales, tests and questionnaires). The independent variables in the study were the Big Five dimensions, general cognitive ability, and EI. The dependent variables included job performance, job stress, coping with stress, and CWB.

4.2.1 Participants

It is important to note that no psychometric tests have been used or are currently being done in practices of employee selection at the ADP, as indicated in Study One. As a result, all current employees at the ADP have been hired without having taken any ability or personality-based tests. The initially targeted participants were a group of 400 full-time police officers working within the ADP. Out of 400 questionnaires distributed by the researcher to the employee volunteers, 350 questionnaires (87.5%) were returned. However, Out of 350 officers, 40 participants (11.4%) were excluded from the data analysis because of: incomplete test submissions; or a demonstration of high levels of social desirability, as measured by the Lie Scale of Eysenck's Personality Questionnaire.

The 310 participants completed the assessments fully, without exceeding the social desirability evaluation. The gender breakdown of the participants included a total of 258 males (83.2%) and 52 females (16.8%), with an age range between 19 and 45. The average age was 26.5 years with $SD = 6.4$ years. Of the 258 males, the minimum age was 19 and the maximum was 45 (mean = 26.3 years, $SD = 6.6$). The minimum age for females was 21 and the maximum was 45 (mean = 27.7 years, $SD = 5.2$).

Moreover, participants' job experience levels ranged between one and 21 years (mean = 5.0 years, SD = 4.1). About 58% (181) of the participants had held their current job for one to four years; 31% (96) had served for five to ten years; and about 11% (33) had served for more than ten years. Participants also represented a variety of educational backgrounds, with an average of 11.3 years of education. The majority of the sample, 186 (60%), had completed high school (twelve years of education); 31% (97) had not completed high school (their levels of education ranged between six and eleven years); 6% (19) had Bachelors degrees; and about 3% (8) had college degrees (two to three years of education after high school). With respect to the marital state of respondents, nearly half (154) were married, 48% (150) were single, and six were divorced.

Participants were recruited randomly from five main departments at the ADP. These departments included: the Community Policing Department (n = 65), the Prison Department (n = 62), the Traffic and Patrols Department (n = 62), the Investigation Department (n = 61), and the Ports and Airports Security Police Department (n = 60). These departments were selected for their features, namely they all were involved with active police work, particularly in the area of crime fighting and prevention; and one of the most important features of working in these departments was dealing and interacting with the public. That is, the present study focuses on the departments responsible for these functions, and on those involving more policing activities than managerial tasks.

4.2.2 Measures

A number of tests were used in this study to collect the required data. These tests include: measurements of the FFM, general cognitive abilities, EI, perceived job stress, coping strategies, CWB, and job performance. Kaczmarek and Jeanette (1997) have indicated several important criteria for evaluating psychological tests, particularly when using them for studies of police organisations, including: (a) the tests' established reliability; (b) data supporting the tests' validity; (c) suitability of the tests' norms; and (d) the tests' ease of administration, scoring and interpretation. Based on these guidelines, the researcher constructed a self-reported questionnaire, consisting of the following components:

1) *Demographics and job details.* In this section, participants were asked about their gender, age, education level, marital status, length of service at the current position, and the location of their work.

2) *Personality measurements.* The NEO Five-Factor Inventory (NEO-FFI; Costa and McCrae, 1992b) was used in this study. This well-established 60-item questionnaire was developed to provide a brief measure of the Big Five personality factors (Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness). The NEO-FFI is a short form of the NEO PI-R (Costa and McCrae, 1989), a measurement based on the Five-Factor model of personality. For each scale, twelve items were selected from the group of 180 NEO Personality Inventory (NEO-PI) items, mainly on the basis of their correlations with Validimax factor scores (McCrae and Costa, 1989). Although the NEO-FFI provides less detail than the NEO-PI, it is still recommended as an appropriate measure for assessing the Big Five personality factors (Briggs 1992). This measure takes ten to fifteen minutes to complete, and items include questions about typical behaviours or reactions, to be answered on a five-point Likert scale, ranging from “Strongly disagree” to “Strongly agree.” There is a great deal of empirical research over the past decade providing evidence of the construct, concurrent, divergent, convergent, incremental, and predictive validity (Chamorro-Premuzic and Furnham, 2003).

McCrae and Costa (2004) reported that two-week retest reliability is consistently high, ranging from 0.86 to 0.90 for the five scales. Internal consistency (coefficient alphas) for each of the twelve-item scales included .86 (Neuroticism), .77 (Extraversion), .73 (Openness to Experience), .68 (Agreeableness), and .81 (Conscientiousness). Correlations between NEO-FFI scales and NEO PI-R factors ranged from .75 to .89 (Costa and McCrae, 1992b). Overall, the NEO-FFI has been translated into several different languages and shown high reliability, validity, and utility in many different contexts; it is one of the most widely used measures of the Five-Factor Model (McCrae and Costa, 2004). The NEO-FFI has been used extensively in research settings, and even more often in clinical and occupational settings (Becker, 2006), and it has been found to be a valid procedure for personnel selection (Salgado and Rumbó, 1997).

Alansari (2002) conducted a study of the NEO-FFI in the Middle East, using a total of 2,584 participants from Kuwait, including both genders and with a variety of jobs and

ages. According to Alansari (2002), statistical analysis was used to determine the internal consistency (coefficient alphas) of each factor of the measure, including reliability (Neuroticism, $\alpha = .73$; Extraversion, $\alpha = .63$; Openness to Experience, $\alpha = .64$; Agreeableness, $\alpha = .75$; Conscientiousness, $\alpha = .81$). The split-half reliabilities were (Neuroticism, $\alpha = .77$; Extraversion, $\alpha = .70$; Openness to Experience, $\alpha = .61$; Agreeableness, $\alpha = .70$; Conscientiousness, $\alpha = .80$). In conclusion, the results of Alansari's study (2002) replicate previous research findings to some degree, internal and split-half reliabilities, intercorrelations, concurrent and construct validity of the NEO-FFI Scale, support the FFM, and show that these traits are universal across cultures. In addition, Alansari's findings and others (see Alkhedr, 2006; Ganem, 2007; Kazem, 2001) suggest that the NEO-FFI is a useful instrument for measuring the FFM within Arabic-speaking contexts.

To revalidate the factor structure of the NEO-FFI within the present sample ($n = 310$), a factor analysis was conducted; using principal component factor analyses (PCA) with Varimax rotation (Eigen values ≥ 1.0). Factor loadings of 0.30 or above were chosen as a criterion for analysis. Before performing PCA, the suitability of the data for analysis was judged. An examination of the correlation matrix revealed the presence of all coefficients of 0.30 and above; and that the Kaiser-Meyer-Olkin value was .785, exceeding the recommended value of .6 (Wood and Rutterford, 2006). The analysis yielded results similar to those obtained by other researchers in Arabic regions (e.g., Ganem, 2007; Kazem, 2001). In other words, the examination of the scree plot suggested a five-factor solution, which accounted for 43 % of the total variance. The five extracted factors were called: Agreeableness (twelve items with factor loadings ranging from 0.342 to 0.723), Conscientiousness (twelve items with loadings ranging from 0.305 to 0.797), Neuroticism (twelve items with loadings ranging from .367 to 0.784), Openness to Experience (twelve items with loadings ranging from .388 to .761), and Extraversion (twelve items with factor loadings ranging from .310 to .760).

The reliability of the measurement was calculated using the internal consistency method. The calculated Cronbach's Alphas were as follows: Neuroticism, $\alpha = .85$; Extraversion, $\alpha = .88$; Openness to Experience, $\alpha = .80$; Agreeableness, $\alpha = .92$; and Conscientiousness, $\alpha = .90$. Accordingly, the NEO-FFI shows statistically reasonable degrees of reliability and constructs for use in the current study.

3) *Cognitive ability test*. Cognitive abilities were measured by an Arabic cognitive ability test. This test was developed by Tureary (1999) to assess basic areas of intelligence in adults: (a) Verbal Ability (synonyms and antonyms); (b) Math Ability (complex linguistic and arithmetic problems); (c) Spatial Visualisation Ability (the ability to identify objects, figures, and images); and (d) Logical Reasoning (syllogisms and sentence completion). The test consists of ten parts (89 items) representing a variety of questions and different answering styles. In other words, participants must do all of the following: (a) choose from a set of provided answers; (b) complete a sentence with missing words; (c) use logical thinking; (d) make comparisons; and (e) use problem-solving abilities. The test takers have 40 minutes to complete the test, which begins with moderately simple questions, and rapidly increases in difficulty. Scores may range between 0 and 89, with higher scores indicating a better performance. According to Tureary, test scores are interpreted after transformation into T scores, which are divided into five levels determined by a normal distribution, with a mean of 54.3 and a standard deviation of 6.9 such as follows: (a) 76 and above shows high levels of cognitive ability; (b) 61-75 means that cognitive ability is above average; (c) 46-60 means average levels of cognitive ability; (d) 35-45 indicates below-average levels of cognitive ability; and (e) 34 and below shows low levels of cognitive ability. Data from the manual show that internal and split-half reliabilities were found to be acceptable 0.71 and 0.74 repeatedly. Additionally, the face, concurrent, and construct validities of the test have been reported in the manual to be adequate (Tureary 1999: 31-56).

4) *EI evaluation*. EI was measured by a self-reported EI test developed by Schutte, et al. (The SREIT 1998). The test consists of 33 items with three subscales: EI-Appraisal and expression of emotions (thirteen items), EI-Regulation of emotions (ten items), and EI-Utilization of emotions (ten items). All items ranged from 1 (Strongly disagree) to 5 (Strongly agree). Only items 5, 28, and 33 are reverse scored, and thus scores may range from 33 and 165, with higher scores showing higher levels of EI. Internal reliability was reported by Schutte, et al. (1998) to be satisfactory ($\alpha = .84$) and ($\alpha = .90$) in two different samples, and two-week test-retest reliability was found to be 0.78 acceptable.

The Schutte scale has been used for several reasons. First, from a theoretical perspective, this measurement is based on the conceptual framework of EI (Salovey and Mayer, 1990). According to Schutte, et al. (1998) the Salovey and Mayer's model is the most

comprehensive model of EI, since it conceptualises a variety of dimensions of an individual's emotional development. Moreover, this measuring device has been used widely in EI studies and has been found to have good validity and reliability (Carmeli and Josman, 2006; Schutte, et al., 2002). Second, from a practical viewpoint, the SREIT: (a) does not take a long time to complete, which makes it easy to use in the workplace; and (b) an Arabic version of this test was available. The SREIT has been translated into Arabic by Moosa (2005), who has reported an adequate internal consistency of the Arabic version ($\alpha = .90$). She also provides evidence for the validity that supports the use of this measure with Arabic samples.

To establish the factorial structure of the SREIT in the current study ($n = 310$), a PCA was performed with Varimax rotation (Eigen values ≥ 1.0), and factor loadings of 0.30 or above were chosen as criteria for analysis. Before performing PCA, the suitability of the data for analysis was judged, revealing: (a) the correlation matrix contained the presence of all coefficients of 0.30 and above; and (b) the Kaiser-Meyer-Okin value was .882, exceeding the recommended value of .6 (Wood and Rutterford, 2006). PCA revealed the presence of seven components with Eigen values exceeding 1, explaining 14.79, 10.85, 9.00, 8.52, 8.29, 6.20, and 4.96 percents of the variance respectively. However, an inspection of the scree plot revealed the possibility of one factor solution, explaining 33% of the total variance (including 33 items with loadings ranging from 0.343 to .771). The one factor solution has been selected, based on the recommendation made by the developer of the test, who found a single-factor structure for the SREIT (Schutte, et al., 1998), and also by Moosa (2005), who found similar results with Arabic samples.

The reliability of the test was calculated using the internal consistency method. The Cronbach's Alpha coefficient for the one-factor EI in the current study was 0.93, which is comparable to that reported by Schutte, et al. (1998) and Moosa (2005).

5) *Measurement of job stress*. As a general measurement of stress in employees' lives, the Perceived Stress Scale (PSS), developed by Cohen, et al. (1983) on the basis of Lazarus's (1966) concept of appraisal was used. This is a global assessment scale designed to measure the degree to which people find their lives to be uncontrollable, unpredictable, or overloading (Chan, 2004: 47). The PSS includes questions about respondents' stressful feelings or thoughts related to situations in their lives. The scale contains fourteen items such as "How often have you been upset because of something

that happened unexpectedly?" and "How often have you found that you could not cope with all the things you had to do?" on a five-point Likert scale ranging from 0 = Never, 1 = Almost never, 2 = Sometimes, 3 = Fairly often, and 4 = Very often, with scores ranging from 0 to 56.

Early studies using the 14-item PSS measure found that it possesses high psychometric qualities, such as good reliability, and that it may predict associations with other indices of stress (Cohen, 1999). Cohen, et al. (1983) has reported that the PSS has adequate internal and test retest reliability, and has found it to be correlated with life-events. The relations between the PSS and some other stress measurements (e.g., health service utilisation practices, life satisfaction levels, health behaviours, and help-seeking practices) provide evidence of good construct validity for the PSS (Khayat, 2007). Additionally, the PSS scale has been translated into several languages and used widely in health and psychological studies that have reported an acceptable internal consistency of the scale (Chang, 1998; Remor and Carrobbles, 2001). Moreover, the scale has been used in a number of studies in order to measure levels of police stress (see Perrott and Taylor, 1995).

The PSS has been translated into Arabic by several researchers (e.g., Hattar-Pollara and Dawani, 2006; Khayat, 2007). In the first study, Hattar-Pollara and Dawani (2006) used it in a Jordanian Arabic-speaking sample. Cronbach's Alpha coefficient of the translated tool was 86.4. In the second study, Khayat (2007) piloted the PSS on a sample of 311 Syrian participants from both genders, and provided evidence of the scale's sufficient psychometric qualities (e.g., adequate internal and test retest reliability and predicted associations with other indices of stress). Khayat reported that for the Arabic version of the PSS, the Cronbach's Alpha was 0.83, and Pearson's correlation coefficient for the test-retest reliability was 0.78 ($p < 0.001$). To check the accuracy of the Arabic translation of the PSS, Khayat calculated the correlation between the responses on the English and Arabic versions. Pearson's correlation coefficient between the two versions was 0.86 ($p < 0.001$). The construct validity of the Arabic version, the Pearson's correlation between the PSS, and the Job Stress Symptoms scale was $r = 0.72$ ($p < 0.01$).

The reliability of the test was calculated using the internal consistency method. The Cronbach's Alpha coefficient for the PSS in the current study was 0.85.

6) *Coping strategies*. The Brief Cope Scale developed by Carver (1997) was used to assess participants' coping styles. The Brief Cope Scale is an abbreviated inventory with 28 items measuring the ways in which individuals attempt to reduce, face, or control challenges presented by stressful situations or experiences (Perczek, et al., 2000). The Brief Cope Scale consists of fourteen scales, with two items in each scale. The fourteen scales include: (1) self-distraction; (2) active coping; (3) denial; (4) substance use; (5) use of emotional support; (6) use of instrumental support; (7) behavioural disengagement; (8) venting; (9) positive reframing; (10) planning; (11) humor; (12) acceptance; (13) religion; and (14) self-blame. It is a short form taken from the originally published Cope inventory by Carver, et al. (1989). The original Cope inventory has 52 items, also comprising fourteen subscales, but with more items in each scale. It is theoretically based on the model of behavioural regulation and the transactional model of stress (Khayat, 2007).

The Brief Cope Scale is a self-reported test, in that participants are asked to indicate what they usually do and feel when involved with a stressful event on a 4-point scale, in which 1 = "I haven't been doing this at all," and 4 = "I've been doing this a lot." Scale scores are calculated by totalling item scores within each subscale, with possible scores ranging from 2 to 8, with higher scores assigning a tendency to use the individual coping style (Carver, 1997). Reliability and validity records for the Brief Cope were considerably adequate, according to several different studies (Perczek, et al., 2000; Wood and Rutterford, 2006). For example, Carver reported Alpha coefficients across all strategies between .50 and .90.

The Brief Cope scale has been translated into Arabic by Khayat (2007), who reported an acceptable internal consistency (Alpha coefficients) of the Arabic version, ranging from .47 to .96. The correlation between the responses to the English and Arabic versions of the scale ranged from 0.49 for item 16, to a high of 1.00 for item 11, showing high levels of the translation's accuracy. By comparing Brief Cope with another coping measure, the construct validity of the Brief Cope was found to be high amongst the Arabic sample. Pearson's correlation coefficient ranged from 0.66 to 0.83.

7) *Measurement of CWB*. Overall, there are few methods that have been developed to assess CWB (Beswick, et al., 2006). Two methods were used to measure CWB at the Abu Dhabi Police. First, organisational records of formally recorded incidents of

disciplinary violation were obtained. The police law in the UAE considers 31 actions to be disciplinary violations. Police law also indicates other misbehaviours to be disciplinary violations in Article 32. Organisational misbehaviours, such as damage, theft, and harassment, can be defined as any intentional actions by staff members violating core organisational or public norms (Kidwell and Kochanowski, 2005). Consequently, the disciplinary violation score, or the number of disciplinary complaints submitted against an officer in a given year at ADP, was used as an objective means of measuring CWB.

Second, a self-reported measurement of CWB was used to ask respondents to indicate the frequency with which they performed various violent or deviant behaviours at work. The main reasons for using self-reported measurements were that: (a) officers involved in situations (i.e., CWB) requiring formal disciplinary measures sometimes end up in departmental actions that are not reported in their formal files; and (b) formally recorded incidents can show only those counterproductive behaviours in which a worker has been caught. As a result, depending solely on the number of disciplinary complaints seems to be inappropriate, since it would underestimate the frequency of CWB, particularly interpersonal deviance.

Therefore, the Counterproductive Work Behaviour Checklist, developed by Spector, et al. (2006), was used (see Appendix 5). This checklist takes the form of a questionnaire containing 45 items questioning participants about five dimensions of CWB, such as sabotage, production deviance, theft, withdrawal, and abuse. Many of these behaviours have been directly or indirectly specified by police law in the UAE as disciplinary violations (Articles 1-32, Chapter Six of Police Law in the UAE). Respondents are simply asked to indicate the frequency with which they have ever engaged in any form of CWB. Ratings were made on a 5-point scale, ranging from 1 = Never; 2 = Once or twice; 3 = Once or twice per month; 4 = Once or twice per week; 5 = Every day. Internal reliability was found to be high (Cronbach's Alpha 0.87). Intercorrelations, construct, and the predictive validity of the scale were provided by the developers supporting its utility (Spector, et al., 2006).

Since this test was to be applied in the U.A.E (i.e. with Arabic-speaking people), the questionnaire was translated into Arabic (the official language in the UAE) by a professional translator (see Appendix 6). However, this test was translated back into

English by the researcher and by a third person, in order to ensure that the original translation into Arabic was correct, and that the meanings of the items were not changed. This technique is considered a fundamental means of attaining semantic equivalence for different language versions of a measuring tool (Hambleton, 1993). Moreover, in order to judge that the translated items highly corresponded to the original items in linguistic and psychological senses, the researcher gave the two copies (one in Arabic and one in English) to a sample of five full-time police officers from the ADP who have sufficient knowledge of the two languages (Arabic and English) to determine if there were any differences in meaning. The two versions were confirmed as having the same meanings, and the Arabic copy is very clear. The test's reliability was calculated using the internal consistency method. The Cronbach's Alpha coefficient for the Arabic Counterproductive Work Behaviour Checklist in the current study was 0.94.

Although the use of self-reporting for the instrument of CWB has been criticised, it is assumed that employees are the only ones that will tell you about their own conduct at work (Fox and Spector, 1999). Overall, using self-reported measurements of CWB, in addition to using formal records of employees' histories of engaging in CWB, can play a significant role in enhancing the reliability and validity of the data.

8) Job performance. Job performance was measured by using the existing tool that developed and used in the ADP. Based on the ADP's vision, principles and strategies the performance dimensions were developed to measure the criteria important to the organisation and its objectives. Supervisors in different departments rated their officers on ten dimensions of performance on a 7 point Likert scale format with 1 being the worst and 7 being the best. A possible overall job performance score ranged from 10 to 70, according to the following: (66-70) 7 shows that performance is absolutely superior in all respects; (56-65) 6 means that performance is excellent in almost all respects; (46-55) 5 shows that performance is above average and satisfactory in all respects; (36-45) 4 means that performance is average and satisfactory in most respects but not all; (26-35) 3 indicates that performance is below average and less than satisfactory in many respects; (16-25) 2 means that performance is poor and less than satisfactory in almost all respects; and (10 -15) 1 means that performance is very poor and barely meets minimum job standards.

These ratings are provided annually by three officers, including: (a) the immediate supervisor of the employees who assesses them on ten dimensions; (b) another supervisor who is working in the same department as the officers' immediate supervisor; and (c) the director of the department. The ten dimensions include: collaboration with co-workers, written and oral communication, enthusiasm levels, planning abilities, organising abilities, discipline levels, customer service provided to the public, achievement of objectives, decision-making abilities, and adaptability. Moreover, according to the ADP appraisal system, any evaluation of 1 (Very poor) or 7 (Superior) must be provided with appropriate supporting evidence.

9) *Social desirability*. Faking has been specified by numerous studies to be one of the main disadvantages in applying personality tests, particularly for personnel selection (Robie, et al., 2007). In other words, it has been found that test-takers can deliberately increase their scores on desirable personality traits, and decrease their scores on undesirable traits, particularly when motivated to present themselves in a positive light (Rothstein and Goffin, 2006). Using social desirability or lie scales, however, can play a role in detecting faking (Abdel-Khalek, 1996; Birkeland, et al., 2006; Rothstein and Goffin, 2006). Therefore, the Lie Scale from Eysenck's Personality Questionnaire (EPQ; Eysenck and Eysenck, 1975) was employed in this study. The EPQ Lie Scale is one of the most widely used instruments to assess individual difference in socially desirable responses (Lajunen and Scherler, 1999). According to Burbeck and Furnham (1984), the EPQ Lie Scale consists of 23 items measuring the tendency to 'fake good,' particularly in circumstances such as employment interviews or tests where motivation to do so is high.

The EPQ Lie Scale has been translated into several languages, and its reliability and validity have been found to be acceptable (Burbeck and Furnham, 1984; Eysenck and Haapasalo, 1989; Abdel-Khalek, 1996). The EPQ Lie Scale has been translated into Arabic by Alansari (2002), who reported acceptable levels of reliability and validity for the scale. For instance, on a sample of 345 persons of both genders in Kuwait, Alansari found internal reliability to be satisfactory (Cronbach's Alpha 0.76), and split-half reliabilities also to be good (0.76). In addition, he found intercorrelations, concurrent, and construct validities of the scale to be satisfactory. The EPQ Lie has also been found

to predict *social desirability* or faking of personality tests with in Arabic samples (see Abdel-Khalek, 1996; Alansari, 2002; Farag, 2007).

4.2.3 Procedure

Data were collected by the researcher from the participants in every department of the ADP in the UAE. Testing was conducted during a period of one to two hours with different groups. Participating police officers were first informed about the general nature and objectives of the investigation, and they were asked to answer all questions truthfully. Officers first completed the time-limited test (the cognitive ability test) and then other tests. Job performance and disciplinary violation scores were collected by the researcher from the Human Resources Department at the ADP. This has been done by asking participants to write their police identification numbers on their tests. This was important in order to help the researcher collect their annual official job performance evaluations and disciplinary violation scores from the Human Resources Department at the Abu Dhabi Police (in order to match the results of the tests and criteria measurements).

A number of tests had to be completed by participating officers, potentially leading to fatigue or boredom, which may have influenced their performance on the tests (Abbas, 1996; Farag, 2007). Therefore, the Latin Square Design was used for presenting tests in an attempt to minimise systematic errors occurring because of the order of the tests' presentation (see Table 4.1).

Table 4.1 Order of tests used in the current study

Department	Test Order					
	N	1	2	3	4	5
Community Policing	80	NEO-FFI + Lie Scale	Perceived Stress Scale	EI Measure	The Brief Cope Scale	CWB Scale
Investigation	80	CWB Scale	NEO-FFI + Lie Scale	Perceived Stress Scale	EI Measure	The Brief Cope Scale
Traffic and Patrols	80	The Brief Cope Scale	CWB Scale	NEO-FFI + Lie Scale	Perceived Stress Scale	EI Measure
Prison	80	EI Measure	The Brief Cope Scale	CWB Scale	NEO-FFI + Lie Scale	Perceived Stress Scale
Ports and Airports	80	Perceived Stress Scale	EI Measure	The Brief Cope Scale	CWB Scale	NEO-FFI + Lie Scale

4.2.4 Ethical Considerations

The ethical matters arising in this study have been given major consideration from the beginning. Ethical considerations were undertaken according to Sheffield Hallam University regulations regarding ethical standards. Particular consideration was also given to codes of ethics from related professional associations, such as the British Psychological Society and the Emirates Psychological Association. More specifically, the ethical considerations of the present research have taken several steps, as described below:

First, the researcher obtained permission from the Executive Manager of the Abu Dhabi Police to begin collecting data (see Appendix 7). The research question, objectives, and procedures were explained to the Executive Manager in order to give him a holistic understanding of the study. Second, during the research the participation was optional for all officers, who were free at any time to withdraw without giving any reasons and without suffering any consequences. In addition, if any officer wished to know his or her results, he or she was encouraged to contact the researcher. Finally, all data were and will be handled in line with the Code of Conduct published by the British Psychological Society.

Furthermore, although all participants were asked to write their police identification numbers on their tests to help the researcher collect some dependents data from the Human Resources Department at the Abu Dhabi Police, the anonymity and confidentiality was not compromised at any point during the research. For example, all tests have been saved in a secure place with the only access can be made by the researcher.

4.2.5 Statistical Analyses

All statistical analyses were conducted using the SPSS statistical package version 17. A number of statistical analyses were conducted as follows: (a) descriptive statistics of all variables, including range, means, standard deviations, skewness, and kurtosis, were calculated to ensure the normality of the data distribution; (b) Cronbach's Alpha coefficients were used to determine the internal consistency of measuring instruments; (c) factor analysis was performed to test the factor structure of the NEO-FFI, the SREIT, the Brief Cope Scale, and the Counterproductive Work Behaviour Checklist; and (d); bivariate correlation, partial correlation, and multiple regression analysis were performed to test the hypotheses. These three sets of correlation analysis were conducted because each provides a different view of the associations amongst the variables, ranging from the least restrictive to the most restrictive.

First, bivariate correlations show the linear relationships between two variables. Second, partial correlations test the degrees of association between two variables after removing the effects of other variables. Demographic factors have been shown in previous research to be correlated with: (a) police performance, such as education (Truxillo, et al., 1998), age and experience (Sanders, 2008); (b) CWB (Lau, et al., 2003); and (c) exposure to police job stress (He, et al., 2002). Therefore, demographic variables (i.e. gender, age, marital status, years of experience, and education levels) have been included in the partial correlations in order to remove any potentially intervening effects on the relationship amongst study variables. The descriptions of correlations have been based on the guidelines for conventional practice as outlined by Cohen and Cohen (1983) such as follows: $r = .10$ (classified as weak or small), $r = .30$ (classified as moderate or medium), and $r > .50$ (classified as strong or high).

Multiple regression analysis (the stepwise method) has been used to provide a more comprehensive test of the hypotheses. Stepwise regression methods have been used over other regression alternatives due to the exploratory nature of this study, and its emphasis on model building rather than model testing (Coolican, 2004). Moreover, stepwise regression is considered to be the most robust option in producing the best prediction equation. It is usually used to build up a subset of predictor variables that is valuable in predicting the criterion variable, and to remove other predictor variables that do not add predictions to the predictor variable already in the equation (Mallb, 2000).

Finally, hierarchical regression analysis has been employed to test the incremental validity of personality variables and EI in predicting job performance over and above cognitive ability. Effect size has been interpreted using the descriptors by Cohen (1988), in that a large effect in the social and behavioural sciences explains about 26% of the variance, a medium effect explains about 13%, and a small effect explains about 1.9%.

For regression analysis, however, a number of assumptions about the data need to be examined before conducting it. First, residual analysis for all regression equations demonstrated normally distributed residuals with no significant outliers (all within three standard deviations of the mean), and no evidence of curvilinearity or heteroscedasticity. Additionally, the relationships between the independent variables should not be too high. This is not a concern in the current study, with the correlations among independent variables not too high, as recommended $r < 0.70$. Moreover, in the present data, tolerance (or the variance of the specified independent variable not explained by the other independent variables in the regression model) was not too small > 0.10 , and the VIF value (or the inverse of the tolerance value) was not too high < 10 as recommended (see Pallant, 2005; Tabachnick and Fidell, 2001). The final condition for the appropriateness of regression analysis is sample size. Stevens (1996) has recommended for social science research that fifteen cases per predictor are required for a reliable regression equation. Tabachnick and Fidell (2001) have given another formula for calculating the sample size necessities for regression analysis: $N > 50 + 8m$ (m stands for the independent variables used). Consequently, since this study has seven independent variables, a minimum of 106 subjects was needed. The sample size used in the current study ($n = 310$) clearly exceeds this condition. In general, the main assumptions for the data set to suit multiple regression analysis in the current study have not been violated.

4.3 Results

4.3.1 Descriptive Statistics

Information on the range, means, standard deviations, skewness, and kurtosis, of all variables are shown in Table 4.2, and correlations amongst the studied variables are reported in Table 4.3.

Table 4.2 Summary statistics for all variables of Study Two (n = 310)

Variable	Min	Max	Mean	SD	Skewness	Kurtosis
Neuroticism	20	48	33.1	5.1	.105	.141
Extraversion	30	56	41.9	4.3	.082	.938
Openness to Experience	24	46	34.3	3.5	-.178	.855
Agreeableness	28	56	41.0	4.5	.178	.559
Conscientiousness	30	58	44.2	5.3	-.204	.004
Cognitive Ability	26	74	54.9	10.5	-.395	-.641
Emotional Intelligence	65	161	104.1	28.9	.282	-1.418
Job Performance	2	7	4.7	1.47	-.427	-.775
Perceived Stress	1	48	23.5	8.32	.229	-.145
Self-reported - CWB	45	164	78.2	24.63	.850	.860
Objective measurements of - CWB	0	3	.40	.77	1.799	2.163

According to Table 4.2, Neuroticism, Extraversion, Openness to Experience, Agreeableness, Conscientiousness, Cognitive Ability, and EI had average scores in the average categories. Levels of perceived job stress were found to be generally average, though some participants showed very high levels and others showed very low levels of job stress. This may result from the fact that officers were working in different departments, or from their different levels of ability in handling job stress. Regarding job

performance, data indicated that overall performances were slightly above average. Finally, the skew and kurtosis for the variables in the current study indicate the normality of the data distribution.

Table 4.3 Correlations amongst study variables (n = 310)

	1	2	3	4	5	6	7	8	9	10	11
1. Neuroticism	-										
2. Extraversion	-.27**	-									
3. Openness to Experience	.06	.01	-								
4. Agreeableness	-.16**	.25**	-.00	-							
5. Conscientiousness	-.27**	.28**	.04	.15**	-						
6. Cognitive Ability	.03	.09	-.02	.02	.09	-					
7. Emotional Intelligence	-.17**	.19**	.04	.03	.21**	.26**	-				
8. Job Performance	-.20**	.21**	-.01	.08	.46**	.54**	.43**	-			
9. Perceived Stress	.48**	-.12*	.02	-.07	-.28**	-.12*	-.35**	-.35**	-		
10. Self-reported - CWB	.41**	-.29**	-.01	-.20**	-.51**	-.19**	-.33**	-.50**	.38**	-	
11. Objective measurements of CWB	.32**	-.10	.06	-.18**	-.41**	-.14*	-.21**	-.37**	.35**	.51**	-

* p < 0.05, ** p < 0.01

4.3.2 The FFM, Cognitive Ability, Emotional Intelligence, and Job Performance

Three of the FFM were found to significantly correlate with job performance. Conscientiousness, Extraversion and Neuroticism were all significantly correlated ($p < .01$) with overall job performance ($r = .46$, $r = .21$, and $r = -.20$ respectively) and remained significant in the partial correlation analysis ($pr = .44$, $pr = .18$, and $pr = -.17$). Cognitive ability demonstrated the highest significant correlations with job performance ($r = .54$, $p < .01$), and partial correlation ($pr = .55$, $p < .01$). A significant positive relationship between EI and job performance was also found ($r = .43$, $p < .01$), and the partial correlation coefficient ($pr = .42$, $p < .01$) was significant. These results, as shown in Table 4.4, support Hypotheses 1a and 1b with significant weak to strong correlations between three of the Big Five dimensions, cognitive ability, EI, and job performance have found.

Table 4.4 Correlations between the FFM, Cognitive Ability, EI, and Job Performance (n = 310)

Independent Variable	Dependent Variable (Job Performance)	
	Bivariate Correlation	Partial Correlation***
Neuroticism	-.20**	-.17*
Extraversion	.21**	.18*
Openness to Experience	-.01	-.07
Agreeableness	.08	.06
Conscientiousness	.46**	.44**
Cognitive Ability	.54**	.55**
Emotional Intelligence	.43**	.42**

$p < 0.05$, ** $p < 0.01$, *** Controlling variables (gender, age, marital status, years of experience, and education level)

To test Hypothesis 2a, stepwise multiple-regression analyses were conducted, with the probabilities of entering and removing the predictor variables set at .05, with job performance as the dependent variable, and the FFM, cognitive ability, and EI as the predictors (see Table 4.5).

Results indicate that three independent variables contributed significantly to the prediction of overall job performance levels: cognitive ability ($\beta = .419$, $p < .01$), Conscientiousness ($\beta = .396$, $p < .01$) and EI ($\beta = .234$, $p < .01$). Altogether, they accounted for 51% of variability in job performance.

Table 4.5 Job performance regressed on the FFM, cognitive ability and EI (n = 310)

Model		B	SE B	β	t	F	R2
1	Constant	1.709	.282		6.054		
	Cognitive Ability	.967	.086	.541**	11.279	127.208**	.292
2	Constant	-3.143	.550		-5.716		
	Cognitive Ability	.898	.075	.502**	11.957		
	Conscientiousness	.115	.012	.415**	9.870	132.219**	.463
3	Constant	-3.240	.526		-6.157		
	Cognitive Ability	.748	.077	.419**	9.722		
	Conscientiousness	.109	.011	.396**	9.819		
	Emotional Intelligence	.394	.073	.234**	5.434	106.176**	.510

** p < 0.01

In addition, to evaluate whether or not personality variables (Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness) and EI provide incremental validity in predicting job performance over and above cognitive ability, job performance was regressed on cognitive ability in Step 1, personality variables in Step 2, and EI in Step 3. Results are summarised in Table 4.6.

Table 4.6 Hierarchical regression of job performance, cognitive ability (step 1), the FFM (step 2), and EI (step 3) (n = 310)

Model		β	t	F	R2	Adj. R2	R2 Change
1	Cognitive Ability	.427**	9.792	127.208**	.292	.290	
2	Neuroticism	-.071-	-1.619	45.846**	.476	.465	.184
	Extraversion	.029	.669				
	Openness to Experience	-.009-	-.224				
	Agreeableness	-.015-	-.349				
	Conscientiousness	.367**	8.502				
3	Emotional Intelligence	.217**	4.924	45.775**	.515	.504	.039

** p < 0.01

As can be noted in Table 4.6, the amount of variance explained by cognitive ability for job performance variables was generally high ($R^2 = .29$, $p < .01$). In Step 2, personality variables were added to the model, with a yield of $R^2 = .47$, $p < .01$ with a ΔR^2 of .18. Nonetheless, of the five personality factors, only Conscientiousness was found to be a significant predictor of job performance. The amount of variance explained by EI in the final step was generally small but significant ($R^2 = .039$, $p < .01$). These findings indicate that Conscientiousness and EI add incremental validity to the predicting of job performance over cognitive ability.

To summarise, hypotheses 1a, 1b, 2a and 2b were supported by correlations and regression analyses with job performance as the dependent measure. The results indicate that cognitive ability is the strongest predictor of job performance. In addition, Conscientiousness and EI are valuable variables when analysing police officers' levels of job performance. Even after accounting for the variance presented by cognitive ability, conscientiousness, and EI, the predictability of the model still increased.

4.3.3 The FFM, Cognitive Ability, Emotional Intelligence, and Perceived Job Stress

Hypotheses 3a and 3b proposed that a negative correlation between Conscientiousness, Extraversion, cognitive ability, EI, and perceived job stress were expected, as was a positive correlation between Neuroticism and perceived job stress. Bivariate Pearson

correlation and partial correlation were used in the analyses to test the hypotheses (see Table 4.7).

Table 4.7 Correlations between the FFM, cognitive ability, EI, and perceived job stress (n = 310)

Independent Variable	Dependent Variable (Perceived Job Stress)	
	Bivariate Correlation	Partial Correlation***
Neuroticism	.48**	.46**
Extraversion	-.12*	-.14*
Openness to Experience	.02	.01
Agreeableness	-.07	-.09
Conscientiousness	-.28**	-.29**
Cognitive Ability	-.12*	-.14*
Emotional Intelligence	-.35**	-.34**

* $p < 0.05$, ** $p < 0.01$, *** Controlling variables (gender, age, marital status, years of experience, and education level)

As Table 4.7 indicates, results support hypotheses 3a and 3b. EI and Conscientiousness are all significantly correlated with perceived stress at $p < .01$. Extraversion and cognitive ability are also significantly correlated with perceived stress at $p < .05$. In addition, a negative moderate relationship between Neuroticism and perceived stress at $p < .01$ is reported. This result suggests that individuals either high in EI, Conscientiousness, Extraversion, or cognitive ability factors, or low in the Neuroticism factor reported low levels of job stress.

Furthermore, stepwise multiple-regression analyses were used to determine the contributions of the FFM, cognitive ability, EI, and their relative importance in predicting perceived job stress (see Table 4.8). The regression has revealed that three independent variables uniquely predict perceived job stress, and together explain about 33% of its variance. Neuroticism has been found to be the strongest of the three significant variables ($\beta = .401$, $p < .01$), followed by EI ($\beta = -.266$, $p < .01$), and Conscientiousness ($\beta = -.143$, $p < .05$).

Table 4.8 Perceived job stress regressed on the FFM, cognitive ability, and EI (n = 310)

Model		B	SE B	β	t	F	R2
1	Constant	-2.663	2.722		-.978		
	Neuroticism	.792	.081	.486**	9.750	95.054**	.236
2	Constant	5.194	2.933		1.771		
	Neuroticism	.708	.078	.438**	9.109		
	Emotional Intelligence	-2.609	.456	-.275**	-5.720	68.780**	.309
3	Constant	16.888	4.934		3.423		
	Neuroticism	.654	.080	.401**	8.139		
	Emotional Intelligence	-2.517	.452	-.266**	-5.574		
	Conscientiousness	-.223	.076	-.143*	-2.929	49.844**	.328

* p < 0.05, ** p < 0.01

4.3.4 The FFM, Cognitive Ability, Emotional Intelligence, and Coping Strategies

Table 4.9 indicates the mean and standard deviations for scores on the different scales of the Brief Coping measure, which provides an overview of the relative use of the different strategies.

Table 4.9 Means, Standard Deviations, and Alpha Coefficients of Brief Coping Subscales (n = 310)

Coping Strategy	Range	Mean	SD	Alpha
Self-Distraction	2-8	5.3806	1.49550	,67
Active Coping	2-8	5.5968	1.67660	,72
Denial	2-8	4.2290	1.46451	,68
Substance Use	2-8	2.9903	1.64580	,76
Emotional Social Support	2-8	5.6290	1.53949	,80
Instrumental Social Support	2-8	6.0742	1.37863	,71
Behavioural Disengagement	2-8	4.3968	1.55190	,73
Focusing on and Venting of Emotion	2-8	4.6323	1.47040	,70
Positive Reinterpretation and Growth	2-8	5.6774	1.51342	,71
Planning	2-8	5.5677	1.62711	,72
Humour	2-8	4.3161	1.41766	,78
Acceptance	2-8	5.8710	1.48655	,67
Turning to Religion	2-8	6.3323	1.46013	,81
Self-Blame	2-8	5.3000	1.70768	,73

To examine overall patterns of coping, the fourteen subscales of the Brief Cope were subjected to PCA with Varimax rotation (Eigen values ≥ 1.0). Criteria for item retention were a factor loading of greater than (0.30). PCA was selected instead of factor analysis, since the main objective was to identify those components that were empirically correlated, rather than confirming a hypothetical factor structure. Before performing PCA, the suitability of the data for analysis was judged. An examination of the correlation matrix revealed several coefficients of .3 and above; and the Kaiser-Meyer-Olkin value was .744, exceeding the recommended value of .6 (Wood and Rutterford, 2006).

Principal component analysis revealed the presence of four components with Eigen values exceeding 1, explaining 22.55%, 16.57%, 9.33%, and 8.05% of the variance respectively. Using the scree test, two factors emerged that accounted for 39.13% of the variance. The first factor was labelled “adaptive coping strategies” (22.55% of the variance) and it comprised seven sub-scales. The second factor was termed “maladaptive coping strategies” (16.57% of the variance), and it also comprised seven subscales (see Table 4.10).

Table 4.10 Factor Loadings for Brief Cope Subscales

Scale	Component	
	F1	F2
Planning	.755	
Active Coping	.748	
Positive Reinterpretation and Growth	.670	
Acceptance	.652	
Instrumental Social Support	.537	
Turning to Religion	.508	
Emotional Social Support	.507	
Behavioural Disengagement		.638
Self-Blame		.611
Humour		.597
Denial		.558
Substance Use		.476
Self-Distraction		.440
Focusing on and Venting of Emotion		.431

Neuroticism showed significant positive correlations with the use of maladaptive coping strategies ($r = .30$, $p < .01$), and partial correlation ($pr = .31$, $p < .01$), and significant

negative associations with adaptive coping strategies ($r = -.20$, $p < .01$), and partial correlation ($pr = -.16$, $p < .05$).

On one hand, Conscientiousness, EI, cognitive ability, and Extraversion all have moderate to weak positive correlations with using adaptive coping mechanisms ($r = .36$, $r = .29$, $r = .25$, and $r = .21$ all $p < .01$ respectively) and remained significant in the partial correlation analysis. On the other hand, negative associations between maladaptive coping mechanisms and Conscientiousness, Agreeableness, Extraversion, and EI were also found. Perceived job stress also demonstrates significant positive associations with maladaptive coping mechanisms ($r = .26$, $p < .01$), and significant negative associations with adaptive coping mechanisms ($r = -.37$, $p < .01$).

Table 4.11 Correlations between the FFM, Cognitive Ability, EI, and Coping Strategies (n = 310)

Independent Variable	Adaptive Coping Strategies		Maladaptive Coping Strategies	
	Bivariate Correlation	Partial Correlation***	Bivariate Correlation	Partial Correlation***
Neuroticism	-.20**	-.16*	.30**	.31**
Extraversion	.21**	.20**	-.16**	-.13*
Openness to Experience	-.02	.00	-.08	-.02
Agreeableness	.08	.09	-.17**	-.14*
Conscientiousness	.36**	.38**	-.31**	-.28**
Cognitive Ability	.25**	.26**	-.05	-.03
Emotional Intelligence	.29**	.29**	-.11*	-.10*

* $p < 0.05$, ** $p < 0.01$, *** Controlling variables (gender, age, marital status, years of experience, and education level)

4.3.5 The FFM, Cognitive Ability, Emotional Intelligence, and CWB

Hypotheses 4a and 4b assumed that CWB, as measured by both self-reported and objective tests, would be significantly related to the FFM, cognitive ability, and EI.

First, for the objective measurement of CWB, three of the FFM were found to significantly correlate with it. More specifically, Conscientiousness, Neuroticism and Agreeableness were all significantly correlated ($p < .01$) with the objective measure of CWB ($r = -.41$, $r = .32$, and $r = -.18$) respectively, and remained significant in the partial correlation analysis ($pr = -.41$, $p < .01$, $pr = .32$, $p < .01$ and $pr = -.16$, $p < .05$). A significant negative weak correlation between EI and objective measurements of CWB was found ($r = -.21$, $p < .01$), and a partial correlation coefficient ($pr = -.19$, $p < .05$) was significant. Cognitive ability also demonstrated a weak significant correlation with the objective measurements of CWB ($r = -.14$, $p < .05$), and partial correlations ($pr = -.13$, $p < .05$).

Second, for the self-reported CWB, four of the FFM (Conscientiousness, Neuroticism, Extraversion, and Agreeableness), EI, and cognitive ability were all significantly correlated with self-reported CWB at $p < .01$. Overall, this result, as shown in Table 4.12, support Hypotheses 5a and 5b with significant weak to strong correlations found between four of the Big Five dimensions, EI, cognitive ability, and CWB, as measured by both self-reported and objective means. It suggests that individuals high in Conscientiousness, EI, Extraversion, Agreeableness, and cognitive ability factors, and low in the Neuroticism factor, reported low levels of CWB.

Table 4.12 Correlations between the FFM, cognitive ability, EI, and CWB (n = 310)

Independent Variable	Objective Measure of CWB		Self Reported of CWB	
	Bivariate Correlation	Partial Correlation***	Bivariate Correlation	Partial Correlation***
Neuroticism	.32**	.32**	.41**	.40**
Extraversion	-.10	-.07	-.29**	-.24**
Openness to Experience	.06	.08	-.01	.01
Agreeableness	-.18**	-.16*	-.20**	-.18*
Conscientiousness	-.41**	-.41**	-.51**	-.51**
Cognitive Ability	-.14*	-.13*	-.19**	-.21**
Emotional Intelligence	-.21**	-.19*	-.33**	-.31**

* p < 0.05, ** p < 0.01, *** Controlling variables (gender, age, marital status, years of experience, and education level)

Stepwise multiple-regression analysis was used to determine the contributions of the FFM, cognitive ability, and EI in predicting self-reported levels of CWB (see Table 4.13). The regression revealed that four variables uniquely predicted self-reported CWB, and together explained 41% of its variance. Conscientiousness was found to be the strongest of the four significant predictors ($\beta = -.404$, $p < .01$), followed by Neuroticism ($\beta = .246$, $p < .01$), EI ($\beta = -.245$, $p < .01$), and Agreeableness ($\beta = -.091$, $p < .05$).

Table 4.13 Self-reported CWB regressed on the FFM, cognitive ability, and EI (n = 310)

Model		B	SE B	β	T	F	R2
1	Constant	182.837	10.035		18.220		
	Conscientiousness	-2.365	.225	-.513**	-10.500	110.255**	.264
2	Constant	118.971	14.047		8.469		
	Conscientiousness	-1.991	.221	-.432**	-8.996		
	Neuroticism	1.428	.232	.296**	6.162	80.731**	.345
3	Constant	135.348	13.767		9.832		
	Conscientiousness	-1.911	.212	-.415**	-9.007		
	Neuroticism	1.249	.224	.259**	5.573		
	Emotional Intelligence	-6.864	1.260	-.245**	-5.446	68.733**	.403
4	(Constant)	155.485	16.947		9.175		
	Conscientiousness	-1.862	.212	-.404**	-8.765		
	Neuroticism	1.189	.225	.246**	5.286		
	Emotional Intelligence	-6.881	1.254	-.245**	-5.487		
	Agreeableness	-.494	.245	-.091*	-2.018	53.085**	.410

* $p < 0.05$, ** $p < 0.01$

Furthermore, the objective measurements of CWB were regressed on the FFM, cognitive ability, and EI to test their relative importance in predicting CWB and to see whether or not similar self-reported results would be found (see Table 4.14). The regression showed that three variables uniquely predicted objective measurements of CWB. Conscientiousness was found to be the strongest of the three significant variables ($\beta = -.341$, $p < .01$), followed by Neuroticism ($\beta = .206$, $p < .01$), and EI ($\beta = -.137$, $p < .05$). Altogether they accounted for 23.6% of variability in objective measurements of CWB.

Overall, it is clear from regression analysis that Conscientiousness, Neuroticism, and EI can play a significant role in examining police officers' counterproductive workplace behaviours.

Table 4.14 Objective measurements of CWB regressed on the FFM, cognitive ability, and EI (n = 310)

Model		B	SE B	β	t	F	R2
1	Constant	3.063	.336		9.107		
	Conscientiousness	-.060	.008	-.412**	-7.947	63.151**	.170
2	Constant	1.520	.485		3.136		
	Conscientiousness	-.051	.008	-.350**	-6.673		
	Neuroticism	.035	.008	.227**	4.317	42.704**	.218
3	Constant	1.809	.492		3.680		
	Conscientiousness	-.050	.008	-.341**	-6.538		
	Neuroticism	.031	.008	.206**	3.918		
	Emotional Intelligence	-.121	.045	-.137*	-2.698	31.477**	.236

* p < 0.05, ** p < 0.01

Finally, PCA with promax (oblique) rotation were conducted for the Counterproductive Work Behaviour Checklist, to examine whether or not there was support for the two-factor structure of deviant workplace behaviours as identified by Bennett and Robinson (2000). Criteria for item retention were a factor loading of greater than (0.30). An initial oblique PCA yielded ten factors that explained 67.53% of the variance. Following several cycles, an orthogonal two-factor solution explained 41.31% of the variance. Three items were removed because of low communalities: (a) taking money from an employer without permission; (b) stealing something belonging to someone at work; and (c) failure to report a problem, causing it to get worse.

The first factor was labelled “organisational deviance” (or counterproductive work behaviours harmful to an organisation) (22.72% of the variance) and it consisted of 25 items. The second factor was termed “interpersonal deviance” (or counterproductive work behaviours harmful to other people in the organisation) (18.58% of the variance) and it consisted of seventeen items (see Appendix 8). This result generally supports the cross-cultural view of Bennett and Robinson’s (2000) findings, which indicated that CWB consists of two related but distinct components.

4.4 Discussion

The purpose of the current study was to examine the relationship between the FFM, general cognitive ability, EI, and workplace behaviours (job performance, perceived job stress and coping, and CWB) amongst a sample of police officers in an Arabic cultural context. The following discussion outlines the results and interpretations of each of the hypotheses.

Regarding the role of the FFM in the workplace, correlational analyses have confirmed that the Big Five traits of Conscientiousness (positively), Extraversion (positively) and Neuroticism (negatively) are significantly associated with job performance. This result overall supports the findings of several previous studies (e.g., Barrick and Mount, 1991; Black, 2000; Hurtz and Donovan, 2000). Additionally, consistent with findings from previous studies investigating the relationship between the FFM and job stress amongst police officers (e.g., Burke, et al. 2006; Lau, et al. 2006; Mostert and Rothmann, 2006), results of the present research indicate that: (a) personality traits characterised by high levels of Conscientiousness and Extraversion, and low levels of Neuroticism, correspond to lower values of perceived job stress; (b) officers with high Conscientiousness and high Extraversion levels have higher values on adaptive coping strategies and lower values on maladaptive coping strategies; and (c) neurotic officers have higher values on maladaptive coping strategies and lower values on adaptive coping strategies. Results also indicate that Conscientiousness, Agreeableness, and Neuroticism have found to be related to CWB. These findings corroborate previous research (e.g. Colbert, et al., 2004; Mount, et al., 2006; Sarchione, et al., 1998) finding that Conscientiousness (negatively), Agreeableness (negatively) and Neuroticism (positively) were significantly associated with CWB.

It is clear from the current results that high levels of Conscientiousness and low levels of Neuroticism are very important traits for police officers. On one hand, the trait of Conscientiousness has been found in previous studies to be correlated with a number of elements, including self-efficacy, goal-setting, and goal commitment (Johnson, 2003), as well as achievement striving, competence, order, and dutifulness (Driskell, et al., 2006). Thus, Conscientiousness reflects tendencies to be prepared, hardworking, organised, thorough in the completion of tasks, and punctual, which may positively contribute to police job performance (Black, 2000). Conscientious officers have also a tendency to

adhere to obligations and duties that make them less likely to engage in CWB than individuals low on Conscientiousness, characterised as careless, irresponsible, impulsive, disordered, and having little concern for a sense of duty (Sarchione, et al., 1998).

In addition, high Conscientiousness levels are shown to reflect high levels of diligence and reliability, the ability to see events and situations as pleasant, predictable, and within people's control (Tong, et al., 2006), and the capacity to use adaptive coping strategies (Burke, et al. 2006). Therefore, conscientious officers are less susceptible to job stressors and strain. Taken together, enthusiasm, organisation, discipline, and adherence to obligations and duties are very important for police organisations such as those in the UAE, where such factors are a central part of job performance evaluation. Conscientiousness appears to be a significant trait of effective police officers showing high levels of job performance.

Neuroticism, on the other hand, has been found to play a negative role in the workplace, with present results indicating that Neuroticism is associated negatively with job performance and positively with CWB, job stress, and maladaptive coping strategies. As indicated earlier in the literature review, neurotic employees are more likely to be less successful, particularly in highly stressful jobs, since: (a) they may avoid or withdraw from certain tasks that they perceive to be stressful or anxiety-producing; (b) they may exert less effort on completing tasks; (c) their view about the importance of risk taking, achievement, working hard, and persisting in the face of obstacles is negative; and (d) they cannot effectively handle normal levels of stress and strain in the workplace (Cook, 2005; Judge, et al., 2008). Individuals who score high on this trait tend to be anxious, moody, paranoid, nervous, depressed, insecure, impulsive, show high levels of hostility, and report high levels of negative affects that make them unsuitable for police jobs that require high levels of emotional stability (Ainsworth, 2002; Bishop, et al., 2001; Costa, et al., 1995; Howard and Howard, 2001; Pienaar, et al., 2007; Qatan, 2003).

In other words, according to Ghazinour, et al. (2010), from a personality perspective, police work involves working in a variety of situations that all require a high capacity for stress tolerance. For instance, police work includes fighting the most terrible crimes, investigating awful accidents, providing support and protection for victims of crimes, and maintaining public relations and discipline. Moreover, police work often involves having to work night shifts, having to keep up with a substantial amount of paperwork,

having to deal with a lack of organisational support, and having to function in a rigid hierarchy or a semi-military environment that limits individual levels of autonomy and control. The combination of these factors is likely to trigger feelings of stress, frustration, helplessness, and burnout (Berking, et al., 2010). Thus, since police work is characterised as demanding and stressful, police agencies need officers with low levels of Neuroticism. This would aid officers in handling the difficulties facing them as a result of their police responsibilities.

Burbeck and Furnham (1984) have found that successful applicants to the police force differ considerably from unsuccessful ones, in that they are more extroverted and less neurotic than unsuccessful candidates. They have claimed that introverted persons are more likely to be inappropriate for police work because it primarily involves dealing with people, and neurotic persons may find it difficult to cope with job stress or perhaps to distance themselves psychologically from some of the incidents that can occur on-duty. Moreover, Extraversion has been found in the current study to correlate positively with the job performance of police officers. This finding is consistent with an earlier study by Hooke and Krauss (1971), which aimed to determine the personality characteristics of successful police officers. They describe successful law enforcement officers as being more independent, more sensitive to interpersonal relationships, more self confident, and more genial and sociable. Extraversion, therefore, appears to be important for the law enforcement occupation, since it primarily involves interacting with people.

A final significant result regarding the relationship between the FFM and workplace behaviours in the present study is the correlation between Agreeableness and CWB, in both objective and subjective measurements. This result supports a great deal of research by clinical and industrial psychologists (e.g., Judge, et al., 2008; Mount, et al., 2006; Roberts, et al., 2007; Sackett, et al., 2006) reporting that Agreeableness is one of the most important traits predicting CWB, particularly of interpersonal deviance at work. Agreeableness reflects individual differences in social harmony. In other words, agreeable people get along with others, and always tend to be friendly, cooperative, generous, and willing to compromise their own interests for the sake of others. They also have a positive view of life and human nature in general, and they consider people to be basically decent, honest, and trustworthy. Individuals high in Agreeableness prefer to use

negotiation to resolve interpersonal conflicts, and thus are more likely to withdraw from social conflicts and anti-social behaviours (Howard and Howard, 2001; Siddiqui, 2008).

Cognitive ability was expected in the current study to be significantly associated with work behaviour, particularly job performance. As predicted, a series of correlational analyses has indicated a strong positive relationship between police officers' cognitive abilities and their job performance. This finding is compatible with nearly all existing Western studies of the associations between cognitive ability and job performance in the police force and other organisations (e.g. Aamodt, 2004; Black, 2000; Hunter and Schmidt, 1996; Ree, et al., 1994; Robertson, et al., 2002; Schmidt and Hunter, 1998; Stolp, 2002). Explanations of this result can be found in the nature of police work. First, most police functions are difficult and complex (Gaines and Falkenberg, 1998). The function of police investigators, for example, is to answer questions of Who? What? Where? When? How? and Why?. According to Mohamed and Pauleen (2005), a criminal investigator's cognitive ability can play a significant role in his or her ability to answer such questions through the application of knowledge, the accumulation of information, the collection of sufficient evidence, and the ability to possess a broad and deep perspective about all aspects of a case. Second, police officers also need to make critical decisions in complex, ambiguous, and often stressful situations, with very little external support. At the same time, they must operate within their agency's laws, procedures, and guidelines (Miller, 2006; Qatan, 2003). In practice, this requires officers not only with high levels of emotional stability, but also with high levels of cognitive ability (Rabee, et al., 2004).

According to Stolp (2002), police work mainly involves the ability to follow high-level instructions and the ability to make court reports. Officers, therefore, should possess abilities to correctly interpret written policies, to follow written and verbal instructions, and to transfer and report different ideas and information when necessary (Kaczmarek and Packer 1996; Rabee, et al., 2004). Another mechanism by which cognitive ability may aid job performance is that higher cognitive abilities are linked to higher job breadth. This quality allows employees to perform a wider range of tasks, which helps them achieve high levels of job performance (Chamorro-Premuzic and Furnham, 2010). This could explain the strong existing relationship between cognitive ability and police performance. More specifically, studies of police work consistently indicate that a

number of duties, tasks, and high-risk responsibilities must be performed by police officers as a normal part of their daily and nightly functions (Gaines and Falkenberg, 1998). Thus, officers with higher cognitive abilities are more likely to perform a greater variety of police work during the course of a day.

Furthermore, as previously discussed in the literature review, people with high cognitive abilities have a higher potential for adaptability, which is considered a central criterion for job performance at the UAE Police. More particularly, adaptive performance has been defined in UAE Police Law as an officers' ability to modify his or her behaviour to meet the demands of work, such as creatively dealing with uncertain or unpredictable work situations; learning new job skills, technologies, and procedures; and handling work stress, emergencies, or crisis circumstances in an effective manner during duty. All such abilities and skills are considered of great value for the ADP, since the failure to effectively perform in stressful and dangerous circumstances would have a serious negative impact not only on the police officers themselves, but also on the police organisation and the public as a whole. Thus, since cognitive ability has been found to predict adaptive performance (Pulakos, et al., 2002; Tucker and Gunther, 2009), in turn, it will most likely affect overall job performance.

Additionally, the present investigation supports recent research providing evidence of negative associations between cognitive ability and CWB in police officers (Cutler and Muchinsky, 2006; Dilchert, et al., 2007). Data in this study indicate a significant negative correlation between cognitive abilities and CWB, as assessed through both objective and self-reported measures. As demonstrated earlier in the literature review, the negative association between cognitive abilities and CWB may be a result of the protective effects of high levels of cognitive ability, enabling people with high intelligence test scores to better expect or foresee the negative potential of engaging in CWB (Chamorro-Premuzic and Furnham, 2010). Therefore, since employees' deviant behaviours, particularly within police organisations, are extremely intolerant, officers with higher cognitive abilities may more likely to withdraw from engaging in such deviant behaviours, in order to avoid being punished or dismissed from work.

Finally, the present study contributes to a growing body of literature addressing the concept of EI and its importance to organisations. The findings of this research indicate the important role of EI in enhancing work outcomes. First, EI has been found to be

significantly associated with job performance. Second, EI has been found to be negatively correlated with CWB, job stress, maladaptive coping strategies, and to be positively correlated with adaptive coping strategies. The current results are therefore consistent with many other recent findings about the relationship between EI and job performance (Carmeli and Josman, 2006; Law, et al., 2004; Lev, 2005), CWB (Poole, et al., 2008), as well as job stress and coping (Nikolaou and Tsaousis, 2002; Saklofske, et al., 2007).

According to Sy, et al. (2006), employees with high EI levels are more adept at regulating their emotions, making them feel more confident and in control of the tasks required for their job. In addition, emotionally intelligent employees have many different skills (such as adaptive performances, strategies for conflict management, organisational commitment, and motivation for achievement), which are necessary for succeeding in the contemporary workplace, and which distinguish them from less emotionally intelligent workers with similar levels of experience and education (Armstrong, 2007). Additional reasons for the positive links between EI and job performance may be that individuals with high EI are more successful than low EI persons at: (a) creatively solving problems; (b) completing cognitive tasks; and (c) interacting with others at work (Carmeli and Josman, 2006; Rode, et al., 2007). More specifically, positive moods may play a positive role in enhancing integrative thinking, creativity, and inductive reasoning. Moreover, "emotions can assist individuals in channelling attention to issues in need of immediate attention, thereby determining the focus of attention..., when being faced with multitudinous options, emotions may allow for choosing among various options and making judgments; being capable of anticipating one's emotional reaction to an imaged future event can help individuals to choose from these options..., and emotions can be harnessed to facilitate specific forms of cognitive processing" (Lindebaum, 2008: 53). It is evident that the ability to apply emotions to improve cognition may have an important value for complex professions that involve high-risk decision-making abilities, such as police work.

These explanations may largely justify the current study's positive correlation between EI and police officers' job performance. On one hand, integration and dealing with the public are key police responsibilities (Gaines and Falkenberg, 1998) and they are key factors in police performance evaluations in the UAE. Every day, officers deal with

people from different backgrounds and with different problems (some are victims, others are offenders or witnesses). On the other hand, community-oriented, problem-solving policing has become an accepted and applied philosophy in many police organisations. The main principle of this philosophy is to work with the public in order to solve community problems (Lord and Schoeps, 2000). Thus, community police officers are expected to: (a) have close relations with the public; (b) prevent and focus on a wide range of community problems; (c) restore trust in the police; (d) mediate conflicts and solve a wide range of problems related to crime and disorder; (e) be approachable for citizens from different ethnic groups; (f) offer help and support to people with personal problems; and (i) collect relevant information about public safety problems (Terpstra, 2009). Therefore, it would seem that high levels of EI (or officers' abilities to manage their own and others' emotions) can play a critical role in building constructive communication with people and other agencies in a community (such as schools) to meet these demands, which in turn aid in predicting aspects of police officer performance. This supports similar claims reported by other researchers in connection with the effects of EI on police performance (see Daus and Ashkanasy, 2005).

Additionally, cooperating with other officers at work is one of the most important criteria of job performance in the UAE police force. A commonly accepted maxim holds that job performance is frequently dependent upon the support, advice, and access to resources provided by other people at work and thus, the quality of social interaction may play a significant role in determining whether or not an employee can draw upon such a helpful network at work (Lindebaum, 2008). Accordingly, one possible explanation for the positive relationship between EI and police job performance in the present research is that high EI individuals are more able to cooperate with others, and are more successful in communicating their ideas, intentions, and goals in assertive, articulate, and interesting ways, which might be closely associated with the social skills required for teamwork (Zeidner, et al., 2004)

Furthermore, in line with several previous studies (e.g. Azib, 2006; Poole, et al., 2008), the present research demonstrates evidence of a negative relationship between EI and CWB. These findings are compatible with Bar-On's (1997) study of the effects of EI on deviant behaviour amongst police officers. EI, therefore, seems to be a factor discouraging deviant behaviours at work. Although very few studies have investigated

the relationship between EI and CWB and its causes, a number of possible factors have been provided in the literature review that could explain this negative association, such as: (a) because emotionally intelligent individuals are able to identify and manage undesirable emotions, negative affects, and stressful situations, they are less likely to be paralysed by fear, negative emotions, and anxiety (Lam and Kirby, 2002), all of which have been found to predict CWB (Penney and Spector, 2005); (b) people with low levels of EI may engage in CWB, since they have relatively lower moral standards (Khalid, et al., 2009); (c) emotionally intelligent employees are better able to understand and follow organisational norms and rules, and show high levels of sensitivity towards informal behavioural opportunities at work (Carmeli and Josman, 2006); and (d) low EI individuals lack empathy, effective social skills, and an understanding and appreciation of how others feel, which in turn may lead to negative and aggressive conduct, particularly in difficult and stressful situations (Quebbeman and Rozell, 2002).

A number of investigations have found EI to be positively related to problem-focused strategies and negatively related to emotion-focused and avoidance strategies (Bastian, et al., 2005; Chan, 2008). This research corroborates such findings by showing that EI is correlated positively with adaptive coping strategies and negatively with maladaptive coping strategies. These findings may explain another equally important result of the current research, namely the negative correlation between EI and perceived job stress. Emotionally intelligent individuals suffer less stress and tend to be able to progress despite unfavourable circumstances. In other words, individuals may differ in how they perceive, express, understand, and manage emotional experience and thus, emotional intelligence may be a key feature in differentiating people who are able to successfully cope with difficult and stressful encounters (by applying adaptive coping strategies) from those who face setbacks from similar experiences (Tugade and Fredrickson, 2002).

In recent years, increasing attention has been paid to the incremental validity of different predictors. This phenomenon has several implications: (a) theoretically, it helps to identify whether different tools are measuring similar or different constructs; and (b) it practically demonstrates the validity of each measure in predicting the criteria that can help modify selection tools (Lievens, et al., 2003). In other words, incremental validity may help organisations avoid measuring the same trait several times and instead select different measuring methods that would add validity to an existing selection system

(Smith and Smith, 2005). A series of regression analyses were conducted to test the predictive and incremental validity of the FFM, cognitive ability, EI on job performance, occupational stress, and CWB. Hierarchical regression analysis was also employed to test the incremental validity of personality variables and EI in predicting job performance over and above cognitive ability.

Results indicate that cognitive ability is the best predictor of job performance (cognitive ability accounted for around a third of the variance in job performance amongst officers). Conscientiousness and EI have been found to add incremental validity over cognitive ability in the prediction of job performance. Additionally, Neuroticism has been found to be a stronger predictor of perceived job stress than any other variable. EI and Conscientiousness significantly have explained additional variance in the criteria of perceived job stress over Neuroticism. With respect to the prediction of CWB, current findings have suggested that Conscientiousness is the best predictor of CWB. EI, Neuroticism, and Agreeableness account for a significant additional portion of the variance in CWB over Conscientiousness.

Other findings of the present study have involved coping strategies. Current results show that the most frequently used strategies include turning to religion and instrumental social support. In contrast, substance use has been found to be the least used strategy amongst the sample. This result reflects the Islamic culture of respondents that emphasises turning to religion and social cooperation in times of crisis and stress. It also reflects the collectivist feature of UAE culture that emphasises group unity, cooperation, consultation, harmony, and conventionality. It also indicates the impact of Islamic law prohibiting the use of alcohol and other kinds of drugs. Overall, the coping strategies used by participants in this study can generally be described as including positive and negative strategies, with officers high in Conscientiousness, EI, and Extraversion, and low in Neuroticism traits, tending to use adaptive coping strategies more than maladaptive coping strategies. This result overall supports the findings of several previous studies in non Arabic countries (e.g., Bishop, et al., 2001; Burke, et al. 2006; Chan, 2008), and may suggest that personality traits and EI affect coping styles with stress despite different cultures.

To summarise, the results of Study Two suggest that measures of personality, cognitive ability, and EI may enhance the personnel selection system. Police work is stressful,

dangerous, difficult, and involves a multiplicity of different tasks (Howitt, 2002). Police research, accordingly, has argued that police functions require a number of different abilities and skills (Ainsworth, 2002). Current findings may provide evidence for this argument by demonstrating that officers with high scores in Conscientiousness, cognitive ability, and EI, and low scores in Neuroticism, show high levels of police job performance and low levels of both job stress and CWB. The present research shows that cognitive ability influences a worker's ability to complete a specific task, while EI and individual personality, particularly, Conscientiousness trait influence a worker's ability to cooperate with others, deal with the public, cope with occupational stress, avoid engaging in CWB, and stay motivated.

Finally, a follow-up study examining the predictive validity of the same variables with a different sample, namely with newly hired officers will be helpful in supporting the predictive validity of using psychometric tests in the process of police officer selection. Therefore, the next study within the present thesis was conducted. The contributions, implications, and limitations of the findings in Study Two will be reported in the general discussion section in the final chapter.

Chapter 5: Study Three

5.1 Introduction

The aim of study three is to extend study two by using a different sample (newly hired officers) and different method of data collection (a longitudinal design). It was found in study two that cognitive ability, Conscientiousness, and EI are the strongest predictors of police job performance. However, the main disadvantage of study two was that its sample was based on incumbent employees. More specifically, study two was based on cross-sectional research design (where information of predictors and criteria are collected at the same point in time from the same group of employees), which suffer a number of disadvantages, especially when using the results for human resource selection. These disadvantages include: (a) job experience may indeed influence scores on either predictors or criteria measures, particularly when job tenure is related to the dependent variable tested; (b) since applicants are mostly characteristically different from current employees in a number of ways (e.g., age, job experience), generalising the findings and using them for selection may be inappropriate; (c) with this method, several cases are inevitably excluded from participating (such as employees who have left the organisation, or those dismissed as a result of poor performance or misconduct), which may result in range restriction and a lower apparent validity; and (d) test-takers (current employees) may be less motivated to participate, since they are already working, and high performance employees tend to participate more than low performance personnel, which may affect the test's validity (Gatewood and Field, 2001). Study Three, therefore, aims to extend Study Two through a new sample and by using longitudinal data

As indicated earlier in the literature review, the selection process should not only focus on finding applicants with the qualities necessary for demonstrating success at work; it should also focus on hiring people who would benefit from academic and training courses. All employees need additional training throughout the course of their working lives, in order to retain old skills, develop new ones, and to acquire new concepts, rules, or attitudes that could contribute to their job performance (Ainsworth, 2002; Colquitt and Simmering, 1998; McKenna, 2006). Training is also extremely important to police agencies, since police work involves a multiplicity of different tasks and thus, requires a range of knowledge, abilities, and skills, which may be attained through appropriate training programs (Howitt, 2002). Continuing to learn and train is also a critical part of

police organisations, allowing them to meet the challenges of a rapidly changing environment, the development of organised crime, terrorist crimes, and cyber crimes; these activities are also needed for officers to keep up with changes in procedure and in the law (Ainsworth, 2002; Al-Zwaibi, 2005).

Although much Western research has demonstrated the utility of personality traits and general cognitive abilities in predicting academic and training performance (Furnham, 2008; Warr, 2002), very little research has been done on the relationship between these factors and academic and training performance in Arabic-speaking contexts, and very little research has examined the validity of EI in predicting training performance, particularly within police organisations (Al-Muhaya, 2005; Burnette, 2008; Rasol and Kazem, 2005). Upon reviewing the available literature, for instance, Armstrong (2007) reported that "There appear to be no peer-reviewed empirical studies that have explored relations between EI and the ability to learn new ways to perform one's job, to adjust to new work processes, procedures, and equipment, or the propensity to search for and participate in work assignments that require one to develop new skills" (2007: 222).

Accordingly, the gap in knowledge serves as a reason to investigate the relationship between personality traits, cognitive ability, and training performance from a cross cultural perspective. Limitation of previous police research on training is the failure to explain the relationship between EI and training performance. To date, most of the empirical work addressing individuals' features as predictors of learning and training achievement has focused on personality traits and cognitive ability in Western cultures. Therefore, the main goal of study three is to fill this gap in the research, by investigating the associations between personality traits, cognitive ability, EI measurements, and Police Academy training performance (i.e., academic performance, physical performance, firearms performance, discipline, and overall training performance) in non-Western cultures, namely the UAE. A second aim is to determine the potential for personality traits, cognitive ability, and EI for predicting overall training performance levels in the UAE.

A third aims is to examine the validity of personality dimensions, cognitive ability, and EI in predicting actual police job performance and CWB after graduating and joining the work force. In other words, since the central aim of performance prediction is not only to predict training outcomes but also actual job performance after graduation, in this

study another major goal is to examine the validity of personality traits, cognitive ability, and EI in predicting actual professional police performance levels.

As indicated, the current study aims to extend study two through a new sample and by using longitudinal data. That is, the main differences between Study two and the current study are: (a) the sample of current study is based on new recruits who joined the ADP without any prior job experience; and (b) the current study is a predictive investigation, in that there are about eighteen months between the time of collecting data predictors (i.e., personality dimensions, cognitive ability, and EI) and data criteria (i.e., job performance and CWB). In line with existing literature discussed in chapter two, as well as the results of Study Two, several hypotheses can be stated:

H1a: There will be a positive correlation between Conscientiousness, cognitive ability, EI, and academic performance.

H1b: Neuroticism is expected to have negative associations with academic performance.

H1c: Cognitive ability and Conscientiousness are expected to predict academic performance.

H2a: There will be a positive correlation between Conscientiousness, Openness to Experience Extraversion, cognitive ability, EI, and overall training performance.

H2b: Neuroticism is expected to have negative associations with overall training performance.

H2c: Cognitive ability and Conscientiousness are expected to predict overall training performance.

H3a: There will be a positive correlation between Conscientiousness, Extraversion, cognitive ability, EI, and job performance.

H3b: Neuroticism is expected to have negative associations with job performance.

H4a: Cognitive ability is expected to be a better predictor of job performance than the Big Five dimensions and EI.

H4b: Personality factors and EI are expected to add incremental validity to predicting job performance over cognitive ability.

H5a: There will be a negative correlation between Conscientiousness, Extraversion, Agreeableness, EI, cognitive ability, and CWB.

H5b: Neuroticism is expected to have positive associations with CWB.

5.2 Method

The research design used in study three was that of a quantitative research approach. It was conducted according to a non-experimental correlational research design. The survey method of data collection was used (including the collection of data through scales, tests, and questionnaires) based on the predictive criterion-related validity technique. The independent variables in the present study were the Big Five dimensions, (i.e., Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness), cognitive ability, and EI. The dependent variables include: academic performance, physical performance, firearms performance, discipline, overall training performance, actual job performance, and objective measurements of CWB.

5.2.1 Participants

Participants for this study were selected from new police recruits who were enrolled at the Abu Dhabi Police Academy in March 2008. All new police recruits ($n = 407$, 356 male and 51 female) were surveyed during their first month of training at the Police Academy. However, out of 407 officers, 22 participants (5.4%) were excluded in the data analysis because: (a) they had incomplete test submissions; or (b) they demonstrated high levels of social desirability as measured by the Lie Scale from Eysenck's Personality Questionnaire.

The 385 participants completed the tests fully and without exceeding the social desirability evaluation. All participants were UAE nationals. The gender breakdown of

the participants included a total of 338 males (87.8%) and 47 females (12.2%) with ages ranging between 18 and 22. The average age was 20.0 years with a $SD = 1.3$ years.

Participants possessed a variety of educational backgrounds, with an average of 12.5 years of education. The majority of the sample, 278 (72.2%), had completed high school (twelve years of education), 24.4% (94) had not completed high school (their level of education ranged between seven and eleven years), and about 3% (13) had college degrees (two to three years of education after high school). With respect to the marital state of respondents, most of the sample 91.7% (353) were single, and only 32 participants were married. None of the participants had any prior job experience, and they had been selected without taking any ability or personality-based tests. That is, as previously discussed in chapter four, only five tools are generally used to select new police officers (application forms, criminal records investigations, oral unstructured interviews with the candidates, physical fitness testing, and medical exams), and psychometric tests are not one of these instruments.

All participants were at the Abu Dhabi Police Academy for about five months. Successful candidates graduated from the Police Academy ($n = 385$) and joined the ADP force as full-time police officers. They were assigned to various police departments involved in active police work, particularly in the areas of crime fighting and prevention, such as the Community Policing Department, the Traffic and Patrols Department, and the Criminal Investigation Department.

5.2.2 Predictor Measures

All participants completed three tests, including personality, cognitive ability, and emotional intelligence tests similar to those used in Study Two. Personality was measured using the Arabic version of the NEO-FFI (Costa and McCrae, 1992). Cognitive ability was measured by an Arabic cognitive ability test (Tureary, 1999), and EI was measured by the Arabic version of the Self-Reported Emotional Intelligence Test (Schutte, et al., 1998). In addition, the Lie Scale from Eysenck's Personality Questionnaire (EPQ; Eysenck and Eysenck, 1975) was employed in this study as a means of measuring social desirability.

5.2.3 Criterion Measures

Seven different types of performance data were used as criterion measures in this study, including academic performance, physical performance, firearms performance, discipline, overall training performance, overall actual job performance, and objective measurements of CWB.

1) *Academic performance.* The recruits spend about 400 hours in the classroom learning laws, policies, and rules. During the 20 weeks of Academy training, police recruits study eleven modules, divided into two main categories: (a) police models, including police rules, traffic regulations, police communication, first aid, report writing, and drug offences; and (b) law models, including penal law, the criminal justice system, personal law, criminal investigation, and Islamic law. The recruits take three exams throughout the 20 weeks of training. At the end of Academy training, exam scores are reported for the eleven modules. These scores are based on a 0-100 scale for some subjects, and a 0-50 scale for others. Overall academic performance for the eleven subjects can range from 0 to 800.

2) *Physical performance.* Recruits take lessons in sports fitness, self-defence, and police work, such as patrol skills. The evaluation of recruits for this part of the training is based on a 0-200 scale.

3) *Firearms performance.* This is one of the most important trainings in the Police Academy. Recruits, firstly, take theoretical lessons in shooting with handguns and shotguns, on weapons' safety (i.e., safety-related behaviours when using, handling, or caring for weapons), and weapons' maintenance (cleaning weapons, opening and installing weapons). Recruits also take practical lessons, including shooting with handguns and shotguns in normal situations, as well as in circumstances similar to those in actual police work, such as shooting during a chase. The assessment of recruits on their firearms performance is based on a 0-200 scale.

3) *Discipline at the Academy.* Recruits are evaluated on a 0-100 scale that aims to show their overall behaviours and discipline during training, such as not following orders, failing to complete required assignments and duty obligations, arguing with supervisors, embezzling property, lying, and demonstrating inappropriate verbal or physical conduct toward others in the Academy.

4) *Overall training performance.* Overall training performance was the total score obtained in four training criteria, including academic performance, physical performance, firearms performance, and discipline performance. Overall training performance as calculated by the Abu Dhabi Police Academy can range from 0 to 1300. According to Abu Dhabi Police Academy rules, overall training performance scores can also be divided into grade point average (GPA) such as follows: (a) 1170 and above shows an excellent GPA; (b) 1040-1169 shows a very good GPA; (c) 910-1039 shows a good GPA; (d) 780-909 indicates a satisfactory GPA; (e) 650-779 indicates a pass; and (f) 649 and below means fail.

6) *Overall actual job performance and objective measurements of CWB.* These were similar to those in Study Two. First, annual official job performance evaluations of ten dimensions completed by supervisors' officers (see Study Two) were used as job performance criteria in this study. Second, the disciplinary violation score and the number of disciplinary complaints formally submitted against an officer were used as objective measurements of CWB.

5.2.4 Procedure

At the beginning of training (March 2008), data were collected from participants at Abu Dhabi Police Academy. The researcher conducted tests of different groups over a period of one to two hours. Recruits were first informed about the general nature and aims of the study, and they were asked to answer all questions truthfully. A warning that faking could be identified was also given to participants. Such a technique has been found to play a significant role in controlling faking on personality tests, as noted in the literature review. Recruits first completed a time-limited test (i.e. the cognitive ability test) and then were administered other tests (the NEO-FFI, lie scale, and EI test). At the end of Academy training (July 2008), the researcher collected data from the Abu Dhabi Police Academy on participants' levels of academic performance, physical performance, firearms performance, discipline, and overall training performance.

Overall job performance and objective measurements of CWB were collected by the researcher from the Human Resources Department at the ADP in January 2010, approximately eighteen months after participants had graduated from the Police

Academy and joined the work force. However, of the 385 participants who graduated from the Police Academy and joined the force as full-time police officers, performance evaluations were only available for 355 (92.2%) officers. The remaining 30 participants had either chosen to resign prior to the end of their first year of employment, or had been dismissed from their jobs as a result of misconduct. Summary of data collection stages are shown in Table 5.1.

Table 5.1 Stages of data collection in Study Three

Stage	Date	Participant	Action
One	March 2008	407	All participants completed independents measures including personality, cognitive ability, and emotional intelligence tests at Abu Dhabi Police Academy in the UAE
Two	July 2008	Of 407 participated in the first stage, 385 were available for this stage	The researcher collected dependent measure of training performance including participants' levels of academic performance, physical performance, firearms performance, discipline, and overall training performance from Abu Dhabi Police Academy in the UAE
Three	January 2010	Of 385 participated in the second stage, 355 were available for this stage	The researcher collected dependent measures of job performance and objective measurements of CWB from the Human Resources Department at Abu Dhabi Police in the UAE

5.2.5 Ethical Considerations

The researcher took several actions in relation to the ethical considerations of the present research. These are similar to those in Study Two such as obtaining permission from the Executive Manager of the ADP to begin collecting data (see Appendix 7 and 9); and ensuring the confidentiality of participants' results and information collected by the researcher at all points during the research.

5.2.6 Statistical Analysis

All statistical analyses were conducted using the SPSS statistical package version 17. A variety of statistical analyses were used, such descriptive statistics of all variables, including range, means, standard deviations, skewness, and kurtosis, were calculated to ensure the normality of the data distribution; Cronbach's Alpha coefficients were computed to determine the internal consistency of measuring instruments; and bivariate correlation, partial correlation, and multiple regression analysis were performed to test the hypotheses. Similar to the analyses used in Study Two, the main assumptions for the data set to suit multiple regression analysis in the current study have not been violated.

5.3 Results

5.3.1 Descriptive Statistics

The means, standard deviations, range, skewness, and kurtosis of the studied variables are presented in Table 5.2, and correlations amongst the studied variables are reported in Table 5.3.

As shown in Table 5.2, the reliability (coefficient alpha) for all measurements was high. Neuroticism, Extraversion, Openness to Experience, Agreeableness, Conscientiousness, Cognitive Ability, and EI had nearly mean scores in the average category. Data about training criteria were in the average range. Regarding actual job performance criteria, data indicated that the overall job performance was slightly above average. Finally, the skew and kurtosis for the variables in the current study indicated the normality of the data distribution. Only measurements of CWB were positively skewed and slightly kurtosis. This result was actually expected, due to the low disciplinary violation scores in the target population (80% of participants were not found to have committed any violations). However, this seems to not be an issue in the current research, due to the large sample involved.

Table 5.2 Summary of statistics for all variables in Study Three

Variable	Min	Max	Mean	SD	Skewness	Kurtosis	Alpha
Neuroticism	17	47	31.6	5.12	-.002	-.143	,85
Extraversion	27	56	42.0	5.00	-.305	.349	,86
Openness to Experience	22	49	34.2	3.88	.369	.601	,81
Agreeableness	26	54	41.1	4.96	.005	-.006	,90
Conscientiousness	27	59	43.5	6.20	.118	-.567	,88
Cognitive Ability	29	75	53.8	8.77	.119	-.772	-
Emotional Intelligence	60	160	103.6	28.81	.315	-1.292	,94
Academic performance	432	773	623.1	59.68	-.108	-.267	-
Physical performance	108	186	145.1	16.05	.306	-.467	-
Firearms performance	83	193	153.0	14.53	-.478	1.122	-
Discipline and overall behaviour at the Academy	62	100	94.8	5.78	-2.012	4.964	-
Overall training performance	806	1235	1016.1	74.03	.001	-.286	-
Job performance	2	7	4.82	.908	-.284	-.129	-
Objective measurements of CWB	0	3	.272	.634	2.59	6.66	-

Table 5.3 Correlations amongst study variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Neuroticism	-													
2. Extraversion	-.27**	-												
3. Openness to Experience	.02	.02	-											
4. Agreeableness	-.07	.19**	.04	-										
5. Conscientiousness	-.37**	.27**	.08	.26**	-									
6. Cognitive Ability	-.15**	-.00	.05	.02	.17**	-								
7. Emotional Intelligence	-.18**	.18**	.09	.055	.28**	.32**	-							
8. Academic performance	-.20**	.13**	.08	.06	.52**	.66**	.32**	-						
9. Physical performance	-.22**	.17**	.00	.08	.33**	.15**	.17**	.19**	-					
10. Firearms performance	-.56**	.06	.07	.00	.35**	.32**	.17**	.35**	.34**	-				
11. Discipline and overall behaviour at the Academy	-.09	.08	.00	.37**	.43**	.13**	.12*	.21**	.35**	.17**	-			
12. Overall training performance	-.28**	.13**	.10*	.08	.59**	.64**	.33**	.81**	.39**	.48**	.29**	-		
13. Job performance	-.24**	.18**	.01	.09	.48**	.50**	.33**	.53**	.26**	.28**	.29**	.58**	-	
14. Objective measurements of CWB	.16**	-.12*	-.07	-.14*	-	-	-	-	-.07	.18**	.16**	.23**	.40**	-

* p < 0.05, ** p < 0.01

5.3.2 The FFM, Cognitive Ability, Emotional Intelligence, and Academic Performance

Hypotheses 1a and 1b stated that higher levels of cognitive ability, Conscientiousness, Neuroticism, and EI would be significantly related to academic performance. As can be seen from Table 5.4, there were significant strong positive correlations between cognitive ability, Conscientiousness, and academic performance. EI levels demonstrated a moderate positive correlation with academic performance. Also as predicted, Neuroticism showed significant negative associations with academic performance. Extraversion was also found to have a significant positive relationship with academic performance.

When gender, age, and education levels were factored out, similar results were found, indicating that the correlations of cognitive ability, Conscientiousness, Extraversion, Neuroticism, and EI with academic performance were not affected by demographic variables.

Table 5.4 Correlations between the FFM, cognitive ability, emotional intelligence, and academic performance (n = 385)

Independent Variable	Dependent Variable (Academic Performance)	
	Bivariate Correlation	Partial Correlation***
Neuroticism	-.20**	-.19**
Extraversion	.13**	.12*
Openness to Experience	.08	.09
Agreeableness	.06	.05
Conscientiousness	.52**	.50**
Cognitive Ability	.66**	.62**
Emotional Intelligence	.32**	.27**

* p < 0.05, ** p < 0.01, *** Controlling variables (gender, age, and education level)

Using stepwise multiple-regression analyses with the probabilities of entering and removing the predictor variables set at .05, academic performance was regressed on significantly associated independent variables (cognitive ability, Conscientiousness, Neuroticism, Extraversion, and EI). Regression statistics are shown in Table 5.5.

Table 5.5 Academic performance regressed on the FFM, cognitive ability, and emotional intelligence (n = 385)

	Model	B	SE B	β	t	F	R2
1	Constant	.851	.142		5.979		
	Cognitive Ability	.772	.044	.665**	17.442	304.238**	.443
2	Constant	-.832	.199		-4.175		
	Cognitive Ability	.654	.040	.564**	16.239		
	Conscientiousness	.047	.004	.376**	10.817	256.700**	.573

** p < 0.01

As shown in Table 5.5, the stepwise models retained two variables, explaining 57.3% of the variance in academic performance. Cognitive ability was retained as the most important predictor of academic performance ($\beta = .564$, $p < .01$) followed by Conscientiousness ($\beta = .376$, $p < .01$). To summarise, hypotheses 1a, 1b, and 1c were supported by correlations and regression analysis, with academic performance as the dependent measure.

5.3.3 The FFM, Cognitive Ability, Emotional Intelligence, and Physical Training Performance

The correlations between physical performance, personality variables, cognitive ability, and EI are present in Table 5.6.

Table 5.6 Correlations between the FFM, cognitive ability, emotional intelligence, and physical performance (n = 385)

Independent Variable	Dependent Variable (Physical Performance)
Neuroticism	-.22**
Extraversion	.17**
Openness to Experience	.00
Agreeableness	.08
Conscientiousness	.33**
Cognitive Ability	.15**
Emotional Intelligence	.17**

** p < 0.01

As reported in Table 5.6, results show that three of the FFM were found to significantly correlate with physical performance. Conscientiousness, Neuroticism, and Extraversion were all significantly correlated ($p < .01$) with physical performance ($r = .33$, $r = -.22$, and $r = .17$) respectively. EI and cognitive ability were also significantly correlated with physical performance at $p < .01$. This result suggests that individuals high in Conscientiousness, Extraversion, EI, and cognitive ability factors, and low in the Neuroticism factor demonstrate high levels of physical performance at the Police Academy.

Stepwise multiple-regression analyses were used to determine the contributions of the FFM, cognitive ability, and EI, as well as their relative importance in predicting physical performance at the Police Academy (see Table 5.7).

Table 5.7 Physical performance regressed on the FFM, cognitive ability, and emotional intelligence (n = 385)

Model		B	SE B	β	t	F	R²
1	Constant	.821	.283		5.979		
	Conscientiousness	.045	.006	.338**	17.442	49.482**	.114
2	Constant	1.684	.470		-4.175		
	Conscientiousness	.039	.007	.294**	16.239		
	Neuroticism	-.019	.008	-.118*	10.817	27.643**	.126

* $p < 0.05$, ** $p < 0.01$

According to Table 5.7, the regression revealed that two independent variables, namely Conscientiousness and Neuroticism, predicted physical performance, and together explained 12.6% of its variance.

5.3.4 The FFM, Cognitive Ability, Emotional Intelligence, and Firearms Performance

The correlations between the firearms performance and the personality variables of cognitive ability and emotional intelligence were investigated. Table 5.8 presents these correlations.

Table 5.8 Correlations between the FFM, cognitive ability, emotional intelligence, and firearms performance (n = 385)

Independent Variable	Dependent Variable (Firearms Performance)
Neuroticism	-.56**
Extraversion	.06
Openness to Experience	.07
Agreeableness	.00
Conscientiousness	.35**
Cognitive Ability	.32**
Emotional Intelligence	.17**

** $p < 0.01$

Results indicate that four factors were found to significantly correlate with firearms performance at the Police Academy. More specifically, Neuroticism shows strong negative associations with firearms performance ($r = -.56$, $p < .01$). Conscientiousness and cognitive ability show moderate positive correlations with firearms performance ($r = .35$, and $r = .32$) respectively. A positive weak correlation between EI and firearms performance was also shown.

Using stepwise multiple-regression analyses, firearms performance at the Police Academy was regressed on Neuroticism, Conscientiousness, cognitive ability, and EI. Regression statistics are shown in Table 5.9.

Table 5.9 Firearms performance regressed on the FFM, cognitive ability, and emotional intelligence (n = 385)

	Model	B	SE B	β	t	F	R2
1	Constant	5.801	.202		28.756		
	Neuroticism	-.084	.006	-.561	-13.269	176.066**	.315
2	Constant	4.763	.261		18.227		
	Neuroticism	-.078	.006	-.524	-12.784		
	Cognitive Ability	.275	.047	.242	5.901	113.221**	.372
3	Constant	4.053	.379		10.705		
	Neuroticism	-.072	.006	-.485**	-11.160		
	Cognitive Ability	.246	.048	.217**	5.180		
	Conscientiousness	.014	.005	.115*	2.578	78.813**	.383

* $p < 0.05$, ** $p < 0.01$

The regression analyses produced three different independent factors as predictors of firearms performance, with an adjusted R2 of 0.38. These factors include Neuroticism, cognitive ability, and Conscientiousness, with Beta values of -.48, .21 and .11 respectively. Based on these results, it is clear that Neuroticism, cognitive ability, and Conscientiousness can play a significant role in increasing the results of firearms training performance at the Police Academy.

5.3.5 The FFM, Cognitive Ability, Emotional Intelligence, and Discipline and Overall Behaviours at the Academy

Table 5.10 provides the correlations between the FFM, cognitive ability, EI, and discipline at the Police Academy. Conscientiousness and Agreeableness were found to demonstrate a moderate significant relationship with discipline and overall behaviours at the Police Academy ($r = .43$, and $r = .37$) respectively. Cognitive ability and EI show weak positive correlations with discipline ($r = .13$, and $r = .12$) respectively.

Table 5.10 Correlations between the FFM, cognitive ability, emotional intelligence, discipline, and overall behaviours at the Academy (n = 385)

Independent Variable	Dependent Variable (Discipline and overall behaviours at the Academy)
Neuroticism	-.09
Extraversion	.08
Openness to Experience	.00
Agreeableness	.37**
Conscientiousness	.43**
Cognitive Ability	.13**
Emotional Intelligence	.12*

* p < 0.05, ** p < 0.01

Furthermore, discipline and overall behaviours at the Academy were regressed on significantly associated independent variables (Conscientiousness, Agreeableness, cognitive ability, and EI). Results, as reported in Table 5.11, showed that two of the FFM, namely Conscientiousness and Agreeableness, were significant predictors of discipline at the Police Academy, accounting for 26% of the variance.

Table 5.11 Discipline and overall behaviours at the Academy regressed on the FFM, cognitive ability, and emotional intelligence (n = 385)

	Model	B	SE B	β	T	F	R2
1	Constant	.352	.348		1.010		
	Conscientiousness	.075	.008	.435**	9.441	89.135**	.189
2	Constant	-1.592	.456		-3.490		
	Conscientiousness	.062	.008	.360**	7.915		
	Agreeableness	.061	.010	.283**	6.220	68.297**	.263

** p < 0.01

5.3.6 The FFM, Cognitive Ability, Emotional Intelligence, and Overall Training Performance

Hypotheses 2a and 2b stated that cognitive ability, Conscientiousness, Neuroticism, Openness to Experience, Extraversion, and EI would be significantly correlated with overall training performance.

As shown in Table 5.12, there were significant strong positive correlations between cognitive ability, Conscientiousness, and overall training performance. EI indicated a moderate positive correlation with academic performance. Also, as predicted, Neuroticism, Extraversion, and Openness to Experience showed significant weak associations with overall training performance. Thus, hypotheses 2a and 2b were supported.

When gender, age, and education levels were factored out, similar results were found, demonstrating that the correlations of cognitive ability, Conscientiousness, emotional intelligence, Neuroticism, and Openness to Experience with overall training performance were not affected by these factors.

Table 5.12 Correlations between the FFM, cognitive ability, emotional intelligence, and overall training performance (n = 385)

Independent Variable	Dependent Variable (Overall training performance)	
	Bivariate Correlation	Partial Correlation***
Neuroticism	-.28**	-.27**
Extraversion	.13**	.10*
Openness to Experience	.10*	.10*
Agreeableness	.08	.04
Conscientiousness	.59**	.56**
Cognitive Ability	.64**	.62**
Emotional Intelligence	.33**	.26**

* p < 0.05, ** p < 0.01, *** Controlling variables (gender, age, and education level)

Stepwise multiple-regression analysis was used to determine the contributions of Conscientiousness, Neuroticism, Openness to Experience, Extraversion, cognitive

ability, and EI in predicting overall training performance. Regression statistics are reported in Table 5.13.

Table 5.13 Overall training performance regressed on the FFM, cognitive ability, and emotional intelligence (n = 385)

	Model	B	SE B	β	t	F	R2
1	Constant	1.359	.120		11.325		
	Cognitive Ability	.616	.037	.645**	16.505	272.413**	.416
2	Constant	-.321	.158		-2.037		
	Cognitive Ability	.499	.032	.522**	15.664		
	Conscientiousness	.047	.003	.455**	13.665	295.615**	.607

** p < 0.01

The regression analyses reveal that two independent variables uniquely predicted overall training performance and together explain 60% of its variance. Cognitive ability was found to be the strongest of the two significant variables ($\beta = .522$, $p < .01$), followed by Conscientiousness ($\beta = .455$, $p < .01$). This finding supports hypothesis 2c.

5.3.7 The FFM, Cognitive Ability, Emotional Intelligence, and Actual Job Performance

Hypotheses 3a and 3b involve testing the relationship between the FFM, cognitive ability, EI, and actual job performance. According to Table 5.14, three of the FFM were found to significantly correlate with job performance. Conscientiousness, Extraversion and Neuroticism were all significantly correlated ($p < .01$) with job performance ($r = .48$, $r = .18$, and $r = -.24$) respectively, and remained significant in the partial correlation analysis. Cognitive ability demonstrated strong significant positive correlations with job performance ($r = .50$, $p < .01$), and partial correlations ($pr = .46$, $p < .01$). A significant positive relationship between EI and job performance was also found ($r = .33$, $p < .01$), and partial correlations ($pr = .28$, $p < .01$). These findings support the hypothesis that significant weak to strong correlations between three of the Big Five dimensions, cognitive ability, EI, and job performance would be found.

Table 5.14 Correlations between the FFM, cognitive ability, emotional intelligence, and job performance (n = 355)

Independent Variable	Dependent Variable (Job Performance)	
	Bivariate Correlation	Partial Correlation***
Neuroticism	-.24**	-.23**
Extraversion	.18**	.17*
Openness to Experience	.01	.00
Agreeableness	.09	.07
Conscientiousness	.48**	.45**
Cognitive Ability	.50**	.46**
Emotional Intelligence	.33**	.28**

* $p < 0.05$, ** $p < 0.01$, *** Controlling variables (gender, age, and education level)

To test Hypothesis 4a, a stepwise multiple-regression analysis with the probabilities of entering and removing the predictor variables set at .05 were conducted, with job performance as a dependent variable, and the FFM, cognitive ability, and EI as the predictors. The results from stepwise multiple-regression analysis are presented in Table 5.15.

Results show that three factors explain 39% of the variance in job performance ($R^2 = 0.392$, $F(3, 384) = 82.05$, $p < 0.01$). The three independent variables contributing significantly to the prediction of actual police officers' job performance levels include: cognitive ability ($\beta = .369$, $p < .01$), Conscientiousness ($\beta = .348$, $p < .01$), and EI ($\beta = .118$, $p < .05$). As the full model reached statistical significance, hypothesis 4a was supported.

Table 5.15 Job performance regressed on the FFM, cognitive ability, and emotional intelligence (n = 355)

	Model	B	SE B	β	t	F	R2
1	Constant	2.697	.192		14.037		
	Cognitive Ability	.678	.060	.501**	11.344	128.681**	.251
2	Constant	.748	.280		2.672		
	Cognitive Ability	.542	.057	.400**	9.574		
	Conscientiousness	.055	.006	.373**	8.922	117.340**	.381
3	Constant	.794	.278		2.856		
	Cognitive Ability	.500	.058	.369**	8.590		
	Conscientiousness	.051	.006	.348**	8.189		
	Emotional Intelligence	.132	.048	.118*	2.737	82.053**	.392

* p < 0.05, ** p < 0.01

Hypothesis 4b proposed that personality factors and EI would explain additional variance in the prediction of job performance over cognitive ability. This hypothesis was tested using hierarchical regression analysis, where cognitive ability entered at Step 1, the FFM at Step 2, and EI at Step 3. Results are shown in Table 5.16.

Table 5.16 Hierarchical regression of job performance, cognitive ability (step 1), the FFM (step 2), and EI (step 3) (n = 355)

	Model	β	t	F	R2	Adj. R2	R2 Change
1	Cognitive Ability	.377**	8.698	128.681**	.25	.250	
2	Neuroticism	-.028	-.638	44.467**	.391	.381	.140
	Extraversion	.072	1.660				
	Openness to Experience	-.048	-1.194				
	Agreeableness	-.021	-.495				
	Conscientiousness	.328**	6.948				
3	Emotional Intelligence	.109*	2.499	36.059**	.401	.390	.010

** p < 0.01

The hierarchical regression results demonstrate that after cognitive ability was controlled for, personality factors resulted in a change in R Squared of 0.14. However, as an inspection of the coefficients table reveals, of the FFM of personality, only Conscientiousness made statistically unique contributions to the prediction of job performance. In the third step, EI accounted for a statistically significant portion of variance (R^2 Change = .010) in the prediction of job performance over that accounted by personality factors and cognitive ability. The results from the above analysis indicate that Hypothesis 4b was supported.

5.3.8 The FFM, Cognitive Ability, Emotional Intelligence, and Objective Measurements of CWB

Hypothesis 5a and 5b assumed that Conscientiousness, Extraversion, Agreeableness, Neuroticism, cognitive ability, and EI would be significantly related to CWB. As shown in Table 5.17, three of the FFM, namely Conscientiousness, Extraversion, and Agreeableness, were found to negatively and significantly correlate with objective measurements of CWB. Moreover, cognitive ability and EI showed negative associations with CWB. Neuroticism, in contrast, showed positive associations with CWB. These findings support the hypotheses.

Additionally, when gender, age, and education levels were factored out, similar results were found, demonstrating that the correlations of Conscientiousness, Extraversion, Agreeableness, Neuroticism, cognitive ability, and EI with CWB were not affected by these factors.

Table 5.17 Correlations between the FFM, cognitive ability, emotional intelligence, and objective measurements of CWB (n = 355)

Independent Variable	Dependent Variable (Objective measure of CWB)	
	Bivariate Correlation	Partial Correlation***
Neuroticism	.16**	.15*
Extraversion	-.12*	-.10*
Openness to Experience	-.07	-.06
Agreeableness	-.14*	-.13*
Conscientiousness	-.33**	-.31**
Cognitive Ability	-.24**	-.23**
Emotional Intelligence	-.22**	-.20**

* $p < 0.05$, ** $p < 0.01$, *** Controlling variables (gender, age, and education level)

Furthermore, the objective measurements of CWB were regressed on the FFM, cognitive ability, and EI to test their relative importance in predicting CWB (see Table 5.18).

Table 5.18 Objective measurements of CWB regressed on the FFM, cognitive ability, and EI (n = 355)

	Model	B	SE B	β	t	F	R2
1	Constant	2.124	.135		15.783		
	Conscientiousness	-.021	.003	-.337	-6.994	48.918**	.113
2	Constant	2.302	.143		16.044		
	Conscientiousness	-.019	.003	-.293	-5.929		
	Cognitive Ability	-.095	.029	-.162	-3.289	30.495**	.138
3	Constant	2.284	.143		15.957		
	Conscientiousness	-.017	.003	-.269	-5.351		
	Cognitive Ability	-.079	.030	-.134	-2.623		
	Emotional Intelligence	-.053	.025	-.109	-2.136	22.040**	.148

** $p < 0.01$

The regression showed that three variables uniquely predicted objective measurements of CWB, and together explained 14.8% of its variance. Conscientiousness was found to be the strongest of the three significant variables ($\beta = -.26$, $p < .01$), followed by cognitive ability ($\beta = -.13$, $p < .05$), and EI ($\beta = -.10$, $p < .05$).

5.4 Discussion

The main purpose of the study three was examine the relationship between personality traits, cognitive ability, EI, and police performance. More specifically, the study set out to investigate the validity of the FFM, general cognitive ability, and EI in predicting seven different types of performance data (academic performance, physical performance, firearms performance, discipline at the Academy, overall training performance, actual job performance, and CWB) in a sample of newly police officers. The following discussion outlines the results in relation to existing research.

Conscientiousness was found to be significantly and strongly correlated with academic performance, physical performance, firearms performance, discipline, and overall training performance. Conscientiousness has also been found to be a valid predictor of all criteria in regression analyses. For example, in the present research, Conscientiousness explains about 20% of the variance in overall training performance. The current results are therefore consistent with recent findings on the relationship between Conscientiousness and academic achievement (Furnham, et al., 2003), the relationship between Conscientiousness and disciplinary behaviour amongst police officers (Sarchione, et al., 1998), and the association between Conscientiousness and overall training performance (Black, 2000; Barrick and Mount, 1991).

As discussed in Study Two, conscientious individuals are characterised by higher levels of dutifulness, dependability, striving for achievement, order, and responsibility. Conscientiousness has also been found to be positively related to motivation for learning, which can affect learning outcomes (Colquitt and Simmering, 1998; Ford and Oswald, 2003). Consequently, Conscientiousness points to tendencies to be prepared, organised, hard-working, obedient, and reliable (Driskell, et al., 2006; Furnham, et al., 2003). Conscientious individuals, thus, are more likely to benefit from training, since they approach training in a careful and persistent way (Barrick, et al., 2001).

In addition, Neuroticism was found to be negatively related to all criteria, aside from discipline. These findings corroborate existing research that has found Neuroticism to be negatively associated with academic performance (e.g., Chamorro-Premuzic and Furnham, 2003), firearms performance (Detrick, et al., 2004), and with overall training performance (Barrick and Mount, 1991; Hough, et al., 1990; Salgado 1997).

Individuals higher in Neuroticism are more anxious, fearful, and depressive, and are often described as inflexible, inadaptible, insecure, submissive, indecisive, and high-strung (Driskell, et al., 2006). Thus, individuals higher in Neuroticism may not be able to function effectively, particularly when faced with stressful situations or high levels of pressure (Cook, 2005). According to Detrick, et al. (2004), higher Neuroticism indicates nervousness, anxiety, tension, and worries. More specifically, the Neuroticism trait is an indicator of different predispositions to experiencing low confidence levels and heightened negative affects, stress-reactivity, and anxiety tendencies in general (Chamorro-Premuzic and Furnham, 2010). Therefore, lower levels of accuracy in firearms performance amongst police officers are the logical result of the expression of the Neuroticism trait. In other words, people with high scores in Neuroticism are less likely to achieve higher score in firearms performance. This argument is supported by the results of the present study, which has found low levels of Neuroticism (or emotional stability) to predict firearms performance by about 32%. This result also supports Scholtz, et al.'s (2005) study indicating that the personality traits of Neuroticism and Conscientiousness are most related to a successful performance as a sniper.

Furthermore, a number of existing studies (e.g., Barrick, et al., 2001) have found that Openness to Experience and Extraversion are significant predictors of training performance. This research has corroborated such findings by showing significant correlations between Extraversion, Openness to Experience, and overall training performance ($r = .13$ and $r = .10$) respectively. In addition, as hypothesised, Agreeableness has been found to correlate and predict discipline and overall behaviours at the Academy. This is compatible with a number of studies in clinical and industrial psychology (e.g., Judge, et al., 2008; Mount, et al., 2006; Roberts, et al., 2007; Sackett, et al., 2006) reporting Agreeableness as one of the most important traits predicting deviant behaviours at work. As discussed earlier in study two, agreeable people tend to get along with others, and are generally gracious, cooperative, generous, and willing to compromise their own interests for the sake of others. They also have a positive view of life and human nature, and they consider people to be basically decent, honest, and truthful. Individuals high in Agreeableness prefer to use negotiation to resolve interpersonal conflicts, and thus are more likely to withdraw from social conflicts and anti-social behaviours (Howard and Howard, 2001; Siddiqui, 2008).

The second predictor variable studied in relation to police performance in study three was cognitive ability. Research has consistently found cognitive ability to be one of the best predictors of academic and training performance amongst police officers (Aamodt, 2004; Cuttler and Muchinsky, 2006). The present study replicates such findings, demonstrating that cognitive ability is a strong predictor of both academic and training performance. For example, cognitive ability has been found in the present research to explain about 42% of the variance in overall training performance. Cognitive ability has also been found in the current research to explain about 6% of the variance in firearms performance. Firearms training require a number of skills, abilities, and practice to accomplish a high level of performance (Anderson and Plecas, 2000). The current research shows that in addition to strength and motor ability, a shooter needs high levels of emotional stability, cognitive ability, and Conscientiousness to achieve a high level of firearms performance.

As indicated in the literature review, people with high scores on cognitive ability tests are more likely to be highly successful in learning new tasks and acquiring more knowledge, since they are better able to integrate, process, and apply new information than people with lower cognitive abilities (Kanfer and Ackerman, 1989). Regarding firearms, very few studies have investigated the importance of cognitive ability in predicting firearms performance. Nonetheless, Dorta, et al. (2010) theoretically proposed a number of factors impacting competence in the use of firearms, including fear of the firearm, knowledge of the use of firearms, self-confidence, motivation, positive attitudes before the use of the firearm, and lack of concentration. Thus, possible explanations for the relationship between cognitive ability and firearms performance could be that general cognitive ability levels affect firearms performance through: (a) visual abilities (i.e., spatial visual ability) and decision making; (b) the acquisition of knowledge about firearms and weapons through lessons on this topic; or (c) demonstrations of better safety behaviour. That is, it has been found that individuals with higher levels of cognitive ability are more likely to demonstrate higher safety behaviours (e.g., Postlethwaite, et al., 2009), which is one criterion of firearms performance at the Abu Dhabi Police Academy. Therefore, a possible explanation for the relationship between cognitive ability and firearms performance in the present study is that recruits with high scores on cognitive ability tests show high levels of safety behaviour when using firearms, which may positively affect their evaluation.

The final independent factor used in the present study was EI. Consistent with existing research on the relationship between EI and academic achievement (e.g., Di Fabio and Palazzeschi, 2009; Jaeger and Eagan, 2007; Parker, et al., 2004), EI was found in the current research to be moderately related to academic performance ($r = .32$). According to Rode, et al. (2007), there are generally two main factors that may explain the role of EI in academic performance. First, since academic work includes a great deal of ambiguity and uncertainty, which produces stress amongst students, EI may be helpful in managing academic stress and pressures that have been found to negatively affect academic performance (Petrides, et al., 2004b). Jaeger and Eagan, (2007), for example, have claimed that "a student's ability to be calm, flexible, and realistic while identifying possible avenues to work through the stress seems crucial to success in college" (2007: 528). Second, academic activities are largely self-directed, and thus require highly developed abilities of self-management. According to Armstrong (2007), academic success at school or university is largely dependent on a student's abilities to independently search for knowledge and conceptual understandings, to be profession-specific through learning new skills, to learn to use modern technologies, and to understand associations between theory, research, and practice. Consequently, emotionally intelligent individuals have an advantage in terms of their capacity to learn, resulting from their self-management abilities that include self-control, conscientiousness, trustworthiness, adaptableness, motivation, and initiative, as shown in the literature review.

Additionally, current results demonstrate a significant association between EI and training performance. According to Sy and Cote (2004), emotionally intelligent individuals are better at understanding roles and responsibilities; able to use emotions to guide their thinking, which may help them make faster and higher-quality decisions; better in managing ambiguities and stress; and more cooperative, better at building relationships, and capable of building more effective social networks. Moreover, Dardeer (2004) has found emotionally intelligent individuals to show higher levels of stress management, activity, motivation, and collaboration with others than low emotional intelligence individuals. This finding could explain the relationship between EI and training performance in the present study. In other words, training at the Police Academy differs from training in other fields in that: (a) it is run under a semi-military environment with high levels of stress and pressure; (b) it combines academic learning

(e.g., law models, police rules, etc.) and skills training (the use of firearms, how to respond to crime scenes, etc.); and (c) it requires high levels of cooperation and teamwork amongst recruits. Thus, emotionally intelligent recruits may have advantages allowing them to benefit and succeed in the Police Academy, since they have the ability to identify, understand, and manage their own and others' emotions, to correctly adapt to the emotional climate of the Academy, and to work well with others.

Finally, one of the major goals of the present study has been to investigate the validity of personality traits, cognitive ability, and EI in predicting actual job performance and CWB. With respect to job performance, the present results closely support and nearly replicate findings of study two, in that Conscientiousness, Neuroticism, cognitive ability, and EI were significantly associated with job performance evaluation. This result is consistent with several previous studies of the association between personality traits and job performance (e.g., Barrick and Mount, 1991; Hurtz and Donovan, 2000), cognitive ability and job performance (e.g., Aamodt, 2004; Ree, et al, 1994), and EI and job performance (e.g., Carmeli and Josman, 2006; Law, et al, 2004). Conscientiousness, Extraversion, Agreeableness, cognitive ability, and EI have shown significant negative correlations with objective measurements of CWB. Neuroticism, by contrast, has been found to be positively associated with this criterion. The results support the hypothesis and previous findings about the validity of personality traits (e.g., Mount, et al., 2006), cognitive ability (e.g., Dilchert, et al., 2007), and EI (e.g., Poole, et al., 2008) in predicting CWB, as discussed in Study Two.

Additionally, similar to the findings of study two, results from hierarchical regression analysis have shown that cognitive ability is the best predictor of job performance (cognitive ability accounted for about 25% in the variance of officers' job performance levels). Conscientiousness and EI have been found to add incremental validity over cognitive ability in predicting job performance. The present results are therefore consistent with several recent findings (amongst different populations) on the importance of personality traits (e.g., Ones, et al., 2007) and EI (e.g., Van Rooy and Viswesvaran, 2004) in the workplace over cognitive ability, which has been found to be the best predictor of job performance across a variety of jobs, including police work (Hunter and Schmidt, 1996). This finding demonstrates that in addition to cognitive ability,

Conscientiousness and EI are constructs that are worthy of being considered valuable predictors of job performance in police work.

To summarise, similar to Study Two, the results of the Study Three suggest that tests of personality, cognitive ability, and EI may enhance the personnel selection system in police organisations. The current results indicate that personality traits, particularly Conscientiousness, cognitive ability, and EI, are important characteristics that enhance an individual's ability to benefit from learning and training programs, particularly at police organisations. That is, the implementation of a cognitive ability test and a five-factor trait personality inventory in the selection process, as well as the provision of training programs for the development of EI at the Police Academy, may prove particularly useful in enhancing both the personnel selection system and the training context. These factors (Conscientiousness, cognitive ability, and EI) also play a significant role in increasing actual police job performance levels and in decreasing deviant behaviours. According to the present results, officers high in these factors are more likely to obtain high job performance evaluations and less likely to engage in indiscipline behaviours at work. The contributions, implications, and limitations of the findings of all three studies will be reported in the concluding chapter below.

Chapter 6: General Discussions and Conclusions

This chapter provides a general discussion of the entire thesis. The first section offers a summary of the key results of Studies One, Two, and Three. The following section presents the theoretical contributions of the results. The practical implications of the findings are then discussed. Finally, a consideration of the limitations of this research is reported, concluding with suggestions for future research.

6.1 Summary of the Main Findings

The present study was conducted to integrate and build upon existing research examining the role of personality traits, general cognitive ability, and EI in predicting workplace behaviours, particularly amongst police officers. More specifically, this study attempted to examine the validity of personality dimensions (Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness), general cognitive ability, and EI as predictors of a number of work outcomes, including job performance, training performance, perceived job stress, coping with stress, and CWB. Therefore, three studies were conducted to achieve this goal.

6.1.1 Current Officer Selection Procedures at the Abu Dhabi Police

The first study was designed to provide a review of current police officer selection procedures within the ADP, in order to explore their effectiveness, as well as the appropriateness of using psychometric tests for hiring new officers. Interviews with 30 senior police managers from the ADP have indicated that the current procedure of the selection of police officers is of little value, and is in need of a number of improvements. Police officers' performances tend to be low; stress and indiscipline are serious problems at the ADP; and the use of valid psychometric tests in selection processes could play a significant role in helping the ADP select the best entry-level police officers. Moreover, consistent with previous research (e.g., Caillouet, et al., 2010; Furnham, 2008; Smith and Smith, 2005; Taylor, et al., 2002), the results of Study One indicated that using psychometric tests in police selection processes, particularly tests of personality and

cognitive ability, could improve the objectivity, the validity, and the fairness of the selection process. It could also increase job performance levels, and avoid police officer misconduct. That is, using psychometric tests in police selection would have a positive impact, not only on the police agency, but also on officers themselves, as well as the public as a whole.

First, for police organisations, using psychometric tests could aid in the selection of the best candidates who would contribute to their success. Additionally, employing high quality officers could help police agencies to decrease the time and costs of training, and to counter the drop of public confidence in and cooperation with the police, and may protect agencies from accusations of unfairness in their selection process (Ainsworth, 2002). Second, regarding the benefit for officers themselves, using psychometric tests could ensure that the most qualified candidates would be hired, which in turn would affect their overall levels of well being at work. In other words, police work can be stressful, dangerous, and difficult, and involves multiple types of tasks. Thus, since personality and human behavioural traits are important in determining how a person reacts within his or her working environment (Carrigan, 2007), selecting people with abilities to control job stress, to positively cope with work pressures, and to stay motivated could help decrease the negative impacts of police demands. Finally, as indicated in the introduction chapter, police officers are often placed in critical positions of trust, where they are responsible for handling life and death circumstances, sometimes with the right to use physical force or firearms. Selecting high quality police officers, therefore, could protect the public from any abuse or misuse of such authority.

Participants in Study One reported a number of psychological characteristics required for performing effective police work, including high abilities in problem-solving, decision-making, dealing constructively with others (such as dealing with community members, other officers, and supervisors), as well as qualities such as loyalty, dedication, discipline, emotional stability, and motivation. These findings are compatible with several previous studies of western countries (e.g., Ainsworth, 2002; Kaczmarek and Packer, 1996; Lord and Schoeps, 2000) investigating the psychological characteristics necessary for performing police work.

Findings from Study One also demonstrated that senior police managers at the ADP believe that Conscientiousness, Emotional Stability, and Extraversion are important

dimensions for effective and high-performance police work, and that the suitability or validity of the Big Five in predicting workplace behaviour, particularly job performance levels, is high. Respondents reported that effective police officers were thought to be characterised by low scores in Anxiety, Angry Hostility, Depression, Impulsiveness, and Vulnerability (facets of the Emotional Stability dimension); high scores in Gregariousness, Assertiveness, and Activity (facets of the Extraversion dimension); and high scores in Competence, Order, Dutifulness, Achievement Striving, Self-Discipline, and Deliberation (facets of the Conscientiousness dimension). These results are consistent with other research findings relating to the personality characteristics of effective police officers based on the five-factor model (e.g. Costa, et al., 1995; Detrick and Chibnall, 2006). In addition to personality, cognitive ability has also been reported in Study One as an important factor in effective police work. This is compatible with several previous findings (e.g., Aamodt, 2004; Hughes, 2003) on the role of cognitive ability in the police.

On the basis of these findings, it is evident that police organisations, in both western and eastern cultures, do highly similar work, and thus involve a number of similar psychological characteristics for efficiently performing this work. The consistency of the profiles of effective police officers based on different studies from different countries around the world suggests that there is an overall agreement about the basic psychological qualities desirable for entry-level police officers.

Based on the results of study one, the two other studies were aimed to test the criterion-related validity of personality traits, cognitive ability, and EI in predicting a number of workplace behaviours (job performance, training performance, perceived job stress, coping with stress, and CWB). These studies targeted an Arab context in general, and a police organisation in particular. The following section outlines the validity of independent factors in predicting each of the criteria used in Studies Two and Three.

6.1.2 Job Performance

Findings in study two ($n = 310$) and study three ($n = 355$) showed a significant relationship between three of the FFM (Neuroticism, Extraversion, and Conscientiousness) and cognitive ability, EI, and job performance. Variations in police

officers' job performance levels, as measured by supervisors' evaluations, were explained in both Studies by three main factors, namely cognitive ability, Conscientiousness, and EI. First, cognitive ability was found in Studies Two and Three to strongly predict job performance amongst the sample of police officers. This finding supported the hypothesis and supported the claim (e.g., Aamodt, 2004; Hunter and Schmidt, 1996; Ree, et al, 1994; Schmidt and Hunter, 1998) that general cognitive ability is positively related to performance for almost all jobs, including police work. As discussed earlier in the literature review, police work is generally complex and involves many different tasks requiring high levels of cognitive ability. According to Gottfredson (2002), many police duties may be described as requiring general kinds of problem solving abilities, such as planning, advising, instructing, negotiating, and coordinating employees without line authority, and thus, require high levels of cognitive ability. Most of these duties are considered basic functions of policing that require high levels of cognitive ability, such as reading comprehension, paying attention to detail, verbal aptitude, problem solving abilities, and decision making abilities. This and other explanations provided in previous chapters may provide a justification for the current results supporting the importance of cognitive ability amongst police officers.

Second, of the five personality factors, Conscientiousness, Neuroticism, and Extraversion demonstrated statistically significant relationships with job performance with the former, indicating a medium predictive value. That is, Conscientiousness was found in study two and in study three to add additional variance in the prediction of job performance over cognitive ability (18% and 14%) respectively. This finding supports the hypothesis and supports the literature indicating Conscientiousness as having a consistently positive correlation with job performance criteria, as reproduced amongst numerous professional groups (e.g., Barrick and Mount, 1991; Hertz and Donovan, 2000; Ones, et al., 2007; Smithikrai, 2007). As discussed previously in the literature review, Conscientiousness reflects a number of work behaviours that are critical for police, such as perseverance, diligence, an orientation towards achievement, and tendencies to comply with standards, rules, policies, and norms. Conscientious people also tend to be reliable, organised, self-governing, and meticulous. According to Arrigo and Claussen (2003), these characteristics are associated with how individuals distribute their efforts amongst decisions and tasks, which could be an advantage to almost all organisations, including the police.

The third predictor construct used in Studies Two and Three was EI. In both studies, EI showed a positive moderate relationship with job performance. Results indicate that EI provides a small but significant incremental validity in the prediction of police officers' job performance levels over cognitive ability and personality factors. The findings support the hypothesis and support the claim (e.g., Carmeli and Josman, 2006; Daus and Ashkanasy, 2005; Joseph and Newman, 2010) that EI is positively associated with job performance in occupations logically requiring high levels of emotional labour, such as police work. For example, police officers often engage in a variety of emotional circumstances during their normal duties, requiring high levels of calmness, self-control, and empathy. They also need high abilities to understand and respond appropriately to the emotions of others, such as when they are dealing with aggressive people, interviewing witnesses or victims of crimes, delivering advice or bad news, and investigating murders or severe accidents.

A number of possible explanations for the positive relationship between EI and job performance in police organisations have been discussed in previous chapters. For instance, Goleman (1998) proposed that people with high EI create positive emotions to motivate their achievement drives, and when negative emotions (such as frustration, anger, or anxiety) interfere with their motivation, they replace them with positive emotions. Goleman also claimed that the achievement drive of emotionally intelligent employees is articulated in four ways: (a) they are driven to accomplish results in terms of meeting goals and expected job standards; (b) they set challenging objectives for themselves and take considered risks to achieve them; (c) they actively follow task information and find ways to perform tasks better; and (d) they are generally motivated to learn how to advance their performance and skills at work. Most of these skills and behaviours are important for effectively performing police work, as reflected in the evaluations of police officers' performance levels at the UAE Police.

6.1.3 Training Performance

According to Furnham (2005), learning and training are fundamental for enhancing knowledge and skills within any organisation, particularly those experiencing rapid changes in technology and equipment. Training can also be implemented in order to

improve productivity; to provide a focus for supporting the workforce with company strategies; to function as a powerful individual motivator and an effective means for change; and to provide links between the employee's and the organisation's values. Moreover, learning and training provide new workers with skills and knowledge essential for successfully and effectively performing their tasks. For this and other results reported in the literature review, one main objective of the present thesis was to investigate the relationship between personality, cognitive ability, EI, and Police Academy training performance in a sample of newly hired police officers. This investigation was accomplished in Study Three, with a sample of 385 newly-recruited officers.

Results indicated that in addition to cognitive ability and EI, four of the five personality factors, namely Conscientiousness, Neuroticism, Extraversion, and Openness to Experience, made statistically significant relationships with overall training performance at the Police Academy, including academic performance, physical performance, firearms performance, and discipline. The multiple regression results showed that overall police training performance was strongly predicted by cognitive ability and Conscientiousness, which explained about 61% of its variance. These findings are generally consistent with several previous studies (Black, 2000; Cuttler and Muchinsky, 2006; Detrick, et al., 2004) and support the importance of general cognitive ability and Conscientiousness in predicting police training performance.

Furthermore, the results of the present study may support the importance of providing training (e.g., police knowledge and skills) to new recruits prior to joining the workforce, to help them be more effective police officers. That is, the result of overall training performance demonstrates a high correlation with actual job performance over time ($r = .58, p < .01$). This demonstrates that police training is important for preparing new recruits to perform tasks related to their required duties. Additionally, although the current study does not aim to evaluate the Abu Dhabi Police Academy's training programme, the programme seems to be suitable in providing the skills, information, and knowledge for police candidates to do their work effectively after successfully graduating and joining the force.

6.1.4 Job Stress and Coping

Given the problems associated with the exposure to a variety of stressors in police work (such as the loss of motivation, the reduction of self-esteem, chronic disease, and increasing instances of absenteeism, sickness absences, and work accidents) (Al-Noshan, 2003; Bannish and Ruiz, 2003; Manzoni and Eisner, 2006; Mayhew, 2001), it is important to determine whether or not a relationship between specific psychological characteristics and stress susceptibility exists. Police work involves a variety of general and specific stressors (such as bureaucracy, excessive paperwork, poor representation by the media, shift work, physical threats, and exposure to danger) that have the potential to negatively impact an officer's ability to effectively carry out his or her day-to-day tasks and successfully deal with difficult or dangerous circumstances. Consequently, an identified relationship between certain psychological characteristics and police officers' stress tolerance levels could prove helpful in both the selection and training of police officers (Bishop, et al., 2001; Cimbura, 1999). One goal of Study Two, therefore, was to examine the associations between personality traits, cognitive ability, EI, and perceived job stress. The relationships between these factors and coping styles, namely adaptive coping strategies and maladaptive coping strategies, were also tested.

First, results regarding job stress indicated that three individual differences, namely Neuroticism, EI, and Conscientiousness, uniquely predicted self-reported levels of stress amongst police officers. One third of the variance in perceived job stress was found to be explained by these three factors together. Second, with respect to coping styles, findings indicated significant relationships between three of the FFM (Neuroticism, Extraversion, and Conscientiousness) and cognitive ability, EI, and coping styles. More specifically, Conscientiousness, EI, cognitive ability, and Extraversion correlated positively with adaptive coping mechanisms, and negatively with maladaptive coping mechanisms. Neuroticism, in contrast, was found to correlate negatively with adaptive coping mechanisms, and positively with maladaptive coping mechanisms. Self-reported levels of stress showed significant positive associations with maladaptive coping strategies, and significant negative association with adaptive coping strategies.

These findings support the hypothesis and support the claim that there are individual differences in response to stress (e.g., Folkman and Lazarus, 1984), and the argument that personality traits, particularly Conscientiousness and Neuroticism (e.g., Bishop, et

al., 2001; Connor-Smith and Flachsbart, 2007; Lau, et al., 2006), and EI (e.g., Bastian, et al., 2005; Nikolaou and Tsaousis, 2002) are important characteristics for personnel with higher stress tolerance levels. On one hand, individuals with high levels of Neuroticism are more likely to be depressed, anxious, worried, and may indicate an inability to perform effectively under conditions of high pressure and stress (Chan, 2004; Judge, et al., 2008). Individuals high in Neuroticism also tend to react with strong emotions and self-criticism in stressful circumstances, and seem to use avoiding and distracting coping strategies, which may make them more vulnerable to all symptoms of job stress (Bakker, et al., 2006).

Conscientiousness, on the other hand, reflects a tendency to be dependable, reliable, careful, purpose-driven, thorough, and better able to solve problems (Costa, et al., 1991; Grant and Langan-Fox, 2007). According to Chan (2004), the ability to be careful and meticulous helps an individual avoid problems that may become stressful, and if a problem does occur, a conscientious individual will be better able to persist and find solutions to alleviate the stress through the use of adaptive coping strategies. This ability to avoid problems and solve them when they do occur aids individuals in regulating their environment in order to alter or manage the stressor.

Finally, since people with high EI are more adept at identifying and regulating their emotions, EI may relate to the ability to effectively deal and cope with environmental demands, stress, and pressures (Zeidner, et al., 2004). As indicated by Sy, et al. (2006: 470), "employees with high EI (compared with employees with low EI) could be more adept at identifying when they are beginning to feel overwhelmed by stress. This awareness allows them to search for the causes of their stress, thereby enabling them to develop coping strategies and ways to manage their emotional reactions to these stressors." Taken together, Conscientiousness, Neuroticism, and EI are a significant set of characteristics for performing successfully under stressful work conditions. Given that policing is often a difficult and stressful job, the possible benefit to police organisations in employing officers with efficient or high levels of Conscientiousness, and EI, and low levels of Neuroticism is assumed to be an advantageous attribute.

6.1.5 Counterproductive Work Behaviour

Police officers do vital and honourable work for their communities. Their main responsibilities include protecting individuals from danger, such as defending their rights and their lives. Police work, therefore, is based on a number of laws and rules that must be followed and respected by officers, and which must be considered a regular part of their daily duties. Additionally, law enforcement officers are in a position to gain public confidence and trust, which plays a role in police success. As a result, officers showing high levels of ethical attitudes towards the organisation and towards the public, as well as refraining from deviant behaviour, are valuable for the police. Accordingly, several studies have investigated the validity of psychological testing, particularly for predicting law enforcement applicant misconduct or identifying unsuitable police candidates (Caillouet, et al. 2010).

Much police research over the past few decades has focused on identifying the characteristics of unsuitable candidates. In line with this growing interest on the role of psychometric testing in predicting employees' misconduct or indiscipline in police agencies, one dependent variable in the current thesis was CWB amongst police officers. CWB was measured using three tools, including a self-reported measurement of CWB; a disciplinary violation score, or the number of disciplinary complaints submitted against an officer in a given year, as an objective measure of CWB; and the overall behaviours and discipline levels during training at the Police Academy.

Findings from Studies Two and Three have demonstrated a significant relationship between Conscientiousness, Agreeableness, cognitive ability, EI, and all measurements of CWB used in the present thesis. Neuroticism and Extraversion were found in both studies to correlate with objective and self-reported measurements of CWB. These findings are generally consistent with several previous studies on the associations between personality traits, particularly Conscientiousness, Agreeableness, and Neuroticism (Mount, et al., 2006; Ones and Viswesvaran, 2001), cognitive ability (Cuttler and Muchinsky, 2006; Dilchert, et al., 2007), EI (Brackett, et al., 2004; Poole, et al., 2008) and CWB. These findings, consequently, support the usefulness of psychometric testing, particularly tests of personality traits, cognitive ability, and EI, in identifying unsuitable applicants who are likely to engage in antisocial acts of police corruption or misconduct.

Overall, psychological testing has become one of the fastest-growing instruments for selecting employees in many organisations, including the police. However, not all psychological tests have the same qualities to be used in the selection process. In other words, for a test to be used as a selection tool, it must meet two main criteria, namely good reliability and good validity, as discussed in the literature review. Results regarding the reliability (Cronbach's Coefficient Alpha) and validities (face validity, concurrent validity, and predictive validity) of measurements used in the current thesis are shown in Table 6.1.

Table 6.1 Summary of reliability and validities of psychological variables used in the current thesis

Variable	Cronbach's Alpha	Face Validity From the perspective of senior police managers Study one (n = 30)	Criterion-related validity	
			Concurrent Validity Study two (n = 310)	Predictive Validity Study three (n = 355)
Neuroticism	High	Being low in this dimension is a very important characteristic of effective police work	Neuroticism shows good criterion-related validity in predicting all criteria* used in the present thesis, particularly perceived job stress and CWB	
Extraversion	High	This dimension is one important characteristic of effective police work	Extraversion shows weak correlations with some criteria but it was not a significant predictor of any criteria in regression analysis	
Openness to Experience	High	Low	This dimension only shows significant weak correlations with overall training performance	
Agreeableness	High	Low	This dimension only shows significant weak correlations with CWB	
Conscientiousness	High	Being high in this dimension is a very important characteristic of effective police work	Conscientiousness shows high criterion-related validity in predicting all criteria used in the present thesis	
Cognitive Ability	Not available	High levels of intelligence are very important for a police officer position and using an intelligence test in hiring will enhance the selection process	Cognitive ability shows high criterion-related validity in predicting all criteria used in the present thesis, particularly job performance and training performance	
Emotional Intelligence	High	Not available	EI shows good criterion-related validity in predicting all criteria used in the present thesis	

* Job performance, training performance, perceived job stress, coping with pressure, and CWB

According to Table 6.1, measurements of personality traits based on the FFM, particularly measurements of Conscientiousness and Neuroticism, in addition to measurements of general cognitive ability and EI, could help police organisations improve their selection process, which in turn could aid in hiring the best candidates for the job. That is, high cognitive ability, Conscientiousness, EI, and low Neuroticism are important characteristics of effective police officers who are not only more likely to demonstrate high levels of job performance, but also to control job stress and pressures and refrain from engaging in CWB. These results support the claim (e.g., Ainsworth, 2002; Ho, 2001; Rostow and Davis, 2002; Arrigo and Claussen, 2003) that psychological testing introduces greater quality and objectivity into the decision of selecting new police officers, in that it can distinguish between effectual and ineffectual law enforcement officers, and thereby generally contribute to an organisation's success. The contributions, implications, and limitations of the current findings will be discussed in the following section.

6.2 Contributions of the Current Findings to Knowledge

The results of this study contribute to the existing literature by providing additional evidence regarding the validity of the FFM, cognitive ability, and EI in predicting actual job performance, training performance, perceived job stress, and CWB amongst police officers. The current research shows similar results as studies in non-Western contexts, supporting the cross-cultural perspective of the value of using psychometric testing in police officer selection. In addition to supporting previous research findings, this study has contributed unique information in an Arabic-speaking context, by indicating that cognitive ability, Conscientiousness, and EI may significantly predict police officers' job performance levels.

Within the police literature, a significant amount of research has been conducted on the characteristics of effective police officers. Consideration has been given to reducing the selection of unfavourable candidates, known as the "screening out" process. Minimal attention, however, has been directed towards finding recruits with certain positive qualities or desirable traits for police work. Additionally, although the validity of the FFM has been researched in many areas of work psychology, most notably with respect

to job performance, the relationship of the FFM to job performance in police agencies has been studied much less, especially in Arabic-speaking contexts; and prior research using the FFM in police contexts has mainly focused on training and academic performance, as discussed earlier.

The present thesis has addressed these issues in police research by examining the question of how good policing is defined, and by aiming to identify characteristics that predict both successful field performance and discipline amongst police officers. The results from this thesis add to the current police literature by indicating the value of using cognitive ability, Conscientiousness, and EI to predict a variety of officers' workplace behaviours that indicate the overall value of his/her contributions to the organization, including job performance and CWB amongst police officers. That is, the current findings strengthen the assumption behind using positive characteristics in order to predict officers' future behaviour. In other words, instead of only examining negative characteristics that could be the cause of negative behaviours (or the "screening out" process), examining positive characteristics (or the "screening in" process), may be a more valid approach, in that selecting for positive traits may guarantee that applicants will be effective officers.

Furthermore, this study has also replicated from a cross-cultural perspective and from different areas of study (i.e. police research) previous research on the relationship between EI and a number of workplace outcomes. In the present investigation, EI shows significant correlations with the academic achievement of recruits at a Police Academy in an Arabic context. This study also answers the call for additional research on the role of EI on training performance, police job performance, and CWB, since little research has examined this issue previously, as indicated in the literature review. The current findings, therefore, contribute unique information by showing significant associations between EI and police outcomes. In other words, this study takes police research a step forward by applying a new concept (emotional intelligence) to the characteristics of effective or desirable police officers. It has been claimed that in some occupations, particularly those based on human contact, EI can be a possible predictor of job performance. The present thesis provides insight to this claim by testing this proposition within a police organisation, where the contacts and interactions between officers and the

public occur in highly emotional situations. Findings suggest that in many police settings such as in the UAE, EI may be an important characteristic of effective police officers.

One key debate in the EI literature centres around the incremental validity of EI within the workplace. As indicated in the literature review, the use of EI test is only cost-effective for organisations, particularly in personnel selection, to the extent that it provides additional information to that provided by tests of established intelligence and personality constructs. Generally, the results of this study contribute to the literature by providing additional evidence that EI represents a noteworthy construct in predicting a statistically significant amount of unique variance in a range of workplace outcomes, particularly job performance related to policing, and beyond this, accounting for general cognitive ability and personality traits. Additionally, current findings demonstrate the multi-cultural validity of EI and its impact on job outcomes (such as job performance, training performance, perceived job stress, coping with stress, and CWB), since the present samples were taken in an Arabic/Islamic context.

The present results also contribute to the literature by providing additional evidence from a cross-cultural perspective regarding the construct validity of CWB. Results generally support Bennett and Robinson's (2000) findings, which indicate that CWB is comprised of two related but distinct components: (a) organisational deviance or counterproductive work behaviours harmful to an organisation; and (b) interpersonal deviance or counterproductive work behaviours harmful to other people within an organisation. The present results also contribute to the literature by providing evidence from a cross-cultural perspective regarding the validity of Agreeableness in predicting CWB and overall behaviour at the Academy.

Furthermore, the ability to use a firearm safely and accurately is a critical skill for adequate job performance in police work (Anderson and Plecas, 2000). The current research shows that in addition to strength and motor ability, individuals need high levels of emotional stability, cognitive ability, and Conscientiousness to achieve high levels of firearm performance. More specifically, Neuroticism, cognitive ability, and Conscientiousness were found to be significant predictors of firearms performance amongst officers at the Police Academy, accounting for 37% of unique variance. As a result, further investigations attempting to predict firearms performance or shooting

abilities, or screening for shooting success, should include effective tests of Neuroticism, cognitive ability, and Conscientiousness.

Furthermore, the results of the current thesis indicated that the ability model of EI provided an additional percent in predicting a number of important police outcomes including job performance, job stress and CWB over cognitive ability and personality factors. This finding has some significant contributions. It confirms that models of EI based on ability appear to be the most well-conceptualised and practical descriptions of the construct. It also provides empirical evidence into organizational settings in terms of the incremental validity of EI which supports the worthiness of welcoming emotional intelligence into the organizational psychology field. In addition, this result supports the use of self-reported measures to evaluate EI according to ability models. Finally, regarding the FFM, the current findings support the cross-linguistic and cross-cultural dimensions of the FFM. That is, five strong and recurrent personality factors were found in present research among Arabic speaking sample.

6.3 Implications of the Current Findings

Many police studies have highlighted the benefits of selecting appropriate individuals for the job. Police departments do not want to spend unnecessary time and money training officers who will not benefit by training or periods of probation (DeCoster-Martin, et al., 2004). This thesis, consequently, has focused on the associations between a number of psychological constructs (personality traits, general cognitive ability, and EI) and workplace behaviours of police officers employed in an Arabic-speaking context. Consequently, the implications discussed in this section are mostly applicable to the management of police organisations in the UAE. They may, nonetheless, be considered as an example to other police agencies worldwide, since police officers tend to do similar work everywhere. The most considerable implications of the current findings are those related to personnel selection and employee training undertaken in police organisations.

First, police organisations could benefit by using psychological testing devices as standard practices to aid in the selection of the best candidates (Arrigo and Claussen, 2003). The present results provide further support for the use of psychometric testing in personnel selection. More specifically, the results demonstrate that using standardised

tests of Conscientiousness and cognitive ability in police officer selection processes may play an important role in maximising the benefits gained during Academy training. The results also demonstrate that selecting police officers based on their levels of cognitive ability, Conscientiousness, and Neuroticism, is likely to enhance overall job performance and to reduce the occurrence of CWB. According to Dilchert, et al. (2007), both improvements in job performance and reductions in CWB can significantly contribute to the overall value of personnel selection systems. Thus, including measurements of cognitive ability and personality traits may add predictive validity to employee selection systems.

Using these types of psychometric instruments could assist law enforcement agencies in gaining a clearer picture of the individuals they are employing, which in turn would help reduce the direct costs of training, as well as increase overall levels of productivity. As previously discussed, on one hand, if police organisations were to utilise such instruments in their selection processes, the rates of officer turnover, and the levels of officer misconduct on the job could very likely significantly decrease. On the other hand, officers' job performance levels and their overall well being at work, in addition to their ability to gain public confidence and cooperation, could be more likely to improve.

Second, Cherniss (2000) has argued that the workplace is a reasonable setting for evaluating and improving EI competencies for four major reasons: (a) EI competencies are important for success and effective performance in many jobs; (b) many adults start their jobs without the levels of competency essential for their success; (c) organisations already have the motivation and the established means for providing EI training; and (d) most people spend the majority of their waking hours at work. In addition, according to Saville (2006), EI represents a critical step for police training, leadership, and hiring practices. Improving EI can play a significant role in increasing several types of competency, such as self-confidence, communication, conflict management, and stress management. Moreover, in the present thesis, EI has been found to be positively associated with police job performance, training performance, and adaptive coping strategies, as well as negatively associated with perceived job stress, maladaptive coping strategies, and CWB. Although the effect sizes of EI in study two and study three in predicting job performance and CWB were not high, EI seems to be desirable for police work. According to Weiss, et al. (2008), small effect sizes can have practical importance

under certain conditions, namely when outcomes may have serious results. Police work is one such situation, as unfit officers could create serious problems for their organisation, other co-workers, and the public at large, as previously shown.

Based on these claims, it is clear that employing officers with high levels of EI may be an advantageous attribute for law enforcement agencies. Therefore, since EI can be improved through training and development programs (Nelis, et al., 2009; Sy and Cote, 2004), EI should be considered by police organisations as a potential training mechanism for the development of police officers' work skills. That is, including a training program for the development of EI at the Police Academy might be useful in improving overall performance levels at the Academy and actual job performance levels after recruits have joined the work force. Other important advantages of an EI program may include a decrease in police officers' deviant behaviours, and an increase in their ability to control job stress and police pressures, as found in the current research.

Taken as a whole, one key practical implication of the present findings is that it is possible to identify in advance those individuals who may be particularly well-suited for police positions, namely positions that entail frequent stress, difficulties, dangers, and highly emotional situations; and require high levels of problem-solving abilities, decision-making abilities, loyalty, dedication, discipline, and motivation. The utility of personality traits, cognitive ability, and EI variables could offer police organisations the potential for selecting the best applicants. This could especially be very beneficial for police, as these selection criteria (Conscientiousness and Neuroticism, general cognitive ability, and EI) and others (e.g., education, physical ability, background investigations) could aid in hiring candidates who would have short-term and long-term positive effects on the organisation.

There are a number of issues, however, that require consideration when using psychometric tests in particularly in an Arabic-speaking context. First, the potential for applicant response distortion on personality tests remains a concern in high-stakes testing situations, such as in personnel selection processes. Thus, further research in Arab regions is necessary to provide more information about this possible issue, including whether or not people in Arabic-speaking contexts tend to fake tests; and what practical solutions might be adopted in order to prevent or reduce faking. Additionally, some

psychometric tests may be unreliable or invalid, and thus should not be used as part of the selection process.

A final difficulty that may emerge in the use of psychometric testing for employee selection in the UAE is the availability of reliable and valid tests that are also free from cultural bias. That is, intelligence tests developed in a Western cultural context, for instance, may contain embedded assumptions about intelligence; however, the definition of 'intelligence' may differ from culture to culture (Abu-Hatab, et al., 2008). Moreover, culture may have a negative effect on the results of a test through shaping people's attitudes towards tests and test-taking in general. More specifically, Abu-Hatab, et al. (2008) have identified certain issues pertaining to psychological testing in Arab regions, such as the fact that many people usually perceive the use of psychometric tests (particularly within organisations) as unimportant or irrelevant to the actual skills or abilities required for a job. They do not believe that being evaluated on their performance through psychological tests is necessarily related to their day-to-day activities (i.e., psychological tests are perceived as giving unnecessary information). Data in the present study show similar concerns, in that the lack of social acceptability in using psychometric tests in the employee selection process is one obstacle that may challenge the actual use of such tools. This problem, nevertheless, could be solved by identifying the importance and usefulness of psychometric tests, both for organisations and for applicants (Abbas, 1996; Abdel-Khalek, 1996). That is, raising people's levels of awareness about the true benefits of using psychometric tests in the selection process may reduce negative attitudes towards such practices of psychological evaluation.

6.4 Strengths and Limitations of the Current Findings

There are a number of strengths and limitations of the present study that must be noted. First, regarding its strengths, all participants in Studies Two and Three had been selected to work for the ADP without previously having taken any ability or personality-based tests, and therefore, a restriction of range (or when the scores on a particular variable fall very close together) on tested traits and abilities was not expected. In other words, one common limitation in much existing research aiming to examine the validity of psychometric tests in predicting workplace behaviours is that their samples have already successfully passed pre-screening procedures, including psychometric tests. As discussed

in the literature, individuals with less desirable characteristics were not included in these studies, which may have resulted in an underestimation of the role of psychometric tests (e.g., personality and cognitive ability) in predicting the criterion variables (e.g., performance and workplace deviance).

This limitation in the present research is not a concern, since psychological assessments are not required for new police recruits (i.e., personality or cognitive ability assessments currently are not used for any purposes at the ADP). This fact represents one of this study's most important strengths, particularly in study three, since a restriction of range on tested traits and abilities was not expected as a result of hiring applicants without considering their psychological profiles, as indicated in Study One. As many researchers have pointed out (e.g., Bartol and Bartol, 2004; Kaplan and Saccuzzo, 2005; Smith and Smith, 2005), using longitudinal data (or a predictive validity research design) with minimum range restriction is by far the best standard of validation in selection research. This has been achieved on study three as previously reported.

Moreover, the author employed and sponsored by the ADP organization may seem as a weakness or a lack of objectivity. That is, the researcher being a part of the organization is not always a positive feature in that some sources of bias/error could introduce into the research. For example, as indicated in study one, the researcher mainly interviewed officers of high rank. Thus, a potential limitation is that senior officers may have been unwilling to tell the whole truth (such as their leadership style is one factor that may negatively affects job performance), for fear of losing face, or they may have tended to provide socially desirable answers for the researcher (as low rank police officer). In addition, according to Aguinis and Henle (2002), in such research where the researcher is part of the organization, participants may feel pressured to participate in the research since it sponsored by their employer. They also argued that the privacy of the participants may be violated due to that fact that the researcher has an access to their personal data. Participants may also motivated to respondent in ways that make them appear well-adjusted, hard-worker, emotionally stable, and following organizations rules and policies due to their fear of being evaluated negatively by the researcher who is a senior police officer in their organization.

An additional limitation in the current research regarding the possible lack of objectivity is a concern on the measurement of job performance. In other words, the study was

dependent on non-standardised measure for evaluating job performance. Although this appraisal system was officially developed and used in the ADP to evaluate police officers' job performance levels, its validity and reliability are unknown.

The researcher, however, takes several steps to demonstrate that the current results emerge from the objective data and do not influence by the researcher's police affiliation. For instance, using well-established tests, particularly the Arabic test of cognitive ability, which is free from cultural bias, may be considered strength of the current research. In addition, all independent variables were based on well established models and several previous studies. The strength of this investigation and objectivity also comes from the fact that the data for most dependent variables, particularly in study three, were gathered in context. That is, the academic achievement and skill acquisition, in addition to overall training performance data, came from the actual qualification and training assessment instruments officially used to train and evaluate police recruits, and not from general tests given in a controlled laboratory setting.

Additionally, overall actual job performance and objective measurements of CWB were collected from the formal evaluations of police officers applying to the Human Resources Department at the ADP. More specifically, most dependent measures applied in the present research were collected by the researcher, after having been developed and used by the ADP as formal evaluations for police officers. These evaluations were officially used by the ADP for the purposes of training, motivating, promoting, or prosecuting police officers, depending on their results.

Furthermore, other strengths or objectivity elements of the current research include:

The research was nearly comprehensive, in terms of the range of topics covered and the research population, in that: (a) the topics covered included important aspects of police outcomes (job performance, training performance, perceived job stress, coping with stress, and CWB); (b) all types of officers, from the newest recruits in study three to the longest-serving officers in study two, including ones from different police occupations and locations, as well as officers of both genders, were part of the present research population. The sample and response rates were also quite high. Additionally, using three studies with different methods and samples such as using cross-sectional research design

in study two, using longitudinal data collection method in study three, and using interview technique in study one may support the validity of the results.

The researcher's own police background, which included experience with several different types of police work (such as police investigation, prison service, and community policing), provided him with greater insights into the subject, and gave him privileged access to the research population in studies one, two, and three. In addition, all ethical issues were recognised and resolved by the researcher as reported earlier.

In terms of other weaknesses, perhaps the major limitation in this research concerns the use of self-reported measurements of construct variables such as stress, CWB, EI, and personality. First, social desirability is a major problem for personality and self-reported measures of EI. Research shows that test-takers can intentionally increase their scores on desirable personality traits, and decrease their scores on undesirable traits, particularly when motivated to present themselves in a positive light (Rothstein and Goffin, 2006). This limitation, however, was controlled through the use of a lie scale, as discussed in Study Two. Second, a dependent variable in the study asked participants to report behaviours that were harmful to the organisation and to others. Therefore, it is possible that respondents were motivated to underreport conduct that could be seen as illegal or socially unacceptable. Nevertheless, the inclusion of objective measurements, in addition to the self-reported scale of CWB, may have played an important role in enhancing the reliability and validity of the study's findings.

Third, according to Cimburu (1999), people may subjectively deny the presence of stress, whilst at the same time demonstrate clear symptoms through engaging in emotional, cognitive, or behavioural defence mechanisms, or through developing physical complaints. Consequently, their perception of stress-related symptoms may not reflect the true extent of the problem. Overall, "it is a common assumption among health researchers that the impact of "objectively" stressful events is, to some degree, determined by one's perception of their stressfulness" (Chan, 2004: 47). Future research, however, is recommended in the examination of police stress, to measure it by both self-reported means and through investigations of the actual symptoms of job stress (such as doctor visits, sick days, etc.).

Fourth, the present thesis mainly leans upon trait theory, namely the FFM. There are, nonetheless, a number of frequently cited limitations of the FFM. First, the model neglects other domains of personality and does not explain all aspects of human personality, such as the failure to explain motives, feelings, religiosity, interpersonal behaviours, honesty, and sense of humour (Hough, 1992). Another major criticism of the FFM is that it is not based on any underlying theory; it is merely an empirical finding that certain descriptors cluster together under factor analysis (Block, 2010). More specifically, the FFM is fundamentally descriptive, and fails to provide a sufficient explanation of the processes underlying the diverse factors (Ewen, 1998; Eysenck, 2002). For example, the Big Five researchers have not paid adequate attention to issues of personality development, particularly in childhood (John and Srivastava, 1999). Third, the main criticisms of the FFM and trait theory in general centre on the use of the factor analysis technique, since: (a) the statement governing factor analysis oversimplifies personality (McKenna, 2006); (b) the capacity of factor analysis for testing hypotheses and making essential truths is questionable (Ewen, 1998); (c) this technique requires a number of relatively subjective decisions, such as how many factors are enough, and whether factors should be oblique or orthogonal (Poropat, 2004); and this method generally identify source of common variance at the expense of unique variance and thus important factors may be overlooked when the data are categorized solely on the basis of blind groupings by the statistical programs (see Kaplan and Saccuzzo, 2005).

In addition, the current thesis by using a personality test based on the FFM measured only normative personality traits. While it has been argued in the literature review chapter that normative personality traits, rather than pathological traits, may be more important in identifying the best police candidates, there are several past studies that supported the validity of psychopathological personality features as a predictor of law enforcement performance. Therefore, future research needs to test the validity of normative personality traits tests in combination with tests of pathological traits as a selection tools in police organizations. Future research may also consider other theories of personality as a predictor of workplace behaviours.

Another limitation in the current thesis relates to the difficulty of generalising the results of training performance for organisations other than the police particularly in the UAE. By nature, police training involves intentionally high levels of stress and pressure at the

Police Academy, as such circumstances are considered a necessary part of training; and recruits at the Police Academy are required to learn a number of academic subjects and acquire many different skills in less than twenty weeks. Such conditions may not apply in other training environments, thereby allowing for the possibility that similar factors and criteria may lead to different results.

Other results regarding job performance and CWB may only apply to the particular job examined in the current research, namely policing particularly in the UAE. Other jobs and other police organisations with different organisational environments and special task structures might result in different patterns of findings. Certain personality traits and EI may be not effectively predictive for other jobs' outcomes, such as engineering. That is, current research shows that for police work in the UAE, which is likely to be similar worldwide, personality traits, cognitive ability, and EI are more likely to predict job performance and CWB. Therefore, a comparative investigation is recommended to compare different levels of EI and personality traits for personnel in different organisations and jobs. Such a study would probably provide evidence of the importance of EI and personality traits in these other jobs and other police organisations outside the UAE as well. However, despite these limitations, personality traits, cognitive ability, and EI appear to have sufficient predictive validity for police performance.

In addition, further studies are needed to replicate and explain these results, particularly regarding the role of cognitive ability on firearms performance and the influence of EI on training performance, police performance, and CWB. For example, although a number of possible explanations for the role of personality, cognitive ability, and EI at police have been reported in the current study, future studies particularly in Arab region should build on the present findings and try to empirically investigate the mechanisms that affect the relationship between personality traits, EI, and performance at work particularly in the police.

Furthermore, the current thesis investigated only one part of organizational functions that may impact on organizational success namely personnel selection. That is, personnel selection was the main scope that the current research studied to control some issues at ADP. However, there are other organizational functions that could also aid in increasing organisational success such as training, leadership, motivation, structure, and quality

assurance. Therefore, future research could focus on these functions as possible effective solutions for organizational success.

Although personality traits, cognitive ability, and EI in particular only predict an average portion of variance in performance, it is worth noting that even minor achievements in predictive validity may lead to important improvements in productivity (Hirsh, 2009) especially in jobs such as police work, where employees are responsible for providing safety and security within a community. This study's results also indicate that some performance factors appear to be more predictable than others through the use of psychometric tests. For example, while job performance in study three was predictable by about 40%, CWB was predictable by only 15%. Therefore, future research needs to test the validity of psychometric tests in combination with other selection methods, such as structured interviews or Biodata. This may increase the validity of selection techniques.

Furthermore, the incorporation of an ability EI measure to assess officers' emotional intelligence levels could enhance the contribution of the research into emotional intelligence research. A more thorough personality measure including assessing the facets of each domain of the five personality factors may also assist more precise personnel selection.

Finally, a follow-up study using data gathered in this thesis could also be a recommendation for future research. That is, testing the validity of personality traits, cognitive ability, and EI in predicting other performance variables, such as organisation citizenship behaviours or objective measurements of job performance (e.g., the number of unknown crimes solved) may add to the credibility of the findings. Another study that could be conducted using the present data, particularly from study three, could involve research on the effects of work experience and police culture on performance and the validity of personnel characteristics. The main question for follow-up research is: "To what extent could work experience or police culture mediate or moderate the relationship between personality and job performance?"

6.5 Conclusions

The current thesis expands the present literature on factors that may be important in the selection of individuals that are more likely to be effectual police officers. Current findings have indicated that a number of psychological characteristics may be required to be an effective police officer. These psychological characteristics can be categorised as: personality traits (Conscientiousness and Neuroticism); general cognitive abilities (such as reasoning abilities, verbal abilities, spatial abilities); and EI (the perception, appraisal, expression, and regulation of emotions). These psychological characteristics have been supported in the present research as important elements in high job performance profiles, in employee behaviour and discipline, and in improving overall employee states of well being, which in turn may lead to a better climate for cooperation and service delivery.

On the basis of these findings, it is evident that police from both Western and Eastern cultures require a number of psychological characteristics to perform their tasks effectively. It is also evident that some skills are not appropriate for including as training criteria (Ainsworth, 2002). In other words, some tasks (e.g., patrol skills) should not be incorporated into the selection process since they can be developed through accurate training programs. Other characteristics, in contrast, should be included as selection criteria, since they are stable and difficult to improve, such as cognitive ability, Conscientiousness, and Emotional Stability. Thus, it is clear that the process of police officer selection in the UAE should include at least one personality measurement, and one intelligence test. This could contribute in selecting best applicants who suited for law enforcement occupations, not only through eliminating those clearly not suited for law enforcement, but also by identifying individuals with characters that make the best officers.

To summarise, this study has provided an insight into the role of personality traits, general cognitive ability, and EI in key police outcomes, and suggested some potential modifications to existing practices of police personnel selection and training. In other words, it is clear that what the ADP need more than ever before is to consider tests of cognitive ability, Conscientiousness, and Neuroticism in their selection processes. Including a program for developing EI at the Police Academy could additionally contribute to overall levels of police performance. That is, increasing an officer's ability

to perceive, identify, and manage emotion may provide the basis for the types of social and emotional competencies that are important for success in the police.

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Appendix 1: Questions of the interview

Demographic information:

Participant No: (.....)

Department:

- Investigation (.....) Prison (.....)
- Traffic and Patrols (.....) Community Policing (.....)
- Ports & Airports Security Police (.....) Recruitment and Selection (.....)
- Strategic and Performance Development (.....)

Gender: Male Female

Age:

Interview date: (.....)

Start time: (.....) **Finish time:** (.....)

How long have you served within Abu Dhabi Police? (.....years)

What is your rank? (.....)

What is your position? (.....)

What is your qualification? (.....)

Introduction:

I'm now going to ask you a series of questions about your experiences as police officers at Abu Dhabi Police GHQ. I want to stress that there are no 'right' or 'wrong' answers to any of the questions and you are welcome to state your opinions and views on the issues covered, as you see suitable.

The main goal of this interview is to review the current police officers selection process and the effectiveness of present police officers at Abu Dhabi Police, so if you need to stop for a moment or ask any questions at any time, please feel free to do so.

This interview is voluntary and you may choose to finish your involvement in this interview at any time. This interview is also confidential and the final report for this project will not identify which former officers have participated in the project, and you will not be individually identifiable from your responses.

1. Current selection procedures:

1.1 In your opinion, what are the advantages and disadvantages of current selection system?

2. Current police officers performance and behavior:

2.1 Do you think that your department obtains the appropriate individuals for doing the work effectively?

2.2 Have you ever complained to your supervisor about the process of police officers selection?

2.3 How do you rate police officer's overall performance in your department on the following job performance ratings?

- Performance is poor (.....)
- Performance is below average (.....)
- Performance is average (.....)
- Performance is above average (.....)
- Performance is excellent (.....)

2.4 To what extent do you agree that stress is a serious problem among police officers at ADP?

- Strongly agree (.....)
- Agree (.....)
- Not sure (.....)
- Disagree (.....)
- Strongly disagree (.....)

2.5 What do you think are the factors that effect on increasing police officers level's of stress from the following?

- Limited promotional opportunities (.....)
- Non-participation in the decision making (.....)
- Work load (.....)
- Disputes in work (.....)

- The nature of police work (.....)
- Lack of administrative support (.....)
- External stressors (.....)
- Role ambiguity (.....)
- Poor coping strategies (.....)

2.6 To what extent do you agree that indiscipline is a serious problem among police officers at ADP?

- Strongly agree (.....)
- Agree (.....)
- Not sure (.....)
- Disagree (.....)
- Strongly disagree (.....)

2.7 What of the following is the most indiscipline behaviors that committed by officers?

- Absenteeism, coming late to work or left work earlier without permission (.....)
- Lack of respect between officers such as verbally abuse a coworker (.....)
- Public complaints about officers conduct (.....)
- Refused to take on an assignment when asked (.....)
- Misuse of authority (.....)
- Purposely doing work incorrectly or without following instructions (.....)
- Others (.....)

3. Using psychometric test for selection:

(To what extent are you familiar with the term of psychometric tests?)

3.1 Do you think that using psychometric test in selection process will enhance the quality of police officers that recruits?

2.2 What do you think the obstacles of police officers selection in general, and the use of psychometric test for selection in particular?

3.3 Do you have any other comments or suggestions?

Thank-you for your time and cooperation

Appendix 2: The NEO Job Profiler (Costa, McCrae, and Kay, 1995)

Name

Job/Title

Date

NEO Job Profiler for (job or position rated). There are 2 steps to completing this Job Profiler. Step 1: For each of the 30 traits described below, indicate whether the trait is relevant to this particular job. Not all of the traits are expected to be relevant to all jobs. A trait is relevant to the degree that having or not having the trait will influence job performance. If the trait is relevant circle the name of the trait. Step 2: For all traits that you considered relevant, indicate whether the trait is Very Undesirable (VU), Somewhat Undesirable (SU), Somewhat Desirable (SD), or Very Desirable (VD) by circling the appropriate letters. Undesirable traits are expected to have a negative impact on job performance. Desirable traits are expected to have a positive impact on job performance. - The descriptions given below attempt to suggest both the positive and the negative aspects of each of the 30 traits; consider both the strengths and the limitations of levels of this trait. Recall also that different positions will require different characteristics in the employee, and base your ratings on the requirements of this position, not on the desirability of the trait in general.

Description of the trait

N1: Calmness [vs. Anxiety] Relaxed, unconcerned, not sensitized to potential problems or difficulties [-2] [-1] [1] [2]
VU SU SD VD

[The same rating format is used for the other NEO PI-R facets:]

N2: Even-Temperament [vs. Angry Hostility]: Slow to anger or take offense, mild-tempered and easy-going

N3: Contentment [vs. Depression]: Content and imperturbable, rarely feels discouraged, not prone to guilt feelings

N4: Poise [vs. Self-Consciousness]: Confident in social groups, not easily embarrassed, insensitive to status differences

N5: Self-Control [vs. Impulsiveness]: Resists temptation, controls drives and urges; not excitable

N6: Hardiness [vs. Vulnerability]: Self-reliant, copes well with crises, can deal with stress

E1: Warmth: Friendly, talkative, eager to interact on a personal level with many others

E2: Gregariousness: Likes to be around people, sociable; finds it hard to be or work alone

E3: Assertiveness: Forceful and assertive, assumes positions of leadership, likes to be in charge

E4: Activity: Energetic, lively, high activity level; may find sedentary work unappealing

E5: Excitement Seeking: Seeks excitement, adventurous and daring, takes unnecessary risks for thrills

E6: Positive Emotions: Cheerful, high-spirited, buoyant in mood; laughs readily

01: Openness to Fantasy: Imaginative, creative, dreamy; prone to let mind wander off into daydreams

02: Openness to Aesthetics: Sensitive to art and beauty, intrigued by patterns; concerned with aesthetics

03: Openness to Feelings: Emotionally sensitive, empathetic, attuned to own and others' feelings

04: Openness to Actions: Adapts well to novelty, needs variety, bored by routine

05: Openness to Ideas: Intellectually curious, questioning, needs stimulation of new ideas

06: Openness to Values: Independent in judgment, high moral reasoning, questions authority

A1: Trust: Trusting, takes others at their word uncritically, can be gullible

A2: Straightforwardness: Frank, candid, interpersonally open; unable to manipulate others or conceal information

A3: Altruism: Generous, giving, courteous; not prone to put own interests first; soft-hearted

A4: Compliance: Gets along with others, cooperative, unwilling to raise objections or express disagreement

A5: Modesty: Humble, self-effacing, defers to others, unwilling to promote self

A6: Tender-Mindedness: Sympathetic, humanitarian; swayed by human feelings over rational judgment

C1: Competence: Capable, confident, well-prepared; takes pride in common sense and prudence

C2: Order: Well-organized, tidy, methodical; exacting and fastidious

C3: Dutifulness: Upright and scrupulous, a stickler for rules, can be moralistic

C4: Achievement-Striving: Ambitious, strives for excellence, has high standards; may be 'workaholic'

C5: Self-Discipline: Persistent, productive, does not procrastinate, tends to push self

C6: Deliberation: Cautious, thoughtful, makes careful plans; may lack spontaneity

Note. Traits not considered relevant are scored 0; facets of Neuroticism are reverse scored. When the NEO Job Profiler is administered, bracketed material does not appear and items are rotated across domains (i.e., N1, E1, 01, A1, C1, N2, etc.).

العوامل الخمسة الكبرى للشخصية

NEO Job Profiler
Costa, McCrae and Kay (1995)

يهدف هذا الاستبيان إلى تحديد أهم السمات الشخصية المرتبطة بالعمل والمؤثرة في أداءه بفعالية وكفاءة. هناك خطوتان نحو إكمال هذا الاستبيان:

أولاً- بعد قراءة السمة أو الصفة حدد إذا ما كانت مرتبطة ومؤثرة في أداء العمل أم لا وبالتأكيد ليست كل السمات لها تأثير في أداء العمل.

ثانياً- في حالة السمات المرتبطة بالعمل هناك تأثيران مختلفان:

1- قد يكون هذا التأثير ايجابي أي وجود هذي السمة في الموظف يساهم ايجابيا في أداء العمل وهي سمات مرغوبة.

2- قد يكون التأثير سلبي أي وجود هذي السمة في شاغل الوظيفة يعوق أداء العمل وهي سمات غير مرغوبة.

إن مما لاشك فيه إن لكل سمة من السمات الثلاثين المذكورة في الاستبيان نقاط قوة ونقاط ضعف ولكن ما يهمنا في هذا البحث هو تحديد السمات المؤثرة في العمل وتحديد مدى الرغبة في توافر أو عدم توافر هذي السمة في رجل الشرطة بشكل عام وفي إدارتكم بشكل خاص.



م	السمة	مرغوبة بدرجة كبيرة	مرغوبة إلى حد ما	غير مرتبطة أو غير مؤثرة في العمل	غير مرغوبة إلى حد ما	غير مرغوبة بدرجة كبيرة
1	الخوف والقلق					
2	اللطف والمودة					
3	الخيال والبعد عن الواقع في أحلام اليقظة					
4	الثقة المفرطة في الآخرين					
5	الكفاءة والحكمة والثقة في النفس					
6	سرعة الغضب والعدائية					
7	الاجتماعية وحب الاختلاط بالآخرين					
8	الجمال وحب الفنون والآداب					
9	الطيبة والصراحة					
10	النظام وحب الدقة والترتيب					
11	الاكتئاب وتقلب المزاج					
12	الجدية والحزم وتوكيد الذات وحب القيادة					
13	الحساسية وقوة التعبير عن المشاعر والانفعالات					
14	الإيثار والرغبة في مساعدة الآخرين					
15	الالتزام بالمهام والاهتمام بالواجبات					
16	سرعة الشعور بالإنثم والحرص والخلل الاجتماعي					
17	النشاط والحيوية وحب العمل					
18	حب التغيير والتجديد وسرعة الملل من الروتين					
19	التعاون والإذعان والتسامح					
20	الطموح والاجتهاد في العمل					
21	الاندفاع وعدم القدرة على ضبط المشاعر					
22	الحماس والبحث عن الإثارة وحب المغامرة					
23	الابتكار والفضول وحب الاستطلاع					
24	التواضع وعدم الرغبة في منافسة الآخرين					
25	الانضباط والمثابرة في العمل					
26	عدم القدرة على تحمل الضغوط ومواجهة الصعوبات					
27	التفاؤل والشعور بالبهجة والسعادة					
28	الانفتاح وحب المغامرة					
29	اللين والتعاطف مع الآخرين					
30	اليقظة والحذر والتأني في اتخاذ القرارات					

Appendix 4: The permission from ADP to start data collection for study one

United Arab Emirates
Ministry of Interior
Abu Dhabi Police G.H.Q.
Human Resources G.D.
Training Adm.
Education and Scholarship Section



وزارة الداخلية (الشرطة)
وزارة الداخلية
القادة العامة (الشرطة)
إدارة الموارد البشرية
قسم التأهيل والبيئات

التاريخ : 2007/9/2 م

مدير مديرية شرطة العاصمة
مدير إدارة الاختيار والتعيين
مدير إدارة المرور والدوريات
مدير إدارة الشرطة المجتمعية
مدير إدارة أمن المنافذ والمطارات
مدير إدارة المنشآت الإصلاحية والعقابية

سيقوم النقيب رقم (36584) عمر إبراهيم آل علي بتحضير رسالة الدكتوراه في

(علم النفس الوظيفي)

وبناءً على نرجو التكرم بتوفير التسهيلات اللازمة للضابط المذكور لكي تساعده في

مهمة جمع المعلومات والمادة العلمية التي يحتاج لها في دراسته.

وتقبلوا فائق الاحترام ،،،

الرائد /
متعرض محمد العفاري
ع/مدير عام الموارد البشرية

Tel.: 4461461 - Fax : 4092428 - Box: 253 - Abu Dhabi
www.adpolice.gov.ae

هاتف : 4461461 - فاكس : 4092428 - ص. ب : 253 - أبو ظبي
E-mail: hr@adpolice.gov.ae

Appendix 5: Counterproductive Work Behavior Checklist (Spector et al., 2006)

How often have you done each of the following things on your present job?

1=Never 2=Once or twice 3=Once or twice per month 4=Once or twice per week 5=Every day

1 Purposely wasted your employer's materials/supplies	1	2	3	4	5
8 Purposely damaged a piece of equipment or property	1	2	3	4	5
9 Purposely dirtied or littered your place of work	1	2	3	4	5
6 Came to work late without permission	1	2	3	4	5
7 Stayed home from work and said you were sick when you weren't	1	2	3	4	5
17 Taken a longer break than you were allowed to take	1	2	3	4	5
19 Left work earlier than you were allowed to	1	2	3	4	5
5 Purposely did your work incorrectly	1	2	3	4	5
13 Purposely worked slowly when things needed to get done	1	2	3	4	5
18 Purposely failed to follow instructions	1	2	3	4	5
10 Stolen something belonging to your employer	1	2	3	4	5
22 Took supplies or tools home without permission	1	2	3	4	5
24 Put in to be paid for more hours than you worked	1	2	3	4	5
25 Took money from your employer without permission	1	2	3	4	5
32 Stole something belonging to someone at work	1	2	3	4	5
2 Daydreamed rather than did your work	1	2	3	4	5
3 Complained about insignificant things at work	1	2	3	4	5
14 Refused to take on an assignment when asked	1	2	3	4	5
15 Purposely came late to an appointment or meeting	1	2	3	4	5
16 Failed to report a problem so it would get worse	1	2	3	4	5
23 Tried to look busy while doing nothing	1	2	3	4	5
4 Told people outside the job what a lousy place you work for	1	2	3	4	5
11 Started or continued a damaging or harmful rumor at work	1	2	3	4	5
12 Been nasty or rude to a client or customer	1	2	3	4	5
20 Insulted someone about their job performance	1	2	3	4	5
21 Made fun of someone's personal life	1	2	3	4	5
26 Ignored someone at work	1	2	3	4	5
30 Blamed someone at work for error you made	1	2	3	4	5
31 Started an argument with someone at work	1	2	3	4	5
33 Verbally abused someone at work	1	2	3	4	5
34 Made an obscene gesture (the finger) to someone at work	1	2	3	4	5
35 Threatened someone at work with violence	1	2	3	4	5
36 Threatened someone at work, but not physically	1	2	3	4	5
37 Said something obscene to someone at work to make them feel bad	1	2	3	4	5
39 Did something to make someone at work look bad	1	2	3	4	5
40 Played a mean prank to embarrass someone at work	1	2	3	4	5
42 Looked at someone at work's private mail/property without permission	1	2	3	4	5
43 Hit or pushed someone at work	1	2	3	4	5
44 Insulted or made fun of someone at work	1	2	3	4	5
27 Refused to help someone at work	1	2	3	4	5
28 Withheld needed information from someone at work	1	2	3	4	5
29 Purposely interfered with someone at work doing his/her job	1	2	3	4	5
38 Hid something so someone at work couldn't find it	1	2	3	4	5
41 Destroyed property belonging to someone at work	1	2	3	4	5
45 Avoided returning a phone call to someone you should at work	1	2	3	4	5

Appendix 6: The Arabic Copy of the Counterproductive Work Behavior Checklist

يهدف الاستبيان الاتي الى قياس السلوك السلبي في العمل. المطلوب منك قراءة كل فقرة ثم حدد الى أي مدى تقوم بمثل هذا السلوك او قمت به سابقا في العمل علما بان جميع البيانات الواردة سوف تعامل بسرية تامة

م	الفعل	ابدا	نادرا	احيانا	كثيرا	كثيرا جدا
1	اهدار موارد وتجهيزات المنظمة					
2	الاضرار بممتلكات او اجهزة المنظمة					
3	عدم الاهتمام بنظافة مكان العمل					
4	الوصول متأخرا للعمل					
5	الحصول على اجازة مرضيه على الرغم من قدرتك على العمل					
6	اخذ استراحات اثناء العمل اكثر من اللازم					
7	الخروج من العمل قبل انتهاء وقت الدوام					
8	القيام بالاعمال الموكولة اليك بشكل غير متقن					
9	القيام بالاعمال الموكولة اليك ببطئ					
10	عدم الالتزام بالالوامر والتعليمات الادارية					
11	اخذ اشياء من المنظمة دون اذن					
12	استخدام ممتلكات المنظمة في اعمال شخصية دون اذن					
13	المطالبة باجازات وحوافز يفوق ما تستحقه على عملك					
14	اخذ اموال من المنظمة او بسببها دون وجه حق					
15	اخذ اشياء الاخرين في العمل دون اذن					
16	الاتشغال بالاعمال الشخصية اثناء العمل					
17	كثرة الاعتراض على اشياء غير مهمة في العمل					
18	رفض القيام بمهمة ما موكولة اليك في العمل					
19	الحضور متأخرا بشكل متعمد لاجتماع او لقاء					
20	عدم الايلاغ عن مشكلة ما في العمل مما ادى الى تفاقمها					
21	محاولة الظهور بمظهر المشغول اثناء العمل					
22	التحدث عن المنظمة بشكل سيء مثل (منظمة ضعيفة، ظالمة، فاشلة)					
23	نشر أو دعم الإشاعات السلبية في العمل					
24	التعامل بطريقة فظة مع الجمهور					
25	السخرية من أداء احد العاملين في المنظمة					
26	السخرية من احد الأشخاص داخل المنظمة					
27	اهمال وعدم الاكتراث باحد الاشخاص (زميل او مراجع) في المنظمة					
28	القاء اللوم على الاخرين لتبرير اخطائك					
29	الجدال مع الاخرين في العمل					
30	الاعتداء اللفظي على الاخرين في العمل					
31	القيام بحركات وإشارات بذيئة لشخص ما في العمل					
32	الشجار مع شخص ما في العمل					
33	تهديد احد الاشخاص في العمل					
34	احباط الاخرين واشعارهم بالنقص في العمل					
35	القيام بتصرفات تجعل شخص ما يظهر بصورة سيئة في العمل					
36	القيام بتصرفات تؤدي الى احراج شخص ما في العمل					
37	الاطلاع على اعمال او اغراض الاخرين الخاصة دون اذن					
38	ضرب شخص ما في العمل					
39	إهانة شخص ما في العمل					
40	رفض مساعدة شخص ما في العمل					
41	القيام بحجب او منع وصول معلومات ضرورية لشخص ما في العمل					
42	التدخل في مهام الاخرين في العمل					
43	اخفاء اشياء مهمة عن الاخرين في العمل					
44	تخريب او اتلاف ممتلكات شخص ما في العمل					
45	عدم الرد على هاتف العمل اثناء الدوام					

Appendix 7: The permission from ADP to start data collection for study two

30 Apr 2008 8:29

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U.A.E. Arab Emirates
Ministry of Interior
Abu Dhabi Police G.H.Q.
Human Resources G.D.
Training Adm.
Education and Scholarship Section



دولة الإمارات العربية المتحدة
وزارة الداخلية
القوة الامنية ومكافحة الجريمة
مديرية العامة للشرطة
إدارة التدريب
قسم التأهيل والمعدات

الرقم: 1891 / 11 / 35
التاريخ: 2008 / 04 / 28 م

مدير إدارة أمن المنفذ والمطارات
مدير إدارة المنشآت الإصلاحية والعقابية
مدير مديرية شرطة العاصمة
مدير مديرية شرطة العين
مدير إدارة الشرطة المجتمعية
مدير إدارة المرور والدوريات
مدير إدارة مصادر الشرطة

الموضوع : الدراسات العليا

إيماءة إلى خطة اعداد وتأهيل ضباط سوامن في مجالات العمل الشرطي والإداري والقانوني والإجتماعي ، والمتضمنة مراحل الدراسات العليا لهؤلاء الضباط والمعتمدة من سمو وزير الداخلية ، تأمل تسهيل إجراءات جمع المادة العلمية اللازمة في إعداد رسالة الدكتوراه الضباط المذكورين أدناه.

للتفضل بالعلم وإجراء اتكم .

واقبلوا الاحترام ...

الملازم أول /
زايد حسن بارحمة العليفي
ع/ مدير عام الموارد البشرية

التوقيع
المفك شخصي
المفك الدبل
مخبر

الترتيب	الاسم	الرتبة	الرقم	✓
1	راشد خلفان الذخري	نقيب	36583	
2	عبد إبراهيم البلي	نقيب	36584	

Tel: 4444098 - Fax: 4448401 - Box: 253 - Abu Dhabi
www.adpolice.gov.ae

مكتب: ٩٨٠ - ٤٤٤٤ - فاكس: ٤٤٤٨٠١ - ص. ب: ٢٥٣ - أبوظبي
E-mail: hr@adpolice.gov.ae

Appendix 8: Factor Loadings for Counterproductive Work Behavior Checklist

Items	Component	
	F1	F2
Purposely damage a piece of equipment or property	.767	
Steal something belonging to your employer	.759	
Stay home from work and say you are sick when you aren't	.740	
Purposely dirty or litter your place of work	.716	
Take a longer break than you are allowed to take	.713	
Purposely work slowly when things need to get done	.699	
Purposely waste your employer's materials/supplies	.698	
Take supplies or tools home without permission	.683	
Purposely do your work incorrectly	.656	
Avoided returning a phone call to someone you should at work	.647	
Start or continue a damaging or harmful rumor at work	.612	
Tried to look busy while doing nothing	.588	
Withheld needed information from someone at work	.565	
Come to work late without permission	.558	
Put in to be paid for more hours than you worked	.533	
Hid something so someone at work couldn't find it	.532	
Destroyed property belonging to someone at work	.522	
Refused to help someone at work	.520	
Refused to take on an assignment when asked	.494	
Tell people outside the job what a lousy place you work for	.492	
Purposely came late to an appointment or meeting	.466	
Complained about insignificant things at work	.456	
Leave work earlier than you are allowed to	.449	
Daydreamed rather than did your work	.399	
Purposely fail to follow instructions	.338	
Make an obscene gesture (the finger) to someone at work		.876
Threaten someone at work with violence		.764
Verbally abuse someone at work		.746
Blame someone at work for errors you made		.711
Start an argument with someone at work		.650
Threaten someone at work, but not physically		.644
Ignore someone at work		.631
Play a mean prank to embarrass someone at work		.605
Insult someone about their job performance		.591
Being nasty or rude to a client or customer		.549
Do something to make someone at work look bad		.519
Purposely interfered with someone at work doing his/her job		.500
Say something obscene to someone at work to make them feel bad		.470
Look at someone at work's private mail/property without permission		.435
Insulted or made fun of someone at work		.399
Hit or push someone at work		.396
Make fun of someone's personal life		.302

Appendix 9: The permission from ADP to start data collection for study three

الدراسات العليا

Page 1 of 1

United Arab Emirates
Ministry of Interior
Abu Dhabi Police G.H.Q
Human Resources G.D
.Training Adm



دولة الإمارات العربية المتحدة
وزارة الداخلية
القيادة العامة لشرطة أبوظبي
الإدارة العامة للموارد البشرية
إدارة التدريب

الرقم : 99/11/33
التاريخ : 2010/01/04 م
الموافق : 18/محرم/1431 هـ

مدير إدارة تقييم أداء العاملين

الموضوع : الدراسات العليا

إيماءاً إلى خطة إعداد وتأهيل مواطنين في مجالات العمل الشرطي والإداري والقانوني والإجتماعي، والمتضمنة مراحل الدراسات العليا لهؤلاء الضباط من سمو وزير الداخلية، نأمل تسهيل إجراءات جمع المادة العلمية اللازمة في إعداد رسالة الدكتوراه للضباط المذكورين أدناه.

للتفضل بالتعلم وإجراء التكم.

م.	الرقم	الرتبة	الاسم	التخصص
1.	36583	نقيب	راشد خلفان الذخري	التطوير الإداري
2.	36584	نقيب	عمر إبراهيم العلي	علم النفس الوظيفي

واقبلوا الاحترام،،،

الملازم أول/

عبدالله سالم الشامسي

ع/ مدير إدارة التدريب

نسخة إلى:

• الملف الشخصي ..

• الملف العام ..

• 2010/01/04 - 156918