

Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

**THE ROLE OF PERSONALITY ON  
WORK-RELATED ATTITUDES AND BEHAVIOUR  
OF  
EARLY CHILDHOOD EDUCATORS  
AND CARE PROVIDERS**

A thesis in partial fulfilment of the requirements  
for the degree  
of Master of Arts

in Psychology  
at Massey University

Christine Barrow  
1999

## ACKNOWLEDGEMENTS

I would like to take this opportunity to acknowledge the important people that have provided the help, support and inspiration that enabled me to complete this thesis. Firstly I would like to express my appreciation for the advice, assistance, availability, and supervision provided by Dr. Hillary Bennett throughout the year. Her enthusiasm and knowledge of matters relating to Occupational Psychology has been an inspiration to me.

I acknowledge my parents, Barbara and Brian, for the continued support throughout my tertiary education. I thank them both for their emotional, practical, and financial support, without which I would not be completing my Masters degree.

I would like to thank Trish and Warwick for their support, assistance, friendship, and encouragement during this year, and their daughters Janelle and Alicia for sharing their time with their mum and dad with me. I would also like to thank Linda for her friendship and encouragement during year. The interest Linda showed and the sympathetic ear given when the going got tuff helped me complete the process.

A special thanks also to the children, parents, staff, and committee members of the Red Beach Pre-school who were so gracious and supportive as I juggled the roles of supervisor and student during the year.

I would also like to express my appreciation and gratitude to my fellow childcare educators and care providers who gave up their time to participate in this research.

## TABLE OF CONTENTS

Acknowledgements	ii
Table of Contents	iii
Lists of Tables	vi
Lists of Figures	viii
Abstract	ix
 Chapter One INTRODUCTION	 1
 Chapter Two PERSONALITY	 4
Trait Theories	6
The Five-Factor Model	9
The Five-Factors	12
Self-efficacy	13
Locus of Control	15
 Chapter Three PERSONALITY AND ORGANIZATIONAL OUTCOMES	 17
Performance Outcomes	
Organizational Commitment	19
Global Job Satisfaction	21
Psychological Well-being	22
Work Performance	24
 Chapter Four RESEARCH QUESTIONS	 27
Profiling the early childhood educator and care provider	28
Understanding the relationship between personality and work-related attitudes and behaviour	29



Chapter Five	
METHODOLOGY	32
Pilot Phase	32
Sample	33
Distribution	34
General Demographic Characteristics of the Sample	34
Procedure	37
Measures	39
Analysis	45
 Chapter Six	
RESULTS	47
Factor Structure of Performance	48
Descriptive Statistics for the Personality Measures	51
Inferential Statistics for the Personality Measures	54
Descriptive Statistics for the Self-rated Outcome Measures	57
Inferential Statistics for the Self-rated Outcome Measures	58
Inferential Statistics for the Performance	60
Outcome Variables and Relationship to Demographic Variables	61
Psychological Well-being	62
Correlational Analyses	63
Regression Analysis	
Personality as a Predictor of Work-Related Attitudes and Behaviour	65
The Moderating Effect of the Five-factors of Personality on the Relationship Between the Linear Combination of Work Locus Of Control and General Work Self-efficacy and Work Related Attitudes and Behaviour: And the Moderating Effects of Commitment On the Relationship Between Personality and the Remaining Outcome Variables	70
Broad Personality Measures and Single Trait Personality Measures	78
Experience and Level of Qualification and Work Related Attitudes and Behaviours	79

Chapter Seven	
DISCUSSION	80
Profiling the Early Childhood Educator and Care Provider	80
The Average Profile of the Early Childhood Educator and Care Provider	81
The “Good” Early Childhood Educator and Care Provider	84
Commitment, Job Satisfaction, and Self-Rated Performance	85
Profile of Psychological Well-being	86
The Nature of Work Performance	87
Relationships Between Personality Dimensions	89
Predictors of Self-rated Work Attitudes and Behaviour	90
Psychological Well-being	91
Affective Commitment	92
Continuance Commitment	93
Self-rated Performance	93
Job Satisfaction	95
Externally Rated Performance	97
Experience and Level of Training	97
Predicting General Work Self-efficacy and Work Locus of Control	97
Limitations	97
Conclusion	102
 REFERENCES	 104
 APPENDICES	 130
Appendix One	131
Appendix Two	143
Appendix Three	166

## LIST OF TABLES

		Page
Table 1	Demographic Personal Characteristics of Sample	35
Table 2	Rotated factor loading matrix, items and standard deviations, and variable Cronbach alphas for the performance variables	49
Table 3	Means, standard deviations, alpha reliabilities, and correlations for performance variables	50
Table 4	Comparisons of published and obtained means, standard deviations (women) and reliability coefficient for the NEO-PI-R Form S	52
Table 5	Descriptive Statistics and alpha co-efficient for the Modified Work Locus of Control and General Work Self-Efficacy Scales	54
Table 6	Means and standard deviations across gender, working hours, work position, centre license, and the age group working with for personality measures	56
Table 7	Descriptive statistics and alpha co-efficient for outcome measures	57
Table 8	Means and standard deviations across gender, working hours, work position, centre license, and the age group working with for outcome measures	59
Table 9	Differences among groups on changes in the level of agreeableness and work locus of control across the three performance groups	61
Table 10	Distribution and frequency of scores on the General Health Questionnaire – 12	62
Table 11	Pearson product-moment correlation of personality traits and outcome variables	64
Table 12	Linear regression and adjusted $R^2$ between the five-factors of the NEO-PI-R and six outcome variables: And the results of the linear regressions analyses of the five-factors of the NEO-PI-R on six performance outcomes	66
Table 13	Linear regression and adjusted $R^2$ between the single personality traits, General work self-efficacy and Work locus of control and the six Outcome variables: Results of linear regression analyses of the single Personality traits on the six performance outcomes	67

Table 14	Results of five linear regression analyses of the facet scales of the five-factor domains – neuroticism, extraversion, openness, agreeableness, and conscientiousness on the six outcome variables	68
Table 15	Hierarchical multiple regression analysis – moderating effect of the five-factors of personality (step 2), then the moderating effect of commitment (step 3) on the relationship between the linear combination of work locus of control and general work self-efficacy and work related attitudes and behaviour: Total Group	72
Table 16	Hierarchical multiple regression analysis – moderating effect of the five-factors of personality (step 2), then the moderating effect of commitment (step 3) on the relationship between the linear combination of work locus of control and general work self-efficacy and work related attitudes and behaviour: Sub-group – Part-time Work Force	73
Table 17	Hierarchical multiple regression analysis – moderating effect of the five-factors of personality (step 2), then the moderating effect of commitment (step 3) on the relationship between the linear combination of work locus of control and general work self-efficacy and work related attitudes and behaviour: Sub-group - Full-time Work Force	74
Table 18	Hierarchical multiple regression analysis – moderating effect of the five-factors of personality (step 2), then the moderating effect of commitment (step 3) on the relationship between the linear combination of work locus of control and general work self-efficacy and work related attitudes and behaviour: Sub-group - Supervisors	76
Table 19	Hierarchical multiple regression analysis – moderating effect of the five-factors of personality (step 2), then the moderating effect of commitment (step 3) on the relationship between the linear combination of work locus of control and general work self-efficacy and work related attitudes and behaviour: Sub-group - Non – Supervisors	77
Table 20	Results of two multi regression analyses – moderating effects of single trait personality on the relationship between the five factors of personality and (a) general work self-efficacy and (b) work locus of control	78

LIST OF FIGURES

Page

Figure 1	Mean NEO PI-R Form S profiles of early childhood educators and care providers and random sample of 500 women.
----------	---

53

## ABSTRACT

The present study aimed to provide a personality profile of early childhood educators and care providers in New Zealand and to assess their psychological well-being. This may be the first attempt within New Zealand to provide an empirical frame-work from which the personality profile of the early childhood educator and care provider can be described.

The study examined how well personality traits can predict the work-related attitudes and behaviours of affective and continuance commitment, self-rated performance, global job satisfaction, psychological well-being, and performance as assessed by co-worker or supervisor. Results from the study give tentative support for the personality factor of agreeableness being able to distinguish the 'good' early childhood educator and care provider from others. The study utilised quantitative data, collected through a survey. Questionnaire One comprised three personality scales, including the NEO PI-R, five scales to measure outcome, and collected a range of demographic data. Questionnaire Two was handed to a co-worker to rate the participants' performance. There were 416 Questionnaire One's returned and 340 of these were matched to Questionnaire Two. An aggregate personality profile of the participants was formed. The level of diminished psychological well-being was consistent with that of a normal sample of adults. Results indicated that personality was a moderate predictor of the attitudes and behaviour examined. Work locus of control was the better predictor of affective and continuance commitment and job satisfaction. General work self-efficacy was the better predictor of self-rated performance, and neuroticism was the better predictor of psychological well-being. The study further analysed the predictive ability of personality using multiple regression analysis. Results showed that affective and continuance commitment could substantially increase the explained variance in job satisfaction after controlling for personality traits. Further, the present study showed there are significant differences in some aspects of the personality profile of early childhood educators and care providers in terms of the position held within the centre, the centre type, and if employed part-time or full-time. Sub-group differences need to be considered when using personality to predict outcomes.

## CHAPTER ONE

### Introduction

The characteristics of a good early childhood educator are well documented but not based on a strong foundation of reliable and valid research. Characteristics such as warm, caring, patient, flexible, good sense of humour, creative, energetic, interested in ideas and possibilities, reliable, responsible, altruistic, nurturing, having a stable and cheerful personality, and a well rounded person have been used in literature (e.g., Almy, 1975; Bacmeister, 1980; Ebbeck, 1990; Feeney & Chun, 1985; Scarr, 1998). Research, although sparse, which has focused on identifying the personality characteristics or values held by an early childhood educator have included interviews (e.g., Alberta Department of Education, 1975; Norton, 1996); theoretical supposition (e.g., Bacmeister, 1980; Honig, 1981; Katz, 1970/71); autobiographical essays (Rosen, 1968, 1972, cited Feeney & Chun, 1985); personal experience (e.g., Balaban, 1992); observations (e.g., Cartwright, 1999); and a questionnaire in which respondents endorsed 50 out of 462 qualities (Weitman & Humphires, 1989).

An early review of research that examined the relationship between teachers' personalities and pupil achievement was inconclusive (Ryan, 1960, cited in Almy, 1975). However, studies reviewed by Ryan did not include early childhood educators. Studies since have included educators and caregivers working with children younger than six and with children in kindergarten through to grade three. Gordon and Jester (1973) proposed that for early childhood educators, working with younger children, that "this personality dimension may be more important than it seemed to be for older children" (p. 212). Dyemade and Chargoss (1977) called for a greater understanding of the personal, social, and intellectual attributes of the early childhood teacher and a need to appraise these dimensions in prospective trainees and at the time of employment. LaGrange and Read (1990) propose that future research should focus on determining the characteristics of caregivers and the characteristics of their work environment. Developing the personality of the trainee teacher was one of three important factors identified in teacher training in Japan (Ishigaki, 1980).

Research linking characteristics of early childhood educators, including personality, to outcomes has usually focused on child outcomes (e.g., Dyemade & Chargoss, 1977). However, numerous confounds inherent in such studies would undermine the results obtained, including the assumption that there is a cause-and-effect relationship between a specific characteristic/skill of a teacher and a specific outcome in the child. Comparing research results is further compounded by the age range of children staff work with (0 – 8 years) and the type of care and education offered (e.g., home based to kindergarten and grade school). A review of research into effective teachers of young children concluded that information obtained is not helpful for teacher education and selection (Feeney & Chun, 1985). Research examining the relationship between personality and work related attitudes and behaviours in the early childhood sector appears to be non existent.

Some aspects within the early childhood sector are well researched. For example, effect of childcare on the child (e.g., Belsky, 1986, 1988, 1992; Deater-Deckard, Pinkerton, & Scarr, 1996); issues related to quality childcare (e.g., Bredekamp, 1989); employment issues (parents and childcare) (e.g., Blau & Robbins, 1990; Scarr, 1998); and the measurement of quality childcare (e.g., Scarr, Eisenberg & Deater-Deckard, 1994).

Occupational related research in the early childhood sector has been diverse but sparse. Research areas have included examining issues related to turnover rates (Deery-Schmitt & Todd, 1995; Manlove & Guzell, 1997; Stremmel, 1991); careers (Johnson, & McCracken, 1994); stress (Cherniss, 1980; Kyriacou, 1987; Manlove, 1993; Stremmel, Benson, & Powell, 1993; Whitebook, Howes, Darrah, & Friedman, 1982); job satisfaction (Bollin, 1993; Jorde-Bloom, 1986; Lyons, 1997; Schryer, 1994), job commitment (Kontos & Riessen, 1993; Schryer, 1994, Webb & Lowther, 1990); and the adult working environment in childcare (Phillips, Howes, & Whitebook, 1991).

Research focusing on work related issues within the New Zealand education and care sector is negligible. Education and care centres, formerly known as childcare centres, have from the period of 1990 – 1998 experienced tremendous growth. During this period the number of education and care centres increased from 789 to 1482 – a 95% increase. Over the same period the number of kindergartens increased by 3.7%. In 1998 just under half (46%) of children enrolled in childcare were in education and care



services or home based networks, 29% in kindergartens, and 10% in playcentres (Ministry of Education (MOE), 1998).

Staff retention in the early childhood sector is a concern (Scarr, 1998). Turnover rates in the United States are between 26% and 41% per year (Whitebook, Phillips, & Howes, 1993) and although there is no documented evidence, in New Zealand it is thought childcare sector has similar rates of high staff turnover. A change in staff, especially staff working with infants and toddlers, is potentially detrimental to aspects of the development of the young child (Howes & Stewart, 1987). A number of reasons are given for the high turnover rates, including pay rates (Ritchie, 1991, cited in Schryer, 1994 ) and stress or burnout (Manlove, 1993; Pines & Maslach, 1980). Younger workers and those employed for shorter periods of time are more likely than older or longer term employees to leave their job (Deery-Schmitt & Todd, 1995). This may reflect that they may realize the work does not meet their expectations, and thus leave whereas those who have been in the industry for longer may have limited job alternatives and therefore stay (Whitebook et al., 1993).

In summary, the present study is an attempt to profile New Zealand early childhood educators and care providers and to examine the role of personality on work related behaviours and attitudes in early childhood educators and care providers in New Zealand.

## CHAPTER TWO

### Personality

The idea that the characteristic features or quality of an individual's personality could be labeled has been a feature of many cultures for thousands of years. For example, the Chinese culture as early as 3000 BC used palmistry to determine an individual's characteristics (Lanyon & Goodstein, 1997), and Theophrastus, a student of Aristotle, wrote a book in which he described thirty 'characters' or personality types (Matthews & Deary, 1998). The use of descriptors to describe or define a personal characteristic is evident in everyday language and in many languages (Lanyon & Goodstein, 1997; Winter, 1996). In the Collins English Dictionary, "a characteristic feature or quality distinguishing a particular person or thing" (Makins, 1993, p.1229) is termed – trait.

The use of trait descriptors, to label a characteristic feature or quality that distinguishes one individual from another, may be the result of using cognitive strategies to understand and predict behaviour (Kelly, 1955; Williams, Satterwhite, & Saiz, 1998). Alternatively, it may be the result of cultural beliefs transmitted through social interaction (Vygotsky, 1978) in which the individual projects a role/personality for the observer (Hogan, 1998). Regardless of the theoretical view taken as to why people throughout the centuries have used words to describe self and others it is generally accepted, in folk psychology, that personality is fairly stable over time and that personality influences behaviour (Matthews & Deary, 1998).

There are many paradigms from which the construct of personality is understood (Ewen, 1988). These include personality as understood from a Freudian – psychodynamic perspective (e.g., Erickson, 1963; Freud, 1923), neo-psychoanalytic perspective (e.g., Adler, 1929; Jung, 1964), behaviour and learning perspective (e.g., Bandura, 1986; Mischel, 1984; Sullivan, 1953) humanistic perspective (e.g., Rogers, 1980), trait perspective (e.g., Cattell, 1950; Sheldon, 1942), humanistic trait perspective (e.g., Allport, 1961), humanistic perspective (e.g., Maslow, 1969, 1970; Rogers, 1951), and a biological perspective (e.g., Eysenck, 1967, 1990). The varying perspectives have led to difficulties in defining and in understanding personality (Staub, 1980).

There is an acknowledged difficulty in defining personality precisely as the term refers to the study of all aspects of an individual (Hall, Lindzey, & Campbell, 1998).

There are many definitions of personality, reflecting different perspectives. For example:

“the dynamic organization within the individual of the psychophysical systems that determine characteristics behaviour and thought” Allport (1961, p.28);

“the culmination of all relatively enduring dimensions of individual differences on which he (an individual) can be measured” Byrne (1974, p.26);

“a person’s unique pattern of traits” Guilford (1959, p.5).

“is that which permits a prediction of what a person will do in a given situation” Cattell (1950, cited in Engler, 1979, p. 251).

All these definitions imply that personality is the observed expression of a person’s characteristics, and that these characteristics, or combinations of characteristics, are both unique and enduring.

The contemporary study of individual difference has its rudimentary beginnings in the nineteenth century. Early interest focused on the classification and training of the mentally challenged rather than differences between individuals. Three individuals are usually credited with laying the foundations for the growth of individual assessment in the twenty-first century, namely: Wundt who studied the individual reaction times; Cattell who focused on the of measuring intellectual functioning; and Galton who focused on the measurement of the “nonintellectual faculties” of “character and temperament” and the demystifying of statistical procedures and the analyzing of data (Anastasi, 1988; Lanyon & Goodstein, 1997; Matthews & Deary, 1998).

Early attempts to assess individual differences in personality functioning included the use of self-report inventories, situational tests, and projective techniques. For example The Woodworth Personal Data Sheet, a self-report inventory, was used to screen out those who were not fit for military service during World War 1. Further, Harshorne, May, and Associates used situational tests with school children in the late 1920’s (Anastasi, 1988).

In the 1930’s and 1940’s the desire to uncover the system of personality was evident in literature. Despite the varying theoretical perspectives common trends among the systems are evident (McAdams, 1997). The first trend identified by McAdams is that the structure of personality systems has multiple constructs and layers. Secondly, that

personality is a unified and an organized whole. Thirdly, that the individual is motivated to obtain equilibrium. Finally, a trend to view personality development as a product of social learning.

Personality Psychology is a field of study with three essential focuses: the whole person, motivation, and individual differences (McAdams, 1997). The study of traits is the distinguishable and relatively enduring ways in which individuals differ from another (Staub, 1980). McAdams (1992) describes the study of traits as primarily focusing on one aspect of personality psychology, that is individual difference, and to a less extent individual motivation.

### Trait Theories

One approach that has dominated the theories of personality has been the trait approach (Pervin, 1990, 1993). Traits are defined "as consistent patterns of thoughts, feelings, or actions that distinguish people from one another" (Johnson, 1997, p. 74). Traits reflect aspects of an individual's personality that are *enduring and typical*, and *public*. Traits are observed directly or indirectly (Winter, 1996). When assessing one's own personality the individual takes on the role of the observer (McAdams, 1992).

There is a growing consensus among researchers (e.g. Costa & McCrae, 1997; Wiggins, 1997) that traits do exist. Support for trait theories is seen in evidence emerging from studies of twins with results indicating that more than half of the variation observed in personality characteristics can be attributed to genetic factors (Loehlin & Nichols, 1976). The measurement of traits is both reliable and valid (Costa & McCrae, 1997; West & Finch, 1997). Furthermore the ability to measure individual differences in traits can be used in a variety of situations and circumstances to predict behaviour (e.g., Costa & McCrae, 1988; Emmons, 1995; Hogan, R. 1987; Soldz & Vaillant, 1999).

Two approaches can be used to describe the study of traits by the various researchers. One body of research focuses on selected traits (e.g., Jung's Theory of Introversion-Extraversion and Rotter's Theory of Locus of Control). The fundamental premise for selected trait theories is that the theorist deems the selected trait important.

A second body of research focuses on the reduction of the trait descriptors to a manageable list of fundamental traits (e.g., Cattell's Factor-Analytic Theory and Eysenck's Three-Factor Theory). The assumption underlying the reduction theorist's work is the belief that personality has a set of core foundational traits (Ewen, 1988).

The increased availability and sophistication of statistical research tools, such as that used in meta-analysis and multivariate statistical procedures, are credited with providing the opportunity for the resurgence of interest and use of trait theories and the development of the five-factor models (Lanyon & Goodstein, 1997). However, the reliance on these statistical tools also provides an avenue for criticism, in particular, the limitations of factor analysis (Block, 1995; Matthews & Deary, 1998).

In conceptualizing the science of traits a number of difficulties exist. These include the measurement and classification of traits, how traits relate to behaviour; the causal status of traits, and whether a general scientific theory of traits be developed (Matthews & Deary, 1998). Trait theories therefore are subject to skepticism and critical analysis from a number of perspectives.

Historically, trait measures have been criticized from two perspectives. In the 1950's and 1960's trait measures were described as the measurement of social desirability and acquiescence (Christie & Lindauer, 1963). In the 1970's and 1980's trait measures were deemed poor predictors of behaviour in many situations (Ghiselli, 1973; Mischel, 1968; Schmitt, Gooding, Noe, & Kirsch, 1984). Recent research, especially the emergence of research on the five-factor model (e.g., Digman, 1990; McCrae & Costa, 1990), have tempered some of the criticisms regarding trait measures (Emmons, 1995). However some, (e.g., Bentall, 1993) still view trait measures as tainted by values and limited by only moderate ability to predict specific behaviours.

Fundamental to many criticisms of trait theory is the question of, "What should be measured?" Many terms are used to describe and explain personality. The list includes: interests; attitude; motives; instincts; dispositions; temperament; values; cognitive styles; personal constructs; and pathological traits (Allport, 1958; Emmons, 1989). Common traits (Allport, 1961) or behavioural traits (Wiggins & Trapnell, 1997) are terms used to describe the outer traits – those which can be observed and described. Personal traits – true traits (Allport, 1961) or emotional and cognitive traits (Johnson, 1997) are terms used to describe the personality that must be inferred and, as such, are more complex

traits (Allport, 1961). The frequency and level of intensity of behaviour that must be observed before a personal or true trait can be inferred is questioned (Ewen, 1998).

A further criticism of trait theory is the circularity argument that occurs as a trait is used both to describe and to explain behaviour - e.g., Joe hit Fred because Joe is aggressive (Hogan, & Shelton, 1998; Weimer, 1984). Using trait terminology to explain behaviour is a description of the behaviour and not an explanation for the behaviour (Rholes, Newman, & Ruble, 1990; Weimer, 1984). Trait descriptors are therefore not a theory of personality but a means by which an observer describes the personality of an individual or their reputation (Hogan & Shelton). However, in order to understand behaviour common traits need explaining and personal/true traits can provide the explanation (Johnson, 1997).

The existence of traits is challenged from a behaviorist's perspective. Behaviour is seen as being product of the situation and the environment (Mischel, 1968). From a behavioural perspective the emphasise should be on the situation and the impact that situations have on behaviour (Pervin, 1993). Consistency in behaviour observed is attributed to similarity of situations (Ross, 1977).

Assessment of traits is usually based on self-assessment, that is individuals appraise themselves based on their personal experiences generalized over many situations. However, an individual's personality can influence the choice of which situation he/she is involved in, so that the situation will allow the individual to behave in a way that reflects aspects of his/her personality. This is known as *the dynamic interactional strategy* (Ickes, Synder, & Garcia, 1997). Understanding how an individual perceives a situation and the mechanisms as to why people choose situations are challenges confronting researchers (e.g., Langston & Sykes, 1997). Hogan (1996) proposes that trait personality is personality from the outside or a person's reputation. "Personality from the inside reflects the strategies a person has developed to get along, get ahead and find meaning" (Hogan, & Shelton, 1998, p. 132) and therefore personality from the inside is the person's identity.



## The Five-Factor Model

Among the different presentations of trait models the five-factor model is widely accepted and used (Wiggins & Trapnell, 1997). Allport and Odbert (1936) are credited with providing the foundations from which the five-factor model has emerged (McAdams, 1992). From unabridged English dictionary Allport and Odbert listed 18,000 descriptors of personality related terms and estimated that there might be 4,000-5,000 traits. This list was later decreased to 171 by Cattell (1943, cited in Digman, 1990) who subsequently identified 12 factors (Cattell, 1947, cited in Digman). Later researchers, Fiske (1949, cited in Digman), Tupes and Christal (1961, cited in Digman) using factor analysis techniques on the trait adjectives suggested the presence of five traits. The five provide a reasonable structure for the descriptors of personality (McCrae & John, 1992).

The five-factor model is a structure for organizing personality traits (Costa & McCrae, 1992; Digman, 1990, Goldberg, 1990, McCrae & Costa, 1990) and a means by which individual trait differences can be identified (Barrick & Mount, 1991). Numerous studies have replicated five broad factors traits (e.g. Barrick & Mount, 1991; Hough, 1992; Tett, Jackson, & Rothstein, 1991).

Support for the five-factor model, using exploratory factor analysis, has been demonstrated using different methods of factoring and factor rotation (Peabody & Goldberg, 1989), different instruments (Goldberg, 1992, McCrae & Costa, 1987), among different users (Norman, 1963) – including children (Merviedle, Buyst, & De Fruyt, 1995) and cultures (McCrae and Costa, 1997), using different languages (Borkenau & Ostendork, 1990; Digman, 1990), and confirmed through both self-report and observer rating (Costa & McCrae, 1986).

Despite wide spread support for the five-factor model as being the most comprehensive and parsimonious available for the assessment of personality (Goldberg & Saucier, 1995), there is disagreement over the make-up of the factors and over the labels given to the constructs (Barrick & Mount, 1991; Hough, 1998a). The labels commonly used are Extraversion, Emotional Stability – Neuroticism, Agreeableness, Conscientiousness, and Openness to Experience (Intellect) (John, 1990). Briggs (1992) identifies the researchers Costa and McCrae as the main protagonists of the five-factor model and the instrument, the revised version of the NEO Personality Inventory, (NEO-

PI-R; Costa & McCrae, 1992) is described as the most comprehensive and valid of the inventories available (Schinka, Kinder, & Kremer, 1997).

There are a number of theoretical perspectives taken by researchers of the five-factor approach to personality structure. Wiggins and Trapnell (1997) identify four perspectives: a dispositional view, that is trait personality is enduring; a dyadic interactional view, that is trait personality is the interaction of two interpersonal transactions: dominance and nurturance; a competency view, that is trait personality is acquired social competence; and a lexical view, that is trait personality is revealed through the study of language. The varying theoretical perspectives taken have resulted in differences in both measurement and application.

Costa and McCrae, who adopt a dispositional perspective, have been recognised for their substantial work in studying the relationships between the five-factor model, as operationalised by the NEO-PI, and a variety of other instruments, many of which are founded in different theoretical orientations. For example the Myers-Briggs Type Indicator (MBTI; Myers & McCaulley, 1985), the Eysenck Personality Questionnaire (EPQ; Eysenck & Eysenck, 1975), The Self-Directed Search (SDS; Holland, 1985), and the Minnesota Multiaxial Personality Inventory (MMPI; Hathaway & McKinley, 1983). The results of their research (e.g. Costa, Bush, Zonderman, & McCrae, 1986; Costa, McCrae, & Dye, 1991; McCrae, Costa, & Bush, 1986) suggest a convergence of other measures to the five-factor model (Wiggins & Trapnell, 1997). Practically, this means that the diverse literature on personality assessment can be integrated through the five-factor model.

Uses of the five-factor model draw similar criticism to that of trait theories generally, that is whether a five-factor model adequately express human personality (Bental, 1993; Block, 1995; John, 1990; McAdams, 1992, 1995). However, despite the criticisms raised researchers agree that further research is warranted (e.g., Block). For example, Costa and McCrae (1992) suggest that further research is needed to determine if there are differences in factors across different populations.

Debate exists concerning the use of broad personality constructs or narrower, more specific traits (e.g., Aston, 1998; Guion & Gottier, 1965; Hough, 1998a; Ones & Viswesvaran, 1996). While some argue for the use of superordinate constructs, such as integrity (e.g., Ones, Viswesvaran, & Schmidt, 1993), others argue for the use of broad



traits, such as the big five (e.g., Barrick & Mount, 1993). Yet others (e.g., Aston, 1998; Crant, 1995; Costa & McCrae, 1995, Costa, McCrae, & Kay, 1995; Paunonen, Rothstein, & Jackson, 1999) propose, that for applied purposes, measuring at the lowest level that the assessment tool provides may result in the identification of better predictors. However, it is becoming increasingly apparent within the literature that the assessment of personality is only meaningful if it is theoretically and empirically matched to an occupational criteria (e.g., Hogan, & Roberts, 1996; Hough & Paullin, 1994). Therefore, either a broad or narrow band assessment can be appropriate depending on the purpose for the assessment (Hogan & Roberts). Advances that are occurring in structural modeling techniques are likely to be helpful in choosing between factor models (Matthews & Deary, 1998).

Debate exists regarding what is the optimal set of facets to represent the five factors (Endler, Rutherford, & Denisoff, 1997) and if five is the optimal number (Hogan & Hogan 1995, cited in Hogan & Shelton, 1998; Hough, 1998a). There are strong correlations between various personality domains - high negative correlation between neuroticism and conscientiousness and a high positive relationship between extraversion and openness (Costa, McCrae, & Dye, 1991; Vassend & Skrondal, 1997). Although acceptable factors loadings for the facet scales on the respective domains are reported there is significant secondary loading of facet scales on a number of domains (McCrae & Costa, 1989, cited in Vassend & Skrondal). Costa and McCrae (1995) propose that depending on the applied application different trait sets may need to be developed.

Assessment of the five-factors is usually based on self-assessment and therefore subject to many psychometric issues, such as reliability – internal consistency and test-retest, and various aspects of validity (West & Finch, 1997). Furthermore, self-assessment instruments are subject to many biases and distortions, such as, faking (Paulhus, Bruce, & Trapnell, 1995; Schwab, 1971), and response distortions (Hough, 1992, 1998b). Research by Bradshaw (1997) that examined whether or not results on the NEO PI-R domains might be biased by social desirability needs reported slightly biased profiles, but overall the effect was minimal. However, as with all self-report tests, when asked to deliberately fake responses, the results compromise the validity of the measure (Schmit & Ryan, 1992; Topping & O’Gorman, 1997).

## The Five-Factors.

The five-factors are usually described in literature by their key characteristics (e.g. McCrae & Costa, 1992).

### Extraversion

The dimension Introversion/Extraversion is identified as a higher-order factor. It is measured in all inventories that measure the five-factors of personality (Watson & Clark, 1997). This dimension is referred to as extraversion – the quality and intensity of interpersonal interaction, and surgency – dominant, ambitious, adventuresome, and assertive (Watson & Clark, 1997). Individuals high in extraversion prefer stimulating environments filled with social interaction (Hogan & Hogan, 1992, cited in Hurley, 1998). Costa and McCrae (1992) itemizes extraversion to six facets: warmth, gregariousness, assertiveness, activity, excitement-seeking, and positive emotions.

### Emotional Stability.

Emotional stability is also known as stability: emotionality (John, 1989); neuroticism (McCrae & Costa, 1985); negative emotionality (Tellegan, 1982, cited in John, 1990); and negative affectivity (Watson & Clark, 1992). Emotional stability is a personality dimension used to describe the characteristics/personality of a 'normal' individual (Wiebe & Smith, 1997). Emotional stability is described as the general tendency for the individual to experience negative emotions such as fear, anger, shame, guilt, and sadness. It measures the lack of psychological adjustment versus emotional stability. Costa and McCrae (1992) itemizes neuroticism to six facets: anxiety, angry hostility, depression, self-consciousness, impulsiveness, and vulnerability.

### Agreeableness

The agreeableness or likability dimension of personality enjoys widespread agreement on the description of the basic dimension, but has been given a number of different labels (Graziano & Eisenberg, 1997; John, 1989, McCrae & Costa, 1985). Agreeableness can be conceptualized as a latent variable, or the more benevolent aspects of personality that summarizes more specific tendencies and behaviors (e.g., being kind, caring, considerate, cooperative, helpful, likable, trusting, tolerant) (Barrick & Mount,

1991; Digman, 1990; Graziano & Eisenberg, 1997). It reflects the need for pleasant and harmonious relations (Hogan & Hogan, 1992, cited in Hurley, 1998). Costa and McCrae (1992) itemizes agreeableness to six facets: trust, straightforwardness, altruism, compliance, modesty, and tender-mindedness.

#### Conscientiousness.

The conscientiousness dimension of the five-factor model is described as the dominant perspective in personality research (Costa & McCrae, 1988). The conscientiousness dimension is also called conformity or dependability (Hogan, 1983, cited in Digman, 1990), and the will to achieve (Digman, 1989). The dimension “refers to conformity and socially prescribed impulse control” (Hogan & Ones, 1997, p. 849). The conscientiousness construct is related to an individual’s degree of self-control as well as his/her need for achievement, order, and persistence (Costa, McCrae, & Dye, 1991). Costa and McCrae itemizes conscientiousness to six facets: competence, order, dutifulness, achievement striving, self-discipline, and deliberation.

#### Openness

The Openness domain is described as a fundamental dimension of personality (McCrae & Costa, 1994), yet it is the most controversial of the five-factors (McCrae & John, 1992) as the construct is characterized by an intellectual orientation as well as the unconventional. There is substantial disagreement on the label for this personality domain. Labels include intellect (Goldberg, 1981), intelligence (John, 1989), openness to experience (McCrae & Costa, 1985), and culture (Norman, 1963). Costa and McCrae (1992) itemizes openness to six facets: fantasy, aesthetics, feelings, actions, ideas, and values.

#### Single Trait Personalities

##### Self-efficacy

Self-efficacy, as theorized by Bandura (1977, 1986, 1997), is an individual, situation specific, belief system. The belief is one’s ability to execute certain behaviours in order to achieve a specific function. The behaviour required could include cognitive, social, emotional, and/or behavioural skills. The efficacy belief system not only passes

judgement on the current level of skill ability required but judges the perceived capacity of self to integrate the behaviours required in the given situation faced. Inputs on which judgements are made could include the unique context in which execution of the specific function is required, past successes and failures, the perceived degree of difficulty, and the similarity of the required behaviour to other tasks experienced. Succinctly defined, self-efficacy is the "belief in one's ability to perform a task or more specifically to execute a specified behaviour successfully" (Bandura, 1977, p.79).

The construct of self-efficacy, as defined by Bandura, is rooted in Social Cognitive Theory (Bandura, 1997) – a humanistic philosophy. Self-efficacy, as conceptualized by Bandura, is deemed not a personality trait but fundamentally a cognitively generated belief system (Maddux, 1991). However, self-efficacy when used in a general or global sense is conceptualized and measured in a very similar way to trait personalities (Bandura, 1997) and viewed as a relatively stable trait (Sherer et al., 1982). Some researchers follow Banduras' lead (e.g., Eden & Kinnar, 1991; Shelton, 1990) and view general self-efficacy as a cognition about one's general self-competency. This cognition is the initial input to the cognitive process which influences specific self-efficacy expectations. Others (e.g., Sherer, et al., 1982) view general self-efficacy as a personality trait, in that general self-efficacy is a relatively stable trait that significantly contributes to an individual's performance.

Bandura (1997) strongly criticizes the use of global or general measures of self-efficacy although he does acknowledge that, "once established, enhanced self-efficacy tends to generalize to other situations" (1986, p.399). Reasons for his concerns are rooted in how efficacy is conceptualised and operationalised within Social Cognitive Theory. As a fluid system, contingent on the particular unique sets of inputs, the measurement of self-efficacy and the ability of the assessment to predict performance is dependant on an elaborate assessment procedure – especially if the behaviour in question is complex. Development of a measure with predictive power requires the measure to be custom made to the domain of functioning with a realistic spread of task demands (Bandura, 1997). Hence, a general self-efficacy measure is not deemed an adequate measure of self-efficacy. However, general self-efficacy measures and domain specific measures of general work self-efficacy are being used for research purposes (e.g., Jex & Bliese, 1999).

### Locus of Control.

Outcome expectancy theories, such as locus of control, are different from the construct of self-efficacy. Whereas self-efficacy is the belief that one has in one's ability to execute a given behaviour successfully (Bandura, 1997), locus of control assesses the generalized expectancy that outcomes are a result of either one's own behaviour or as a result of external forces which are beyond individual control. Internal control is the belief that outcomes are influenced primarily by personal factors, e.g., hard work, effort, skill and/or ability. External control is the belief that outcomes are a result of external factors – powerful others, chance, luck or fate (Joe, 1971; Rotter, 1966).

Locus of control measures seek to determine the extent to which behaviour can be predicted by individual differences in the tendency to perceive outcomes as either contingent upon one's own action (internal control) or as a result of forces that are beyond the individual's control (external control) (Levenson, 1981).

Locus of control measures have been used extensively in research over the last three decades. Domain-specific locus of control measures was advocated by Phares (1976) to enhance the predictiveness of the construct. Similarly, Lefcourt (1982) proposed that the development of domain specific measures of locus of control would contribute to maintaining the construct as a tool for research. Spector (1988) developed a generalized Work Locus of Control Measure. This domain-specific measure has demonstrated its ability to better predict aspects of performance than Rotter's (1966) locus of control measure (Blau, 1993).

Concerns regarding the number of dimensions has been expressed by Gurin, Gurin, Lao, & Beattie (1969). Gurin and colleagues, using Rotter's Locus of Control measure, reported two dimensions based on a *self-other* distinction. They proposed that specific characteristics of their sample were a contributing factor to the emergence of the two dimensions. Levenson (1981) has also challenged the unidimensional view of the Locus of Control. Levenson proposed that forces beyond the individual's control are of two types – chance and powerful others. Levenson went on to develop a multidimensional scale – Internality, Powerful Others, and Chance.

Further research on the Work Locus of Control Scale by Spector (1992, cited in Macan, Trusty, & Timble, 1996) and Macan et al. (1996) utilizing factor analysis, concluded that there is a possibility that the locus of control is not a unidimensional construct as originally thought. Macan et al. recommend that statements related to internal and external dimensions are computed as two factors and that each factor is checked to ensure the data is normally distributed. A person, therefore, although orientating to either an internal or external work locus of control may exhibit a combination of its dimensions.

Internal locus of control, as measured by the Modified Work Locus of Control Scale, is positively and significantly correlated with the factors of extraversion and conscientiousness and negatively correlated with neuroticism (Gupchup & Wolfgang, 1997).



## CHAPTER THREE

### Personality and Organizational Outcomes

In summarizing the literature relating to personality and occupational performance Hogan, Hogan, and Roberts (1996) concluded that, "well constructed measures of normal personality are valid predictors of performance in virtually all occupations" (p.469). Furthermore they concluded that generally the use of personality assessment does not result in adverse impact for minority groups.

Reliable and valid personality measures have demonstrated utility. The inclusion of personality measures as a selection tool adds to the predictive validity of the selection process (e.g., Mabon, 1998; Schmidt & Hunter, 1998) as even a small criterion validity can be useful if improvement in the decision making process results (Rosenthal & Rubin, 1982). Researchers (e.g. Raymark, Schmit, & Guion, 1997) are now currently working on designing instruments to identify aspects of work that are potentially related to individual differences in personality with the hope of increasing the criterion validity of personality measures.

With the resurgence of interest and research of personality traits there has been a corresponding resurgence in understanding how personality relates to organizational outcomes within a variety of occupational groups (George, 1992; Schmit, Guion, & Raymark, 1994, cited in Costa, 1996; Tokar, Fischer, & Subich, 1998) - particularly in understanding the relationship between five-factor models of personality and job performance (e.g., Costa, 1996, Tett, Jackson, & Rothstein, 1991); personality and job satisfaction (e.g., Costa, 1996; Day, Bedeian, & Conte, 1998); personality and commitment (e. g., Mathieu & Zajac, 1990); personality and psychological well-being (e.g., Diener, 1984; Hart, Wearing, & Headey, 1995; Motowidlo, Packard, & Manning, 1986); personality and occupational stress (e.g., Endler et al., 1997; Hart et al., 1995; Moyle, 1995); personality and aspects of training (e.g., Barrick & Mount, 1991); personality and interpersonal interactions (e.g., Mount, Barrick, & Stewart, 1998);

personality and team outcomes (e.g., Barrick, Stewart, Neubert, & Mount, 1998); personality and training outcomes (e.g., Driskell, Hogan, Salas, & Hoskin, 1994).

Empirical research examining the link between self-efficacy and outcomes within an organizational context is limited. Research has primarily been laboratory based (McDonald & Siegall, 1992) and focusing on self-efficacy and training (Harrison, Rainer, Hockwater, & Thompson, 1997).

Using Bandura's conceptual understanding of self-efficacy a limited number of studies have investigated the relationship between beliefs of self-efficacy and aspects of work attitudes and performance. Teacher efficacy (both general and personal) predicted commitment to teaching (Coladarci, 1992). Technological self-efficacy was predictive of job satisfaction, commitment, and job performance for telecommunication service technicians (McDonald & Siegall, 1992). Computer self-efficacy was predictive of self reported measures of performances on the use of computer hardware and software (Harrison et al., 1997).

Research that examines the relationships between self-efficacy and the five-factor model of personality is minimal and insufficient. A literature search by Toms, Moore, and Scott (1996) found no studies that specifically examined such a relationship. Research since then identifies moderate correlations between the five factors of personality and self-efficacy for participating in self-managed work groups (Toms et al.).

Results from research suggest that locus of control measures are an important construct to consider when investigating behaviour in the work environment. For example research has linked responses on locus of control measures to: employees' ability to handle and deal with stress (Callan & Dickson, 1992; Cohen & Edwards, 1988; Parkes, 1984); depression (Benassi, Sweeney, & Dufour, 1988); ethical and unethical workplace behaviours (Reiss & Mitra, 1998); job satisfaction (Gupchup & Wolfgang, 1997); general health (Lawler & Schmied, 1992); and various aspects of job performance (Blau, 1993; Judge, Erez, & Bono, 1998). In the education field researchers have used the locus of control measures in a number studies. These studies include examining the relationships between locus of control and stress (Parkay, Greenwood, Olejnik, & Proller, 1988; Soh, 1986), performance (Sadowski, Blackwell, & Willard, 1986), and burnout (Byrne, 1992).



### Organizational Commitment

Organizational commitment examines employees' commitment to their employer (Meyer, Allen, & Smith, 1993). A decade ago commitment was treated as a unidimensional construct although there were a variety of definitions of the construct (Mathieu & Zajac, 1990). Now commitment is perceived as a multidimensional construct with dimensions potentially having different antecedents, consequences, and correlations (e.g., Allen & Meyer, 1990; Mayer & Schoorman, 1992). Allen and Meyer (1990) and Meyer and Allen (1991) propose three dimensions of commitment: affective, continuance, and normative.

Continuance commitment, described as the recognition of the costs associated with leaving (Meyer & Allen, 1991) and similar in concept to calculative commitment, is relatively independent of affective and normative commitment (Morrow, 1993). Allen and Meyer (1990) describe continuance commitment as developing from two factors: "the magnitude and/or number of investments (or side-bets) individuals make and a perceived lack of alternatives" (p. 4).

Affective commitment, described as the reflection of an employee's emotional attachment to, identification with, and involvement in the organization (Meyer & Allen, 1991) closely resembles Porter, Steers, Mowday, and Boulian's (1974) attitudinal measure. Antecedents to affective commitment include personal characteristics, structural characteristics, job-related characteristics, and work experience (Mowday, Porter, & Steers, 1982). However, the research examining the links between individuals' personal predisposition and commitment is sparse (Meyer, Irving, & Allen, 1998).

Normative commitment, described as the reflection of the employee's feelings of obligation to remain (Allen & Meyer, 1990), does not display the same level of reliability as the other two measures (Morrow, 1993). Allen and Meyer (1996) concede that the normative commitment construct needs more attention.

Little research appears to have been reported on the relation between the five-factor model of personality and organizational commitment (Meyer, Irving, & Allen, 1998). In Mathieu and Zajac's (1990) review and meta-analysis of the antecedents, correlates, and consequences of organization commitment no variable was directly

related to personality. Some researchers (e.g. Webb & Lowther, 1990) see organization commitment as a reflection of the individual's attitude and moral involvement. In some theoretical models job satisfaction is considered an antecedent to organizational commitment (Mowday, Porter, & Steers, 1982; Webb & Lowther).

The relationship between organizational commitment and performance has been well-researched (Angle & Lawson, 1994). There have been a number of recent reviews (e.g., Mathieu & Zajac, 1990; Morrow, 1993). Evidence supporting a link between commitment and performance has been sparse (Mathieu & Zajac) despite the intuitive appeal of the committed employee – high performer and high staff retention scenario (Angle & Lawson).

When multidimensional constructs of commitment and performance are used by researchers then modest correlations on some facets have emerged. For example, affective commitment and job performance (Angle & Perry 1983; Meyer, Paunonen, Gellatly, Goffin, & Jackson, 1989), and affective commitment and supervisor's evaluation of dependability and initiative (Angle & Lawson, 1994).

There has been minimal research done on commitment in the early childhood education and care sector (Schryer, 1994). On reviewing previous research which used a definition of commitment similar to Meyer and Allen's (1994) definition of affective commitment, Schryer found mixed relationship between commitment and salaries, a strong correlation with job satisfaction, a significant relationship with age, and a negative relationship with level of education. Schryer's own research results showed no relationship between the quality rating of centres and organisation commitment, or centre size and organizational commitment.

Kontos and Riessen (1993) looked at predictors of job commitment among Family Day Care providers, that is, individuals who care for children in their own home. Commitment questions were primarily focused on commitment to occupation or career. For example, "It's not my chosen occupation but is good while my children are young". There was moderate relationship between job stress and job commitment with those having made a career choice to work as a family day care provider having less job stress.

## Global Job Satisfaction.

Job satisfaction is well researched. By 1976, Locke estimated that over 3,000 articles had been written. Job satisfaction is an emotional state which results when an individual appraises his/her job or work experience (Locke, 1976). Numerous theories have been proposed to explain job satisfaction. They include Herzberg's Two Factor Theory (Herzberg, Mausner, & Snyderman, 1959), Locke's Value Discrepancy Theory (Locke, 1976), Lawler's facet Theory (Lawler, 1973), and Landy's Opponent Process Theory (Landy, 1985). However, support for these theories is mixed (Muchinsky, 1993).

A number of different instruments are available to measure job satisfaction. Most are questionnaires or surveys and, as such, attract the expected problems. However, other difficulties exist including differences amongst the measures and problems associated with the construct. Different measures are not necessarily comparable and measures can tap either cognitive or emotional aspects of the attitude. Furthermore, the attitude may not be stable and it is questionable if the attitude existed before it was measured (Berry & Houston, 1993).

Single item measures of job satisfaction began with Kunin's Face Scale (Kunin, 1955, cited in Wanous, Reichers, & Hudy, 1997). Scarpello and Campbell (1983) interviewed employees to ascertain what they considered to be factors that determined job satisfaction. Results indicated that a global measure of job satisfaction was more correlated to variables of the employee's perception of job satisfaction. Highhouse and Becker (1993) demonstrated that developing a measure that included facets based on employees' perception of job satisfaction increased the relationship between with the multi-faceted measure and a single-item measure. Further support for the use of a global measure of job satisfaction has come from a meta-analyst study in which global measures of job satisfaction are correlated with scales measuring overall job satisfaction. The overall mean correlation, corrected for reliability, is 0.67 (SD = 0.08). Using the best group of job satisfaction measures the mean corrected reliability rose to 0.72 (SD = 0.05) (Wanous, Reichers, & Hudy).

Personality is considered important in predicting job satisfaction (Meir, 1995; Tranberg, Slane, & Ekeberg, 1993) with the assumption that satisfaction is determined in part by personality and therefore should be reasonably stable over time (George, 1992). Research suggests that lower states on emotionality (neuroticism) and high state of

extraversion are correlated with global job satisfaction (e.g., Decker & Borgen, 1993; Tokar & Subich, 1997). However, similar results were not found when a multiple construct of job satisfaction was used. Negative emotionality was correlated with only some aspects of job satisfaction (e.g., Alpass, Long, Chamberlain, & Macdonald, 1997; Parkes, Mendham, & von Rabenau, 1994). Yet others (e.g., Judge & Hulin, 1993) suggest the relationship is not direct but mediated by subjective well-being. The link between satisfaction and performance has not led to unequivocal results (Thierry, 1998).

Jorde-Bloom (1986) found that in the early childhood sector the construct of job satisfaction remained largely unexplored although a number of different approaches had been used to understand levels of job satisfaction amongst teachers. Job satisfaction, using a variety of measures, has been measured in the following work environments: family day care (Bollin, 1993; Kontos & Riessen, 1993) and childcare centres (Lyons, 1997; Manlove & Guzell, 1997; Stremmel, Benson, & Powell, 1993). Results from studies in childcare centres show that childcare workers are generally satisfied with their jobs (Lyons, 1997; Stremmel, 1991).

#### Psychological Well-being.

Psychological well-being, or positive mental health, according to Christopher (1999) has a crucial role in theories of personality and provides the baseline for the assessment of psychopathology. Measures to assess psychological well-being provide not only a guide to determining the direction intervention to be taken to alleviate distress, but the measure usually identifies the variables believed to enhance or diminish well-being and so the measure usually provides the definition of well-being. However, the nature of psychological well-being is unclear as the notion of well-being is influenced by values and culture (Christopher).

The psychological well-being of the individual is of concern because of the potential negative effects that can result when an individual feels they are no longer functioning in their normal 'healthy way'. For example in Britain it is estimated that 80 million work days each year are lost due to stress and other mental illness (Fingret, 1994). Relatively high levels, 25%, of minor psychiatric morbidity, or people 'under stress' are apparent in random community samples (Goldberg & Huxley, 1980).

Psychological well being has been studied over the last 40 decades, beginning with the work of Bradburn and Caplovitz (1965, cited in Bohlander, 1999). Many of the studies are criticized as they focused on demographic correlates such as age, income, and level of education, which accounted for no more than 10% of the variance in psychological well being (Ryff, 1995, cited in Bohlander).

Bowen (1976) and Kerr & Bowen (1988), both cited in Bohlander, (1999) identified two factors, the differentiation of self and the quality of emotionally significant relationships, as being associated with psychological well being. Differentiation of self is the ability to separate thinking and feeling processes – a type of emotional maturity.

Although work is associated with low psychological distress and reported feelings of well-being, work and family commitments can cause conflict which can impair normal psychological well-being (Baruch, Biener, & Barnett, 1987). The work-family conflict may result in lower levels of work performance, increased absenteeism and tardiness, and lowered affective commitment to work (Bateman & Strasser, 1984 and Morris & Sherman, 1981, cited in Cohen, 1997). In a study of female university employees women who had caring responsibilities reported more pressure than women without caring responsibilities, married women felt more under pressure than single women, and part-time workers felt they were under more pressure than those working full-time (Field & Bramwell, 1998). Results from the Health and Lifestyle Survey reported diminished well-being for separated and divorced women (Cox, Thiriaway, Gotts, & Cox, 1983).

In the Health and Safety Resources for Childcare Workers (1984), stress has been identified as an occupational hazard. It was thought that intense interaction between adult and child over time would become draining and the interaction less gratifying (Whitebrook, Howes, Darrah, & Friedman, 1982). Stressors have been identified as work-role conflict and work-role ambiguity (Manlove, 1993); working conditions, such as pay rates and hours worked (Whitebook, Howes, Darrah, & Friedman); and personal characteristics, such as career commitment, age, perceived social support (Kontos & Riessen, 1993). The personality trait neuroticism is also linked with high levels of reported stress (Manlove).

A number of studies have investigated the relationship between the five-factor model and psychological well-being, and in particular stress (e.g., Matthews, Mohamed, & Lochrie, 1994; cited in Matthews & Deary, 1997; Mughal, Walsh, & Wilding, 1996;



Noor, 1997). Over the last 20 years, there has been resurgence in the study of personality and health (Wiebe & Smith, 1997). Negative affectivity – neuroticism, is significantly correlated with various measures of illness (Costa & McCrae, 1987). These measures include the four sub-scales of the General Health Questionnaire (e.g., Deary, Blenkien, Agius, Endler, Zealley, & Wood, 1996, cited in Matthews & Deary, 1997; Mohamed, 1996, cited in Matthews & Deary, 1997). Individuals scoring high on neuroticism and low on extraversion tend to have less effective techniques for coping with stress (McCrae & Costa, 1986). Furthermore, there is a tendency for those scoring higher on neuroticism to report diminished well being (Costa & McCrae, and Arenberg, 1980, cited in Matthews & Deary, 1997). However, other dimensions of personality, in particular extraversion and conscientiousness, have identifiable effects on general health (Jerram & Coleman, 1999; Matthews & Deary, 1998).

### Work Performance

Measures of work performance are thwart with difficulties (Campbell, McCloy, Oppler, & Sager, 1993). Problems identified in Ostroff's (1992) review include measurement, research design, and situation and personal constraints on performance. Austin and Villanova (1992) suggest that workers' view of what constitutes 'good' performance is taken into consideration when establishing the performance criterion.

Performance criteria usually include in-role behaviours or task activities and extra-role or discretionary behaviours. Extra-role behaviours are also known as contextual performance (Borman & Motowidlo, 1993); organization citizenship (Bateman & Organ, 1983); and prosocial behaviour (Brief & Motowidlo, 1986). Although the terms used differ in some aspects, they all describe behaviour that involves cooperation and helping others (Motowidlo & Van Scotter, 1994).

Measurement of extra-role and in-role behaviours is complex (Morrison, 1994). While some researchers (e.g., Katz & Kahn, 1978) theorized that there is a difference, others (e.g., Van Dyne & LePine, 1998; Williams & Anderson, 1991) have demonstrated that difference. However, for some care-giving occupations extra-role behaviours, such as helping, could be considered in-role behaviour (Van Dyne & LePine). Furthermore, Morrison (1994), predicted and found that employees scoring high in affective and normative commitment defined their roles more broadly blurring the distinctions between

extra and in-role behaviour. Whereas Organ and Ryan (1995) in a meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behaviour concluded that among nonmanagerial and nonprofessional groups there is a relationship between job satisfaction and organizational citizenship behaviour.

It is suggested by Borman and Motowidlo (1993, 1997) that general mental abilities are a stronger predictor of in-role behaviours, such as job performance, whereas, personality domains are a stronger predictor of extra-role behaviours, such as helping behaviours. Hough (1998a) proposed that personality measures are a useful addition to a battery of assessment that includes cognitive ability tests, if the criterion measures include organizational citizenship behaviours.

Meta-analytic studies demonstrate a moderate relationship between job performance and the five-factor model of personality (e.g., Barrick & Mount, 1991, Hough, 1992; Salgado, 1997; Tett, Jackson, & Rothsten, 1991). However, Tett, Jackson, Rothstein, and Reddon (1999) when using a modification to standard meta-analysis, that allowed for the possibility of bidirectionality in facet scores, found effect sizes stronger than those reported by Tett et al (1991). The domains of conscientiousness and emotional stability generalize across occupations and criteria (Barrick & Mount, 1991; Hough, 1992) and European cultures (Salgado, 1997, 1998). Furthermore, the strength of the relation between the five domains and work-related performance is occupation and criterion related (Barrick & Mount, 1991; Eysenck, 1995; Hogan, 1991; Matthews & Oddy, 1993), and related to hierarchical levels (Baehr & Orban, 1989). Borman and Motowidlo (1997) after reviewing the literature related to the extra-role or organization citizenship behaviour concluded personality predictors are the dominant antecedent of extra-role behaviour.

There are potential moderators and mediators in the relationship between the five-factor model of personality and performance criterion. For example, Barrick, Mount, and Strauss (1994), using a sample of sales representatives demonstrated that the source of the personality ratings affected the size of the relationship, with observer ratings generally having higher correlations with performance ratings. Furthermore, they suggest that conscientiousness may be mediated by motivational factors, such as goal setting and goal commitment.

Research has shown mixed results when investigating the relationship between locus of control measures and job performance (Blau, 1993). Spector (1988) proposed that if initiative and independence were required then the internally controlled employee would be better suited. However, if compliant behaviour were required then the externally controlled employee would be more suitable. Other potential reasons for the mixed results could be related to the locus of control measures (Gurin, Gurin, Lao, & Beattie, 1969; Phares, 1976) or how job performance is measured (Tseng, 1970).

Despite the wide spread use of locus of control measures in research it appears that the construct has not been used in research related to early child care centre staff.



## CHAPTER FOUR

### Research Questions

Research questions have been developed to be applied in two areas. The first area of application is for use by the early childhood sector. In particular, results will focus on profiling the aggregate personality and psychological well-being of early childhood educators and care providers as presented by the participants of this study. Results may have relevance to those involved in the selection of staff and students for training and the professional development of staff in this sector. The second area of application focuses on extending and challenging our understanding of the relations between personality and work related attitudes and behaviours.

Broadly defined, personality is the observed expression of a person's characteristics. These characteristics, or combinations of characteristics, are both unique and enduring (e.g., Allport, 1961; Byrne, 1974). The trait approach to the study of psychology has experienced a resurgence in popularity over the last 20 years as findings continue to emerge that personality is a moderate predictor of behaviour (Digman, 1990). Two approaches to the study of traits are noted. One approach focuses on the use of single trait measures that are deemed by a researcher to be important. The second approach to the study of traits focuses on the use of core foundational traits, such as the five-factor model (e.g., The NEO PI-R, Costa & McCrae, 1992) or a three factor model (e.g., the EPQ, Eysenck & Eysenck, 1975). Both approaches aim to identify individual differences in personality.

## Profiling the early childhood educator and care provider

### Review

The personal characteristics of a good early childhood educator are well documented but lack the support of empirical research. Adjectives such as warm, altruistic, energetic, imaginative, and having a stable personality used to describe a good early childhood educator (e.g., Almy, 1975; Bacmeister, 1980; Ebbeck, 1990) can also be found in McCrae and Costa's Adjective Check List of Correlates of NEO PI-R Facet Scales (cited in Costa & McCrae, 1992). For example, the facet tender-mindedness, the sixth facet of Agreeableness factor, lists the positive adjective correlates as friendly, warm, sympathetic, soft-hearted, kind, and the negative adjective correlate of unstable. A further example is the facet altruism, the third facet of Agreeableness factor, which lists the positive adjective correlates as warm, soft-hearted, gentle, generous, kind, tolerant and the negative adjective correlate of selfish.

Stress has been identified as a concern in the early childhood sector. However little is known about the level of psychological well-being of this occupational group. Cox, Thirlaway, Gotts, & Cox (1983) showed that for grade teachers, scores on neuroticism are significantly and substantially associated with well-being.

### Research Questions.

1. What is the personality profile of this sample of early childhood educators and care providers?
2. Are there significant differences in the observed means of personality traits at the sub-group levels of gender, part and full-time workers, position (supervisor and non-supervisor), the centre type in which the participants work, and the age group with which the participants work?
3. Is the personality trait agreeableness a predictor of performance?
4. Do participants report higher levels of diminished psychological well-being then what is seen in a random community sample?

## Understanding the relationship between personality and work-related attitudes and behaviour

### Review

The use of factor models and single trait personality dimensions in understanding how personality relates to organizational outcomes has been the focus of much research in the last two decades (Matthews & Deary, 1998). Although the relationship between conscientiousness and performance is generalizable across occupations, relations between personality traits and outcome measures may be specific to an occupational group. For example extraversion is a valid predictor of job performance for police occupations (Salgado, 1997).

Debate continues regarding the predictive value of broad personality constructs and narrower, more specific traits, especially when the criterion is overall job performance (Paunonen, Rothstein, & Jackson, 1999). Researchers (e.g., Hogan, & Roberts, 1996; Hough & Paulin, 1994) conclude that the assessment of personality is only meaningful if it is theoretically and empirically matched to an occupational criterion. Therefore, either a broad or a narrow band assessment can be appropriate depending on the purpose of the assessment (Costa, 1996).

Measuring the criterion of job performance is thwart with difficulties (Campbell, McCloy, Oppler, & Sager, 1993). As performance is a multi-dimensional construct difficulties include measurement issues and what aspects of performance to measure. The performance criteria can include in-role behaviour and extra-role or pro-social behaviour. Research linking characteristics of early childhood educators to performance outcomes has tended to use aspects of child behaviour as the assessment criteria. For example, a series of studies was undertaken by Rosen (1968, 1972, 1975, cited Feeney & Chun, 1985) in which the relationship between the personality of the early childhood teacher and teaching effectiveness was examined. Children's learning and attitudes toward school measured teaching effectiveness. This study focuses on examining the relationship between personality and work-related attitudes and behaviours.

Of the two single personality traits used in this study, minimal research has examined the relationship between general self-efficacy and the five-factors of personality. Tom et al. (1996) found no studies that specifically examined the relationship between the five factors of personality and self-efficacy. However, they reported that studies outside the field of organizational behavior are suggestive of a relationship between personality and self-efficacy. Phillips and Gully (1997, p.793) proposed "that personality variables, such as locus of control will have a strong effect on an individual's level of self-efficacy." Their research supported their proposal. Research has shown that internal locus of control, as measured by the Work Locus of Control Scale, is positively and significantly correlated with the factors of extraversion and conscientiousness and negatively correlated with neuroticism (Gupchup & Wolfgang, 1997).

#### Research Questions.

5. When measuring the performance of early childhood educators and care providers is a multi-dimensional measure a good model?
6. Are there significant differences in the observed means of work related attitudes and behaviours at the sub-group levels of gender, part and full-time workers, position (supervisor or non-supervisor), the centre type in which the participants work, and the age group which participants work with?
7. Are there significant correlations between the five-factors of personality, work locus of control, and general work self-efficacy?
8. For early childhood educators and care providers which of the personality traits is a better predictor of work-related attitudes and behaviours?
9. Which is the better predictor of work-related attitudes and behaviour, the five-factors combined or the individual personality traits?
10. Which is the better predictor of work-related attitudes and behaviour, the linear combination of the facets or the individual five factors of personality?
11. Are the five-factors of personality able to predict work related attitudes and behaviour over and above the single personality traits general work self-efficacy and work locus of control?

12. Can affective and continuance commitment predict self-rated performance, global job satisfaction, psychological well-being and externally rated performance over and above the personality measures used in this study.
13. Can the demographic variables, experience and level of training add to the prediction of work-related attitudes and behaviour?
14. How well can the five-factors of personality and work locus of control predict general work self-efficacy?
15. How well can the five-factors of personality and general work self-efficacy predict work locus of control?

## CHAPTER FIVE

### Methodology

The study used a survey method of research. This had the advantages of eliminating the complex and subtle interaction associated with interviews and provided a structured procedure enabling a more reliable operational definition (Dunham, 1988).

A two-stage strategy was used. In the first stage the questionnaire was piloted. Piloting was deemed necessary by the researcher because of the length of Questionnaire One which had 330 items. The issues of concern related to (a) was would the length result in participants not completing sections; (b) the need to establish a response rate for the return of both Questionnaire One and Two to ensure that an adequate number of questionnaires would be distributed in the main study; (c) the checking of the formatting of the demographic section; and (d) the need to ensure the internal consistency of scales used was adequate for the focus group.

#### Pilot Phase.

The supervisors/managers from 37 centres, from a population of 500, were sent the pilot questionnaire packs. The total number of questionnaires distributed in the pilot phase was 150. Forty-three usable Questionnaires One were returned, yielding a response rate of 28%. These 43 questionnaires were matched with a Questionnaire 2. Participants were informed that where applicable their data would be included with data in the main study.

At the pilot stage a number of aspects related to the study were reviewed. The means, standard deviations, and internal consistency reliabilities for all measures were computed and are present in Tables 1 and 2 of Appendix 1.

An exploratory correlation analysis (see Table 3, Appendix 1) showed extremely high correlations among the performance scales. Consequently, the instructions for Questionnaire 2 were modified clarifying the grading scales (see Appendix 1). Two further changes were made to the demographic section. The question relating to level and type of training was simplified (see Appendix 1). Additional questions relating to the number of staff employed at the centre and team size were included. This was included so that the working environment, in relation to size of organization and team size, could be assessed, as the size of centres in New Zealand may well be different from centre sizes in other countries.

## Sample

The early childhood educators and care providers involved in the main study were sampled from a population of 500 Education and Care Centres. The pool of centres was randomly drawn from centres advertising in the Childcare section of the Yellow Pages of regional telephone directories in New Zealand.

Education and Care Centres are a category of early childhood education providers recognised by the New Zealand Ministry of Education. Education and Care Centres are providers of sessional, all day, or flexible hour programmes, which can cater for children from birth to school age or specific age groups within this age range. The centres may be privately owned, community based, or operated as part of a larger business, e.g., leisure centre crèches. The centres included such groups as Montessori and Pacific Island Centres, but excluded Free Kindergartens, Playcentres, Playgroups, Home Care, and Kohanga Reo.

To establish the distribution of the centres a manual count was done of the number of centres advertising in the telephone directories. The researcher's knowledge of the childcare industry was used to determine which centres would most likely be designated as an education and care centre. Of the total number of centres one third, or 150, came from the Auckland region. The remaining centres coming from outside of the Auckland region. Two thirds of centres from each regional telephone directory were included in the pool ensuring a nationwide distribution. The pool of 500 centres



represented 38% of education and centres identified by the Ministry of Education (MOE), as at 1 July 1998 (MOE, 1998).

#### Distribution.

The supervisors/managers of each centre received an information sheet detailing the rationale and objectives for the study (see Appendix 2). In addition, each centre, regardless of size, received four questionnaire packs. If the supervisor/manager was unwilling to make available the questionnaire packs to staff they were asked to return the packs to the researcher. Packs returned, either by supervisor/managers or because of incorrect addresses or centre closures, within 20 days, were mailed out to other centres randomly chosen from the pool of 500 or to centres requesting additional packs. There was 1650 questionnaires printed (150 for the pilot phase and 1500 for the main study). This number represented 20% of the total 8118 paid and voluntary staff at education and care centres as at 1 July 1998 (MOE, 1998). Four hundred and sixteen usable Questionnaire One's were returned (43 from the pilot phase and 373 from the main study). This yielded a response rate for Questionnaire One of 25%, or 5% of those working in education and care centres. Return of matching questionnaires, Questionnaires One and Two, reduced the response rate to 21% ( $n = 340$ ).

#### General Demographic Characteristics of the Sample.

As shown in Table 1, the age of participants ranged from under 20 years to 65 plus, with an average between 30 - 39 years. Experience, as measured by the number of years that the participant had worked in the field, ranged from less than one year to 30 plus years. Participants had an average of 8 years experience ( $SD = 6.4$ ). Of the 404 respondents who identified their years of experience, 22 had worked for less than one year.

The demographic information pertaining to gender, marital status, ethnicity, and religious conviction is presented in Table 1. It can be seen that respondents were predominately female. Ministry of Education reported, as at 1 July 1998, 98.5% of paid and voluntary staff in this sector group are female. Three hundred and ninety six participants (95.2%) identified themselves as female, 6 male (1.4%), 14 participants (3.4%) did not complete this section.

Various levels and pathways for training are available to those working in the Early Childhood Sector. Of the respondents who completed the qualification section, (*n* = 407) 5% reported having no training, 7% were in training, 5% having less than 80 licensing point, 23% having reached a minimum of 80 licensing points, and 60% having a diploma or higher.

Table 1  
Demographic Personal Characteristics of Sample

Variable	Frequency	% of total
<u>Gender (<i>n</i> = 402)</u>		
Female	396	98.5
Male	6	1.5
<u>Age (<i>n</i> = 412)</u>		
Under 20	5	1.2
20 - 29	140	34.0
30 – 39	106	25.7
40 – 49	105	25.5
50 - Plus	56	13.5
<u>Marital Status (<i>n</i> = 410)</u>		
Single	97	23.7
Married	230	56.1
Defacto Relationship	47	11.5
Divorced or Separated	31	7.6
Widowed	5	1.2
<u>Dependant Responsibilities (<i>n</i> = 410)</u>		
No Dependants	151	36.8
With Dependants	259	63.2
<u>Religious Conviction (<i>n</i> = 407)</u>		
Life governed by a religious conviction	68	16.7
Partially governed by a religious conviction	90	22.1
Life not governed by a religious conviction	249	61.2

N ≠ 416 due to missing data on Questionnaire 1

Table 1 continued.

## Work-Related Demographic Characteristics of Sample

Variable	Frequency	% of total
<u>Work Commitment (n = 413)</u>		
Part-time (less than 30 hours per week)	86	20.7
Full – time (more than 30 hours per week)	327	78.6
<u>Age range of children working with (n =406)</u>		
Under 2's	66	16.3
Over 2's	145	35.7
Mixed Ratio's	195	48.0
<u>Centre License (n = 407)</u>		
Exclusively sessional	52	12.8
Full day, but may include sessional room	355	87.2
<u>Position (n = 409)</u>		
Supervisor or person-in-charge/manager	160	39.1
Non Supervisor	249	60.9
<u>Years of Experience (n = 404)</u>		
0 – 4 years	137	33.9
5 – 9 years	140	34.7
10 – 14 years	67	16.6
15 – 19 years	30	7.4
20 – 24 years	15	3.7
25 – 29 years	10	2.4
30 plus years	5	1.2
<u>Highest Early Childhood Training ( n = 407)</u>		
No training	22	5.4
In training	29	7.1
Less than 80 points	19	4.7
80 points or greater	94	23.1
Diploma level Qualification	223	54.8
Bachelor Level Qualification	20	5.0
<u>Reason for working in early childcare</u>		
(Frequency = number of participants who agreed or strongly agreed with the following statements)		
1. My children were/are involved	90 of 397	8.1
2. I have the energy and enthusiasm to be with children	362 of 408	88.7
3. To see young children socialised/education from a sound moral perspective.	274 of 409	70.0
4. I wanted to see more mothers in the workforce	98 of 404	24.2
5. The ability I have to care for young children	383 of 409	93.6
6. I didn't think I had what it takes to be a primary teacher	34 of 404	8.4
<u>Would you choose this career again (n = 399)</u>		
Yes	354	86.5
No	54	13.5

N = 416 due to missing data on Questionnaire

A number of 'work' options are available in the sector. These options include part-time or full-time work, working with children under the age of two or over the age of two, and working in a mixed age centre. Centres can be licensed for full-day or sessional programme. Full-day licensed centre may also operate sessional programmes. Eighty-six respondents worked part-time and 327 full time (30 hours or more per week). Fifty-two respondents worked in centres licensed for sessional programmes and 355 worked in centres licensed for full day, which could include a sessional programme.

Participants were asked to either identify themselves as a supervisor/manager, that is a person who has the role of person-in-charge, or as not being a supervisor. A centre may have more than one person having the title of supervisor/manager. Of the 409 respondents, 39% identified themselves as being a supervisor/manager.

The size of an early childhood centre is controlled by regulations set by the MOE. Although more than one license might be issued for a single premise, most centres would not cater for more than 40 children at any one time. Minimum staffing ratios are set by MOE regulations, with varying levels depending on age range of children present and funding level.

The average number of early childhood educators employed at a centre, as identified by 360 participants, is 7.6 (SD = 3.1). The average team size in which the participants work is 5.3 (SD = 2.2).

#### Procedure.

The Massey University Human Ethics Committee approved the research proposal. The same procedures were used in both the pilot and main research phase. However, a different information sheet was used in the pilot phase (see Appendix 1).

Approval for access to participants was obtained from centre supervisors/managers. Approval from the centre to distribute the questionnaires was

implied if management made the questionnaire packs available to staff. The questionnaire packs contained the following information.

1. An information sheet (see Appendix 2) inviting early childhood educators and care providers to participate in the research. This sheet included a clear description of the purpose for the research and the nature and duration of the participant's involvement. The information sheet stressed that participation in the research was voluntary and that the distribution of the questionnaire by centre management did not negate their right of choice to participate in the study. Furthermore, potential participants were informed of their right to refuse to answer any particular question and their right to withdraw from the research at any time. Potential participants were assured that the results would be presented in aggregate form and neither they, nor their centre, could be identified. Further, potential participants were assured that the numeric codes on Questionnaire One and Two were for matching purposes only and no records had been kept of where numbered questionnaire packages had been sent. Finally, potential participants were given instructions on how they may obtain a summary description of their personality profile at the completion of the study. Potential participants were advised that they would be given access to a summary of the results, by way of a newsletter, at the conclusion of the study.
2. A questionnaire, which included measures on personality, locus of control, work self-efficacy, global job satisfaction, global performance, continuance and affective commitment, general, and demographic data (see Appendix 2)
3. A second questionnaire, which included measures related to extra-role and in-role work related attitudes and behaviours. Participants were instructed to ask either a co-worker or supervisor to complete this questionnaire (see Appendix 2).
4. Two free-post, self-addressed envelopes. One for the participants to return Questionnaire One, and the second envelope for the co-worker or supervisor to return Questionnaire Two.

## Measures.

Questionnaire One consisted of three sections. The first section assessed the participants' personality through the use of the NEO Personality Inventory – Revised (NEO-PI-R) (Costa & McCrae, 1992). The second section combined measures that assessed the participants' thoughts, feelings, and attitudes concerning aspects of work as well as single trait personality measures. The following measures were utilized: The General Work Self-efficacy Scale (based on Bosscher & Smitt's General Self Efficacy Scale – 12, 1998) to assess the individual's perception of general work self-efficacy; a Modified Work Locus of Control Scale (Gupchup & Allen, 1997); Affective and Continuance Commitment Scale (Allen & Meyer, 1990); and single measures of global job satisfaction and job performance. In addition, the second section concluded with the General Health Questionnaire-12 (GHQ-12) (Goldberg & Williams, 1988) to measure psychological well-being. The final section gathered demographic information.

Questionnaire Two was designed to measure the work related attitudes and behaviours of the participant as assessed by a co-worker or supervisor. The measure consisted of 15 statements developed by the researcher from performance appraisal forms used by five centres, a global measure of job performance and a measure designed to assess participants' in-role and extra-role behaviour developed by Van Dyne and LePine (1998).

### Five-factor Model of Personality

Trait personality was assessed using the Revised NEO Personality Inventory (NEO-PI-R) (Costa & McCrae, 1992). The NEO-PI-R measures 30 traits that define five basic factors of normal personality. The scale consists of 240 items. Respondents are asked if they strongly disagree to strongly agree with the statements. Responses are scored on a Likert scale of 0 to 4. Reverse scoring is used on some items.

The NEO-PI-R is used extensively in practice and in research (Matthew & Deary, 1998). Internal consistency for the five factor domain scales is excellent with coefficient alphas ranging from 0.86 to 0.92 on a random sample of adults. Reliabilities for the 30 facet scales are acceptable, with coefficient alphas ranging from .56 to .80 (Costa & McCrae, 1992). Long term test-retest reliability, over a seven year period, for the domain scales period has been reported: neuroticism, 0.67; extraversion, 0.81; openness, 0.84; agreeableness, 0.63; conscientiousness, 0.78 (Costa & McCrae, 1992b).

Each of the domains has six distinct facets. These facets having been established through extensive review of the personality research by Costa and McCrae. This research has established the content validity of the measure. The convergent and divergent validity of the scales has been well established as the researchers have sought to integrate their model of personality with other personality theories (Costa, 1996; Costa & McCrae, 1992; Matthew & Deary, 1998).

#### General Work Self-Efficacy.

General work self-efficacy was assessed using a version of Sherer et al.'s (1982) General Self-Efficacy Scale (GSES). The original measure developed by Sherer and colleagues included a 17-item general self-efficacy sub-scale. Evidence of convergent validity for the GSES was demonstrated by correlations with six personality measures theoretically associated with self-efficacy. A second study by Sherer and colleagues established criterion validity. Moderate positive correlations was reported between demographic measures of vocational, educational, and military career success and the GSES. A Cronbach alpha coefficient of .86 ( $n=376$ ) using a military sample was reported for the GSES. A later study by Woodruff and Cashman (1993) verified the convergent validity of the GSES. Verification included significant correlations between a specifically designed task measure of self-efficacy and the GSES.

Bosscher and Smit (1998) in using the GSES in a large study reduced the original scale to twelve items. Five items from the original scale were excluded because of "low item-test correlations and ambiguous wording" (pg. 340). A Cronbach alpha coefficient



of .69 ( $n = 2860$ , older adults) was reported. A factor analysis showed the data could fit one of two models: a three uncorrelated factor model or a correlated model with one higher order factor. Bosscher and Smit concluded that the best fit was the correlated model with one higher order factor, and therefore the GSES-12 is tapping one dimension, namely general expectations of self-efficacy.

The GSES-12 was modified to reflect the participants' general work self-efficacy. Items were reworded to provide a more specific focus. Modification of general efficacy scales for specific work environments has been used by other researchers (e.g. Jex & Bliese, 1999). A sample of the modification for this research is, "If something looks too complicated I will not even bother to try it" was changed to, "In my work if something looks too complicated I will not even bother to try it." On the general work self-efficacy measure participants are asked to rate their agreement with each item using a 5-point Likert scale ranging from 1 "strongly disagree" to 5 "strongly agree". Reverse scoring is used on some items.

#### Work Locus of Control.

Locus of control was assessed using a version of the Modified Work Locus of Control Scale (MWLCS) (Gupchup and Wolfgang, 1997). It consisted of 20 items on which the participants were asked to rate their agreement with each item using a 5-point Likert scale ranging from 1 = "strongly disagree" to 5 "strongly agree". Reverse scoring is used on some items.

The modified scale used 15 of the original items from Spector's (1988) Work Locus of Control Scale plus five items from Levenson's (1981) Internal, Powerful Others, and Change Scale. Modifications to the scale included personalizing items. For example, "Most people are capable of doing their jobs well if they make the effort", was changed to, "I am capable of doing my job well if I make the effort". The basis for the modification from people in general to a personal conception of control was based on the recommendations of Levenson (1981). She suggested, when developing the Internal, Powerful Others, and Chance Scales, that the appropriate use of measurement be linked

to what individual's feels they have control over, not what they think "people in general" have control over.

Convergent validity for the Modified Work Locus of Control Scale is demonstrated by correlations to other personality measures theoretically related to the scores of locus of control. Internal control (high scores) was positively correlated with the personality factors Extraversion and Conscientiousness. The Cronbach alpha for the modified scale was .88 (N = 284 pharmacists) (Gupchup and Wolfgang, 1997). No reference was made by Gupchup and Wolfgang as to whether the modified scale developed would be a uni or multidimensional scale after the inclusion of the five additional items.

#### Organization Commitment.

To assess organization commitment, affective and continuance commitment were measured using scales devised by Allen and Meyer (1990). The third construct, normative commitment, was not used because Allen & Meyer (1996) concede that the construct needs more attention.

The original scales were used but were modified. Each scale consisted of statements on which the participants were asked to rate if they (1) strongly disagreed to (5) strongly agreed. Reverse scoring is used on some items. The original scales were rated on a 7-point Likert scale, this was reduced to a 5-point scale to be consistent with the other measures used. Statements were also modified to represent the early childhood education and care sector by substituting the word organization with centre.

Although the measure has only been recently developed, there is considerable support for the psychometric properties of the scale, including support for construct validity (Allen & Meyer, 1996). In a review of research using the measure Allen and Meyer report median Cronbach alpha reliabilities for Affective Commitment and Continuance Commitment Scales are .85 and .79, respectively.

Psychological well-being.

To assess psychological well being, the General Health Questionnaire (GHQ-12)(Goldberg & Williams, 1988) was used. The scale consisted of 12 items on which participants were asked to identify if they had in the last two weeks experienced a change from their normal patterns of functioning.

The scale assesses if the participant, in the proceeding two weeks, has experienced a change in normal function. This change may be the result of a physical illness - a false positive result, a transient disorders which require no intervention, or changes that result from "inability to carry out one's normal 'healthy' functions, and the appearance of new phenomena of a distressing nature" (Goldberg & Williams, 1988, p. 5).

The GHQ-12 was scored using both the suggested GHQ (0-0-1-1), and the Likert scale (0-3) (Goldberg & Williams, 1988). No prior research using a similar sample was identified in a literature search of the PyschLIT or ERIC data bases to establish the appropriate estimated point of prevalence. Goldberg (1972) recommended a 1/2 cut-off for the GHQ-12 (sensitivity 93.5%, specificity 78.5%). Singh, Lewin, Raphael, Johnston, and Walton (1987), identified three Australian studies had used the GHQ-12 with community-living adults. In these studies the threshold morbidity, the estimated of point of prevalence, at the 1/2 cut-off, ranged from 22.4 to 30.5%.

The reliability of the GHQ and in particular the GHQ-12 has been investigated in terms of split-half (.83), internal consistency (.85) and test retest reliability (.73). In terms of the validity of the GHQ a number of studies have been conducted and reported in the General Health Questionnaire manual (Goldberg & Williams, 1988). Criterion validity has been established by comparing the GHQ responses with results obtained from independent and standardized psychiatric assessments. Reported correlation coefficients between the GHQ-12 and Clinical Interview Schedule, from three studies, ranged from .53 – .71, with a median coefficient of .70. Corrected for error, correlations rose to 0.81. Validity coefficients for GHQ-12 with other clinical assessment range from 71 per cent to 93 per cent (Goldberg).

### Global Job Satisfaction

A global measure of job satisfaction was used. The participants were asked to respond on a 5- point Likert scale, ranging from 0 = strongly disagree to 5 = strongly agree, to the following statement, "Considering all things I am overall satisfied with my job."

### Global Measure of Performance.

A global measure of job performance was included in Questionnaire One. The participants were asked to respond on a five point Likert Scale, ranging from 0 = strongly disagree to 5 = strongly agree, to the following statement, " Considering all aspects of my work I am a high performer".

### Externally Rated Performance.

To assess the performance of the participant a performance questionnaire was designed. The performance questionnaire used the Helping and Voice Extra-Role Behaviors Scale (Van Dyne & LePine, 1998), 15 statements drawn from performance assessment forms used by some centres, and a global performance question.

The Helping and Voice Extra-Role Behaviors Scale was designed to assess two aspects of extra-role behavior, helping and voice, as well as in-role behaviour. Helping is defined as 'promotive behavior that emphasizes small acts of consideration' and voice is defined as 'promotive behavior that emphasizes expression of constructive challenge intended to improve rather than merely criticize' (Van Dyne & LePine, 1998, p. 109). Support for the convergent, discriminant, and predictive validity of this reasonably new measure is growing as research using the measures continues. Cronbach alpha reliabilities range from .85 to .97, and test-retest reliabilities, over a six month time period, range from .52 to .72.

The 15 statements, drawn from performance assessment forms provided by five centres, covered two broad categories. The first category of statements related to skills expected, for example, "This particular co-worker is able to remain alert to the total group of children even when interacting with an individual child or small group". The second category of statements related to affective attributes, for example, "This particular co-workers is energetic" and, "This co-worker relates positively and confidently with parents". The global performance statement was, "Considering all aspects of work the participant is a high performer".

The co-worker were asked to respond on a seven point Likert Scale, ranging from 1 = strongly disagree to 7 = strongly agree, to the 31 statements. The Likert Scale had a behavioural definition, for example 5, "The work related behaviour is occasionally observed". No items were reversed scored.

#### Demographic Information.

Two criteria were established for the inclusion of demographic variables. The first criteria related to gathering sufficient information to describe the participants. The second criteria related to collecting demographic data which had been identified in the literature as possibly influencing aspects of work related attitudes and behaviour, or mediating the relationship between personality and work related attitudes and behaviours. The main demographic variables included: years of experience; level of training; age; wage rates; reasons for choosing this career option, and if the participant would make the same choice again.

#### Analyses.

The performance statements, Questionnaire 2, were factor analysed, using principal components analysis and varimax rotation procedures, in order to establish a multi-dimensional performance measure.

The analyses used in this study included both descriptive and inferential statistics.

Descriptive statistics were used to summarize the data in terms of the variables used in this study. Inferential statistics, namely independent-sample t-tests and ANOVAs were used to identify if differences in variables at the sub-group level are produced by random or chance factors. Pearson product-moment coefficients were computed to determine the degree of relationship between the variables.

A series of multiple regression analysis were performed to investigate how well various aspects of personality were able to predict work-related attitudes and behaviour.

## CHAPTER SIX

### Results

As questionnaires were returned, data was entered into a data file using an Excel spreadsheet. Initial exploratory data analysis was executed before data was transferred to the Statistical Package for Social Sciences (SPSS) software package. Data entry was checked.

Data, in Questionnaire 1, was assessed for missing values. If 60% of values for a scale were present, the mean of the existing data was used to replace the missing value (Tabachnick & Fidell, 1989). Where participants had not provided information, or more than 60% of values for a scale were missing, the scale was not used for that case. Further exploratory data analysis was performed using the SPSS software package. Using summary statistics, frequencies for demographic variables were checked for the presence of idiosyncratic data. Quantitative variables were assessed using summary statistics explore option. Box-plots and stem-and-leaf plots were used to identify case outliers and assess the distribution of data.

Macan, Trusty and Timble (1996) had recommended that the statements related to internal and external dimensions of the Modified Work Locus of Control Scale be checked to ensure the data is normally distribute. Concerns have been expressed by a number of researchers (e.g. Gurin, Lao & Beattie, 1969, Levenson, 1981) that specific characteristics of a sample may result in the emergence of a two dimension scale. Stem-and-leaf plots for internal and external statements showed normal distribution.



## Factor Structure of Performance

The thirty-two items from the performance measure (Questionnaire 2) were initially analyzed using a principal component extraction. Cases used for factor analysis had no missing data ( $N = 327$ ). The principal-component analysis yielded four factors having eigen values greater than 1.00 and accounting for 63.5% of the total variance. The eigen value for the first factor was substantial (15.54) accounting for 48.6% of the total variance. These results suggest the possibility of one general underlying performance factor and would support the use of a total performance score that is the sum of the performance items.

However, to further explore the factor structure of the performance measure, the thirty-two items were analyzed using unweighted least squares factor analysis with a varimax rotation in order to maximize the within-factor variance on the squared loadings (Everitt, 1996). The rotated solution yielded four factors. Values loading on not more than one factor and items loading on less than 0.50 were eliminated. Twenty-five of the initial 32 items were retained. The first factor accounted for 47% of the variance, the other three factors accounting for 9% of the variance. The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy was 0.96.

Four clear factors emerged from the factor analysis. The first factor consisted of twelve items; the second of six, the third of four, and the fourth factor consisted of three items. A summary of the rotated factor matrix, the item-total correlations, and the item means are presented in Table 2.

The first factor, labeled Voice/Communication, has factor loadings ranging from 0.75 to 0.52. The focus of the items in this factor relates to the person being informed, articulate, and using their knowledge for the benefit of the centre. The second factor, labeled Role, has factor loadings ranging from 0.76 to 0.53. The focus of the items relates to the person performing their role as an early childhood educator and care provider. The third factor, labeled Interaction with Children, has factor loadings ranging from 0.67 to 0.51. The focus is on the person's observed characteristics, traditionally associated with early childhood educators and care providers. The final factor, labeled

Table 2. Rotated Factor Loading Matrix, Item Means and Standard Deviations, and Variable Cronbach Alphas for the Performance Measure.

Performance Measures		I	II	III	IV	M	SD	Cronbach Alphas
I	<i>Voice / Communication</i>							0.94
24	Keeps well informed about issues where opinion might be useful to the centre	.75				6.17	0.99	
20	Articulates clearly knowledge of centres aims, methods and philosophy	.71				5.76	1.34	
28	Speaks up and encourages others to get involved in issues that effect the centre	.71				6.24	0.91	
12	Develops and makes recommendations for the benefit of the centre	.71				6.15	1.03	
13	Keeps abreast with emerging trends in the field	.71				6.10	1.08	
15	Demonstrates knowledge about the meaning of specific activities at the centre	.67				5.84	1.20	
6	Speaks up with ideas for new projects/activities	.63				6.00	1.12	
21	Gets involved in issues that effect the quality of working life at the centre	.63				6.04	1.06	
26	Helps others in the centre learn about their work	.58				6.10	1.03	
32	Communicates opinions even if others disagree	.57				6.12	1.12	
7	Helps orient new employees	.54				5.78	1.28	
3	Able to maintain a well balanced, developmentally appropriate programme	.52				5.98	1.12	
II	<i>Role</i>							0.91
4	Fulfills responsibilities specified in job description		.76			6.40	.90	
14	Performs tasks that are expected		.71			6.46	.82	
25	Meets performance expectations		.70			6.31	.96	
27	Adequately completes responsibilities		.69			6.43	.85	
8	Can follow directions		.63			6.42	.88	
17	Remains controlled in difficult or trying situations		.53			6.17	1.01	
III	<i>Interaction with children</i>							0.83
22	Known for their warm and responsive interactions			.67		6.11	.96	
18	Is actively involved with the children			.60		6.46	.84	
31	Is enthusiastic about the influence they can have on a child's life			.59		6.39	.91	
5	Is energetic			.51		6.24	.98	
V	<i>Helping Behaviours</i>							0.78
23	Gets involved for the benefit of the centre				.65	6.13	1.19	
1	Volunteers to do things for the centre				.61	6.21	1.10	
10	Attends functions that help the centre				.51	6.25	.98	
Percentage of variance explained.		47.3%	6.0%	2.9%	2.2%			

Helping Behaviour has factor loadings ranging from 0.65 to 0.51. The focus being on behaviours that benefits the centre.

Table 3.  
Means, Standard Deviations, Alpha Reliabilities and Pearson Product-Moment Correlations for Performance Variables

Measure	M	SD	$\alpha$	1	2	3	4	5	6
n				335	340	340	340	340	340
1 Global Job Performance	6.48	0.9		-					
2 Voice Communication	72.5	9.8	.93	0.61	-				
3 Role	38.3	4.2	.89	0.75	0.64	-			
4 Interaction with children	25.1	3.1	.81	0.70	0.61	0.73	-		
5 Helping Behaviours	18.6	2.5	.71	0.54	0.64	0.61	0.57	-	
6 Total Performance	154.2	17.4	.75	0.52	0.65	0.58	0.55	0.77	-

$p < 0.01$  for all correlations  
1 = single item measure

After completing the factor analysis and establishing the performance dimensions, the following items were deleted from the file: 2, 9, 11, 16, 19, 29, and 30. Missing values were then computed for Questionnaire 2's that had a match to Questionnaire 1. (Original factor analysis of scale had been carried out on only complete data sets). Means, standard deviations, Cronbach alpha's and Pearson product-moment correlations between the performance dimensions are presented in Table 3. The matched set of cases, Questionnaire 1 and 2, was  $n = 340$ .

As can be seen in Table 3, correlations between the five performance variables are strong. All performance dimensions are negatively skewed: voice = -1.4; helping = -1.4; Interaction = -1.8; and Role -1.9.

The factor scores were saved as variables. These variables were used to establish three performance groups. These groups being high performers, moderate performers, and low performers. The high performance scored the maximum possible on all, or three of the four performance variables. The low performers were scoring the maximum possible on only or none of the variables. The moderate performers scored the maximum possible on two of the four variables.

### Descriptive Statistics for the Personality Measures

Means and standard deviations were computed for the NEO PI-R scale. They are presented in Table 4. Table 4 also presents previously published descriptive statistics for the NEO PI-R as reported by Costa and McCrae (1996) and Costa, McCrae, & Dye (1991). The results were similar although there were some notable differences. Cronbach alphas for the domain scales were lower but similar for the facet scales of agreeableness and conscientiousness. Comparison of Cronbach alphas for the other facet scales shows mixed results.

The mean scores for the domain scales, in this sample of early childhood educators and care providers and previous studies, were similar for neuroticism and conscientiousness, but slightly higher for extraversion, openness, and agreeableness. The present sample being more open (+ 7.3), slightly more extraverted (+ 4), and slightly more agreeable (+1.5) than the normative sample of women reported by Costa and McCrae (1992). Within the facet scales means scores showed similar trends, with extraversion and openness facets having slightly higher means on most of the scales.

Figure 1 profiles the mean scores of the five factors and the thirty facet scales. The profile results are compared to a normative sample of 500 women (Costa & McCrae, 1992). The mean scores for the normative sample of women established the average scores therefore, their profile is flat.

Table 4

Comparison of Published and Obtained Means, Standard Deviations (women) and Reliability Coefficient for the NEO-PI-R Form S.

NEO-PI-R Scale	Published Mean <sub>1</sub>	SD <sub>1</sub>	Reliability <sub>2</sub> $\alpha$	Obtained Mean	SD	Reliability $\alpha$	N
<b>Domains</b>							
N: Neuroticism	83.1	21.7	.92	83.5	19.6	.84	416
E: Extraversion	110.3	18.4	.89	114.3	17.8	.75	416
O: Openness	111.0	17.2	.87	118.3	22.9	.75	416
A: Agreeableness	128.5	14.4	.86	130.0	14.7	.75	416
C: Conscientiousness	122.7	17.8	.90	121.8	17.0	.81	416
<b>Neuroticism facets</b>							
N1: Anxiety	15.4	5.4	.78	15.5	4.7	.77	416
N2: Angry Hostility	12.6	4.8	.75	11.9	4.2	.71	415
N3: Depression	12.9	5.6	.81	13.5	5.1	.79	416
N4: Self-consciousness	15.0	4.5	.68	15.6	4.5	.70	416
N5: Impulsiveness	16.3	4.6	.70	16.7	3.9	.61	415
N6: Vulnerability	10.9	4.0	.77	10.3	3.9	.75	416
<b>Extraversion facets</b>							
E1: Warmth	23.6	3.8	.73	23.9	3.5	.71	416
E2: Gregariousness	17.0	4.7	.72	18.0	5.0	.78	416
E3: Assertiveness	15.4	4.8	.77	16.5	4.8	.78	416
E4: Activity	17.8	4.4	.63	17.7	4.1	.66	416
E5: Excitement Seeking	15.7	5.1	.65	16.3	4.6	.62	415
E6: Positive Emotions	20.8	4.5	.73	21.8	4.3	.77	416
<b>Openness facets</b>							
O1: Fantasy	16.2	5.0	.76	18.0	4.3	.71	415
O2: Aesthetics	18.5	5.1	.76	19.5	5.0	.77	415
O3: Feelings	20.8	4.1	.66	22.2	3.5	.65	414
O4: Actions	16.8	3.6	.58	17.5	3.5	.52	415
O5: Ideas	18.2	5.0	.80	18.5	4.8	.77	415
O6: Values	20.5	3.8	.67	21.7	3.6	.64	415
<b>Agreeableness facets</b>							
A1: Trust	21.7	4.0	.79	21.3	3.8	.75	415
A2: Straightforwardness	22.2	4.3	.71	22.1	3.9	.64	415
A3: Altruism	24.3	3.2	.75	24.2	3.2	.70	416
A4: Compliance	19.6	4.1	.59	20.0	4.1	.67	416
A5: Modesty	19.7	3.8	.67	20.3	3.9	.67	416
A6: Tender-Mindedness	21.0	3.1	.56	22.0	3.1	.50	415
<b>Conscientiousness facets</b>							
C1: Competence	21.8	3.5	.67	22.0	3.3	.64	415
C2: Order	19.1	4.2	.66	18.3	4.4	.71	416
C3: Dutifulness	23.2	3.8	.62	23.3	3.5	.60	415
C4: Achievement Striving	19.6	3.9	.67	19.4	4.0	.67	414
C5: Self-discipline	21.7	4.4	.75	20.8	4.3	.76	416
C6: Deliberation	17.3	4.3	.71	18.0	3.9	.70	416

Note. <sub>1</sub>Costa & McCrae, Ns 500 women.

<sub>2</sub> Adapted from Costa & McCrae, & Dye, 1991, and Costa & McCrae, in press, Ns = 1,539

Adapted From NEO PI-R: Professional manual, revised NEO personality inventory (NEO PI-R) and NEO five-factor inventory (NEO-FFI) (ps.44 & 75), by P.T. Costa & R.R. McCrae, 1985, Florida: Psychological Assessment Resources, Inc.

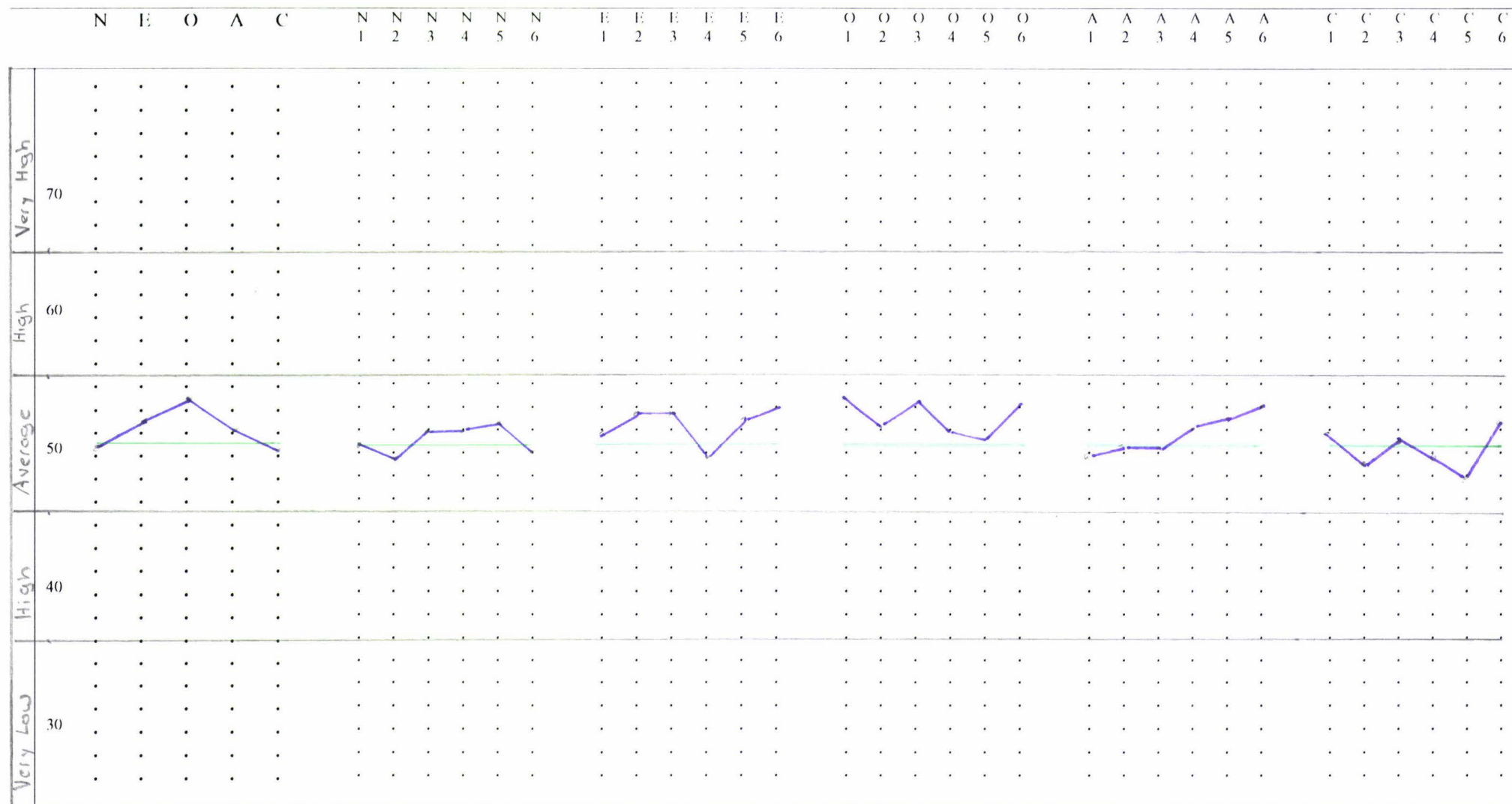


Figure 1. Mean NEO PI-R Forms S profiles of early childhood educators and care providers (— line) and random sample of 500 women<sup>1</sup> (— line).

Note. <sup>1</sup>. Costa & McCrae, *Ns* 500 women.

Adapted From NEO PI-R: Professional manual, revised NEO personality inventory (NEO PI-R) and NEO five-factor inventory (NEO-FFI) (ps.44 & 75), by P.T. Costa & R.R. McCrae, 1985, Florida: Psychological Assessment Resources, Inc.

Single Trait Personality Measures

The mean, standard deviation, and Cronbach alpha reliabilities for the Modified Work Locus of Control Scale and General Work Self Efficacy Scale were computed and are presented in Table 5. Internal consistency for both measures are above the recommended reliability coefficient of .6 recommended by Nunnally (1978).

Table 5. Descriptive Statistics and Alpha Co-efficient for the Modified Work Locus of Control and General Work Self-efficacy Scales

Measures	n	Possible Min	Range Max	Mean	Median	Mode	SD	Reliability $\alpha$
Modified Work Locus of Control	411	20	100	76.3	77.0	77.0	7.4	.81
General Work Self-efficacy	412	12	60	47.9	48.0	48.0	4.3	.79

In terms of the modified work locus of control, the scores for median and the mode were 77, suggesting overall participants had internal locus of control. Similarly with general work self-efficacy, the scores for the median and the mode were 48, indicating that overall participants had a high level of general work self-efficacy.

Inferential Statistics for the Personality Measures

A number of subgroups exist within the sample. Descriptive statistics were computed to assess the means and standard deviations of the personality variables: Modified work locus of control; general work self-efficacy; and the five-factors of personality across different subgroups. The means and standard deviations of the subgroups are reported in Table 6. Independent –samples *t* test was conducted to evaluate the significance of the variations in the observed means.

Concerning the subgroup ‘gender’ differences in means are seen on all measures. Significant differences were found in the conscientiousness domain,  $t(400) = 2.08, p = .04$ . In this sample difference in the means suggests males ( $M = 107.33, SD = 16.19$ ) are



less conscientious than females ( $M = 112.76$ ,  $SD = 16.98$ ). There may be a lack of power associated with the test due to the small sample size ( $n = 6$ ), therefore, the results should be interpreted with caution.

Significant differences were found for the sub-groups part-time and full-time workers on work locus of control,  $t(407) = -1.96$ ,  $p = .05$  and general work self-efficacy,  $t(408) = -3.21$ ,  $p = .001$ . Results indicate that part-time workers have a lower level of work locus of control ( $M = 74.95$ ,  $SD = 6.32$ ) and general work self-efficacy ( $M = 46.58$ ,  $SD = 4.32$ ), than those that work full-time ( $M = 76.71$ ,  $SD = 7.60$ ) ( $M = 48.23$ ,  $SD = 4.20$ ) respectively. No significant group differences were found for the domains of neuroticism, agreeableness, and openness. Differences in extraversion and conscientiousness were not significant at  $p = .05$ , but were at  $p = .10$ .

Independent  $t$ -samples  $t$  tests were conducted to evaluate the significance of the variations in the observed means at the facet levels of the domains of extraversion and conscientiousness. Significant differences were found on the following facets:

Assertiveness,  $t(411) = -2.183$ ,  $p = .03$ ; competence,  $t(411) = -3.271$ ,  $p = .001$ ; achievement striving,  $t(411) = -2.349$ ,  $p = .019$ ; and self-discipline,  $t(411) = -2.535$ ,  $p = .012$ . Results indicated that part-time workers have a lower level of assertiveness, ( $M = 15.61$ ,  $SD = 4.33$ ); competence, ( $M = 20.87$ ,  $SD = 3.55$ ); achievement striving, ( $M = 18.48$ ,  $SD = 3.82$ ); and self-discipline, ( $M = 19.74$ ,  $SD = 4.27$ ) than those working full-time ( $M = 16.89$ ,  $SD = 4.92$ ) ( $M = 22.18$ ,  $SD = 3.23$ ) ( $M = 19.60$ ,  $SD = 3.97$ ) ( $M = 21.06$ ,  $SD = 4.29$ ), respectively.

Significant differences were found in relation to the position held in the centre (supervisor or person-in-charge and non-supervisor). Conscientiousness,  $t(406) = 2.29$ ,  $p = .022$ ; modified work locus of control,  $t(402) = 5.75$ ,  $p = .001$ ; and general work self-efficacy,  $t(403) = 5.17$ ,  $p = .001$ . Results indicate that supervisors are more conscientious ( $M = 124.11$ ,  $SD = 17.06$ ) compared with non-supervisors ( $M = 120.14$ ,  $SD = 17.10$ ); have a higher work locus of control ( $M = 78.85$ ,  $SD = 7.14$ ) compared to non-supervisors ( $M = 74.68$ ,  $SD = 7.08$ ); and have a higher level of general work self-efficacy ( $M = 49.17$ ,  $SD = 4.35$ ) than non-supervisors ( $M = 47.00$ ,  $SD = 4.01$ ).

Table 6. Means and Standard Deviations Across Gender, Working hours, Work Position, Centre License, and the Age Group working with for personality measures

Scales		Gender Female	Male	Work Part Time	Full Time	Work Position Super- visor		Centre License Sessional		Age group working with Under Twos		
							Not	Full Day		Over Two's	Mixed Ratio	
Neuroticism	M	83.60	79.67	85.51	83.05	81.58	84.76	83.29	83.48	85.20	84.83	82.32
	SD	19.83	19.28	19.68	19.64	19.76	19.43	18.75	19.74	19.66	19.57	19.97
	n	396	6	86	327	160	248	52	355	66	145	195
Extraversion	M	114.41	113.17	111.08	115.12	115.23	113.37	117.00	113.91	112.88	115.97	113.28
	SD	17.83	20.25	18.01	17.57	17.30	17.91	17.86	17.46	15.83	19.59	16.94
	n	396	396	86	327	160	248	52	355	66	145	195
Openness	M	116.90	121.00	114.29	117.44	117.14	116.24	119.75	116.43	113.18	117.03	117.67
	SD	16.78	13.74	19.43	16.36	17.16	16.91	19.10	16.57	15.97	17.15	17.39
	n	396	6	86	327	160	248	52	355	66	145	195
Agreeableness	M	113.05	127.83	132.08	129.29	129.04	130.35	132.75	129.39	127.79	131.39	129.64
	SD	14.70	15.97	13.97	18.43	15.40	14.28	14.01	14.73	13.36	14.89	14.35
	n	396	6	86	327	160	248	52	355	66	145	195
Conscientiousness	M	112.76	107.33	118.69	122.40	124.11	120.14	120.96	121.81	118.73	123.34	121.12
	SD	16.98	16.19	17.47	16.93	17.06	17.10	18.17	17.01	18.66	16.82	16.36
	n	396	6	86	327	160	248	52	355	66	145	195
Modified Work Locus of Control	M	76.27	79.50	74.95	76.71	78.85	74.68	75.81	76.33	75.40	76.44	76.51
	SD	7.42	7.97	6.32	7.60	7.14	7.08	5.91	7.57	6.76	7.59	7.5
	n	392	6	85	324	159	245	52	351	65	144	193
General Self Efficacy	M	47.86	48.00	46.58	48.23	49.17	47.00	47.48	47.93	47.42	47.82	48.00
	SD	4.22	5.59	4.32	4.20	4.35	4.01	4.43	4.26	3.70	4.33	4.39
	n	393	6	85	325	160	245	52	352	65	144	194

Analysis at the facet level of extraversion and conscientiousness identified significant group differences. Significant differences were found on the following facets: Gregariousness  $t(407) = -2.149, p = .032$ ; assertiveness,  $t(407) = 5.815, p > .001$ ; anxiety,  $t(407) = 3.664, p > .001$ ; excitement seeking,  $t(407) = -2.213, p = .028$ ; competence,  $t(407) = 3.289, p > .001$ ; achievement striving,  $t(407) = 3.103, p = .002$ ; and self-discipline,  $t(407) = 1.922, p = .055$ . Results indicated that supervisors have a lower level of gregariousness, ( $M = 17.50, SD = 5.0$ ) and excitement seeking, ( $M = 15.64, SD = 4.56$ ); and a higher level of assertiveness, ( $M = 18.24, SD = 4.5$ ); anxiety, ( $M = 18.54, SD = 4.34$ ); competence, ( $M = 22.55, SD = 3.10$ ); achievement striving, ( $M = 20.12, SD = 4.01$ ); and self-discipline, ( $M = 21.29, SD = 4.27$ ) then those that are not supervisors ( $M = 18.0, SD = 5.06$ ) ( $M = 16.67, SD = 4.61$ ) ( $M = 15.51, SD = 4.65$ ) ( $M = 17.02, SD = 3.92$ ) ( $M = 21.45, SD = 3.42$ ) ( $M = 18.88, SD = 3.90$ ) ( $M = 20.45, SD = 4.35$ ), respectively.

Independent-samples  $t$  tests were also carried out to evaluate whether the type of centre in which the participant worked e.g. sessional or full day care, was related to scores on various measures. No significant differences in means of personality measures were identified. Analysis was not conducted at the facet level of the five-factors of personality.

Small variances in means can be observed between the participants who work with different age ranges of children. A one-way analysis of variance was conducted to evaluate the relationships between the personality measures and the age group of the children participants worked with. No significant differences in the means of the personality measures were identified. Analysis was not conducted at the facet level of the five-factors of personality.

#### Descriptive Statistics for Self-rated Outcome Measures.

Descriptive statistics were computed for the self-rated outcome measures, affective and continuance commitment, global measure of performance, global job satisfaction, and psychological well-being. Results are presented in Table 7. Internal consistency for all measures are above the reliability coefficient of .6 recommended by Nunnally (1978). Global

job satisfaction and self-rated performance are single measures and therefore no alpha reliabilities were computed.

In terms of affective commitment, the medium and mode scores of 29 would suggest an overall high affective commitment level. Whereas, the medium and mode scores of 27 would suggest a lower level of continuance commitment. In terms of self-rated performance and global job satisfaction, the mean scores of 4 and scores with the highest frequency also 4, suggest overall high levels of job satisfaction and self-rated performance.

Table 7. Descriptive Statistics and Alpha Co-efficient for Outcome Measures.

Measures	n	Possible Min	Range Max	Mean	Medium	Mode	SD	Reliability $\alpha$
<b>Self-Rated Outcome Measures</b>								
Affective Commitment	413	8	40	29.0	29.00	28.0	4.8	.74
Continuance Commitment	411	9	45	26.5	27.0	27.0	5.5	.73
Self-rated Performance	411	1	5	4.0	4.0	4.0	.6	
Global Job Satisfaction	411	1	5	4.2	4.0	4.0	.8	
Psychological well-being <sup>†</sup>	416	0	36	9.1	8.0	6.0	4.4	.83

<sup>†</sup> = Scored on the Likert Scale 0 –3

The means and standard deviation across gender, working hours, work position, centre license and the age group with which participants work was computed and are reported in Table 8. Variations in the means are observed between different subgroup. To evaluate if the differences are significant independent-samples *t* tests were conducted.

Inferential Statistics for Self-rated Outcome Measures.

Independent-samples *t* tests were conducted to evaluate the significance of the variations in the means observed between the various sub-groups for self-rated outcomes affective and continuance commitment, global job satisfaction, global job performance and psychological well-being. Independent-sample *t* tests results showed no significant differences in means for the following subgroups: gender and age group with which you work.

Table 8. Means and Standard Deviations Across Gender, Working hours, Work Position, Centre License, and the Age Group working with for outcome measures.

Scales		Gender	Male	Work	Full	Work Position		Centre License		Age group working with		
		Female		Part		Time	Super-	Not	Sessional	Full Day	Under	Over
measures.												
Self Rated Measures												
Affective Commitment	M	28.94	29.33	28.07	29.24	30.85	27.80	28.65	29.05	28.60	29.03	29.06
	SD	4.74	3.20	4.86	4.71	4.43	4.57	4.00	4.85	4.25	4.53	5.12
	n	394	6	86	325	160	246	52	353	65	144	195
Continuance Commitment	M	26.56	24.50	25.42	26.76	26.92	26.21	24.90	26.75	26.26	26.66	26.38
	SD	5.54	3.83	5.04	5.58	5.66	5.32	5.30	5.48	5.21	5.76	5.41
	n	392	6	86	323	158	246	52	351	65	144	193
Global Performance	M	3.97	3.67	3.78	4.02	4.09	3.89	3.90	3.99	3.92	3.95	3.96
	SD	.61	.82	.62	.61	.67	.57	.66	.60	.61	.64	.62
	n	395	6	85	327	160	247	52	354	145	194	405
Global Job Satisfaction	M	4.21	4.00	4.13	4.23	4.36	4.11	4.21	4.21	4.20	4.24	4.20
	SD	.82	1.10	.82	.82	.75	.84	.61	.84	.78	.86	.78
	n	393	6	86	324	160	245	52	352	64	144	195
Psychological Well-being	M	9.19	7.33	9.20	9.13	9.38	9.02	8.83	9.16	8.83	9.05	9.34
	SD	4.38	3.38	3.63	4.50	4.79	4.04	4.57	4.23	3.86	4.50	4.41
	n	396	6	86	327	160	248	52	355	66	145	195

Significant differences in affective and continuance commitment were found between full-time and part-time workers. Part-time workers report a lower mean level of affective commitment,  $t(409) = -2.04, p = .04$  and continuance commitment,  $t(407) = -2.02, p = .04$ . Part-time employees having lower mean levels of affective ( $M = 28.07, SD = 4.86$ ) and continuance commitment ( $M = 25.42, SD = 5.04$ ) than full-time employees ( $M = 29.24, SD = 4.71$ ) ( $M = 26.76, SD = 5.58$ ).

Supervisors reported a higher mean level of affective commitment,  $t(404) = 6.65, p = .001, (M = 30.85, SD = 4.43)$  than did non-supervisors ( $M = 27.80, SD = 4.57$ ). Participants working in sessional centres reported higher levels of continuance commitment,  $t(401) = 2.28, p = .02 (M = 26.75, SD = 5.48)$  than did participants working in centres licensed as full-day ( $M = 24.90, SD = 5.30$ ).

#### Inferential Statistics for Performance.

One-way analyses of variance were conducted to evaluate the relationship between seven personality variables (the five domains of the NEO PI-R, work locus of control, and general work self-efficacy) and the three performance groups established (high, moderate and low). Two of the seven personality variables indicated significant relationships with the performance groups.

There was a significant difference in the NEO PI-R dimension agreeableness across the performance groups  $F(2,302) 4.81, p = .001$ . The strength of the relationship between agreeableness and the performance group, as assessed by  $\eta^2$ , was 80 percent, with the personality facet agreeableness accounting for three percent of the variance of the dependent variable.

Follow-up tests were conducted to evaluate pairwise differences among the means. Because the variances among the three groups ranged from 126.70 to 132.45 it was not assumed that there was equal variance among the three groups. A post hoc comparison using the Dunnett's C test was executed. The results are reported in Table 9. There were significant differences in the means in the performance groups. High performers were more agreeable than

moderate and low performers. There was no significant difference in the means between the moderate and low performers.

A one-way analysis of variance conducted to evaluated the relationship between the work locus of control and the performance groups was significant  $F(2,300) 3.369, p = .001$ . The strength of the relationship between work locus of control and the performance group, as assessed by  $\eta^2$ , was 63 percent, with the work locus of control, accounting for two percent of the variance of the dependent variable.

Table 9  
Differences Among Groups on Changes in the Level of Agreeableness and Work Locus of Control Across the Three Performance Groups.

	Mean	SD	Medium Performers	Low Performers
<b>Agreeableness</b>				
High performers	134.45	13.55	*	*
Medium Performers	127.73	15.90		N/S
Low Performers	126.70	14.90		
<b>Work Locus of Control</b>				
High performers	77.53	6.76	N/S	N/S
Medium Performers	75.98	7.25		N/S
Low Performers	74.88	7.64		

Note: N/S indicates non-significant differences between pairs of means, while an asterisk (\*) indicates significance using the Dunnett’s C test.

Follow-up tests were conducted to evaluate pairwise differences among the means. As in the previous follow-up test, a post hoc comparison using the Dunnett’s C test was executed. The results are reported in Table 9. There was no significant difference in the means between the groups.

### Outcome Variables and Relationship to Demographic Variables.

A series of one-way analysis of variance were conducted to evaluate the relationship between outcome variables; affective and continuance commitment, self-rated performance, job satisfaction, psychological well-being, and externally rated performance and demographic variables; age, marital status, years of experience, and level of qualification. No significant differences in the means on the outcome variables were identified.



Psychological Well-being.

Four hundred and sixteen participants completed the GHQ-12. A Likert scale (0-3) was used to score the GHQ-12. The minimum score possible was zero with the maximum score possible being 36. The obtained mean score was 9.14 with a standard deviation of 4.35 (see Table 10). Table 10 shows the distribution of scores. Using a cut-off point of 11/12, the threshold morbidity (n = 123) was 29.6%. The GHQ-12 was also scored using the recommended 0/1 scale (Goldberg & Williams, 1988). Using the customary 1/2 cut-off point, the threshold morbidity (n = 103) was 24.7%.

Table 10  
Distribution and Frequency of Scores on the General Health Questionnaire -12

Question	n		0	1	2	3
Been able to concentrate on whatever you're doing?	415	Frequency	31	339	41	4
		Percentage	7.5%	81.7%	9.9%	1%
Lost much sleep over worry?	415	Frequency	149	197	62	7
		Percentage	35.9%	47.5%	14.9%	1.7%
Felt that you are playing a useful part in things?	415	Frequency	111	280	21	3
		Percentage	26.7%	67.5%	5.1%	0.7%
Felt capable of making decisions about things?	414	Frequency	84	315	14	1
		Percentage	20.3%	76.1%	3.4%	0.2%
Felt constantly under strain?	413	Frequency	105	219	81	8
		Percentage	25.2%	53.0%	19.6%	1.9%
Felt you couldn't overcome your difficulties?	414	Frequency	214	173	21	6
		Percentage	51.7%	41.7%	5.1%	1.4%
Been able to enjoy your normal day-to-day activities?	415	Frequency	65	306	41	3
		Percentage	15.7%	73.7%	9.9%	0.7%
Been able to face up to your problems?	414	Frequency	52	335	25	2
		Percentage	12.6%	80.9%	6.0%	0.5%
Been feeling unhappy and depressed?	414	Frequency	221	153	54	7
		Percentage	53.3%	32.0%	13.0%	1.7%
Been losing confidence in yourself?	415	Frequency	266	111	35	3
		Percentage	64.1%	26.7%	8.4%	0.7%
Been thinking of yourself as a worthless person?	415	Frequency	327	73	13	1
		Percentage	79.0%	17.6%	3.1%	0.2%
Been feeling reasonably happy, all things considered?	414	Frequency	78	305	29	2
		Percentage	18.8%	73.7%	7%	0.5%

Two way contingency table analyses with crosstabs were conducted to evaluate group and demographic variances in the psychological well-being. No significant variances were found.

## Correlational Analyses

Correlation coefficients were computed for personality dimensions: the five dimensions of the NEO PI-R; work locus of control; general work self-efficacy; and the outcomes variables: affective commitment; continuance commitment; global job satisfaction; self-rated global performance; psychological well-being; and the externally assessed variables: global performance and total performance. The correlations were conducted using the Pearson product-moment correlation coefficient and are reported in Table 11.

Table 11 shows significant correlations, at  $p = < 0.01$ , among all personality variables with the following exceptions. The relationship between agreeableness and openness was significant at  $p = < 0.05$  and the relationships between agreeableness and extraversion and conscientiousness and openness which were not significant. All correlations were positive except for neuroticism, which has a significant negative correlation with all personality variables.

### Self-Rated Outcomes.

There were significant correlations between the personality variables and the self-rated outcome variables, with the exception of the following. Openness was not significantly correlated with affective and continuance commitment, global performance, and psychological well-being. Agreeableness was not significantly correlated with continuance commitment, global performance, and job satisfaction. Neuroticism had a significant negative correlation with all outcome measures except for psychological well-being and continuance commitment. Continuance commitment and psychological well-being were negative correlated with all personality measures except neuroticism.

Among the self-rated outcome variables, there was a significant correlation between all measures except for psychological well-being and self-rated performance, and between continuance commitment and self-rated performance. Affective commitment had significant positive correlations with self-rated performance and job satisfaction and significant negative correlations with continuance performance and psychological well-being. There was a significant positive correlation between psychological well-being and continuance commitment. Job satisfaction has a significant negative correlations with continuance performance and a significant positive correlation with self-rated performance.

Table 11. Pearson Product-Moment Correlations Among Personality Traits and Outcome Variables.

	N	E	O	A	C	WLOC	GWSE	AC	CC	P	JS	PWB	ERP	ERGP
Neuroticism (N)	n													
Extraversion (E)	n	416												
Openness (O)	n	416	416											
Agreeableness (A)	n	416	416	416										
Conscientiousness (C)	n	416	416	416	416									
Locus of Control (WLOC)	n	411	411	411	416	411								
General Work Self-efficacy (GWSE)	n	412	412	412	412	412	411							
Affective Commitment (AC)	n	413	413	413	413	413	411	412						
Continuance Commitment (CC)	n	411	411	411	411	411	410	410	411					
Self-rated performance (P)	n	414	414	414	414	414	410	411	412	410				
Job Satisfaction (JS)	n	412	412	412	412	412	410	411	412	410	411			
Psychological well-being (PWB)	n	416	416	416	416	416	411	412	411	412	414	412		
Ext. Rated Performance (ERP)	n	340	340	340	340	340	337	338	338	337	340	337	340	
Ext. Rated Global Performance (ERGP)	n	335	335	335	335	335	332	333	333	332	335	335	332	335
* $p < 0.05$ (2 tailed)		** $p < 0.01$ (2 tailed)												

### Externally Rated Outcomes

Among the externally rated outcome variables there were significant correlations between total performance and all of the personality variables, except extraversion, but only with two of the self-rated outcome variables – affective commitment and global performance. All significant correlations were positive except for the correlations with neuroticism. The externally rated measure of global performance had significant positive correlation with the personality variable extraversion and self-efficacy and a significant negative correlation with neuroticism. There were no significant correlations between the externally rated measure of global performance and any of the self-rated outcome measures. There was a significant correlation between the externally rated global performance measure and the total performance measure.

### Regression Analysis

#### Personality as a Predictor of Work-Related Attitudes and Behaviour

A series of regression analyses were conducted to investigate how well personality can predict work related attitudes and behaviour. For ease in comparing results, some early results have been repeated. In the first stage, the five-factors of personality and the two single measures of personality are used. In the second stage, the linear combination of facets for each of the five-factors are used.

Table 12 shows the results of the first two sets of regression analyses. The first set of regression analyses was conducted using the broadband of the five factors individually. The second set of regression analyses was conducted using a linear combination of the five-factors. Except for the outcome variable, continuance commitment, the linear combination of the five-factors was a stronger predictor of the performance outcomes than any one of the domain factors in isolation. For the outcome variable, continuance commitment,

Table 12: Set 1 and 2.

Linear Regression and Adjusted R<sup>2</sup> Between the Five factors of the NEO-PI-R the Six Outcomes Variables: And the Results of a Linear Regression Analysis of the Five Factors of the NEO-PI-R on Six Performance Outcomes.

	Affective Commitment	Continuance Commitment	Self Rated Job Perform.	Global Job Satisfaction	Well- Being	Externally Rated Performance
	Beta	Beta	Beta	Beta	Beta	Beta
Neuroticism	-.118*	.205***	-.176***	-.198***	.497***	-.125*
Adjusted R <sup>2</sup>	.011*	.040***	.029***	.037***	.246***	.013*
Extraversion	.180***	-.089	.366***	.246***	-.287***	.095
Adjusted R <sup>2</sup>	.030***	.006	.132***	.058***	.080***	.006
Openness	.094	-.049	.073	.103*	-.086	.109*
Adjusted R <sup>2</sup>	.006	.000	.003	.008*	.005	.009*
Agreeableness	.122*	-.028	.051	.092	-.136**	.127*
Adjusted R <sup>2</sup>	.012*	-.002	.000	.006**	.016**	.013*
Conscientiousness	.195***	-.042	.392***	.123*	-.226***	.137**
Adjusted R <sup>2</sup>	.036***	-.001	.151***	.013*	.049***	.016**
<b>Five-factor Model</b>						
Neuroticism	.012	.227***	.061	-.117*	.456***	-.049
Extraversion	.131*	-.026	.332***	.208***	-.160**	.013
Openness	.019	-.015	-.083	-.010	.043	.083
Agreeableness	.077	.025	-.033	.044	-.004	.081
Conscientiousness	.144**	.058	.341***	.005	.014	.086
R	.248	.215	.486	.279	.516	.197
R <sup>2</sup>	.062	.046	.237	.078	.266	.039
Adjusted R <sup>2</sup>	.050***	.035**	.227***	.067***	.257***	.024*

Note: \* Significant at the  $p < .05$  level      \*\* Significant at the  $p < .01$  level      \*\*\* Significant at the  $p < .001$  level

the domain factor neuroticism was the only one of the five factors that was significantly related.

Table 13 shows the results from the third and forth sets of regression analyses. The third set of regression analyses was conducted using the single personality traits, work locus of control and general work self-efficacy. The forth set of regression analyses were conducted using the linear combination of work locus of control and general self-efficacy to predict the performance outcomes. The linear combination of the single traits, work locus on control and general work self-efficacy, was a stronger predictor of performance for affective commitment, continuance commitment, psychological well-being, and externally rated total performance then either of the single measures. However, the variance explained by the linear combination of the two variables was no greater than 1% of that which could be explained by a single personality trait.

The linear combination of work locus of control and general work self-efficacy was a significant predictor of affective commitment,  $R^2 = .19$ ,  $F(2,408) = 49.290$ , continuance commitment,  $R^2 = .08$ ,  $F(2,407) = 19.754$ , self-rated performance,  $R^2 = .21$ ,  $F(2,407) = 53.942$ ; global job satisfaction,  $R^2 = .20$ ,  $F(2,407) = 53.354$ ; psychological well-being,  $R^2 = .07$ ,  $F(2,408) = 16.567$ ; and externally rated performance  $R^2 = .19$ ,  $F(2,334) = 7.751$ .

Table 13. Set 3 & 4.

Linear Regression and Adjusted  $R^2$  Between the Single Personality Traits, General Work Self-Efficacy and Work Locus of Control and the Six Outcomes Variables: Results of a Linear Regression Analysis of the Single Personality Traits on Six Performance Outcomes.

	Affective Commitment	Continuance Commitment	Self Rated Global Job Perform.	Global Job Satisfaction	Well- Being	Externally Rated Total Performance
	Beta	Beta	Beta	Beta	Beta	Beta
<b>General Work Self-efficacy</b>						
General Work Self-efficacy	.355**	-.115*	.457***	.272***	-.248***	.182**
Adjusted $R^2$	.124***	.011*	.207***	.072***	.059***	.030**
<b>Work Locus of Control</b>						
Work Locus of Control	.429***	-.284***	.314***	.455***	-.250***	.198***
Adjusted $R^2$	.182***	.078***	.097***	.205***	.060***	.036***
<b>General Work Self efficacy and Work Locus of Control</b>						
General Work Self Efficacy	.134*	.118	.436***	-.038	-.148*	.093
Work Locus of Control	.343***	-.360***	.032	.479***	-.154*	.138*
R	.441	.297	.458	.456	.274	.211
$R^2$	.195	.088	.210	.208	.075	.044
Adjusted $R^2$	.191***	.084***	.206***	.204***	.071***	.039**
Note: * Significant at the $p < .05$ level    ** Significant at the $p < .01$ level    *** Significant at the $p < .001$ level						

In the second stage, the facets of each the five-factors where used in linear regression analysis. This analysis was done to determine if linear combination of facets was better able to explain the variance in the outcome measures.

The linear combination of the facet scores were generally better predictors of the outcome variables then the domain scores of each of the five factors. Except for the following, where the domain factor was a better predictor and the linear combination of facets failed to make a significant prediction.

Regression Table 14

Results of Five Linear Regression Analysis of the Facet Scales of the Five Factor Domains – Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness on the Six Outcome Variables.

	Affective Commitment	Continuance Commitment	Self Rated Global Job Perform.	Global Job Satisfaction	Well- Being	Externally Rated Total Performance
	Beta	Beta	Beta	Beta	Beta	Beta
<b>Neuroticism Facets</b>						
Anxiety	-.037	.007	.010	.047	.004	.172*
Angry Hostility	-.002	-.016	.133*	-.100	.043	-.112
Depression	-.079	.139	-.170*	-.179*	.378***	-.192*
Self-consciousness	.037	.029	-.009	-.023	.116*	.052
Impulsivity	.087	.035	.020	.112*	.011	.005
Vulnerability	-.123	.063	-.171*	-.073	.055	-.083
R	.180	.217	.265	.261	.529	.228
R <sup>2</sup>	.032	.047	.070	.068	.279	.052
Adjusted R <sup>2</sup>	.018*	.033**	.057***	.055***	.269***	.035***
<b>Extraversion Facets</b>						
Warmth	.125	.061	.096	-.038	-.024	.037
Gregariousness	-.001	-.076	-.103	.150**	-.154**	-.026
Assertiveness	.136*	-.096	.211***	.129*	-.184**	.268***
Activity	.007	.012	.219**	.030	.096	-.078
Excitement-seeking	-.103	-.034	.105**	-.110*	.093	-.063
Positive Emotions	.087	-.006	.042	.189**	-.230***	.003
R	.255	.132	.439	.306	-.370	.244
R <sup>2</sup>	.065	.018	.193	.094	.137	.060
Adjusted R <sup>2</sup>	.051***	.003	.181***	.080***	.124***	.043**
<b>Openness Facets</b>						
Fantasy	.038	-.025	.034	.028	.064	.055
Aesthetics	-.123	-.019	-.163*	-.041	-.148*	-.105
Feelings	.095	.236**	.052	-.030	.244**	-.077
Actions	-.245**	-.316***	-.105	-.123	-.185**	-.116
Ideas	.230**	.072	.160*	-.073	-.025	.125
Values	.043	-.117	.133*	.179**	-.147*	.119
R	.204	.251	.178	.164	-.233	.157
R <sup>2</sup>	.042	.063	.032	.027	.054	.025
Adjusted R <sup>2</sup>	.028**	.049***	.017*	.012	.041**	.007

Note \* Significant at the  $p < .05$  level    \*\* Significant at the  $p < .01$  level    \*\*\* Significant at the  $p < .001$  level



Table X – continued.

	Affective Commitment	Continuance Commitment	Self Rated Global Job Perform.	Global Job Satisfaction	Well- Being	Externally Rated Total Performance
	Beta	Beta	Beta	Beta	Beta	Beta
<b>Agreeableness</b>						
Trust	.129*	-.055	.046	.224***	-.195***	.105
Straight-forwardness	.073	.020	.070	.013	-.025	.022
Altruism	.088	.026	.236***	.116*	-.061	.091
Compliance	-.073	-.002	-.141*	-.108	-.060	-.088
Modesty	-.071	-.002	-.148**	-.083	.157**	.041
Tender-mindedness	.047	-.040	.001	.001	.004	.033
R	.211	.069	.273	.268	.277	.171
R <sup>2</sup>	.045	.005	.074	.072	.077	.029
Adjusted R <sup>2</sup>	.030**	-.010	.061***	.058***	.063***	.012
<b>Conscientiousness Facets</b>						
Competence	.039	.159*	.173**	.169**	-.204**	.195**
Order	.152*	-.036	.013	-.090	.073	.063
Dutifulness	-.034	.021	.012	.015	-.058	.034
Achievement Seeking	-.032	.126*	.335***	.069	.057	-.001
Self-discipline	-.174*	.005	.103	-.007	-.131	.005
Deliberation	.024	-.009	-.111*	.008	-.034	-.107
R	.167	.249	.501	.205	-.292	.224
R <sup>2</sup>	.028	.062	.251	.042	.085	.050
Adjusted R <sup>2</sup>	.013	.048***	.240***	.028**	.072***	.033**

Note \* Significant at the  $p < .05$  level \*\* Significant at the  $p < .01$  level \*\*\* Significant at the  $p < .001$  level

The conscientiousness factor was a stronger predictor of affective commitment than the linear combination of conscientiousness facets. The linear combination of neuroticism explained less of the variance in continuance commitment than the domain of neuroticism. Finally, the following linear combination of facets failed to explain a significant variance in the following outcome variables: Openness facets and global job satisfaction and externally rated performance; conscientiousness facets and affective commitment; and the agreeableness facets and continuance commitment and externally rated performance.

However, despite the results linear combinations of the facets scales being significant in most regressions, the explained variance is less than 10%, except for linear combination of the conscientiousness facets,  $R^2 = .24$ ,  $F(6,409) = 6.367$ , and extraversion facets,  $R^2 = .18$ ,  $F(6,407) = 16.225$  and the criterion self-rated global performance; and the neuroticism facets,  $R^2 = .25$ ,  $F(6,409) = 26.440$ , extraversion facets,  $R^2 = .12$ ,  $F(6,409) = 10.835$  and the criterion psychological well-being.

## The Moderating Effect of the Five-factors of Personality on the Relationship Between the Linear Combination of Work Locus of Control and General Work Self-efficacy and Work Related Attitudes and Behaviour: And the Moderating Effects of Commitment on the Relationship Between Personality and the Remaining Outcome Variables

Regression analysis was conducted to evaluate how well the single trait personality measures, work locus of control and general self-efficacy predicted the self-rated work attitudes and behaviour (affective commitment, continuance commitment, global job satisfaction, global job performance and psychological well-being) and the externally rated performance variable. Independent-samples *t* tests had established significant differences on the single trait items, work locus of control and general work self-efficacy for two subgroups (part-time and full-time workers, and supervisors and non-supervisors). Therefore, regression analysis was also conducted at the sub-group levels. For convenience, some results previously reported are repeated.

At the total group level the linear combination of work locus of control and general work self-efficacy was significantly related to affective commitment  $F(2,408) = 49.21, p = .001$ , continuance commitment  $F(2,407) = 19.79, p = .001$ , self rated global performance commitment  $F(2,407) = 53.53, p = .001$ ; global job satisfaction  $F(2,407) = 52.69, p = .001$  and well-being  $F(2,408) = 16.49, p = .001$ .

A second analysis was conducted to evaluate whether the NEO PI-R personality domain scores predicted work related attitudes and behaviour over and above work locus of control and general work self-efficacy scores. The results suggest that the domain measures did predict over and above the linear combination of work locus of control and general work self-efficacy on the self-rated performance variables continuance commitment  $R^2$  change = .03,  $F(7,402) = 7.35, p = .05$ , self-rated job performance  $R^2$  change = .09,  $F(5,402) = 10.15, p = .001$ , job satisfaction  $R^2$  change = .03,  $F(5,402) = 3.02, p = .01$ , and psychological well-being  $R^2$  change = .20,  $F(5,403) = 22.50, p = .001$ .

Although the direction of the relationship between commitment and job satisfaction is a source of debate (e.g. Farkas & Tetrick, 1989; Mathieu, 1991), a third analysis was conducted to evaluate whether the commitment measures predicted job satisfaction,

psychological well-being, and the externally evaluated performance measure over and above the personality measures. Results suggest that commitment measures did predict over and above the linear combination of work locus of control, self-efficacy, and the five-factors on self-rated performance  $R^2$  change = .02,  $F(9,399) = 5.883$ ,  $p = .003$ , global job satisfaction  $R^2$  change = .17,  $F(2,399) = 55.59$ ,  $p = .001$ , and psychological well-being measures  $R^2$  change = .02,  $F(2,400) = 5.65$ ,  $p = .004$ . Results are presented in Table 15.

Table 16 results demonstrate that on the sub-group level part-time work force that the linear combination of work locus of control and general work self-efficacy was significantly related to: affective and continuance commitment; self-rated performance; global job satisfaction; and psychological well-being - but not externally rated total performance. In the second analysis, conducted to evaluate whether the NEO PI-R measures predicted outcome measures over and above work locus of control and general work self-efficacy, there was a significant change in the explained variance on only one variable, psychological well-being,  $R^2$  change = .12,  $F(5,77) = 9.19$ ,  $p = 0.001$ . The results of the third analysis, the inclusion of affective and continuance commitment, demonstrated significant changes over and above the other set for self-rated performance,  $R^2$  change = .05,  $F(2,74) = 3.349$ ,  $p = 0.041$ , and global job satisfaction,  $R^2$  change = .14,  $F(2,75) = 8.94$ ,  $p = 0.001$ .

In Table 17 results demonstrate, that on the sub-group level full-time work force, that the linear combination of work locus of control and general work self-efficacy was significantly related to all outcome measures. In the second analysis, conducted to evaluate if the NEO PI-R measures predicted outcome measures over and above the single trait measures, significant changes were seen in continuance commitment  $R^2$  change = .04,  $F(5,315) = 6.71$ ,  $p = 0.02$ , self rated total performance  $R^2$  change = .09,  $F(5,315) = 19.07$ ,  $p = 0.001$ , and psychological well-being  $R^2$  change = .18,  $F(5,315) = 15.887$ ,  $p = 0.001$ . The results of the third analysis, the inclusion of the commitment variables resulted in a significant change for self-rated performance  $R^2$  change = .12,  $F(2,313) = 3.00$ ,  $p = 0.05$ , global job satisfaction  $R^2$  change = .17,  $F(2,312) = 45.678$ ,  $p = 0.001$ , and psychological well-being  $R^2$  change = .03,  $F(2,313) = 7.16$ ,  $p = 0.001$ .

Table 15.

Hierarchical Multiple Regression Analysis – Moderating Effect of the Five-factors of Personality (step 2), then the Moderating Effect of Commitment (step 3) on the Relationship Between the Linear Combination of Work Locus of Control and General Work Self-efficacy and Work Related Attitudes and Behaviour.

	Affective Step 1 <i>n</i> = 411 Beta	Commitment Step 2 Beta	Continuance Step 1 <i>n</i> = 410 Beta	Commitment Step 2 Beta	Self – Step 1 <i>n</i> = 410 Beta	Rated Step 2 Beta	Perform. Step 3 Beta
WLOC	.344***	.360***	-.361***	-.340***	.035	.076	.159**
GWSE	.132*	.102	.120	.133	.434***	.258***	.248***
NEO PI-R							
N		.068		.177		.085	.065
E		.052		-.021		.245***	.254***
O		-.056		.023		-.134**	-.143**
A		.037		.031		-.057	-.058
C		.057		.071		.237***	.232***
Aff C							-.093
Con C							.147**
R	.441	.450	.298	.337	.457	.545	.564
R Square	.194	.202	.089	.113	.209	.297	.318
Adj R Square	.190	.189	.084	.098	.205	.285	.302
Change in R Square		.008		.025		.089	.020
F	49.209***	14.611***	19.793***	7.351***	53.529***	24.254***	20.631***
F Change		.816		2.253*		10.135***	5.883**

Note: \* Significant at the *p* < .05 level      \*\* Significant at the *p* < .01 level      \*\*\* Significant at the *p* < .001 level

	Global Step 1 <i>n</i> = 410 Beta	Job Step 2 Beta	Satisfaction Step 3 Beta	Well-being Step 1 <i>n</i> = 411 Beta	Step 2 Beta	Step 3 Beta	Externally Step 1 <i>n</i> = 337 Beta	Rated Step 2 Beta	Perform. Step 3 Beta
WLOC	.479***	.482***	.282***	-.155*	-.107	-.020	.138*	.133	.140
GWSE	-.040	-.124	-.160**	-.147*	-.026	.020	.096	.035	.026
NEO PI-R									
N		-.060	-.078		.449***	.433***		-.014	-.029
E		.190***	.162**		-.163***	-.154**		-.007	-.006
O		-.080	-.050		.076	.066		.058	.060
A		.017	.003		.006	.006		.070	.068
C		-.033	-.056		.034	.031		.064	.056
Aff C			.473***			-.115**			.026
Con C			-.090**			.135**			.056
R	.454	.485	.634	.274	.526	.545	.212	.240	.248
R <sup>2</sup>	.206	.235	.402	.075	.277	.297	.045	.058	.062
Adj R <sup>2</sup>	.202	.221	.388	.070	.265	.281	.039	.038	.036
Change in R <sup>2</sup>		.029	.167		.202	.020		.013	.004
F	52.691***	17.582***	29.751***	16.489***	22.023***	18.781***	7.850***	2.877**	2.387**
F Change		3.015**	55.591***		22.495***	5.652**		.893	.688

Note: \* Significant at the *p* < .05 level      \*\* Significant at the *p* < .01 level      \*\*\* Significant at the *p* < .001 level

N= Neuroticism; E = Extraversion; O = Openness; A = Agreeableness; C = Conscientiousness  
WLOC = Work Locus of Control; GWSE = General Work Self-efficacy; Aff. C. = Affective Commitment; Con C. = Continuance Commitment.

Table 16.

Hierarchical Multiple Regression Analysis for the sub-group - **Part-time Work Force** – Moderating Effect of the Five-factors of Personality (step 2). then the Moderating Effect of Commitment (step 3) on the Relationship Between the Linear Combination of Work Locus of Control and General Work Self-efficacy and Work Related Attitudes and Behaviour.

	Affective Step 1 <i>n</i> = 86 Beta	Commit. Step 2 Beta	Continuance Step 1 <i>n</i> = 86 Beta	Commitment Step 2 Beta	Self Step 1 <i>n</i> = 86 Beta	Rated Step 2 Beta	Perform. Step 3 Beta
WLOC	.342**	.322**	-.304**	-.290**	.106	.126	.249
GWSE	.022	.008	.109*	-.084	.336**	.035	.048
NEO PI-R							
N		.155		.078		.006	.037
E		-.020		-.126		.311*	.322
O		-.103		-.094		-.044	-.084
A		.153		-.083		-.019	-.070
C		.184		.116		.244*	.278*
Aff C							-.266*
Con C							.129
R	.356	.438	.380	.410	.409	.521	.576
R Square	.127	.192	.145	.168	.167	.271	.332
Adj R Square	.105	.119	.124	.093	.147	.204	.251
Change in R Square		.066		.024		.104	.060
F	5.944**	2.618*	6.937**	2.227*	8.133**	4.043**	4.083***
F Change		1.251		.441		2.712	3.349*

Note: \* Significant at the  $p < .05$  level \*\* Significant at the  $p < .01$  level \*\*\* Significant at the  $p < .001$  level

	Global Step 1 <i>n</i> = 86 Beta	Job Step 2 Beta	Satisfaction Step 2 Beta	Step 1 <i>n</i> = 86 Beta	Well-being Step 2 Beta	Step 3 Beta	Externally Step 1 <i>n</i> = 86 Beta	Rated Step 2 Beta	Perf Step 3 Beta
WLOC	.486***	.479***	.356**	-.180	-.191	-.197	-.128	-.158	-.088
GWSE	-.069	-.150	-.151	-.133	.037	.039	.322*	-.323	.346
NEO PI-R									
N		-.024	-.089		.553***	.544***		.082	.056
E		.267*	.279*		-.299*	-.294*		-.215	-.180
O		-.263*	-.224*		.314**	.316**		.225	.203
A		.139	.079		.068	.064		.184	.202
C		-.009	-.087		.130	.119		.022	-.015
Aff C			.408**			.044			.028
Con C			-.029			.029			.272*
R	.458	.529	.647	.282	.651	.653	.265	.392	.464
R <sup>2</sup>	.209	.280	.418	.079	.423	.426	.070	.154	.215
Adj R <sup>2</sup>	.190	.214	.349	.057	.371	.357	.041	.054	.055
Change in R <sup>2</sup>		.070	.139		.344	.003		.084	.082
F	10.861***	4.275**	5.997***	3.529*	8.073***	6.183***	2.421	1.534	1.769
F Change		1.506	8.939***		9.186***	.172		1.166	2.349

Note: \* Significant at the  $p < .05$  level \*\* Significant at the  $p < .01$  level \*\*\* Significant at the  $p < .001$  level

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

WLOC = Work Locus of Control; GWSE = General Work Self-efficacy; Aff. C. = Affective Commitment; Con C. = Continuance Commitment.

Table 17.  
 Hierarchical Multiple Regression Analysis for the sub-group - **Full-time Work Force** - Moderating Effect of the Five-factors of Personality (step 2), then the Moderating Effect of Commitment (step 3) on the Relationship Between the Linear Combination of Work Locus of Control and General Work Self-efficacy and Work Related Attitudes and Behaviour.

	Affective Step 1 <i>n</i> = 327 Beta	Commitment Step 2  Beta	Continuance Step 1 <i>n</i> = 327 Beta	Commitment Step 2  Beta	Self Step 1 <i>n</i> = 327 Beta	Rated Step 2  Beta	Perform. Step 3  Beta
WLOC	.342***	.355***	-.382***	-.351***	.017	.074	.136
GWSE	.153*	.121	.152**	.159*	.444***	.280***	.265***
NEO PI-R							
N		.048		.214**		.114*	.088
E		.061		.000		.225***	.228***
O		-.026		.016		-.146**	-.150**
A		.020		.097		-.061	-.073
C		.028		.045		.249***	.244***
Aff C							-.046
Con C							.128*
R	.457	.461	.305	.360	.455	.546	.558
R Square	.209	.212	.093	.130	.207	.298	.311
Adj R Square	.204	.195	.087	.110	.202	.282	.291
Change in R Square		.004		.037		.090	.013
F	42.300***	12.178***	16.413***	6.714***	41.824***	19.076***	6.167***
F Change		.311		2.663*		4.091**	3.000*

Note: \* Significant at the *p* < .05 level      \*\* Significant at the *p* < .01 level      \*\*\* Significant at the *p* < .001 level

	Global  Step 1 <i>n</i> = 324 Beta	Job  Step 2  Beta	Satisfaction  Step 2  Beta	Well-being			Externally  Step 1 <i>n</i> = 119 Beta	Rated  Step 2  Beta	Perform.  Step 3  Beta
				Step 1 <i>n</i> = 327 Beta	Step 2  Beta	Step 3  Beta			
WLOC	.480***	.475***	.264***	-.139*	-.073	.044	.221**	.214**	.215*
GWSE	-.039	-.111	-.153*	-.166*	-.014	-.020	-.001	-.069	-.072
NEO PI-R									
N		-.065	-.066		.428***	.401***		-.046	-.050
E		.163**	.133*		-.134*	-.124*		.023	.023
O		-.021	-.006		.024	.017		.000	.000
A		.012	-.012		.003	-.010		.043	.042
C		-.035	-.044		-.020	.017		.077	.076
Aff C			.489***			-.167**			.012
Con C			-.108			.163**			.015
R	.456	.483	.638	.278	.511	.542	.220	.249	.362
R <sup>2</sup>	.208	.233	.407	.077	.261	.293	.048	.068	.131
Adj R <sup>2</sup>	.203	.216	.390	.071	.245	.273	.041	.037	.060
Change in R <sup>2</sup>		.025	.174		.184	.032		.013	.010
F	41.819***	13.639***	23.777***	13.376***	15.887***	14.693***	6.751**	2.454*	1.906*
F Change		2.083	45.678***		15.665***	7.163**		.748	.053

Note: \* Significant at the *p* < .05 level      \*\* Significant at the *p* < .01 level      \*\*\* Significant at the *p* < .001 level

N= Neuroticism; E = Extraversion; O = Openness; A = Agreeableness; C = Conscientiousness  
 WLOC = Work Locus of Control; GWSE = General Work Self-efficacy; Aff. C. = Affective Commitment; Con C. = Continuance Commitment.

Table 18 results demonstrate that on the sub-group level supervisor/person-in-charge, the linear combination of work locus of control and general work self-efficacy was significantly related to all the outcome measures except externally rated total performance. In the second analysis, conducted to evaluate whether the NEO-PI-R measures predicted outcome measures over and above work locus of control and general work self-efficacy, significant changes were seen in continuance commitment  $R^2$  change = .09,  $F(5,150) = 3.18$ ,  $p = 0.009$ , self-rated performance  $R^2$  change = .11,  $F(5,150) = 4.70$ ,  $p = 0.001$ , global job satisfaction  $R^2$  change = .07,  $F(5,150) = 2.42$ ,  $p = 0.039$ , and psychological well-being  $R^2$  change = .25,  $F(5,150) = 11.12$ ,  $p = 0.001$ . The results of the third analysis, the inclusion of affective and continuance commitment demonstrated significant changes over and above the other two sets on outcome variable – global job satisfaction,  $R^2$  change = .16,  $F(2,148) = 16.89$ ,  $p = 0.001$ , and self-rated total performance,  $R^2$  change = .03,  $F(2,148) = 53.13$ ,  $p = 0.05$ .

Table 19 results demonstrate that on the sub-group level non-supervisor the linear combination of work locus of control and general work self-efficacy was significantly related to all the outcome measures except externally rated performance. In the second stage of the analysis the inclusion of the NEO PI-R measures resulted in significant changes in self rated total performance,  $R^2$  change = .09,  $F(5,237) = 6.21$ ,  $p = 0.001$ , and psychological well-being,  $R^2$  change = .18,  $F(5,238) = 12.51$ ,  $p = 0.001$ . At the third stage, the inclusion of the commitment measures resulted in significant changes again for self rated total performance,  $R^2$  change = .02,  $F(2,235) = 4.39$ ,  $p = 0.013$ , global job satisfaction,  $R^2$  change = .19,  $F(2,235) = 14.97$ ,  $p = 0.001$  and psychological well-being  $R^2$  change = .02,  $F(2,236) = 3.67$ ,  $p = 0.027$ .

In comparing the results at sub-group level, the five-factors was able to predict 4% more of the variance in global job satisfaction in the sub-group supervisors than in non-supervisors. In addition, the five-factors were able to predict 5% more of the variance in psychological well-being in the sub-group supervisors than in non-supervisors.



Table 18.  
 Hierarchical Multiple Regression Analysis for the sub-group - **Supervisor/person-in-charge** - Moderating Effect of the Five-factors of Personality (step 2), then the Moderating Effect of Commitment (step 3) on the Relationship Between the Linear Combination of Work Locus of Control and General Work Self-efficacy and Work Related Attitudes and Behaviour.

	Affective Step 1 <i>n</i> = 157 Beta	Commitment Step 2 Beta	Continuance Step 1 <i>n</i> = 157 Beta	Commitment Step 2 Beta	Self – Step 1 <i>n</i> = 157 Beta	Rated Step 2 Beta	Perform. Step 3 Beta
WLOC	.259**	.287**	-.307**	-.254**	-.025	.023	.091
GWSE	.230*	.138	.157	.128	.427***	.223*	.209*
NEO PI-R							
N		.053		.327***		.061	.004
E		.094		.041		.220**	.220**
O		.041		.079		-.048	-.060
A		.101		.036		-.117	-.117
C		.039		.131		.304***	.283**
Aff C							-.071
Con C							.186
R	.440	.465	.244	.389	.412	.531	.558
R Square	.194	.216	.059	.150	.170	.282	.311
Adj R Square	.183	.179	.047	.110	.159	.249	.270
Change in R Square		.022		.090		.112	.029
F	18.731***	5.935***	4.896**	3.767**	15.865***	8.427***	7.436***
F Change		.852		3.178**		4.696**	3.130*

Note: \* Significant at the *p* < .05 level      \*\* Significant at the *p* < .01 level      \*\*\* Significant at the *p* < .001 level

	Global Step 1 <i>n</i> = 157 Beta	Job Step 2 Beta	Satisfaction Step 3 Beta	Well-being Step 1 <i>n</i> = 157 Beta	Step 2 Beta	Step 3 Beta	Extern Step 1 <i>n</i> = 132 Beta	Rated Step 2 Beta	Perform. Step 3 Beta
WLOC	.329**	.338**	.171	-.006	.028	.093	.181	.206	.210
GWSE	-.062	-.170	-.211*	-.259**	-.109	-.106	.062	-.053	-.043
NEO PI-R									
N		-.168	-.139		.490***	.459***		-.021	-.001
E		.190*	.154		-.144	-.137		.047	.048
O		-.140	-.145		.185*	.181*		.005	.008
A		.113	.074		-.040	.031		.107	.113
C		-.047	-.043		.037	.027		.091	.105
Aff C			.448***			-.128			-.048
Con C			-.161*			.114			-.048
R	.295	.394	.559	.263	.567	.583	.224	.269	.277
R <sup>2</sup>	.087	.155	.312	.069	.321	.340	.050	.072	.077
Adj R <sup>2</sup>	.075	.116	.270	.057	.289	.300	.035	.020	.009
Change in R <sup>2</sup>		.068	.157		.252	.019		.022	.005
F	7.388**	3.932**	7.459***	5.764**	10.128***	8.482***	3.425*	1.392	1.139
F Change		2.415*	16.888***		11.122***	2.168		.601	.306

Note: \* Significant at the *p* < .05 level      \*\* Significant at the *p* < .01 level      \*\*\* Significant at the *p* < .001 level  
 N= Neuroticism; E = Extraversion; O = Openness; A = Agreeableness; C = Conscientiousness  
 WLOC = Work Locus of Control; GWSE = General Work Self-efficacy; Aff. C. = Affective Commitment; Con C. = Continuance Commitment.

Table 19.  
 Hierarchical Multiple Regression Analysis for the sub-group - **Non Supervisor** - Moderating Effect of the Five-factors of Personality (step 2), then the Moderating Effect of Commitment (step 3) on the Relationship Between the Linear Combination of Work Locus of Control and General Work Self-efficacy and Work Related Attitudes and Behaviour.

	Affective Step 1 <i>n</i> = 245 Beta	Commitment Step 2 Beta	Continuance Step 1 <i>n</i> = 245 Beta	Commitment Step 2 Beta	Self – Step 1 <i>n</i> = 245 Beta	Rated Step 2 Beta	Perform Step 3 Beta
WLOC	.347***	.365***	-.433***	-.438***	.083	.116	.228**
GWSE	.040	.013	.062	.072	.425***	.265**	.225**
NEO PI-R							
N		.080		.071		.117	.119
E		.074		-.028		.289***	.303***
O		-.096		.004		-.183**	-.198**
A		.032		.071		-.005	-.001
C		.057		.032		.171**	.175**
Aff C							-.148*
Con C							.132**
R	.373	.392	.397	.407	.457	.545	.564
R Square	.139	.154	.158	.166	.209	.297	.318
Adj R Square	.132	.129	.158	.141	.205	.285	.302
Change in R Square		.015		.008		.089	.020
F	19.661***	6.181***	22.732***	6.767***	53.529***	24.254***	20.631***
F Change		.818		.478		10.135***	5.883**

Note \* Significant at the *p* < .05 level    \*\* Significant at the *p* < .01 level    \*\*\* Significant at the *p* < .001 level

	Global Step 1 <i>n</i> = 245 Beta	Job Step 2 Beta	Satisfaction Step 2 Beta	Well-being Step 1 <i>n</i> = 245 Beta	Step 2 Beta	Step 3 Beta	Extern Step 1 <i>n</i> = 198 Beta	Rated Step 2 Beta	Perform Step 3 Beta
WLOC	.524***	.532***	.350***	-.155*	-.107	-.020	.073	.038	.090
GWSE	-.017	-.098	-.102**	-.147*	-.026	.020	.114	.061	.051
NEO PI-R									
N		.018	-.021		.449***	.433***		.022	.005
E		.203**	.167**		-.163***	-.154**		.014	.012
O		-.032	-.015		.076	.066		.120	.126
A		.040	-.052		.006	.006		.106	.102
C		-.023	-.054		.034	.031		.044	.033
Aff C			.474***			-.115**			-.002
Con C			-.017			.135**			.129
R	.513	.540	.692	.274	.526	.545	.168	.231	.259
R <sup>2</sup>	.263	.292	.478	.075	.277	.297	.028	.053	.067
Adj R <sup>2</sup>	.257	.271	.458	.070	.265	.281	.018	.019	.023
Change in R <sup>2</sup>		.029	.186		.202	.020		.025	.014
F	43.247***	13.970***	23.948***	16.489***	22.023***	18.781***	2.863	1.534	1.512
F Change		1.928	41.965***		22.495***	5.652**		1.002	1.412

Note: \* Significant at the *p* < .05 level    \*\* Significant at the *p* < .01 level    \*\*\* Significant at the *p* < .001 level

N= Neuroticism; E = Extraversion; O = Openness; A = Agreeableness; C = Conscientiousness  
 WLOC = Work Locus of Control; GWSE = General Work Self-efficacy; Aff. C. = Affective Commitment; Con C. = Continuance Commitment.

Broad personality measures and single trait personality measures

Table 20 presents the results of the multiple regression analysis conducted to evaluate how well the NEO PI-R measures predicted general work self-efficacy. The linear combination of the NEO PI-R was significantly related to the general work self-efficacy index,  $F(5,405) = 55.199, p = 0.001$ . The facets extraversion, openness, agreeableness and conscientiousness making significant contributions to the prediction of the equation.

A second analysis was conducted to evaluate whether the single trait personality measure - work locus of control - predicted general work self-efficacy over and above the five factors. Work locus of control accounted for a significant proportion of general work self-efficacy variance after controlling for the effects of the NEO PI-R,  $R^2$  change = .18,  $F(6,404) = 94.560, p = 0.001$ . The facets extraversion  $t(409) = 6.88, p < .001$ ) and conscientiousness  $t(409) = 6.54, p < .01$ ) made a significant contribution to the prediction of the equation.

Table 20  
Multiple Regression Analysis – Moderating Effect of Single Trait Personality on the Relation Between the Five Factors of Personality and (a) General Work Self-efficacy and (b) Work Locus of Control.

	GWSE Beta	Step 2 Beta	WLOC Step 1 Beta	Step 2 Beta
NEO PI-R				
Neuroticism	-.077	-.001	-.161**	-.112*
Extraversion	.330***	.266***	.136*	-.074
Openness	.134**	.054	.170**	.084*
Agreeableness	.095*	.059	.075	.015
Conscientiousness	.312***	.243***	.148**	-.052
Work Locus of Control (WLOC)		.471*		-
General Work Self-efficacy (GWSE)		-		.639***
R	.637	.764	.439	.660
R Square	.405	.584	.193	.436
Adj R Square	.398	.578	.183	.427
Change in R Square		.179		.243
F	55.199***	94.560***	19.350***	51.948***
F Change		173.685***		173.685***

Note: \* Significant at the  $p < .05$  level    \*\* Significant at the  $p < .01$  level    \*\*\* Significant at the  $p < .001$  level

Table 20 presents the results of the multiple regression analysis conducted to evaluate how well the NEO PI-R measures predicted work locus of control. The linear combination of the NEO PI-R was significantly related to the work locus of control index,  $F(5,405) = 19.350, p = 0.001$ . The facets neuroticism  $t(409) = -3.09, p < .01$ , extraversion  $t(409) = 2.56, p < .05$ , openness  $t(409) = 1.70, p < .01$ , and conscientiousness  $t(409) = 2.89, p < .01$  made a significant contribution to the prediction of the equation.

A second analysis was conducted to evaluate whether the single trait personality measure general work self-efficacy predicted work locus of control over and above the five factors. General work self-efficacy accounted for a significant proportion of the work locus of control variance after controlling for the effects of the NEO PI-R,  $R^2$  change = .24,  $F(6,404) = 51.95, p = 0.001$ . The facets neuroticism  $t(409) = -2.55, p < .05$  and openness  $t(409) = 1.97, p < .05$  made a significant contribution to the prediction of the equation.

#### Experience and level of qualification and work-related attitudes and behaviours

Multiple regression analyses were conducted to evaluate how well a linear combination of experience and level of qualification predicted self-rated performance, global job satisfaction, psychological well-being, and externally rated performance after controlling for the effects of the personality and commitment indices. There was no significant change on any of the indices.

## CHAPTER SEVEN

### Discussion

This study was designed to profile the average personality of early childhood educators and care providers. Further, the study was designed to examine the relationship of personality and work-related attitudes and outcomes in a population of early childhood educators and care providers. The five-factor personality results show that participants in this study are more open, slightly more extraverted, and slightly more agreeable than the normative sample of women reported by Costa and McCrae (1992). The results provide preliminary evidence that the Agreeableness factor may be able to discriminate high performers from moderate and low performers. The results, in general, support previous research that personality traits can predict work-related attitudes and behaviour. The results of the present study are discussed in relation to the posited research questions.

#### Profiling the Personality of the Early Childhood Educator and Care Provider

The personality profiles that result from the research are not from a representative sample of early childhood educators and care providers. The questionnaires were distributed to staff at the discretion of the centre supervisor or manager. Although anonymity of the participants and centres was assured, an element of uncertainty exists regarding the final distribution to staff. Added to this, the voluntary nature of the questionnaire, the questionnaire content, and the requirement to have a co-worker assess the participants' work related attitudes and behaviour would have resulted in further self-selection of participants. Who then did participate and what assumptions can be drawn?

The respondents in this study are potentially representative of those that have been involved in childcare for many years. Although the participants had on average eight years of experience, 31% have worked for ten or more years in the childcare sector. Eighty six percent of respondents indicated that they would make the same career choice again and 89% indicated that they were satisfied or very satisfied with their job. Ninety four percent agreed or strongly agreed that they chose to work in early childcare because they believed

that they had the ability to care for young children. Therefore, it is assumed that the average profile may be close to representing a person profile that *fits* the environment of early childhood education and care centres.

### The Average Profile of the Early Childhood Educator and Care Provider

The average personality of early childhood educator and care provider is described, relative to the normative sample of American women, as one that is generally calm, able to deal with stress, yet sometimes experiences feelings of guilt, anger, or sadness. The early childhood educator and care provider enjoys the company of others yet values his/her privacy. She/he is possibly a little more assertive than the average women, has average levels of energy, but tends to experience positive emotions, such as joy, happiness, and excitement a little more than the average women. The early childhood educator and care provider is practical, but willing more than many to consider new ways of doing things. Although preferring a balance between the old and the new, the early childhood educator and care provider is slightly more imaginative, receptive to his/her feelings, and more open to reexamine social, political, and religious values than the average women. The early childcare educator and care provider is generally warm, trusting, and agreeable. She/he has average concern for the welfare of others, which results in action taken, yet has slightly higher than average sympathy and concern for others. She/he is slightly more compliant and modest person than the average woman is. The average early childhood educator and care provider is dependable, moderately well organized, able to set clear goals, yet compared to the average women is slightly less self-disciplined (Costa & McCrae, 1992). On average, the participants in this study believe they have the ability to perform their work tasks and that the work outcomes achieved are generally the result of their own actions.

The average profile is compared with that of a normative sample of American women (Costa & McCrae, 1992). Immediately concerns of the influence of national cultural and occupational culture is raised. McCrae, Yik, Trapnel, Bond, & Paulhus (1998) suggest that a nation's culture may inhibit or strengthen aspects of personality. The level of openness reported by the early childhood educators and care providers in this study is different from that reported by the normative sample. New Zealanders are known for their

versatility, inventiveness, and adventurous spirit. High openness scores might be indicative of a cultural influence. Openness scores among New Zealand musicians are also higher than average (Langley, 1998). However, when examining the adjective checklist (McCrae & Costa, 1992) the possibility of an occupational cultural influence cannot be discounted. Adjectives such as excitable, spontaneous, insightful, imaginative, affectionate, talkative, versatile, wide interests, adventurous, optimistic, inventive, and curious are indicative of the developmental stage of the young child. Therefore, the working environment, influenced by the characteristics of the young child, may have influenced the participants' responses.

Analyses at various sub-group levels did show some significant differences in aspects of personality. In particular, the mean scores on the personality trait conscientiousness, general work self-efficacy, and general work locus of control showed significant differences.

In the sub-group part-time and full-time workers results indicated that part-time workers have a significantly lower level of general work self-efficacy and work locus of control than that of full-time workers. That is, part-time workers have less belief in their ability to perform their work tasks and have less confidence that work outcomes achieved are a result of their own actions. This may reflect that part-time workers, because they spend less time at the centre have or feel that they have less opportunity to influence their work environment, perceiving that work outcomes are beyond their control. However, the influence of other aspects of personality on the individuals' perception that outcome are not a result of their own action, cannot be discounted.

Previous studies, which considered the relationship between the five-factors and Spector's Work Locus of Control Scale, showed that external locus of control was associated with the less extraverted and less conscientious individual (Gupchup & Worlgang, 1997). Early childhood educators and care providers who work part-time are on average less assertive than those that work full-time. Furthermore, they sense themselves to be less competent and less self-disciplined than full-time workers, and are not driven to succeed to the same extent as the full-time worker.

Results in this study demonstrate that extraversion and conscientiousness significantly contribute to predicting general work self-efficacy. Therefore, differences in personality rather than the opportunity or time spent at a centre offer an alternative



explanation for the observed differences in general work self-efficacy and work locus of control between part-time and full-time workers.

Similar trends were observed between supervisors and non-supervisors. Non-supervisors report having lower levels of internal work locus of control and less general work self-efficacy than did supervisors. Correspondingly, supervisors are more conscientious than are non-supervisors. Analysis at the facet level showed three aspects of conscientiousness attributed to the difference. They are facets of competence, achievement seeking, and self-discipline. The supervisor has a high sense of competency and self-discipline than that of the non-supervisor, and is striven more to succeed than does the non-supervisor.

Although no significant difference was identified between supervisors and non-supervisors on their average level of extraversion, prior research by Gupchup and Worlfang (1997) would suggest that there should be. Therefore, results at the facet level were examined. Results showed that supervisors are more assertive and have a higher level of activity than do non-supervisors. Furthermore, analysis showed that supervisors are less gregariousness and seek less excitement than do non-supervisors.

The difference in personality between supervisor and non-supervisor seem intuitively appealing. The supervisor, as person-in-charge, is responsible for the centre programme, the children attending the centre, and usually the management of staff. The results show that the supervisor has a higher sense of being capable, sensible, prudent, and effective. Supervisors have higher aspiration levels than non-supervisors and will work harder than non-supervisors to achieve their goals. Supervisors are more self-disciplined and more assertive than are non-supervisors. They also have greater sense of energy and need to keep busy. The supervisor, although enjoying the company of others, does not need the stimulation of others as much as non-supervisors appear to. Furthermore, the supervisors crave a little less excitement than do non-supervisors (Costa & McCrae, 1992).

The results may reflect the influence of age. Generally a decrease in extraversion and an increase in conscientiousness is expected as people age (Costa & McCrae, 1997b). It is also thought by Haan, Millsap, and Hartka (1986, cited in Costa & McCrae, 1997b) that the responsibilities of work and marriage help shape personality. The supervisors' role in the centre does include a number of significant responsibilities. Therefore, work

responsibilities may have shaped aspects of the personality of supervisors. Age may also be a contributing factor. Although the average age group for both groups is 30 – 39 years, the age category with the highest frequency for supervisors was 40 – 49 years, and for non-supervisors 20 – 29 years.

#### The “Good” Early Childhood Educator and Care Provider

In literature adjectives such as: warm, caring, patient, flexible, having a good sense of humour, creative, energetic, interested in ideas and possibilities, reliable, responsible, altruistic, nurturing, and having a stable and cheerful personality are used to describe the early childhood educator and care provider (e.g. Almy, 1975; Bacmeister, 1980; Ebbeck, 1990; Feeney & Chun, 1985; Scarr, 1998). The adjectives can be identified with a number of facets using McCrae and Costa’s (1992) Adjective Check-List. However, the agreeableness facets, in particular altruism (warm, soft-hearted, gentle, generous, kind, tolerant, and not selfish) and tender-mindedness (friendly, warm, sympathetic, soft-hearted, gentle, being stable, and kind) encompass many of the attributes described in literature.

An analysis, using one-way analyses of variance, was conducted to evaluate the relationship between personality variables (the five-factors, work locus of control, and general work self-efficacy) and the three performance groups established. Only one significant difference in personality traits was identified. The agreeableness factor was significantly different across the three performance groups. High performers are more agreeable, that is they have the interpersonal tendency to be fundamentally more altruistic (Costa & McCrae, 1992) than that of participants in both the moderate and low performance groups.

The result was supported by the agreeableness factor predicting total performance (see Table 13) but not supported by the linear combination of the agreeableness facets (see Table 14) which failed to explain a significant variance in the total performance measure. The conflicting results are attributed to the difficulties encountered with the externally rated performance measure.

Therefore, it is suggested that the agreeableness factor of personality could be an occupational specific predictor of performance. Future research that examines the relationship between personality and performance should therefore incorporate the

agreeableness dimension of personality as well as the dimensions of conscientiousness and neuroticism which are the most consistent predictors of occupational performance (Barrick & Mount, 1991). However, the fact that participants are usually required to work in a team context, may have confounded the results.

The early childcare-working environments requires the educator and care provider to work with children, interact with parents, and ideally work with adults in a team. These roles require interpersonal interactions and co-operation. Hough (1992) found that individuals, who were more agreeable, achievement orientated, dependable, and well adjusted were more effective in working in a team. Therefore, future research examining the relationship between personality and performance should include measures to assess both competencies in interpersonal interaction and ability to work as a team member.

#### Commitment, Satisfaction, and Self-Rated Performance

In the field of organisational and industrial psychology attention is give to constructs such as affective and continuance commitment and job satisfaction because of their potential relationship with organization outcomes, such as absenteeism and productivity (Berry & Houston, 1993). Results show that participants in this study are committed to their centres, satisfied with their work, and rate themselves as good performers. The results are consistent with previous research which has shown that early childhood educators and care providers are committed (e.g., Kontos & Riessen, 1993) and satisfied with their jobs (e.g., Schryer, 1994). Analysis was undertaken at the sub-group level to see if the trends were the same within the various groups.

Part-time employees report less affective commitment and continuance commitment then do full-time workers. Part-time employees have less involvement in a centre and therefore on average feel less emotionally attached to the centre. They are less committed to staying at their centres suggesting that for the part-time worker there is less cost associated with leaving. This may reflect that part-time employees perceive they can readily find alternative employment or that they are not financially dependent on the income derived from work.

Supervisors have a higher level of affective commitment than do non-supervisors. This higher level of affective commitment may reflect the role and responsibilities required

of the person-in-charge. It could be reasoned that the higher levels might have been inflated by the responses from some supervisors who are also owner-operators of centres. However, there was no significant group difference between supervisors and non-supervisors on continuance commitment. It could be assumed that for an owner/operator the cost of leaving the centre would be too high because of the financial and personal investment made in the centre. However, this was not reflected in the results of this study.

Participants working in sessional centres have a higher level of continuance commitment than those working in centres licensed to operate full-day. This result may reflect the working arrangements of many sessional centres that operate only during school terms. Increasingly early childhood education and care centres are operating all year and unless alternative arrangements are made, staff would generally receive only three or four weeks holiday per year. Possibly, those working in sessional centres do so from personal preference and therefore there are personal costs associated with leaving.

#### Profile of Psychological Well-being

Despite concern within the early childhood sector regarding stress levels and burnout rates (e.g. Manlove, 1993), the threshold morbidity rates reported are similar to those observed in general community samples in Australia (Singh et al., 1987). Therefore, early childhood educators and care providers do not have significantly higher levels of diminished psychological well-being than that which would be expected in a random sample of people.

An analysis of the responses does however give some valuable insights. The average team size in which the early childcare professional works is five. With a prevalence morbidity rate between 25 to 30%, depending on the scoring system used, at any one time one team member may well be experiencing diminished levels of psychological well-being. This is most likely to be signaled by loss of sleep, with feelings of constantly being under strain, feeling unhappy or depressed, and an inability to enjoy the normal day to day activities. Although these symptoms may be common throughout the general community, they may be more difficult to cope with while working with young children all day. Diminished levels of psychological well-being have the potential to have negative affects on the quality of care and interaction children receive. At the same time, if a staff member

leaves there is evidence that change in staff may also result in diminished levels in the quality of care given as continuity of care is disrupted (Manlove, 1993).

Despite research that demographic variables, such as age and level of education, can predict up to 10% of the variance in psychological well-being (Ryff, 1995, cited in Bohlander, 1999), similar results were not found in this study. Further research into factors that contribute to diminished levels of psychological well-being and intervention programmes that are sector specific are therefore needed. For example, noise has been found to increase anxiety levels in both introverts and extraverts, and impair comprehension in introverts (Standing, Lynn, & Moxness, 1990). Childcare centres at times can be noisy and therefore the noise level may result in increased anxiety levels. An investigation into the noise levels in centres and the impact noise has on the psychological well-being of early childhood educators and care providers may be warranted.

Wood and Bandura (1989) suggested that self-efficacy would predict levels of stress, distress, and depression. Results from this study show that general work self-efficacy was able to predict 6% of the broad measure, that is psychological well-being. Partial support for Wood and Bandura's suggestion can be seen in the correlations between the facets of neuroticism and general work self-efficacy (see Appendix 3). Vulnerability to stress, that is the individual that becomes dependent, hopeless, or panics when faced with an emergency (Costa & McCrae, 1992) has a strong negative correlation ( $r = -0.50$ ) with general work self-efficacy. Depression has a moderate positive correlation ( $r = 0.35$ ) with general work self-efficacy. However, it is interesting to note that when a linear combination of the five-factors was used to predict general work-self efficacy, neuroticism did not make a significant contribution to the prediction.

### The Nature of Work Performance

It had been proposed that a multi-dimensional performance measure of work performance could be constructed. However, the results were mixed. The strength of explained variance on the first factor suggested the presence of one general performance factor. However, four clear factors emerged from the factor analysis although the three factors only accounted for 11%. In view of the exploratory nature of this study, both a total



performance score and the factor scores were used to generate further data. A number of reasons are suggested for the ambiguous results.

In examining the results from the pilot phase, strong correlations had emerged between the proposed six dimensions of the performance scale. The items had been derived from three sources. Seventeen items came from a scale designed by Van Dyne and LePine (1985), and the researcher from performance assessment forms provided by five centres had developed 15 items. The items for the established measure consisted of three variables. Two of the variables, help and voice, measured extra role behaviour and the third variable measured role behaviour. The items developed by the researcher covered two broad categories. The first category related to skills and the second related to affective attributes of early childhood educators and care providers. The final item was a global measure of performance.

Three plausible reasons are suggested for the high correlations between six variables. The first related to the instructions given regarding the rating scales. Possibly the instructions were ambiguous or lacked clarity. The instructions were changed and behavioural guide-lines given, however the trend for scoring participants highly on all items was present in the main study. A second possible reason was that the majority of participants who had chosen to participate in the study were excellent performers.

The third possible reason relates to the difficulties involved in measuring performance. As suggested by Van Dyne and LePine (1998) the distinction between extra-role behaviour and in-role behaviour is difficult to determine in some care-giving occupations. Childcare might well be one such care-giving occupation. Further, Morrison (1994) found that employees scoring high in affective commitment defined their roles broadly, so blurring the distinction between extra and in-role behaviours. The results from this study suggest that early childhood educators and care providers have a high level of affective commitment to their centres.

Although in the main study the strength of the correlations between performance variables was reduced, the correlations were still high. Exploratory regression analyses examining the relationship between personality and the four performance variables were only able to explain a maximum of 1% of the observed variance in the criteria measures. Rather than transforming the data, factor scores were saved as variables, and three

performance groups established. The performance groups were used in later analysis of sub-group differences but a total performance score was used for regression analysis.

### Relationships Between Personality Dimensions

The results of the present study indicate that high levels of conscientiousness in early childhood educators and care providers are indicative of high levels of: agreeableness, extraversion, general work self-efficacy, and internal work locus of control and low levels of neuroticism. The directions of these relationships make sense intuitively. The more conscientious early childhood educator and care provider is self-controlled and generally able to control his/her impulses. The conscientious person is more active in planning, organizing, and carrying tasks. Therefore, early childhood educator and care provider is more likely to believe that he/she has the ability to perform the task and that the outcomes of the task are a result of his/her own actions. Further, the conscientious person tends to like, trust, and care about other people, and is more likely to be assertive but not manipulative. The early childhood educator and care provider is active and experience positive emotions.

The early childhood educator and care provider that scored high on extraversion is emotionally stable. Further, she/he is social, warm, affectionate, and a cheerful optimist, yet assertive and active and more open to experience a variety of aspects of his/her inner and outer worlds. The same extravert attributes that are related to high levels of openness are also related to how strongly the early childhood educator and care provider believes that she/he has the ability to perform a task and that the outcomes of that task are a result of his/her own actions.

The early childhood educator that believes he/she the ability to perform a task is also more likely to believe that work outcomes achieved are result of his/her own actions. He/she will also be open to new experiences, particularly those of trying new activities, exploring new ideas, and reexamining social, political, and religious values. Further, he/she is likely to be trusting, straightforward, and concerned for and willing to help others. The early childhood educator and care provider with a high level of general self-efficacy and an



internal locus of control will also be emotional stable, able to cope with stress, and not given to experiencing depression and anxiety.

The strength and direction of the relationships among the five-factors is consistent with intercorrelations reported by Costa and McCrae (1992) except for correlations between openness and those of neuroticism and agreeableness. The early childhood educator and care provider in the study who is very open is also fundamentally altruistic and emotionally stable. The strength and direction of the relationships between work locus and control and extraversion, conscientiousness and neuroticism was consistent with prior research (Gupchup & Wolfgang, 1997). However, for this particular occupational group there were positive significant correlations between work locus of control and the factors of agreeableness and openness.

#### Predictors of Work-related Attitudes and Behaviour

Results indicated that the linear combination of the five-factors of personality, work locus of control, and general work self-efficacy can predict affective and continuance commitment, self-rated performance, job satisfaction, psychological well-being, and externally rated performance (see Tables 12 & 13). At the domain level, neuroticism can predict all outcomes and conscientiousness can predict all except continuance commitment. Extraversion can predict affective commitment, self-rated performance, and psychological well-being. Agreeableness can predict affective commitment, job satisfaction, psychological well-being, and externally rated performance and finally, openness can predict job satisfaction and externally-rated performance.

A series of two and three step regression analysis were conducted at the group and sub-group (part-time and full-time workers and supervisor and non-supervisor) levels. In the first step, work locus of control and general work self-efficacy were entered. These two measures were entered first, as they were the stronger predictors in four of the six outcome variables.

At the second step the five-factors of the NEO PI –R were entered. This was to see if scores from the linear combination of the five-factors were able to predict work-related attitudes and behaviour over and above of the linear combination of the single trait scales.

At the third step, the linear combination of affective and continuance commitment were entered. Organisation commitment is seen as a reflection of the individual's attitude and moral involvement (e.g. Reyes & Kelly, 1986; Webb & Lowther, 1990) and affective commitment as a motivational component of the individual (Porter et al., 1974). Where as the study of traits is focusing on one aspect of the individual (McAdams, 1997) commitment may be focusing on motivation. Therefore, the inclusion of this motivational aspect at the third step of the regression was deemed necessary as it may well add to the ability to predict the remaining four outcome variables.

### Psychological Well-being

The neuroticism factor was a strong predictor of psychological well-being. This result is consistent with previous research (Costa & McCrae, 1987). The linear combination of the neuroticism facets shows depression and self-consciousness are significant contributors to the explained variance. An early childhood educator and care provider who is prone to feelings of guilt, sadness, hopelessness, and loneliness, who feels uncomfortable around others, and who is prone to feelings of inferiority (Costa & McCrae, 1992) is likely to be experiencing diminished levels of psychological well-being.

The single factors of extraversion and conscientiousness were not as strong a predictor as was neuroticism. This result was consistent with previous research (e.g., Jerram & Coleman, 1999). However, in a linear combination of the five-factors, conscientiousness did not significantly contribute to the variance explained. The linear combination the facets showed that participants who are loners, who prefer to stay in the background and let others do the talking, and who are less exuberant and high-spirited (Costa & McCrae, 1992) are more likely to be experiencing diminished levels of psychological well-being.

At step two of the multiple regression, as would be expected, the linear combination of the five-factors strengthened the prediction of psychological well-being. High levels of neuroticism and low levels extraversion made a significant contribution. The inclusion of affective commitment, a significant negative standardized co-efficient, and continuance commitment, a significant positive standardized co-efficient, contributed only a small amount to the overall ability to predict psychological well-being.

For non-supervisors the results are similar to those seen at the group level. For the supervisors, high levels neuroticism and openness made significant contributions to explaining to predicting psychological well-being. For the part-time worker, high levels neuroticism and openness, and low levels of extraversion made a significant contribution to predicting psychological well-being. For the full-time worker results were similar to those seen at group level, except at third step when affective and continuance commitment were included. The inclusion of the commitment variables strengthened the ability of the factors to predict psychological well-being more than what was seen at the group level or with other subgroups.

The inclusion of the commitment variables and the small increase observed in the ability to predict psychological well-being supports in principal Mathieu and Zajac's (1990) suggestion that highly committed employees feel the effects of stress more than those employees who are less commitment. However, it is the early childhood educator that reports high continuance commitment and low affective commitment that feels the effect of stress more. This seems intuitively appealing, in that the employee with high affective commitment has a potential positive input to their level of psychological well-being by having an emotional attachment to their place of work. Whereas the employee lacking the emotional attachment and staying because of the costs involved in leaving experiences more stress.

### Affective Commitment

None of the five-factors or the linear combination of the five-factors, were strong predictors of affective commitment. However, general work self-efficacy and work loci of control were strong predictors of affective commitment. Correlation analysis had identified that there was a strong relationship between general work self-efficacy and work locus of control. A linear combination of these two factors identified work locus of control as being the primary contributor to affective commitment. That is, it is not the belief per se that individuals have that they can perform the task, but the belief that the outcomes are a result of their own actions that is the predictor of affective commitment. Therefore, the early

childhood educator and care provider who believes that outcomes at work have come about because of his/her actions, is more likely to have an emotional attachment to the centre.

The results were similar for all sub-groups, however the ability of work locus of control to predict affective commitment was lower for non-supervisors.

#### Continuance Commitment

Work locus of control was the only personality trait that was a reasonable predictor of continuance commitment. Results show that a participant who has an external locus of control, that is who believes that work outcomes are a result of external forces which are beyond his/her control, will have a higher level of continuance commitment to the centre. The result makes sense intuitively. The individual that believes that outcomes are beyond his/her control may feel that the psychological costs of leaving the centre are too high. The cost could be the uncertainty: not knowing if they would get another position as the outcome is beyond their control.

The result was similar for part-time employees and non-supervisors. However, regression analysis showed that for supervisors and full-time employees that an external locus of control and a high level of neuroticism made a significant contribution to the ability to predict continuance commitment.

#### Self-rated Job Performance

For the participants in this study the personality factors of extraversion and conscientiousness were both strong predictors of self-rated performance. Although conscientiousness and emotional stability are generalizable across occupations and criteria (Barrick & Mount, 1991), results from the linear combination of the five factors showed that extraversion and conscientiousness made the only significant contribution. Furthermore, extraversion and conscientiousness combined were a stronger predictor of self-rated performance than either of the two factors in isolation. Analysis at the facet level showed that participants, who were assertive, lead fast-paced lives, and craved excitement rated themselves as good performers. Further, participants who sensed themselves as

capable, sensible, prudent, and effective, who were diligent and purposeful with a sense of direction in their lives, yet who were spontaneous and able to make quick decisions (Costa & McCrae, 1992) also rated themselves as good performers.

General work self-efficacy was also a good predictor of self-rated performance, and work locus of control was a good but weaker predictor. Research that has examined the relationship between work locus of control and single measures of self-rated performance is negligible. However, the results do support prior research that locus of control measures can predict job performance (Blau, 1993). Research examining the relationship between general work self-efficacy and a single measure of self-rated performance is also negligible. However, self-efficacy measures are good predictors of specific behaviours (Bandura, 1997).

The linear combination of general work self-efficacy and work locus of control showed that general work self-efficacy made the only significant contribution. Therefore, participants who believe that they have the ability to perform work tasks will rate themselves as a high performer. This makes sense intuitively. A person who believes that he/she has the ability and skills required to perform work related tasks is not likely to rate him/herself as a poor performer.

The inclusion of the five-factors at the second step of the regression strengthened the ability of personality to predict self-rated performance over that which could be predicted by general work self-efficacy. Work locus of control did not make a significant contribution to the prediction. At the second step of the regression, high general work self-efficacy, high levels of extraversion and conscientiousness, and low levels of openness made significant contributions to the ability to predict self-rated performance. The inclusion of the linear combinations of affective and continuance commitment added only slightly to the ability to predict the outcome. The results from the inclusion of commitment variables to predict performance, in principle, support the conclusion made by Becker, Billings, Eveleth, and Gilbert, (1996), that overall commitment to an organization is largely unrelated to an employee's performance.

For the part-time employee, results showed that inclusion of the five-factors was able to predict self-rated performance, over and above that of general work self-efficacy and work locus of control. However, only extraversion and conscientiousness made a

significant contribution. The inclusion of affective and continuance commitment strengthened the ability to predict the outcome. The increase was more than that seen at the total group level. However the increase in the ability to predict self-rated performance was small. Of the two commitment measures entered, only affective commitment made a significant contribution.

For full-time workers the factors of neuroticism, extraversion, openness, and conscientiousness make a significant contribution to predicting self-rated performance over and above that of general work self-efficacy and work locus of control. The inclusion of affective and continuance commitment strengthened the ability to predict the outcome. However the increase was small, and of the two commitment measures, only continuance commitment made a significant contribution.

For supervisors general work self-efficacy, extraversion and conscientiousness contribute significantly to predicting self-rated performance. However, for non-supervisors, general work self-efficacy, extraversion, openness and conscientiousness contributed significantly to predicting self-rated performance. Openness was negatively correlated when taking into account the other aspects of personality, suggesting that the non-supervisor, who is more conventional and conservative in their approach to work, will rate their performance highly.

The difference observed between supervisor and non-supervisors in the which aspects of personality significantly contribute to self-rated performance confirm the need to take into account organizational hierarchical levels when examining the relationship between personality and performance (Baehr & Orban, 1989).

### Job Satisfaction

Previous research (e.g., Decker & Borgen, 1993; Tokar & Subich, 1997) showed extraversion and low neuroticism contributed significantly to the prediction of job satisfaction as was the situation in this study. Although the five-factors of personality were not strong predictors of job satisfaction, work locus of control was. Early childhood educators, who have an internal locus of control, believing that work outcomes are a result of their own behaviour, are more satisfied with their jobs.



At step one of the multiple regression, the linear combination of work locus of control and general work self-efficacy was a strong predictor of job satisfaction, however only work locus of control made a significant contribution. At step two, with the inclusion of the linear combination of the five factors, the ability to predict job satisfaction did not increase greatly. Work locus of control still contributed a significant portion and extraversion contributed a smaller but significant portion. At step three, with the inclusion of the linear combination of affective and continuance commitment, there was a sizeable increase in the ability to predict job satisfaction. Work locus of control contributed less, general work self-efficacy and continuance commitment made a negative contribution, and affective commitment became the most significant contributor.

These results support the suggestion by Arvey, Bouchard, Segal, and Abraham (1989) that as much as 30% of the variance in overall job satisfaction could be attributed to personal dispositions. The key dispositional determinants of job satisfaction, in this particular sample, are the personality characteristics of internal work locus of control and extraversion, and the personal motivational component associated with affective commitment.

For part time workers, high levels work locus of control and extraversion, and low levels of openness made a significant contribution to predicting job satisfaction. At the third step, affective commitment also made a significant contribution to predicting job satisfaction.

For supervisors work locus of control and extraversion made significant contributions to predicting job satisfaction. However, the ability to predict job satisfaction is much lower than that seen in other groups. The inclusion of the commitment saw the ability to predict job satisfaction increase, but not to the same extent as seen in the other groups. However, at the third step of the regression, only general work self-efficacy and both the commitment measures made significant contributions to the equations.

For non supervisors work locus of control and extraversion made a significant contribution to the explained variance, as was the situation with the supervisor group. However, for non-supervisors the ability to predict job satisfaction was higher than that of the total group. The inclusion of the commitment scales increased the ability to predict job



satisfaction to 46%. Work locus of control, general work self-efficacy, extraversion, and affective commitment making significant contributions.

#### Externally Rated Performance

No personality trait or linear combinations of traits were strong predictors of externally rated performance. This result may reflect the difficulties with the measure or that personality can not predict performance in early childhood educators and care providers.

#### Experience and Level of Training

A multiple regression analysis was executed to see if the linear combination of the demographic variables, experience and level of training were able to predict the outcome variables over and above the personality measures and levels of affective and continuance commitment. There was no significant change in any of the indices. Therefore, although personal characteristics may predict performance (Matthews & Deary, 1997), experience and level of training were not able to add the prediction of the outcome variables.

#### Predicting General Work Self-efficacy, and Work Locus of Control

Prior research (Gupchup & Worlfang, 1997), has shown that the Spector's Work Locus of Control Scale is positively and significantly correlated with the factors of extraversion and conscientiousness, and negatively correlated with neuroticism. Results from this study have shown that work locus of control has significant positive correlations with extraversion, openness, agreeableness, and conscientiousness, and a significant negative correlation with neuroticism. Furthermore, there is a strong and significant correlation between work locus of control and general work self-efficacy.

Regression analysis was used to evaluate how well a linear combination of the five-factors predicted work locus of control. The linear combination of the five-factors was a good predictor. However, when general work self-efficacy is entered at the second step, there is a substantial increase in the ability to predict work locus of control (see Table 20).

Of the five-factors, neuroticism and openness make the only significant contribution to the equation at the second step.

Research that has examined the relationship between self-efficacy and the five-factors of personality is minimal (Toms et al., 1996). The results from this present study show that extraversion, openness, agreeableness, and conscientiousness are significantly correlated with general work self-efficacy, and that neuroticism is significantly negatively correlated with general work self-efficacy. A regression analysis was used to evaluate how well a linear combination of the five-factors was able to predict general work self-efficacy. Results showed that the linear combination was a good predictor of general work self-efficacy, and that all the five-factors, except neuroticism significantly contributed to the equation. In step two, the inclusion of work locus of control resulted in a substantial increase in the ability to predict general work self-efficacy. Only extraversion, conscientiousness, and work locus of control making significant contributions.

The results should be interpreted cautiously. The 12 items that compromise the general work self-efficacy scale may be measuring something other than 'the belief in one's ability to perform a task or more specifically to execute a specified behaviour successfully' (Bandura, 1977, p.79). According to Bandura (1997) global measures of self-efficacy assess not only individual beliefs about ability to perform a task but also the emotional and motivational effects of efficacy beliefs. Further, the strong correlation between general work self-efficacy and work locus of control suggests a potential overlap in some aspects of the two measures. This study did not factor analysis the items from the two measures to investigate the possibility that the items would form a new measure. Combining the scales into a composite measure may have been more informative.

### Limitations

There are several limitations to this study, which need to be addressed. The first of these relates to the representativeness of the sample. Although the questionnaire was distributed nationally, participation was voluntary. The focus of the study, the length of the questionnaire, and the need to have a co-worker assess the participants' work related attitudes and behaviour may have put some prospective respondents from completing the questionnaire. Furthermore, it was at the discretion of the supervisor/manager if and to

whom the questionnaires would be made available to. Therefore the results are not necessarily representative of early childhood educators and care providers in New Zealand.

When considering the generalizability of the findings, a potential limitation should be noted. Because the sample shared a single occupation, the results of this research should not be generalized beyond early childhood educators and care providers. Although it is possible and perhaps likely that similar results would be found in other early childhood roles, such as kindergarten teachers or home based care providers, future research is needed to establish the generalizability of these findings.

The third limitation involves the use of self-report measures. The use of self-report measures allows a number of relevant variables to be measured quite efficiently. However, there are a number of limitations, such as the participant distorting the responses and the potential impact of social desirability effects (Dunham, 1988). Because all of the responses on Questionnaire One were self-reported and collected at one time, there is a chance that the subjects responded in a consistent and/or socially desirable manner.

In summary, the first purpose of this study was to profile the early childhood educator and care provider. Compared to other people, the average profile suggests that the early childhood educator and care provider can be described as generally calm and able to deal with stress. She/he has moderate levels of activity and enthusiasm, enjoys the company of others but still values privacy. The early childhood educator is practical, but willing to seek new ways of doing things. She/he can be stubborn and competitive but is generally warm, trusting, and agreeable. The early childhood educator generally has clear goals, is dependable and moderately well-organized. When necessary, the early childhood educator and care provider is able to set his/her work aside (Costa & McCrae, 1992).

The results of the study give tentative support for describing the 'good' early childhood educator and care provider as a person who scores high on the Agreeableness factor. However, the role of early childhood educator and care provider requires interpersonal interaction and co-operation. Further research is required to determine if high scores on the agreeableness factor are related to job performance or ability to work within the demands of the work environment.

This study has demonstrated that there are significant sub-group differences in some aspects of personality. In particular, supervisors are more conscientious than non-supervisors and have higher levels of general work self-efficacy and work locus of control. Further, part-time workers tend to have lower levels of general work self-efficacy and work locus of control. The identification of desirable traits may provide helpful information to those involved in the selection and placement of staff. For those involved in future research involving early childhood educators and care providers, results from this study suggest a need to consider the possibility of sub-group differences.

The present study did not find that early childhood educators and care providers had levels of diminished psychological well-being above that which would be found in a random sample of people. The results however may not reflect the stress levels that early childhood educators do actually face and cope with, as participants in this study were self-selected. Further research to ascertain the level of psychological well-being in a representative sample and the identification of stressors faced by early childhood educators is warranted.

The second primary purpose of this study was to contribute to a better understanding of the role of personality in predicting work-related attitudes and behaviour. There are several notable aspects of the research that enhances our understanding. At a general level, it has been demonstrated that analysis at the facet level was more informative than results summed across personality constructs. This confirms the suggestion made by Hough, Eaton, Dunnette, Kamp, and McCloy (1990) that validity coefficients summed across personality constructs may conceal underlying predictor-criterion associations.

The research has also built on previous suggestions (e.g., Avery et al., 1989) that job satisfaction may be partly determined by one or more enduring characteristics of people. Meir (1995) called for further investigation of the role that personality has in predicting job satisfaction. Tokar and Subich (1997) in investigating the relationship between the five-factors and job satisfaction found the five-factors did contribute significantly to predicting job satisfaction. However, they questioned the practical utility of using the five-factors as only 3 to 5% of the variance was explained. The results from this study showed 8% of the variance was explained using the five-factors, but 39% of the variance was explained when

using a wider range of personal characteristics. Specifically internal work locus of control, extraversion, and affective commitment were identified as essential characteristics.

The NEO PI-R is promoted as a valid assessment of personality (Costa, 1996). Although the practical utility of using the NEO PI-R as a predictor of commitment and job satisfaction is doubtful, the NEO PI-R is a good predictor of psychological well-being and self-rated performance. Further, as a selection tool the inventory can assess the personality of applicants in a meaningful way. The expected multi-dimensional performance measure failed to emerge in this study and therefore it is unclear to what extent the five-factors of personality can predict various aspects of performance in this sector group. The results do however suggest that the agreeableness factor may be an important predictor of performance for this sector group.

The use of the single trait measures general work self-efficacy and the work locus of control to predict work-related attitudes and behaviour within this sector group were generally successful. Conceptualizing general work self-efficacy as a personality may have stretched the boundaries of what is normally considered a personality trait. However, as a relatively stable aspect of an individual, that is able to be measured, and able to predict performance (Sherer et al., 1982) it does meet the broad definition of what is personality (e.g. Allport, 1961; Byrne, 1974). Bandura (1997) distinguishes global measures of self-efficacy from self-efficacy belief systems. Global measures of self-efficacy, according to Bandura, assess not only individual beliefs about ability to perform a task but also the emotional and motivational effects of efficacy beliefs.

Bandura (1997) points out that perceived self-efficacy and locus of control are different phenomena. He goes on to say that perceived self-efficacy is a "good predictor of diverse forms of behaviour, whereas locus of control is generally a weak or inconsistent predictor of the same behaviors (p.20)." This was seen in the outcome variable, self-rated performance. However, of particular interest is the reversal that is seen in predictive ability of the measures, when the outcome variable is not behaviour. In the case of affective commitment, continuance commitment, and job satisfaction, work locus of control is the stronger predictor.

## Conclusion

Despite the limitations of this study it is believed that this study is the most comprehensive empirical investigation attempted to profile the personality of early childhood educators and care providers in New Zealand. Investigating how well the personality variables predict work-related attitudes and behaviour has strengthened the study.

Certainly the results are constrained by voluntary participation, the measures employed, the analysis conducted, and the research design used. However, from a theoretical and practical perspective the results have implications for the early childhood educator and care provider and for centre management. Certain inferences can be made in relation to the personality profile of early childhood educators and care providers. Their levels of affective and continuance commitment to their centres, levels of psychological well-being, level of job satisfaction, and how they rate their own performance. It appears that the early childhood educators and care providers in this study are well satisfied with their jobs. They are committed to the centres, believe that they have the ability and skill to do their work, and that work outcomes are a result of their own effort. They rate themselves as good performers and are rated as good performers by co-workers. Early childhood educators and care providers have normal levels of psychological well-being. However, the results do show that sub-group differences need to be considered when practically applying the results.

Despite limited research in the United States which reports high stress levels and burn-out among early childcare workers, the level of diminished well-being reported by participants in this study was not higher than that found in a random sample of adults. Further research is required as the participants in this research may not have been representative of the sector as a whole.

The results of this study suggest that personality is a moderate predictor of work-related attitudes and behaviour. Findings support previous research that personal dispositions can predict a moderate variance in overall job satisfaction. The results give



general support to the suggestion that commitment to an organization is largely unrelated to an employee's performance. The results showed a clear distinction in the predictive ability of general work self-efficacy and work locus of control. Further research should use both general measures of work self-efficacy and work locus of control when investigating occupational issues.

Further research is required to refine a multi-dimensional performance measure. It is suggested that in developing a performance measure interpersonal interactions and co-operation be taken into account.

A longitudinal study is recommended which could follow a random sample of students from the beginning of their training through ten years experience as early childhood educators and care providers. The results may help understand how the influence of training and experience shape the personality of early childhood educators and care providers. Are teachers made or are people born to teach?



## REFERENCES

- Adler, A. (1929). *The practice and theory of individual psychology* (rev. ed.). London: Routledge & Kegan Paul.
- Alberta Department of Education (1975). *Summary of the Early Childhood Service Task Force on Teacher Competency*. ERIC.EECE. (ERIC Document Reproduction Service No. ED 141 294)
- Alpass, F., Long, N., Chamberlain, K., & Macdonald, C. (1997). Job satisfaction differences between military and ex-military personnel: The role of demographic and organizational variables. *Military Psychology*, 9, 227-249.
- Allen, N.J., & Meyer, J.P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, 63, 1-18.
- Allen, N.J., & Meyer, J.P. (1996). Affective, continuance, and normative commitment to the organization: An examination of construct validity. *Journal of Vocational Behavior*, 49, 252-276.
- Allport, G.W. (1958). Personality: normal and abnormal. In G.W. Allport. *Personality and social encounter*, pp.155-168. Boston: Beacon Press.
- Allport, G.W. (1961). *Pattern and growth in personality*. New York: Holt, Rinehart, and Winston.
- Almy, M. (1975). *The early childhood educator at work*. New York: McGraw-Hill.
- Alpass, F., Long, N., Chamberlain, K., & McDonald, C. (1997). Job satisfaction differences between military and ex-military personnel: The role of demographic and organizational variables. *Military Psychology*, 9, 227-249.
- Angle, H. L., & Lawson, M.B. (1994). Organizational commitment and employment performance ratings: Both type of commitment and type of performance count. *Psychological Reports*, 75, 1539-1551.
- Angle, H.L. & Perry, J. L. (1983). Organizational commitment: Individual and organizational influences. *Work & Occupations*, 10, 123-146.
- Anastasi, A. (1988) *Psychological testing* (6<sup>th</sup> ed.) New York: Macmillan.
- Aston, M.C. (1998). Personality and job performance: the importance of narrow traits. *Journal of Organizational Behavior*, 19, 289-303.

- Austin, J.T., & Villanova, P. (1992). The criterion problem: 1917-1992. *Journal of Applied Psychology*, 77, 836-874.
- Avery, R.D., Bouchard, T.J., Jr., Segal, N.L., & Abraham, L.M. (1989). Job satisfaction: Environmental and genetic components. *Journal of Applied Psychology*, 74, 187-192.
- Baehr, M.E. & Orban, J.A. (1989). The role of intellectual abilities and personality characteristics in determining success in higher-level positions. *Journal of Vocational Behavior*, 35, 270-287.
- Bacmeister, R.W. (1980). *Teachers for young children: The person and the skills*. Urbana, IL: ERIC.EECE. (ERIC Document Reproduction Service No. ED 178 155)
- Balaban, N. (1992). The role of the child care professional in caring for infants, toddlers, and their families. *Young Children*, July, 66-71.
- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, N.J: Prentice-Hall.
- Bandura, A. (1997). *Self Efficacy: The exercise of control*. New York: W.H. Freeman & Co.
- Barrick, M.R., & Mount, M.K. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 44, 1-26.
- Barrick, M.R., & Mount, M.K. (1993). Autonomy as a moderator of the relationship between the big five personality dimensions and job performance. *Journal of Applied Psychology*, 78, 111-118.
- Barrick, M.R., Mount, M.K., & Strauss, J.P. (1993). Conscientiousness and performance of sales representatives: Test of the mediating effects of goal setting. *Journal of Applied Psychology*, 78, 715-722.
- Barrick, M.R., Stewart, G.L., Neubert, M.J. & Mount, M.K. (1998). Relating member ability and personality to work-team processes and team effectiveness. *Journal of Applied Psychology*, 83, 377-391.
- Baruch, G.H., Biener, L., & Barnett, R.C. (1987). Women and gender in research on work and family stress. *American Psychologist*, 42, 130-136.

- Bateman, T.S. & Organ, D.W. (1983). Job satisfaction and the good soldier: The relationship between affect and employee "citizenship". *Academy of Management Journal*, 26, 587-595.
- Becker, T.E., Billings, R.S., Eveleth, D.M., Gilbert, N.L. (1996). Foci and bases of employee commitment: Implications for job performance. *Academy of Management Journal*, 39, 464-482.
- Belsky, J. (1986). Infant day care: A cause for concern? *Zero to Three*, 6, 1-9.
- Belsky, J. (1988). The 'effects' of infant day care reconsidered. *Early Childhood Research Quarterly*, 3, 235-272.
- Belsky, J. (1992). Consequences of child care for children's development: A deconstructionist view. In A. Booth (Eds.), *Child care in the 1990's: Trends and consequences* (pp. 83-94). Hillsdale, NJ: Erlbaum.
- Benassi, V.A., Sweeney, P.D., & Dufour, C.L. (1988). Is there a relationship between locus of control orientation and depression? *Journal of Abnormal Psychology*, 97, 357-367.
- Bentall, R.P. (1993). Personality traits may be alive, they may even be well, but are they really useful? *The Psychologist*, 307.
- Bernard, L.C., Hutchison, S., Lavin, A., & Pennington, P. (1996). Ego-strength, hardiness, self-esteem, self-efficacy, optimism, and maladjustment: Health-related personality constructs and the "Big Five" model of personality. *Assessment*, 3, 115-131.
- Berry, L.M. & Houston, J.P. (1993). *Psychology at work: An introduction to industrial and organizational psychology*. New York: WCB Brown & Benchmark.
- Blau, D.M., & Robbins, P.K. (1990, April). *Child care demand labor supply of young mothers over time*. Paper presented at the annual meeting of the Population Association of America. Toronto, Canada.
- Blau, G. (1993). Testing the relationship of locus of control to different performance dimensions. *Journal of Occupational and Organizational Psychology*, 66, 125-138.
- Block, J. (1995). A contrarian view of the five-factor approach to personality description. *Psychological Bulletin*, 117, 187-215.

- Bohlander, R.W., (1999). Differentiation of self, need fulfillment, and psychological well-being in married men. *Psychological Reports*, 84, 1274-1280.
- Bollin, G. (1993). An investigation of job stability and job satisfaction among family day care providers. *Early Childhood Research Quarterly*, 8, 207-220.
- Borkenau, P., & Ostendork, F. (1990). Comparing exploratory and confirmatory factor analysis: A study of the 5-factor model of personality. *Personality and Individual Differences*, 11, 515-524.
- Borman, W.C., & Motowidlo, S.J. (1993). Expanding the criterion domain to include elements of contextual performance. In N Schmitt, W.C. Borman, & Ass. (Eds). *Personnel selection in organizations*. San Francisco: Joessy-Bass Publications.
- Borman, W.C., & Motowidlo, S.J. (1997). Task performance and contextual performance: The meaning for personnel selection research. *Human Performance*, 10, 99-109.
- Bosscher, R.J., & Smit, J.H. (1998). Confirmatory factor analysis of the General Self-Efficacy Scale. *Behaviour Research and Therapy*, 36, 339-343.
- Bradshaw, S.D. (1997). NEO Five-Factor Inventory: Cause for concern. *Psychological Reports*, 83, 823-834.
- Bredenkamp, S. (1989, November). *Measuring quality through a national accreditation system for early childhood programs*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.
- Brief, A.P., & Motowidlo, S.J. (1986). Prosocial organizational behaviors. *Academy of Management Review*, 11, 710-725.
- Briggs, S.R. (1992). Assessing the five-factor model of personality description. *Journal of Personality*, 60, 253-293.
- Byrne, D. (1974). *An introduction to personality: Research, theory, and application*. (2<sup>nd</sup> ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Byrne, B. (1992). Investigating causal links to burnout for elementary, intermediate, and secondary teachers. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, April 20-24. ERIC. (ERIC Document Reproduction Service No. ED 344 886)
- Callan, V. & Dickson, C. (1992). Managerial coping strategies during organization change. *Asia-Pacific Journal of Human Resources*, 30, 47-54.

- Campbell, J.P., McCloy, R. A., Oppler, S. H., & Sager, C.E. (1993) A Theory of Performance. In N Schmitt, W.C. Borman, & Ass. (Eds.). *Personnel selection in organizations*. San Francisco: Joessy-Bass Publications.
- Cartwright, S (1999). What makes good early childhood teachers? *Young Children*, July, 1-7.
- Cattell, R. B. (1950) *Personality: A systematic, theoretical, and factual study*. New York: McGraw-Hill.
- Cherniss, C. (1980). *Staff burnout: Job stress in the human services*. Beverly Hills: Sage.
- Christi, R., & Lindauer, F. (1963). Personality structure. *Annual Review of Psychology*, 14, 201-230.
- Christopher, J.C. (1999). Situating psychological well-being: Exploring the cultural roots of its theory and research. *Journal of Counseling and Development*, 77, 141-152.
- Cohen, A. (1997). Personal and organizational responses to work-nonwork interface as related to organizational commitment. *Journal of Applied Social Psychology*, 27, 1085-1114.
- Cohen, S., & Edwards, J.R. (1988). Personality characteristics as moderators of the relationship between stress and disorder. In R.W.J. Neufeld (ED.). *Advances in the investigation of psychological stress*. New York: John Wiley & Sons.
- Coladarci, T., (1992). Teachers' sense of efficacy and commitment to teaching. *Journal of Experimental Education*, 60, 323-337.
- Costa, P.T. (1996). Work and personality: Use of the NEO-PI-R in Industrial/Organizational Psychology. *Applied Psychology: An International Review*, 45, 225-241.
- Costa, P.T., Jr., Bush, C.M., Zonderman, A.B., & McCrae, R.R. (1986). Correlations of MMPI factor scales with measures of the five-factor model. *Journal of Personality Assessment*, 50, 640-650.
- Costa, P.T., Jr., & McCrae, R.R. (1985). *The NEO Personality Inventory manual*. Odessa, FL: Psychological Assessment Resources.
- Costa, P.T., Jr., & McCrae, R.R. (1986). Major contributions to personality psychology. In S. Modgil & C. Modgil (Eds.), *Hans Eysenck: Consensus and controversy* (pp. 63-72). Philadelphia: Falmer.

- Costa, P.T., Jr., & McCrae, R.R. (1988). Personality in adulthood: A six year longitudinal study of self-reports and spouse ratings of the NEO Personality Inventory. *Journal of Personality and Social Psychology*, 55, 258-265.
- Costa, P.T., Jr., & McCrae, R.R. (1990). Personality disorders and the five-factor model of personality. *Journal of Personality Disorders*, 4, 362-371.
- Costa, P.T., Jr., & McCrae, R.R. (1992). *The Revised NEO Personality Inventory manual*. Odessa, FL: Psychological Assessment Resources.
- Costa, P.T., Jr., & McCrae, R.R. (1987). Neuroticism, somatic complaints, and disease: Is the bark worse than the bite? *Journal of Personality*, 55, 299-316.
- Costa, P.T., Jr., & McCrae, R.R. (1988). From catalog to classification: Murray's needs and the five-factor model. *Journal of Personality and Social Psychology*, 55, 258-265.
- Costa, P.T., Jr., & McCrae, R.R. (1989). *The NEO-PI/NEO-FFI Manual Supplement*. Psychological Assessment Resources, Odessa, FL.
- Costa, P.T., Jr., & McCrae, R.R. (1992). *Revised NEO Personality Inventory manual*. Odessa, FL: Psychological Assessment Resources.
- Costa, P.T., Jr., & McCrae, R.R. (1992b). Trait psychology comes of age. *Nebraska Symposium on Motivation*, 39, 169-204.
- Costa, P.T., Jr., & McCrae, R.R. (1995). Domains and facets: Hierarchical personality assessment using the Revised NEO-Personality Inventory. *Journal of Personality Assessment*, 64, 21-50.
- Costa, P.T., Jr., & McCrae, R.R. (1997a). Stability and change in personality assessment: The revised NEO Personality Inventory in the year 2000. *Journal of Personality Assessment*, 68, 86-94.
- Costa, P.T., Jr., & McCrae, R.R. (1997b). Longitudinal stability of adult personality. In R. Hogan, J. Johnson, & S. Briggs (Eds.). *Handbook of personality psychology* (pp. 269-290). New York: Academic Press.
- Costa, P.T., Jr., McCrae, R.R., & Dye D. (1991). Facet scales for Agreeableness and Conscientiousness: A revision of the NEO Personality Inventory. *Personality and Individual Differences*, 12, 887-898.

- Costa, P. T., McCrae, R.R., & Holland, J.L. (1984). Personality and vocational interests in an adult sample. *Journal of Applied Psychology*, 69, 390-400.
- Costa, P.T., Jr., McCrae, R.R., & Kay, G.G. (1995). Persons, places, and personality: Career assessment using the Revised NEO Personality Inventory. *Journal of Career Assessment*, 3, 123-139.
- Cox, T., Thiriaway, M., Gotts, G., & Cox, S. (1983). The nature and assessment of general well-being. *Journal of Psychosomatic Research*, 27, 353-359.
- Crant, J.M. (1995). The proactive personality scale and objective job performance among real estate agents. *Journal of Applied Psychology*, 80, 532-537.
- Day, D.V., Bedeian, A.G., & Conte, J.M. (1998). Personality as predictor of work-related outcomes: Test of a mediated latent structural model. *Journal of Applied Social Psychology*, 28, 2068-2088.
- Deater-Deckard, K., Pinkerton, R., & Scarr, S. (1996). Child care quality and children's behavioral adjustment: A four-year longitudinal study. *Journal of Child Psychology & Psychiatry*, 37, 937-948.
- Decker, P.J., & Borgen, F.H. (1993). Dimensions of work appraisal: Stress, strain, coping, job satisfaction, and negative affectivity. *Journal of Counseling Psychology*, 40, 470-478.
- Deery-Schmitt, D.M., & Todd, C.M. (1995). A conceptual model for studying turnover among family child care providers. *Early childhood Research Quarterly*, 10, 121-143.
- Diener, E. (1984). Subjective well-being. *Psychological well-being*, 57, 195-214.
- Digman, J.M. (1989). Five robust trait dimensions: Development, stability, and utility. *Journal of Personality*, 57, 195-214.
- Digman, J.M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology*, 41, 417-440.
- Driskell, J.E., Hogan, J., Salas, E., & Hoskin, B. (1994). Cognitive and personality predictors of training performance. *Military Psychology*, 6, 31-46.
- Dunham, P.J. (1988). *Research methods in psychology*. New York: Harper & Row.



- Dyemadé, U., & Chargoss, M. (1977). The relationship of staffing characteristics to child outcomes in day care. ERIC.EECE. (ERIC Document Reproduction Service No. ED 156 350)
- Ebbeck, M. (1990). Preparing early childhood personnel to be pro-active, policy-making professionals. *Early Child Development and Care*, 58, 87-95.
- Eden, D. & Kinnar, J. (1991). Modeling Galatea: Boosting self-efficacy to increase volunteering. *Journal of Applied Psychology*, 76, 770-780.
- Emmons, R.A. (1986). Personal strivings: An approach to personality and subjective well-being. *Journal of Personality & Social Psychology*, 51, 1058-1068.
- Emmons, R.A., (1989). Exploring the relations between motives and traits: The case of narcissism. In D.M. Buss & N. Canter (Eds.). *Personality psychology: Recent trends and emerging directions* (pp. 32-44). New York: Springer-Verlay.
- Emmons, R.A., (1995). Levels and domains in personality: An introduction. *Journal of Personality*, 63, 341-364.
- Engler, B. (1979). *Personality theories: An introduction*. Boston: Houghton Mifflin Company.
- Erickson, E.H. (1963). *Childhood and society* (2<sup>nd</sup> ed.). New York: Norton.
- Endler, N.S., Rutherford, A., & Denisoff, E. (1997). Neuroticism: how does one slice the PI(e)? *European Journal of Personality*, 11, 133-145.
- Ewen, R.B. (1988). Or (1998) *Personality: A topical approach: Theories research, major controversies, and emerging findings*. Jahwaye, NJ: Lawrence Erlbaum Associates.
- Eysenck, H.J. (1967). *The biological basis of personality*. Springfield, Ill: Charles C. Thomas. (Revised, 1977).
- Eysenck, H.J. (1990). Biological dimensions of personality. In L.A. Pervin (Ed.), *Handbook of personality: Theory and research*. (pp. 244-276). New York: Guilford.
- Eysenck, H. J. (1995). Creativity as a product of intelligence and personality. In D.H. Saklofske & M.Zeidner (Eds.). *International handbook of personality and intelligence*. New York: Plenum.

- Eysenck, H.J., & Eysenck, S.B.G. (1975). *The manual of the Eysenck Personality Questionnaire*. San Diego, CA: EdITS.
- Farkas, A.J., & Tetrick, L.E. (1989). A three-wave longitudinal analysis of the causal ordering of satisfaction and commitment on turnover decisions. *Journal of Applied Psychology*, 74, 855-868.
- Feeney, S., & Chun, R. (1985). Effective teachers of young children. *Young Children*, November, 47-52.
- Field, S., & Bramwell R. (1998). An investigation into the relationship between caring responsibilities and the levels of perceived pressure reported by female employees. *Journal of Occupational and Organizational Psychology*, 71, 165-170.
- Fingret, A. (1994). Developing a company mental health plan. In CL. Cooper & S. Williams. *Creating healthy work organizations*. New York: John Wiley & Sons.
- Freud, S. (1923 1962). *The ego and the id*. New York: Norton.
- George, J. (1992). The role of personality in organizational life: Issues and evidence. *Journal of Management*, 18, 185-213.
- Ghiselli, E.E. (1973). The validity of aptitude tests in personnel selection. *Personnel Psychology*, 26, 461-477.
- Gist, M.E., & Mitchell, T.R. (1992). Self-Efficacy: A theoretical analysis of its determinants and malleability. *Academy of Management Review*, 17, 183-211.
- Goldberg, D., & Huxley, P. (1980). *Mental illness in the community: The pathway to psychiatric care*. London: Tavistock Publications.
- Goldberg, D., & Williams, P. (1988). *A user's guide to the General Health Questionnaire*. Windsor: NFER-Nelson.
- Goldberg, L.R. (1981). Language and individual differences: The search for universals in personality lexicons. In L. Wheeler (Ed.), *Review of personality and social psychology* (Vol. 2, pp. 141-165). Beverly Hills, CA: Sage.
- Goldberg, L.R. (1990). An alternative "description of personality": The Big-Five factor structure. *Journal of Personality and Social Psychology*, 59, 1216-1229.
- Goldberg, L.R. (1992). The development of markers for the Big-Five factor structure. *Psychological Assessment*, 4, 26-42.

- Goldberg, L.R., & Saucier, G. (1995). So what do you propose we use instead? A reply to Block. *Psychological Bulletin*, 117, 221-225.
- Goldman, Mitchell, Egelson, (Eds.) (1997). *The directory of unpublished experimental mental measures*. (Vol. 7). Washington, D.C.: American Psychological Association.
- Gordon, I.J., & Jester, R.E. (1973). Techniques of observing teaching in early childhood. In R.M.W. Travers (Ed.). *Second handbook of research on teaching*. Chicago: Rand McNally.
- Graziano, W.G., & Eisenberg, N. (1997) Agreeableness: A dimension of Personality. In R. Hogan, J. Johnson, & S. Briggs (Eds). *Handbook of personality psychology* (pp. 795-824). New York: Academic Press.
- Guilford, J.P. (1959). Three faces of intellect. *American Psychologist*, 14, 469-479.
- Guion, R.M., & Gottier, R.F. (1965). Validity of personality measures in personnel selection. *Personnel Psychology*, 18, 135-164.
- Gupchup, G.V., & Wolfgang, A.P. (1997). A modified work locus of control scale: preliminary investigation of reliability and validity in a sample of pharmacists. *Psychological Reports*, 81, 640-642.
- Gurin, P., Gurin, G., Lao, R.C., & Beattie, M. (1969). Internal-External control in the motivational dynamics of Negro youth. *Journal of Social Issues*, 25, 29-53.
- Hall, C.S., Lindzey, G., & Campbell, J.B. (1998). *Theories of personality* (4<sup>th</sup> ed.) New York: John Wiley & Sons.
- Harrison, A.W., Rainer, R.K., Hochwater, W.A., & Thompson, K.R. (1997). Testing the self-efficacy – performance linkage of social-cognitive theory. *The Journal of Social Psychology*, 137, 79-87.
- Hart, P.M., Wearing, A.J., & Headey, B. (1995). Police stress and well-being: Integrating personality, coping and daily work experience. *Journal of Occupational & Organizational Psychology*, 68, 133-156.
- Hathaway, S.R., & McKinley, J.C. (1983). *The Minnesota Multiphasic Personality Inventory manual*. New York: Psychological Corporation.
- Health and Safety Resources for Childcare Workers. (1984). *Child Care Employee Project*. ERIC.EECE. (ERIC Document Reproduction Service No. ED 247 026)

- Herzberg, F., Mausner, B., & Snyderman, B (1959). *The motivation of work*. (2<sup>nd</sup> ed.). New York: Wiley.
- Highhouse, S., & Becker, A.S. (1993). Facet measures and global job satisfaction. *Journal of Business and Psychology*, 8, 117-127.
- Hogan, J. (1998). Personality and job performance. *Human Performance*, 11, 125-127.
- Hogan, J., & Ones, D.S. (1997). Conscientiousness and integrity at work. In R. Hogan, J. Johnson, & S. Briggs (Eds.), *Handbook of personality psychology* (pp. 849-870). New York: Academic Press.
- Hogan, J., & Roberts B.W. (1996). Issues and non-issues in the fidelity – bandwidth trade-off. *Journal of Organizational Behavior*, 17, 627-637.
- Hogan, R.I. (1987). Personality psychology: Back to basics. In J. Aronoff, A.R. Rabin, & R.A. Zucker (Eds.), *The emergence of personality* (pp. 79-104). New York: Springfield.
- Hogan, R.I. (1991). Physical abilities. In M. D. Dunnette & L.M. Hough (Eds), *Handbook of Industrial and Organizational Psychology* (Vol. 2, pp. 753-831). Palo Alto, CA: Consulting Psychologist Press.
- Hogan, R.I (1996). A socioanalytic interpretation of the Five-Factor Model. In J. Wiggins (Eds.), *The Five-Factor model of personality*, (pp. 163-179). New York: Guilford.
- Hogan, R., Hogan, J., & Roberts, B.W. (1996). Personality measurement and employment decisions: Questions and answers. *American Psychologist*, 54, 469-477.
- Hogan, R. & Shelton, D. (1998). A socioanalytic perspective on job performance. *Human Performance*, 11, 129-144.
- Holland, J.L. (1985). *Self-directed search-1985 edition*. Odessa, FL: Psychological Assessment Resources.
- Honig, A.S. (1981). What are the needs of infants? *Young Children*, November, 3-10.
- Hough, L. M. (1992). The “Big Five” personality variables-construct confusion: Description versus prediction. *Human Performance*, 5, 139-155.

- Hough, L. (1998a). Personality at Work: Issues and evidence. In MD. Hake (Ed.). *Beyond multiple choice: Evaluating alternatives to traditional testing for selection* (pp. 131-166). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Hough, L. (1998b). Effects of intentional distortion in personality measurement and evaluation of suggested palliatives. *Human Performance*, 11, 209-244.
- Hough, L.M., Eaton, N.K., Dunnette, M.D., Kamp, J.D., & McCloy, R.D. (1990). Criterion-related validities of personality constructs and the effect of response distortion of these validities. *Journal of Applied Psychology Monograph*, 75, 581-595.
- Hough, L.M., & Paullin, C. (1994). Construct-oriented scale construction: The roational approach. In C.S. Sstokes, M.D. Mumford, & W.A. Owens (Eds.), *The biodata handbook: Theory, research, and application*. Palo Alto CA: Consulting Psychologists Press.
- Howes, C., & Stewart, P. (1987). Child's play with adults, toys, and peers: An examination of family and child-care influences. *Developmental Psychology*, 23, 423-430.
- Hunt, S.T. (1996). Generic work behavior: An investigation into the dimensions of entry-level, hourly job performance. *Personnel Psychology*, 49, 51-83.
- Hurley, R.F. (1998). Customer service behaviour in retail settings: A study of the effect of service provider personality? *Journal of the Academy of Marketing Science*, 26, 115-127.
- Ickes, W., Snyder, M., & Garcia, S. (1997). Personality influences on the choice of situations. In R. Hogan, J. Johnson, & S. Briggs (Eds.), *Handbook of personality psychology* ( pp. 165-195). New York: Academic Press.
- Ishigaki, E. (1980). How do we educate teachers for early childhood education: Early childhood educators in Japan. Paper presented at the International Congress on Early Childhood Education: *A Challenge for the Educator*. ERIC.EECE. (ERIC Document Reproduction Service No. ED 187 467)
- Jerram, K.L. & Coleman, P.G. (1999). The big five personality traits and reporting of health problems and health behaviour in old age. *British Journal of Health Psychology*, 4, 181-192.
- Jex, S. M., & Bliese, P.D. (1999). Efficacy beliefs as a moderator of the impact of work-related stressors: A multilevel study. *Journal of Applied Research*, 84, 349-361.

- Joe, V.C. (1971). Review of the internalization control construct as a personality variable. *Psychological Reports*, 28, 619-640.
- John, O.P. (1989). Towards a taxonomy of personality descriptors. In D.M. Buss & N. Cantor (Eds.), *Personality psychology: Recent trends and emerging directions* (pp. 261-271). New York: Springer-Verlag.
- John, O.P. (1990). The "Big Five" factor taxonomy: Dimensions of personality in the natural language and in questionnaires. In L.A. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 66-100). New York: Guilford.
- Johnson, J.A.. (1997). Units of analysis for the description and explanation of personality. In R. Hogan, J. Johnson, & S. Briggs (Eds.), *Handbook of personality psychology* (pp. 73-93). New York: Academic Press.
- Johnson, J., & McCracken, J.B. (Eds.). (1994). *The early childhood career lattice: Perspective on professional development*. Washington, DC: National Association for the Education of Young Children.
- Jorde-Bloom, P. (1986). Teacher job satisfaction: A framework for Analysis. *Early Childhood Research Quarterly*, 1, 167-183.
- Judge, T.A., Erez, A., & Bono, J.E. (1998). The power of being positive: The relation between positive self-concept and job performance. *Human Performance*, 11, 167-187.
- Judge, T.A., & Hulin, C.L. (1993). Job satisfaction as a reflection of disposition: A multiple source causal analysis. *Organizational Behavior and Human Decision Processes*, 56, 388-421.
- Jung, C.G. (1964). *Man and his symbols*. New York: Dell.
- Karl, K.A., O'Leary-Kelly, A.M., & Martocchio, J.J. (1993). The impact of feedback and self-efficacy on performance in training. *Journal of Organizational Behavior*, 14, 379-394.
- Katz, L.G. (1970/71). Four questions on early childhood education. *Child Study Journal*, 1, 43-51.
- Katz, D., & Kahn, R.L. (1978). *The social psychology of organizations*. New York: Wiley.
- Kelly, G. A. (1955). *The psychology of personal construct* (2 vols.). New York: Norton.

- Kontos, S., & Riessen, J. (1993). Predictors of job satisfaction, job stress, and job commitment in family day care. *Journal of Applied Developmental Psychology*, 14, 427-441.
- Kyriacou, D. (1987). Teacher stress and burnout: An international review. *Educational Research*, 29, 146-150.
- LaGrange, A., & Read, M. (1990). *Those who care: A report on childcare givers in Alberta daycare centres*. Alberta Canada. Child Care Matters. ERIC.EECE (Eric Document Reproduction Service No. ED 329 358)
- Langley, S.T. (1998). *A study of the career commitment, stress levels, and coping resources of musicians, and the influence of personality*. Unpublished master's thesis, Massey University, Auckland, New Zealand.
- Langston, C.A., & Sykes, W.E. (1997). Beliefs and the big five: Cognitive bases of broad individual differences in personality. *Journal of Research in Personality*, 31, 141-165.
- Landy, F. J. (1985). *Psychology of work behavior*. Homewood, IL: Dorsey.
- Lane, J., & Herriot, P. (1990). Self-ratings, supervisor ratings, positions and performance. *Journal of Occupational Psychology*, 63, 77-88.
- Lanyon, R.I., & Goodstein, L.D. (1997). *Personality assessment* (3<sup>rd</sup> ed). New York: John Wiley & Sons Inc.
- Lawler, E.E. (1973). *Motivation in work organizations*. Belmont, CA: Brooks Cole.
- Lawler, K. & Schmied, L. (1992). A prospective study on women's health. The effects of stress, hardiness, locus of control, Type A behaviour, and physiological reactivity. *Women & Health*, 19, 27-41.
- Lefcourt, H. (1982). *Locus of Control: Current trends in theory and research* (2<sup>nd</sup> ed.) Hillsdale: Lawrence Erlbaum Ass.
- Levenson, L. (1981) Differentiating among internatily, powerful others and chance. In H.M. Lefcourt (Ed.), *Research with the Locus of Control Construct (Vol. 1): Assessment methods*. New York: Academic Press.
- Loehlin, J.C., & Nichols, R.C. (1976). *Heredity, environment and personality*. Austin, TX: University of Texas Press.



- Locke, E.A. (1976). The nature and causes of job satisfaction. In M.D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1297-1349). Chicago: Rand McNally.
- Lyons, M.F. (1997). Work rewards, job satisfaction and accreditation in long day care. *Australian Journal of Early Childhood*, 22, 40-44.
- Mabon, J. (1998). Utility aspects of personality and performance. *Human Performance*, 11, 289-304.
- Macan, T.H., Trusty, M.L., & Trimble, S.K. (1996). Spector's Work Locus of Control Scale: Dimensionality and validity evidence. *Educational and Psychological Measurement*, 56, 349-357.
- Maddux, J.E. (1991). Self-efficacy. In C.R. Snyder, & D.R. Forsyth (Eds.), *Handbook of social and clinical psychology: The health perspective*. New York: Pergamon Press.
- Makins, M. (Chief Ed.) (1993). *Collins English Dictionary and Thesaurus*. Glasgow: HarperCollins Publishers.
- Manlove, E.E., (1993). Multiple correlates of burnout in child care workers. *Early Childhood Research Quarterly*, 8, 499-518.
- Manlove, E.E., & Guzell, J.R. (1997). Intention to leave, anticipated reasons for leaving, and 12 month turnover of child care center staff. *Early Childhood Research Quarterly*, 12, 145-167.
- Maslow, A.H. (1969). *Maslow and self-actualization*. Orange, CA.: Psychological Films.
- Maslow, A. H. (1970). *Motivation and personality* (2<sup>nd</sup>. ed.) New York: Harper & Row.
- Matthews, G., & Deary, I. J. (1998). *Personality traits*. Cambridge: Cambridge University Press.
- Matthews, G., & Oddy, K. (1993). Recovery of major personality dimensions from trait adjective data. *Personality and Individual Differences*, 15, 419-431.
- Mathieu, J.E. (1991). A cross-level nonrecursive model of the antecedents of organizational commitment and satisfaction. *Journal of Applied Psychology*, 76, 607-634.

- Mathieu, J.E., & Zajac, D.M. (1990). A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment. *Psychological Bulletin*, 108, 171-194.
- Mayer, R.C., & Schoorman, F. (1992). Predicting participation and production outcomes through a two-dimensional model of organizational commitment. *Academy of Management Journal*, 36, 671-684.
- McAdams, D.P. (1992). The five-factor model in personality. A critical appraisal. *Journal of Personality*, 60, 329-361.
- McAdams, D.P. (1995). What do we know when we know a person. *Journal of Personality*, 63, 329-396.
- McAdams, D.P. (1997). A conceptual history of personality psychology. In R. Hogan, J. Johnson, & S. Briggs (Eds.), *Handbook of Personality Psychology* (pp. 3-39). New York: Academic Press.
- McCrae, R.R., & Costa, P.T. (1985). Updating Norman's "adequate taxonomy": Intelligence and personality dimensions in natural language and in questionnaires. *Journal of Personality and Social Psychology*, 49, 710-721.
- McCrae, R.R., & Costa, P.T. (1986). Personality, coping, and coping effectiveness in an adult sample. *Journal of Personality*, 54, 385-405.
- McCrae, R.R., & Costa, P.T. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology*, 52, 81-90.
- McCrae, R.R., & Costa, P.T. (1990). *Personality in adulthood*. New York: Guilford Press.
- McCrae, R.R., Costa, P.T. (1992). Discriminant validity of the NEO-PIR facet scales. *Educational & Psychological Measurement*, 50, 229-237.
- McCrae, R.R., Costa, P.T. (1994). The stability of personality: Observation and evaluation. *Current Directions in Psychological Sciences*, 3, 173-175.
- McCrae, R.R., & Costa, P.T. (1997). Conceptions and correlates of openness to experience. In R. Hogan, J. Johnson, & S. Briggs (Eds.), *Handbook of personality psychology* (pp. 825-847). New York: Academic Press.

- McCrae, R.R., Costa, P.T., Jr., & Bush, C.M. (1986). Evaluating comprehensiveness in personality systems: The California Q set and the five-factor model. *Journal of Personality*, 54, 430-446.
- McCrae, R.R., & John, O.P. (1992). An introduction to the five-factor model and its applications. *Journal of Personality*, 60, 175-215.
- McDonald, T., & Siegall, M. (1992). The effects of technological self-efficacy and job focus on job performance, attitudes, and withdrawal behaviors. *The Journal of Psychology*, 126, 465-475.
- Meir, E.I. (1995). Elaboration of the relation between interest congruence and satisfaction. *Journal of Career Assessment*, 3, 341-346.
- Mervielde, I., Buyst, V. & De Fruyt, (1995). The validity of the Big-Five as a model for teachers' ratings of individual differences among children aged 4-12 years. *Personality and Individual Differences*, 18, 525-534.
- Meyer J.P., & Allen, N.J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1, 61-89.
- Meyer, J.P., Allen, N.J., & Smith, C.A. (1993). Commitment to organizations and occupations: Extension and test of three-component conceptualization. *Journal of Applied Psychology*, 78, 538-551.
- Meyer, J.P., Irving, P.G., & Allen, N.J. (1998). Examination of the combined effects of work values and early work experiences on organizational commitment. *Journal of Organizational Behavior*, 19, 29-52.
- Meyer, J.P., Paunonen, S.V., Gellatly, I.R., Goffin, R.D., & Jackson, D.N. (1989). Organizational commitment and job performance: It's the nature of the commitment that counts. *Journal of Applied Psychology*, 74, 152-156.
- Miller, R.L., Griffin, M.A., & Hart, P.M. (1999). Personality and organizational health: theory of conscientiousness. *Work & Stress*, 13, 17-19.
- Ministry of Education. July 1998 early childhood statistics. *Education Statistics News Sheet*, 9, Wellington: Data Management and Analysis Division, Ministry of Education.
- Mischel, W. (1968). *Personality and assessment*. New York: Wiley.
- Mischel, W. (1984). Convergences and challenges in the search for consistency. *American Psychologist*, 39, 351-364.

- Morrison, E.W. (1994). Role definitions and organizational citizenship behaviour: The importance of the employees' perspective. *Academy of Management Journal*, 37, 1543-1567.
- Morrow, P.C., (1993). *The theory and measurement of work commitment*. Greenwich: JAI Press.
- Motowidlo, S. J., Parckard, J.S., & Manning, S.J. (1986). Occupational stress: Its causes and consequences for job performance. *Journal of Applied Psychology*, 71, 618-619.
- Motowidlo, S.J. & Van Scotter, J.R. (1994). Evidence that task performance should be distinguished from contextual performance. *Journal of Applied Psychology*, 79, 475-480.
- Mount, M.K., Barrick, M.R., & Stewart, G.L. (1998). Five-factor model of personality and performance in jobs involving interpersonal interactions. *Human Performance*, 11, 145-165.
- Mowday, . R.T., Porter, L.W., & Steers, R.M. (1982). *Employee – organization linkages: The psychology of commitment, absenteeism, and turnover*. New York: Academic Press.
- Moyle, P. (1995). The role of negative affectivity in the stress process: Tests of alternative models. *Journal of Organizational Behaviour*, 16, 647-668.
- Mughal, S., Walsh, J., & Wilding, J. (1996). Stress and work performance: The role of trait anxiety. *Personality and Individual Differences*, 20, 685-691.
- Muchinsky, P.M. (1993). *Psychology applied to work: An introduction to industrial and organizational psychology*. Pacific Grove, CA: Brooks/Cole Publishing.
- Myers, I.B., & Mc Caulley, M.H. (1985). *Manual: A guide to the development and use of the Myers-Briggs Type Indicator*. Palo Alto, CA: Consulting Psychological Press.
- Noller, P. Law, H. & Comrey, A.L. (1987). Cattell, Comrey, and Eysenck personality factors compared: More evidence for the five robust factors? *Journal of Personality and Social Psychology*, 53, 775-782.
- Noor, N.M. (1997). Work and family roles in relation to women's well-being: The role of negative affectivity. *Personality and Individual Differences*, 23, 487-499.

- Norman, W.T. (1963). Toward an adequate taxonomy of personality attributes: Replicated factor structure in peer nomination personality ratings. *Journal of Abnormal and Social Psychology*, 66, 574-583.
- Norton, J. (1996). The effective practitioner. Paper presented at the annual meeting of the Mid-South Educational Research Association. ERIC.EECE. (ERIC Document Reproduction Service No. ED 405 316)
- Nunnally, J.C. (1978). *Psychometric theory* (2<sup>nd</sup> ed.) New York: McGraw-Hill.
- Ones, D.Z., & Viswesvaran, C. (1996). Bandwidth-fidelity dilemma in personality measurement for personnel selection. *Journal of Organizational Behavior*, 17, 609-626.
- Ones, D.Z., Viswesvaran, C., & Schmidt, F.L. (1993). Comprehensive meta-analysis of integrity test validities: Findings and implications for personnel selection and theories of job performance. *Journal of Applied Psychology*, 78, 679-703.
- Organ, D.W., & Ryan K. (1995). A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behavior. *Personnel Psychology*, 48, 774-802.
- Ostroff, C. (1992). The relationship between satisfaction, attitudes, and performance: An organizational level analysis. *Journal of Applied Psychology*, 77, 963-974.
- Parkay, F., Greenwood, G., Olejnik, S., & Proller, N. (1988). A study of the relationship among teacher efficacy, locus of control and stress. *Journal of Research & Development in Education*, 21, 13-22.
- Parkes, K., (1984). Locus of control, cognitive appraisal and coping in stressful episodes. *Journal of Personality and Social Psychology*, 46, 655-688.
- Parkes, K.R., Mendham, C.A., & von Rabenau, C. (1994). Social support and the demand-discretion model of job stress: Tests of additive and interactive effects in two samples. *Journal of Vocational Behavior*, 44, 91-113.
- Paulhus, D.L., Bruce, M.N., & Trapnell, P.D. (1995). Effects of self-presentation strategies on personality profiles and their construction. *Personality and Social Psychology Bulletin*, 21, 100-108.
- Paunonen, S., Rothstein, M.G. & Jackson, D.N. (1999). Narrow reasoning about the use of broad personality measures for personnel selection. *Journal of Organizational Behavior*, 20, 389-405.

- Peabody, D., & Goldberg, L.R. (1989). Some determinants of factor structures from personality trait-descriptors. *Journal of Personality and Social Psychology*, 57, 552-567.
- Pervin, L. A. (Ed.). (1990). *Handbook of personality: Theory and research*. New York: Wiley.
- Pervin, L.A. (1993). *Personality: Theory and research* (6<sup>th</sup> ed.) New York: Wiley.
- Phares, E. (1976). *Locus of control in personality*. Morristown, NJ: General Learning Press.
- Phillips, D.A., Howes, C., & Whitebook, M. (1991). Child care as an adult work environment. *Journal of Social Issues*, 47, 46-69.
- Phillips, J.M., & Gully, S.M. (1997). Role of goal orientation, ability, need for achievement, and locus of control in the self-efficacy and goal-setting process. *Journal of Applied Psychology*, 82, 792-802.
- Pines, A., & Maslach, C. (1980). Combating staff burn-out in a day care center: A case study. *Child Care Quarterly*, 9, 5-16.
- Porter, L.W., Steers, R.M., Mowday, R.T., & Boulian, P.V. (1974). Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *Journal of Applied Psychology*, 59, 603-609.
- Raymark, P.H., Schmit, M.J., & Guion, R.M. (1997). Identifying potentially useful personality constructs for employee selection. *Personnel Psychology*, 50, 527-736.
- Reiss, M. & Mitra, K. (1998). The effects of individual difference factors on the acceptability of ethical and unethical workplace behaviors. *Journal of Business Ethics*, 17, 1581-1593.
- Rholes, W.S., Newman, L.S., & Ruble, D.N. (1990). Understanding self and other: Developmental and motivational aspects of perceiving persons in terms of invariant dispositions. In E.T. Higgins & R.M. Sorrentino (Eds.), *Handbook of motivation and cognition* (Vol. 2, pp. 369-407). New York: Academic Press.
- Robertson, I.T., & Kinder, A. (1993). Personality and job competencies: The criterion-related validity of some personality variables. *Journal of Occupational and Organizational Psychology*, 66, 225-244.

- Roe, R.A. (1999). Work performance: A multiple regulation perspective. *International Review of Industrial and Organizational Psychology*, 14, 231-335.
- Rogers, C.R. (1951). *Client-centered therapy: Its current practice, implications, and theory*. Boston: Houghton Mifflin.
- Rogers, C.R. (1980). *A way of being*. Boston: Houghton Mifflin Company.
- Rosenthal, R., & Rubin, O.B. (1982). Comparing effect size of independent studies. *Psychological Bulletin*, 92, 500-504.
- Ross, L. (1977). The intuitive psychologist and his shortcomings: Distortions in the attribution process. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 10, pp. 174-221). New York: Academic Press.
- Rotter, J.B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological monographs: General and Applied*, 80, 1-28.
- Sacket, P.R., Gruys, M.L., & Ellingson, J.E. (1998). Ability – personality interactions when predicting job performance. *Journal of Applied Psychology*, 83, 545-556.
- Sadowski, C., Blackwell, M., & Willard, J. (1986). Assessing locus of control, perceived stress, and performance of student teachers. *Education*, 106, 352-353.
- Salgado, J.F. (1997). The five factor model of personality and job performance in the European Community. *Journal of Applied Psychology*, 82, 30-43.
- Salgado, J.F. (1998a). Big five personality dimensions and job performance in army and civil occupations: A European perspective. *Human Performance*, 11, 271-288.
- Salgado, J.F. (1998b). Sample size in validity studies of personnel selection. *Journal of Occupational and Organizational Psychology*, 71, 161-164.
- Salgado, J.F. (1999). Personnel selection methods. *International Review of Industrial and Organizational Psychology*, (Vol. 14), 1-54.
- Scarpello, V., & Campbell, J.P. (1983). Job satisfaction: Are all the parts there? *Personnel Psychology*, 36, 577-600.
- Scarr, S. (1998). American child care today. *American Psychologist*, 53, 95-108.
- Scarr, S., Eisenberg, M., & Deater-Deckard, K. (1994). Measurement of quality on child care centers. *Early Childhood Research Quarterly*, 9, 131-151.



- Schinka, J.A.H., Kinder, B.N., & Kremer, T. (1997). Research validity scales for the NEO-PI-R: Development and initial validation. *Journal of Personality Assessment*, 68, 127-138.
- Schmit, M.J., & Hunter, J.E. (1998). The validity and utility of selection methods in personnel psychology: Practical and theoretical implication of 85 years of research findings. *Psychological Bulletin*, 124, 262-274.
- Schmit, M.J., & Ryan, A.M. (1992). Test-taking dispositions: A missing link? *Journal of Applied Psychology*, 77, 629-637.
- Schmit, N.J., Gooding, R.Z., Noe, R.A., & Kirsch, M. (1984). Meta analyses of validity studies published between 1964 and 1982 and the investigation of study characteristics. *Personality Psychology*, 37, 407-422.
- Schroeder, M.L., Wormworth, J.A., & Livesley, W.J. (1992). Dimensions of personality disorder and their relationships to the Big Five dimensions of personality. *Psychological Assessment*, 4, 47-53.
- Schryer, M. (1994). *The relationship between center size and childcare workers' level of job commitment and job satisfaction*. Master's thesis, National College of Education, National -Louis University. ERIC.EECE. (ERIC Document Reproduction Service No. ED 375 937)
- Schwab, D.P. (1971). Issues in response distortion studies of personality inventories: A critique and replicated study. *Personnel Psychology*, 24, 637-647.
- Shaughnessy, J.J., & Zechmeister, E.B. (1990). *Research Methods in Psychology*. (2<sup>nd</sup> ed.) New York: McGraw Hill.
- Shelton, S.H. (1990). Developing the construct of general self-efficacy. *Psychological Reports*, 66, 987-994.
- Sheldon, W.H. (1942). *The varieties of temperament: A psychology of constitutional differences*. New York: Harper.
- Sherer, M., Maddux, J.E., Mercandante, B., Prentice-Dunn, S., Jacobs, B., & Rogers, R.W. (1982). The self-efficacy scale: Construction and validation. *Psychological Reports*, 51, 663-671.
- Singh, B., Lewin, T., Raphael, B., Johnston, P., & Watson, J. (1987). Minor psychiatric morbidity in a casualty population: Identification, attempted intervention and six-month follow-up. *Australian & New Zealand Journal of Psychiatry*, 21, 231-240.

- Soh, K. (1986). Locus of control as a moderator of teacher stress in Singapore. *Journal of Social Psychology*, 126, 257-258.
- Soldz, S. & Vaillant, G.E. (1999). The big five personality traits and the life course: A 45 year longitudinal study. *Journal of Research in Personality*, 3, 208-232.
- Spector, P.E. (1988). Development of the Work Locus of Control Scale. *Journal of Occupational Psychology*, 61, 335-340.
- Stajkovic, A.D., & Luthans, F. (1998). Social cognitive theory and self-efficacy: Going beyond traditional motivational and behavioral approaches. *Organizational Dynamics*, 26, 62-74.
- Standing, L., Lynn, D., & Moxness K. (1990). Effects of noise upon introverts and extroverts. *Bulletin of the Psychonomic Society*, 28, 134-140.
- Staub, E. (1980). The nature and study of human personality. In E. Staub (Ed.), *Personality: Basic aspects and current research*. Englewood Cliffs, NJ: Prentice-Hall.
- Stremmel, A.J. (1991). Predictors of intention to leave child care work. *Early Childhood Research Quarterly*, 6, 285-298.
- Stremmel, A.J., Benson, M.J., & Powell, D.R. (1993). Communication, satisfaction and emotional exhaustion among childcare centre staff. *Early Childhood Research Quarterly*, 8, 221-233.
- Sullivan, H.S. (1953). *The interpersonal theory of psychiatry*. New York: Newton.
- Tabachnick, B.G., & Fidell, L.S. (1989). *Using multivariate statistics* (2<sup>nd</sup> ed.) New York: Harper Collins.
- Tett, R.P., Jackson, D. N., & Rothstein, M. (1991). Personality measures as predictors of performance: A meta-analytic review. *Personnel Psychology*, 44, 703-742.
- Tett, R.P., Jackson, D.N., Rothstein, M., & Reddon, J.R. (1999). Meta-analysis of bidirectional relations in personality – job performance research. *Human Performance*, 12, 1-29.
- Thierry, H. (1998). Motivation and satisfaction. In P.J.D. Drenth, H. Thierry, & C.J. De Wolff (Eds.), *Handbook of work and organizational psychology*. Hove: Psychology Press.

- Tokar, D.M., Fischer, A.R. & Subich, L.M. (1998). Personality and vocational behaviour: A selective review of the literature, 1993-1997. *Journal of Vocational Behavior*, 53, 115-153.
- Tokar, D.M., & Subich, L.M. (1997). Relative contributions of congruence and personality dimensions to job satisfaction. *Journal of Vocational Behavior*, 50, 482-491.
- Toms, P., Moore, K.S., & Scott, K.S. (1996). The relationship between self-efficacy for participating in self-managed work groups and the big five personality dimensions. *Journal of Organizational Behavior*, 17, 349-362.
- Topping, G.D., & O'Gorman, J.G. (1997). Effects of faking set on validity on the NEO-FFI. *Personality & Individual Differences*, 23, 117-124.
- Tranberg, M., Slane, S., & Ekeberg, S.E. (1993). The relation between interest congruence and satisfaction: A meta-analysis. *Journal of Vocational Behavior*, 42, 253-264.
- Tseng, M. (1970). Locus of control as a determinant of job proficiency, employability, and training satisfaction of vocational rehabilitation clients. *Journal of Counseling Psychology*, 17, 487-491.
- Van Dyne, L. & LePine, J.A. (1998). Helping and voice extra-role behaviors: Evidence of construct and predictive validity. *Academy of Management Journal*, 41, 108-119.
- Vassend, O., & Skrandal, A. (1997). Validation of the NEO Personality Inventory and the five-factor model. Can finds from exploratory and confirmatory factor analysis be reconciled? *European Journal of Personality*, 11, 147-166.
- Vygotsky, L.S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wanous, J.P., Reichers, A.E., & Hudy, M.J. (1997). Overall job satisfaction: How good are single-item measures? *Journal of Applied Psychology*, 82, 247-252.
- Watson, D., & Clark, L.A. (1992). N traits and temperament: General and specific factors of emotional experience and their relation to the five-factor model. *Journal of Personality*, 25, 23-44.
- Watson, D. & Clark, L.A. (1997). Extraversion and its positive emotion core. In Hogan, R., Johnson, J., & Briggs, S (Eds.), *Handbook of personality psychology* (pp. 767-793). San Diego: Academic Press.

- Webb, N.C. & Lowther, M (1990, November). *Predictors of child caregiver commitment*. Paper presented at the annual conference of the National Association for the Education of Young Children, Washington, DC. ERIC:EECE (Eric Document Reproduction Service No. 338 346)
- Weimer, W. B. (1984). Limitations of the dispositional analysis of behavior. In J.R. Royce & L.P. Moss (Eds.), *Annals of theoretical psychology* (Vol. 1, pp. 161-198). New York: Plenum Press.
- Weitman, C., & Humphires, J. (1989). *Qualities of Early Childhood Teachers*. Paper presented at the Annual Conference of the Southern Association for children under six. ERIC:EECE. (ERIC Document Reproduction Service No. ED 317 308)
- West, S.G., & Finch, J.F. (1997). Personality measurement: Reliability and validity issues. In R. Hogan, J. Johnson, & S. Briggs (Eds.), *Handbook of personality psychology* (pp. 143-164). New York: Academic Press.
- Whitebook, M., Phillips, D., & Howes, D. (1993). *National childcare staffing study revisited: Four years into the live of center-based child care*. Oakland, CA: Child Care Employee Project. ERIC:EECE (Eric Document Reproduction Service No. 357 863)
- Whitebook, M., Howes, C., Darrah, R., & Friedman, J. (1982). Caring for the caregivers: Staff burnout in child care. In L.G. Katz (Ed.), *Current topics in early childhood education* (Vol. 4) (pp. 211-235). Norwood, NJ: Ablex.
- Whitebook, M., Howes, D., & Phillips, D. (1989). Who cares? Child care teachers and the quality of care in America. *Final Report: National child care staffing study*. Oakland, CA: Child Care Employee Project.
- Wiebe, D. J., & Smith, T.W. (1997). Personality and health: Progress and problems in psychosomatics. In Hogan, R., Johnson, J., & Briggs, S (Eds.), *Handbook of personality psychology* (pp. 891-918). San Diego: Academic Press.
- Wiggins, J.S. (1997). In defense of traits. In R. Hogan, J. Johnson, & S. Briggs (Eds.), *Handbook of personality psychology* (pp. 95-115). New York: Academic Press.
- Wiggins, J.S., & Trapnell, P.D. (1997). Personality Structure: The return of the big five. In R. Hogan, J. Johnson, & S. Briggs (Eds.), *Handbook of personality psychology* (pp. 737-765). New York: Academic Press.
- Williams, J.E., Satterwhite, R.C., & Saiz, J.L. (1998). *The importance of psychological traits: A cross-cultural study*. New York: Plenum Press.

- Williams L.J., & Anderson, S.E., (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behavior. *Journal of Management*, 17, 601-617.
- Winter, D.G. (1996). *Personality: Analysis and interpretation of lives*. New York: McGraw-Hill.
- Woodruff, S.L., & Cashman, J.F. (1993). Task, domain, and general efficacy: A reexamination of the self-efficacy scale. *Psychological Reports*, 72, 423-432.

# APPENDICES

## APPENDIX ONE

### Pilot Study

		Page
Table 1	Comparison of published and obtained means, standard deviations (women) and reliability coefficient for the NEO PI-R Form S	132
Table 2	Range, means, standard deviations, and reliability coefficient performance measurement of general work self-efficacy, affective and continuance commitment, modified work locus of control, and psychological well-being.	133
Table 3	Pearson product-moment correlations between NEO PI-R dimensions, work locus of control, affective and continuance commitment, general work self-efficacy, psychological well-being, the tentative performance variables, and selected demographic variables.	134
	Summary of amendments to Questionnaire One and Two.	136
	Information Sheet – Centre Supervisor	139
	Information Sheet - Participant	141



Table 1  
 Comparison of Published and Obtained Means, Standard Deviations (women) and Reliability Coefficient for the NEO-PI-R Form S.

NEO-PI-R Scale	Published Mean <sub>1</sub>	SD <sub>1</sub>	Reliability <sub>2</sub> $\alpha$	Obtained <sub>3</sub> Mean	SD	Reliability $\alpha$
<b>Domains</b>						
N: Neuroticism	83.1	21.7	.92	86.7	21.6	.87
E: Extraversion	110.3	18.4	.89	118.2	18.0	.71
O: Openness	111.0	17.2	.87	118.7	14.0	.62
A: Agreeableness	128.5	14.4	.86	131.0	14.0	.73
C: Conscientiousness	122.7	17.8	.90	120.8	18.6	.83
<b>Neuroticism facets</b>						
N1: Anxiety	15.4	5.4	.78	16.4	5.1	.81
N2: Angry Hostility	12.6	4.8	.75	12.2	4.0	.64
N3: Depression	12.9	5.6	.81	13.9	6.1	.87
N4: self-consciousness	15.0	4.5	.68	16.2	4.4	.73
N5: Impulsiveness	16.3	4.6	.70	16.6	4.0	.63
N6: Vulnerability	10.9	4.0	.77	11.3	3.8	.69
<b>Extraversion facets</b>						
E1: Warmth	23.6	3.8	.73	24.6	3.6	.77
E2: Gregariousness	17.0	4.7	.72	20.8	4.9	.76
E3: Assertiveness	15.4	4.8	.77	17.2	4.7	.75
E4: Activity	17.8	4.4	.63	17.8	4.6	.75
E5: Excitement Seeking	15.7	5.1	.65	17.0	5.5	.78
E6: Positive Emotions	20.8	4.5	.73	21.5	4.7	.76
<b>Openness facets</b>						
O1: Fantasy	16.2	5.0	.76	18.4	4.6	.74
O2: Aesthetics	18.5	5.1	.76	21.4	3.9	.68
O3: Feelings	20.8	4.1	.66	21.5	3.8	.57
O4: Actions	16.8	3.6	.58	18.9	3.1	.37
O5: Ideas	18.2	5.0	.80	19.6	4.3	.77
O6: Values	20.5	3.8	.67	19.4	3.5	.68
<b>Agreeableness facets</b>						
A1: Trust	21.7	4.0	.79	21.0	3.6	.45
A2: Straightforwardness	22.2	4.3	.71	22.7	3.8	.67
A3: Altruism	24.3	3.2	.75	23.6	3.5	.76
A4: Compliance	19.6	4.1	.59	20.2	4.1	.73
A5: Modesty	19.7	3.8	.67	22.7	3.8	.68
A6: Tender-Mindedness	21.0	3.1	.56	22.6	3.0	.54
<b>Conscientiousness facets</b>						
C1: Competence	21.8	3.5	.67	21.2	3.5	.59
C2: Order	19.1	4.2	.66	19.5	4.3	.70
C3: Dutifulness	23.2	3.8	.62	22.7	3.7	.72
C4: Achievement Striving	19.6	3.9	.67	20.0	3.8	.66
C5: Self-Discipline	21.7	4.4	.75	21.3	3.8	.77
C6: Deliberation	17.3	4.3	.71	17.1	4.6	.77

Note. <sub>1</sub>.Costa & McCrae, Ns 500 women.  
<sub>2</sub> Adapted from Costa & McCrae, & Dye, 1991, and Costa & McCrae, in press, Ns = 1,539  
<sub>3</sub> Pilot Ns 43  
 Adaped From *NEO PI-R: Professional manual, revised NEO personality inventory (NEO PI-R) and NEO five-factor inventory (NEO-FFI) (pgs.44 & 75 )*, by P.T. Costa & R.R. McCrae, 1985, Florida: Psychological Assessment Resources, Inc.

Table 2  
 Range, Means, Standard Deviations and Reliability Coefficient Performance Measurement of General Work Self-Efficacy, Affective and Continuance Commitment, Modified Work Locus of Control, and Psychological Well-being.

Measure	Range Min	Range Max	Mean	SD	Published Alphas	Obtained Alphas
<b>Externally Rated Performance</b>						
Help	23	49	41.8	7.1	.94	.93
Voice	15	42	35.7	6.5	.94	.92
Task	12	28	24.8	4.0	.96	.87
<b>Self-Rated Measures.</b>						
General Work Self Efficacy	37	59	47.1	4.4	.69	
<b>Commitment.</b>						
Affective	19	38	29.0	4.5	.85	.76
Continuance Commitment	15	36	27.2	4.6	.79	.64
Modified Work Locus of Control	15	36	27.2	4.6	.70	.83
Psychological Well-being	0	8	1.2	2.0	.	.80

N = 43

Table 3

Pearson product moment correlation between NEO-PI-R Dimensions, Work Locus of Control, Affective and Continuance Commitment, General Self Efficacy, General Health Questionnaire, Global Job Satisfaction, Various work related attitudes and behaviours and selected demographic variables.

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Neuroticism													
2 Extraversion	-.276												
3 Openness	-.111	.626**											
4 Agreeableness	-.464**	.121	.016										
5 Conscientiousness	-.505**	.082	-.015	.522**									
6 Work Locus of Control	-.283	.113	.298	.204	.205								
7 Affective Commitment	-.167	.160	.015	.139	.242	.374*							
8 Continuance Commit.	.249	-.032	-.155	-.334*	-.056	-.159	.228						
9 General Work Self-efficacy	-.239	.328*	.488**	.205	.422**	.551**	.075	-.022					
10 Self Rated Performance	-.114	.369*	.095	.152	.291	.184	.187	.229	.437**				
11 Global Job Satisfaction	-.286	.216	.115	.123	.070	.458**	.774**	.087	.021	.186			
12 Psychological Well-being	.266	.135	.172	-.252	-.111	.122	.061	.137	.201	.273	-.066		
13 Help	-.320	.095	.163	.367*	.307	.249	.111	.051	.284	.207	-.056	.170	
14 Voice	-.187	.068	.242	.221	.095	.245	.043	.001	.185	.140	-.041	.287	
15 Task/Role	-.383*	.208	.056	.277	.274	.166	.127	.017	.179	.225	-.085	.145	
16 Global Performance	-.439**	.140	.045	.318	.271	.183	.101	-.043	.158	.127	-.046	.148	
17 Affective Work Attitude	-.272	-.009	.056	.379*	.272	.021	.030	.074	.078	.274	-.047	.207	
18 Role Performance	-.356*	.124	.088	.436*	.186	.144	.099	-.076	.086	.209	.009	.197	

Items 1 – 12,  $N = 43$ ; Item 13,  $N = 33$ ; Items 14 – 17,  $N = 34$ ; Item 18,  $N = 33$ .

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)

Table X continued.

	Measure	13	14	15	16	17	18
1	Neuroticism						
2	Extraversion						
3	Openness						
4	Agreeableness						
5	Conscientiousness						
6	Work Locus of Control						
7	Affective Commitment						
8	Continuance Commit.						
9	General Work Self-efficacy						
10	Self Rated Performance						
11	Global Job Satisfaction						
12	Psychological Well-being.						
	<b>Externally Rated Measures</b>						
13	Help						
14	Voice	.901**					
15	Task/Role	.869**	.809**				
16	Global Performance	.817**	.766**	.893**			
17	Affective Work Attitude	.803**	.756**	.815**	.726**		
18	Role Performance	.824**	.829**	.953**	.812**	.865**	

Items 1 – 12,  $N = 43$ ; Item 13,  $N = 33$ ; Items 14 – 17,  $N = 34$ ; Item 18,  $N = 33$ .

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)

The 15 performance related statements, included by the researcher in Questionnaire Two, were divided into two measures based on the wording of the statements. The two measures are labeled Affective Work Attitude and Role Performance. Analysis of thirty-two items (Global Job Performance excluded) forming Questionnaire 2 cannot occur until sufficient number of responses are received.

## Summary of Amendments to Questionnaire One and Questionnaire Two

Instructions for completing Questionnaire Two in the pilot stage was:

Identify, by marking the appropriate numeral, if you strongly disagree, to strongly agree with the following statements on the work performance of the participant.

- 1 = **strongly disagree**, if the statement is definitely false or if you strongly disagree
- 4 = **neutral**, if the statement is about equally true or false, if you cannot decide, or if the statement is not applicable to the work the co-worker is currently involved.
- 7 = **strongly agree**, if the statement is definitely true or if you strongly agree.

The instructions were modified to provide greater clarity and definition on the rating scales. The instructions for the main study being as follows:

Please rate the extent to which you agree or disagree with the following statements in terms in which they reflect the participants work-related behaviour in the centre.

- 1 = **Strongly disagree**, if the statement is definitely false or if you strongly disagree.  
The work related behaviour has not been observed.
- 2 = The work related behaviour is rarely observed.
- 3 = The work related behaviour is erratic.
- 4 = **Neutral**, if the statement is about equally true or false, if you cannot decide **or** if the statement is not applicable to the work the co-worker is currently involved.
- 5 = The work related behaviour is occasionally observed.
- 6 = The work related behaviour is often observed.
- 7 = **strongly agree**, if the statement is definitely true or if you strongly agree.  
The work-related behaviour is frequently observed.

## Changes in Demographic Section

### Questionnaire One

The following changes were made to the demographic section, pages 14 and 15, of Questionnaire One.

#### Page 14:

##### Marital Status.

A fifth category was included – Widowed.

#### Page 15:

Two additional questions were asked to gain information on centre and team size.

How many, including yourself, early childhood educators and care providers work at your centre?

How many, including yourself, do you work with closely on a daily basis?

##### Information regarding level of training was simplified.

Pilot study was:

##### Level of Training.

Please indicate your highest level of training.

No Training:

Currently Training: Part-time ☐ Field Base ☐ Full Time: ☐

Training Provider:

Tick as many providers as needed to identify your source of training.

Private Training Provider ☐ Polytech/Unitech ☐

College of Education ☐ University ☐

Other: .....

Licensing Points: Under 20 ☐: 20 – 39 ☐: 40 – 59 ☐: 60 – 79 ☐: 80 – 99 ☐:

100 – 120 ☐:

Diploma of Education (Primary) ☐

Diploma of Education (Early Childhood) ☐

Bachelor of Teaching (Early Childhood) ☐

Bachelor of Education (Early Childhood) ☐

Master of Education (Early Childhood) ☐

Other .....

The information required for the main study was simplified to:

**Level of Training.**

Please tick the box that best recognizes your highest level of training achieved. **If you have, for example, completed training at a certificate level and currently in training for diploma, please tick both the in training box and the certificate box.**

Highest Level of Training Recognized for Work in the Early Childhood Sector.	Tick	Highest Level of Training Achieved Since Leaving School.	Tick
No Training		No Training	
In Training		In Training	
NZQA - less than 80 points		Certificate	
NZQA - 80 points and above		Diploma	
Diploma of Education (Early Childhood)		Bachelor	
Diploma of Teaching (Early Childhood)		Masters	
Bachelor of Education (Early Childhood)		Doctorate	
Bachelor of Teaching (Early Childhood)			
Other:			





MASSEY  
UNIVERSITY

A L B A N Y

DEPARTMENT OF PSYCHOLOGY

### Information Sheet

#### To the Centre Supervisor

**Research Project:** An investigation into the relationship between personality and performance in early childcare workers.

**Researcher:**

Christine Barrow  
Department of Psychology  
Massey University, Albany  
Auckland  
Telephone: (09) 443-9799 ext. 9863  
email: thebarrows@xtra.co.nz

**Supervisor:**

Dr. Hillary Bennett  
Department of Psychology  
Massey University, Albany  
Auckland  
Telephone: (09) 443-9799 ext. 9863  
email: H.F.Bennett@massey.ac.nz

Attrition rate of childcare workers is an industry concern. Although a number of factors contribute to the high rate, including pay rates and a perceived lack of career options, little work has been done on the influence of the person-environment fit. By examining the personality profiles of those currently working in childcare the information gained may be helpful for school career advisors, organisations recruiting people to train, for use in the selection process, and in the professional development of staff. This study is designed to explore the relationship between personality and performance in early childhood workers. This study is being undertaken by the researcher to fulfill the requirements for a Masterate degree in psychology.

Your centre staff are invited to participate in the pilot phase of this research. Results from the pilot phase will be analysed and where necessary deleting of redundant sub-scales may occur. The questions and statements used in the final research phase may therefore be different from those in the pilot phase. Data collected from participants of the pilot study will be included with the data gathered in the main study. The main study will collect data from approximately 1500 childcare workers from centres throughout New Zealand who will be invited to participate in the final study.

If you agree to the staff of your centre invited to participate in this study we would ask that you distribute the enclosed packs to staff members, including yourself. **Participation of your centre and centre staff in the research is voluntary.**

The information is provided on the understanding that it is completely confidential to the researcher. Numeric codes are used to match responses on Questionnaire One and Questionnaire Two but no record has been kept of which code numbers were sent to which centre. All data will be stored in a secure place. **It will not be possible to identify participants or your centre in any reports that are prepared from the study. All results computed from the study are in aggregate form.** Centres will not have access to data pertaining to their particular centre, but will receive a newsletter which will publish a summary of the findings. All centres randomly selected for inclusion in the study will receive a newsletter. Additional copies of the newsletter will be included for distribution to centre staff.

If you do you have any questions regarding the procedures or the purpose of the study, or need additional questionnaire packs, please do not hesitate to contact the researcher or the supervisor. Contact details are given on the first page.

If it is unacceptable to distribute the research questionnaires to staff I would appreciate it if you could return the package to me at the Freepost address given.

Thank you for your co-operation.

Christine Barrow

Freepost 80057  
Christine Barrow  
Psychology Department  
Massey University Albany  
Private Bag 102904  
North Shore Mail Centre



MASSEY  
UNIVERSITY

A L B A N Y

DEPARTMENT OF PSYCHOLOGY

### Information Sheet

**Research Project:** An investigation into the relationship between personality and performance in early childcare workers.

**Researcher:**

Christine Barrow  
Department of Psychology  
Massey University, Albany  
Auckland  
Telephone: (09) 443-9799 ext. 9863  
email: thebarrows@xtra.co.nz

**Supervisor:**

Dr. Hillary Bennett  
Department of Psychology  
Massey University, Albany  
Auckland  
Telephone: (09) 443-9799 ext. 9863  
email: H.F.Bennett@massey.ac.nz

Attrition rates of childcare workers are an industry concern. Although a number of factors contribute to the high rate, including pay rates and a perceived lack of career options, little work has been done on the influence of the person-environment fit. By examining the personality profiles of those currently working in childcare the information gained may be helpful for school career advisors, organisations recruiting people to train, in the selection process, and in the professional development of staff. The study is designed to explore the relationship between personality and performance in early childcare workers. This study is being undertaken by the researcher to fulfill the requirements for a Masterate degree in psychology.

You are invited to participate in the pilot phase of the research programme. Results from the pilot phase will be analysed and where necessary deleting of redundant sub-scales may occur. The questions and statements used in the final research phase may therefore be different from those in the pilot phase. Data collected from participants of the pilot study will be included with the data gathered in the main study. The main study will collect data from approximately 1500 childcare workers from centres throughout New Zealand who will be invited to participate in the final study.

**Participation in this study is voluntary.** The distribution by your centre supervisor or manager of this questionnaire does not negate your right of choice to be involved in this study.

If you agree to participate in this study you will be asked to complete a questionnaire. The questionnaire consists of two sections. In the first section you are asked to respond to statements about your personal thoughts, feelings, and goals. In the second section you are asked to respond

to statements focusing on your thoughts, feelings, and goals with regards to work, complete a health questionnaire, and a demographic profile which is required for analytical reasons. The questionnaire should take approximately 60 minutes to complete. Once you have completed the questionnaire return the questionnaire to the researcher in the self-addressed, Freepost envelope provided.

In addition, if you agree to participate in the study, you will be asked to give a second questionnaire, a performance inventory, to a co-worker or your supervisor to complete. The inventory requires a co-worker or supervisor to rate your performance on a number of indicators. Completing this questionnaire should take your co-worker or supervisor approximately 15 minutes. To ensure confidentiality of this information please ask your co-worker or supervisor to complete the questionnaire in confidence; and return the completed questionnaire independently to the researcher in the second self-addressed, Freepost envelope provided. The researcher will keep both questionnaires in a secure place until the completion of the research; at which time raw data collected will be destroyed.

It is assumed that in completing Questionnaire One that you have given your consent to participate in the research. In addition, the giving of Questionnaire Two to a co-worker or supervisor implies you have given your consent for the co-worker or supervisor to complete the confidential performance inventory.

**If you agree to participate in this study, you have the right to:**

- Refuse to answer any questions, without penalty and without having to give an explanation, however, if possible it is preferred that you answer all questions.
- Ask any questions about the study that occur to you during your participation.
- Provide information on the understanding that it is completely confidential to the researcher. Numeric codes are used to match responses on Questionnaires One and Two but no record has been kept of what code numbers were sent to what centre. All data will be stored in a secure place. It will not be possible to identify you or your centre in any reports that are prepared from the study. All results generated from the study are in aggregate form.
- Be given access to a newsletter that will publish a summary of the findings from the study. Multiple copies of the newsletter will be sent to all centres randomly invited to participate in the research for distribution to centre staff.
- On completion of the research, approximately February 2000, you may access your individual personality profile. To maintain confidentiality requests for personality profiles must be made through the supervising lecturer. To facilitate this process participants will need to enter a password on their completed personality questionnaire. You will need to quote your password when requesting your profile.
- You have the right to withdraw from the research at any point in time.

If you do have any questions regarding the procedure or the purpose of the study, please do not hesitate to contact the researcher or the supervisor. Contact details are given on the first page.

Christine Barrow

## APPENDIX TWO

### Main Study

	Page
Information Sheet – Centre Supervisor	144
Information Sheet - Participant	146
Questionnaire One	148
Questionnaire Two	164



MASSEY  
UNIVERSITY

A L B A N Y

DEPARTMENT OF PSYCHOLOGY

### Information Sheet

#### To the Centre Supervisor

**Research Project:** An investigation into the relationships between personality and work related behaviours of early childhood educators and care providers.

**Researcher:**

Christine Barrow  
Department of Psychology  
Massey University, Albany  
Auckland  
Telephone: (09) 443-9799 ext. 9863  
email: thebarrows@xtra.co.nz

**Supervisor:**

Dr. Hillary Bennett  
Department of Psychology  
Massey University, Albany  
Auckland  
Telephone: (09) 443-9799 ext. 9863  
email: H.F.Bennett@massey.ac.nz

The attrition rate among early childhood educators and care providers is an industry concern. Although a number of factors contribute to the high rate, including pay rates and a perceived lack of career options, little work has been done on the influence of the person-environment fit on attrition rates. By examining the personality profiles of those currently working in childcare the information gained may be helpful for school career advisors, organisations recruiting people to train, for use in the selection process, and in the professional development of staff. The study is designed to explore the relationship between personality and work related behaviour. This study is being undertaken by the researcher to fulfill the requirements for a Masterate degree in psychology.

Your centre has been randomly selected from childcare centers advertising in the Yellow Pages. Approximately 1500 childcare educators and care providers from early childcare centres throughout New Zealand are being invited to participate in this study. If you agree to centre staff being invited to participate in this study we would ask that you distribute the enclosed packs to staff members, including yourself. **Participation by your staff in this study is voluntary.** It would be appreciated if the completed questionnaires could be returned within three weeks of being distributed to staff.

The information is provided on the understanding that it is completely confidential to the researcher. Numeric codes are used to match responses on Questionnaire One and Questionnaire Two but no record has been kept of which code numbers were sent to which centre. All data will be stored in a secure place. **It will not be possible to identify participants or your centre in any reports that are prepared from the study. All results from the study are computed in aggregate form.** Centres will not have access to data pertaining to their particular centre, but will receive a newsletter that will publish a summary of the findings. All centres randomly selected for inclusion in the research will receive a newsletter. Additional copies of the newsletter will be included for distribution to centre staff.

If you do have any questions regarding the procedures or the purpose of the study, or need additional questionnaire packs, please do not hesitate to contact the researcher or the supervisor. Contact details are given on the first page.

If it is unacceptable to distribute the research questionnaires to staff, I would appreciate it if you could return the package to me at the Freepost address given. Immediate returns of the questionnaire packs will enable me to distribute them to other centres.

Thanking you for your co-operation.

Christine Barrow





MASSEY  
UNIVERSITY

A L B A N Y

DEPARTMENT OF PSYCHOLOGY

## Information Sheet

**Research Project:** An investigation into the relationship between personality and work related behaviour of early childhood educators and care providers.

**Researcher:**

Christine Barrow  
Department of Psychology  
Massey University, Albany  
Auckland  
Telephone: (09) 443-9799 ext. 9863  
email: thebarrows@xtra.co.nz

**Supervisor:**

Dr. Hillary Bennett  
Department of Psychology  
Massey University, Albany  
Auckland  
Telephone: (09) 443-9799 ext. 9863  
email: H.F.Bennett@massey.ac.nz

The attrition rate of early childhood educators and care providers is an industry concern. Although a number of factors contribute to the high rate, including pay rates and a perceived lack of career options, little work has been done on the influence of the person-environment fit on attrition rates. By examining the personality profiles of those currently working in childcare the information gained may be helpful for school career advisors, organisations recruiting people to train, for use in the selection process, and in the professional development of staff. The study is designed to explore the relationship between personality and work related behaviour. This study is being undertaken by the researcher to fulfill the requirements for a Masterate degree in psychology.

Your centre has been randomly selected from childcare centres advertising in the Yellow Pages. Approximately 1500 early childhood educators and care providers throughout New Zealand have been invited to participate in this study. **Participation in this study is voluntary.** The distribution by your centre supervisor/management of this questionnaire does not negate your right of choice to be involved in this study.

If you agree to participate in this study, you will be asked to complete a questionnaire. The questionnaire consists of two sections. In the first section you are asked to respond to statements about your personal thoughts, feelings, and goals. In the second section you are asked to respond to statements focusing on your thoughts, feelings, and goals with regards to

work, complete a health questionnaire and a demographic profile required for analytical purposes. The questionnaire should take approximately 60 minutes to complete. Once you have completed the questionnaire return the questionnaire to the researcher in the self-addressed, Freepost envelope provided.

In addition, if you agree to participate in the study you will be asked to give a second questionnaire, a performance inventory, to a co-worker or your supervisor to complete. The inventory requires a co-worker or supervisor to rate your performance on a number of indicators. Completing this questionnaire should take your co-worker or supervisor approximately 15 minutes. To ensure confidentiality of this information please ask your co-worker or supervisor to complete the questionnaire in confidence and return the completed questionnaire independently to the researcher in the second self-addressed, Freepost envelope provided. The researcher will keep both questionnaires in a secure place until the completion of the research at which time raw data collected will be destroyed.

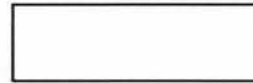
It is assumed that in completing Questionnaire One that you have given your consent to participate in the research. In addition, the giving of Questionnaire Two to a co-worker or supervisor implies you have given your consent for the co-worker or supervisor to complete the confidential performance inventory.

**If you agree to participate in this study, you have the right to:**

- Refuse to answer any questions, without penalty and without having to give an explanation, however, if possible it is preferred that you answer all questions.
- Ask any questions about the study that occurs to you during your participation.
- Provide information on the understanding that it is completely confidential to the researcher. Numeric codes are used to match responses on Questionnaires One and Two but no record has been kept of what code numbers were sent to what centre. All data will be stored in a secure place. It will not be possible to identify you or your centre in any reports that are prepared from the study. All results generated from the study are in aggregate form.
- Be given access to a newsletter that will publish a summary of the findings from the study. Multiple copies of a newsletter will be sent to all centres randomly invited to participate in the research for distribution to centre staff
- On completion of the research, approximately February 2000, you may access your individual personality profile. To maintain confidentiality requests for personality profiles must be made through the supervising lecturer. To facilitate this process participants will need to enter a password on their completed personality questionnaire. You will need to quote your password when requesting your profile.
- You have the right to withdraw from the research at any point in time.

If you do have any questions regarding the procedure or the purpose of the study, please do not hesitate to contact the researcher or the supervisor. Contact details are given on the first page.

Christine Barrow



## Part A. Questionnaire One

Please fill in Questionnaire One and return to the researcher in the self-addressed, Freepost envelope. Please give Questionnaire Two to a co-worker or supervisor to complete. Questionnaire One may take 60 minutes to complete.

In the first part of Questionnaire One you are asked to respond to statements about your personal thoughts, feelings, and goals. In the second part you are asked to respond to statements focusing on your thoughts, feelings and goals with regard to work. Then you are asked to complete a short general health questionnaire. In the final section of Questionnaire One you are asked to complete a demographic profile. This information is required for analytical reasons.

If you agree to participate in this study, you have the right to:

- refuse to answer any questions, without penalty and without having to give an explanation, however, if possible it is preferred that you answer all questions.
- ask any questions about the study that occur to you during your participation
- provide information on the understanding that it is completely confidential to the researcher.

The numeric code on Questionnaires One and Two are used only to match responses. It will not be possible to identify you or your centre in any reports that are prepared from this study.

If you wish, on the completion of the research (approximately February 2000), you may access your individual personality profile. To maintain confidentiality requests for personality profiles must be made through the supervising lecturer. To facilitate this process enter your password here:

**Password** ..... (maximum six letters or numerals)

You will need to quote this password when requesting your profile.

A newsletter will be sent to all centres invited to participate in the research outlining the major results from the study.

### Researcher's Address

Freepost 80057  
Christine Barrow  
Psychology Department  
Massey University Albany  
Private Bar 102904  
North Shore Mail Centre

If you do have any questions regarding the procedures or the purpose of the study, please do not hesitate to contact the researcher or the supervisor.  
Christine Barrow (09) 443-9799 ext. 9863  
email: thebarrows@xtra.co.nz  
Dr. Hillary Bennett (09) 443-9799 ext. 9863  
email: H.F. Bennett@massey.ac.nz



**Remember to give Questionnaire Two, plus envelope, to a co-worker or your supervisor to complete.**

Identify, by marking the appropriate abbreviation, if you strongly disagree; disagree; are neutral on; agree; or strongly agree with the following statements.

SD = **strongly disagree**, if the statement is definitely false or if you strongly disagree

D = **disagree**, if the statement is mostly false or if you disagree

N = **neutral**, if the statement is about equally true or false, if you cannot decide, or if you are neutral on the statement.

A = **agree**, if the statement is mostly true or if you agree.

SA = **strongly agree**, if the statement is definitely true or if you strongly agree.

		<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>
1	I am not a worrier.	(SD)	(D)	(N)	(A)	(SA)
2	I really like most people I meet.	(SD)	(D)	(N)	(A)	(SA)
3	I have a very active imagination.	(SD)	(D)	(N)	(A)	(SA)
4	I tend to be cynical and skeptical of others' intentions.	(SD)	(D)	(N)	(A)	(SA)
5	I'm known for my prudence and common sense.	(SD)	(D)	(N)	(A)	(SA)
6	I often get angry at the way people treat me.	(SD)	(D)	(N)	(A)	(SA)
7	I shy away from crowds of people.	(SD)	(D)	(N)	(A)	(SA)
8	Aesthetic and artistic concerns aren't very important to me.	(SD)	(D)	(N)	(A)	(SA)
9	I'm not crafty or sly.	(SD)	(D)	(N)	(A)	(SA)
10	I would rather keep my options open than plan everything in advance.	(SD)	(D)	(N)	(A)	(SA)
11	I rarely feel lonely or blue.	(SD)	(D)	(N)	(A)	(SA)
12	I am dominant, forceful, and assertive.	(SD)	(D)	(N)	(A)	(SA)
13	Without strong emotions, life would be uninteresting to me.	(SD)	(D)	(N)	(A)	(SA)
14	Some people think I'm selfish and egotistical.	(SD)	(D)	(N)	(A)	(SA)
15	I try to perform all the tasks assigned to me conscientiously.	(SD)	(D)	(N)	(A)	(SA)
16	In dealing with other people, I always dread making a social blunder.	(SD)	(D)	(N)	(A)	(SA)
17	I have a leisurely style in work and play.	(SD)	(D)	(N)	(A)	(SA)
18	I'm pretty set in my ways.	(SD)	(D)	(N)	(A)	(SA)
19	I would rather cooperate with others than compete with them.	(SD)	(D)	(N)	(A)	(SA)
20	I am easy-going and lackadaisical.	(SD)	(D)	(N)	(A)	(SA)
21	I rarely overindulge in anything.	(SD)	(D)	(N)	(A)	(SA)
22	I often crave excitement.	(SD)	(D)	(N)	(A)	(SA)
23	I often enjoy playing with theories or abstract ideas.	(SD)	(D)	(N)	(A)	(SA)
24	I don't mind bragging about my talents and accomplishments.	(SD)	(D)	(N)	(A)	(SA)
25	I'm pretty good about pacing myself so as to get things done on time.	(SD)	(D)	(N)	(A)	(SA)

26	I often feel helpless and want someone else to solve my problems.	(SD)	(D)	(N)	(A)	(SA)
27	I have never literally jumped for joy.	(SD)	(D)	(N)	(A)	(SA)
28	I believe letting students hear controversial speakers can only confuse and mislead them.	(SD)	(D)	(N)	(A)	(SA)
29	Political leaders need to be more aware of the human side of their policies.	(SD)	(D)	(N)	(A)	(SA)
30	Over the years I've done some pretty stupid things.	(SD)	(D)	(N)	(A)	(SA)
31	I am easily frightened.	(SD)	(D)	(N)	(A)	(SA)
32	I don't get much pleasure from chatting with people.	(SD)	(D)	(N)	(A)	(SA)
33	I try to keep all my thoughts directed along realistic lines and avoid flights of fancy.	(SD)	(D)	(N)	(A)	(SA)
34	I believe that most people are basically well intentioned.	(SD)	(D)	(N)	(A)	(SA)
35	I don't take civic duties like voting very seriously.	(SD)	(D)	(N)	(A)	(SA)
36	I'm an even-tempered person.	(SD)	(D)	(N)	(A)	(SA)
37	I like to have a lot of people around me.	(SD)	(D)	(N)	(A)	(SA)
38	I am sometimes completely absorbed in music I am listening to.	(SD)	(D)	(N)	(A)	(SA)
39	If necessary, I am willing to manipulate people to get what I want.	(SD)	(D)	(N)	(A)	(SA)
40	I keep my belongings neat and clean.	(SD)	(D)	(N)	(A)	(SA)
41	Sometimes I feel completely worthless.	(SD)	(D)	(N)	(A)	(SA)
42	I sometimes fail to assert myself as much as I should.	(SD)	(D)	(N)	(A)	(SA)
43	I rarely experience strong emotions.	(SD)	(D)	(N)	(A)	(SA)
44	I try to be courteous to everyone I meet.	(SD)	(D)	(N)	(A)	(SA)
45	Sometimes I'm not as dependable or reliable as I should be.	(SD)	(D)	(N)	(A)	(SA)
46	I seldom feel self-conscious when I'm around people.	(SD)	(D)	(N)	(A)	(SA)
47	When I do things, I do them vigorously.	(SD)	(D)	(N)	(A)	(SA)
48	I think it's interesting to learn and develop new hobbies.	(SD)	(D)	(N)	(A)	(SA)
49	I can be sarcastic and cutting when I need to be.	(SD)	(D)	(N)	(A)	(SA)
50	I have a clear set of goals and work toward them in an orderly fashion.	(SD)	(D)	(N)	(A)	(SA)
51	I have trouble resisting my cravings.	(SD)	(D)	(N)	(A)	(SA)
52	I wouldn't enjoy vacationing in Las Vegas.	(SD)	(D)	(N)	(A)	(SA)
53	I find philosophical arguments boring.	(SD)	(D)	(N)	(A)	(SA)
54	I'd rather not talk about myself and my achievements.	(SD)	(D)	(N)	(A)	(SA)
55	I waste a lot of time before settling down to work.	(SD)	(D)	(N)	(A)	(SA)
56	I feel I am capable of coping with most of my problems.	(SD)	(D)	(N)	(A)	(SA)
57	I have sometimes experienced intense joy or ecstasy.	(SD)	(D)	(N)	(A)	(SA)
58	I believe that laws and social policies should change to reflect the needs of a changing world.	(SD)	(D)	(N)	(A)	(SA)
59	I'm hardheaded and tough-minded in my attitudes.	(SD)	(D)	(N)	(A)	(SA)



60	I think things through before coming to a decision.	(SD)	(D)	(N)	(A)	(SA)
61	I rarely feel fearful or anxious.	(SD)	(D)	(N)	(A)	(SA)
62	I'm known as a warm and friendly person.	(SD)	(D)	(N)	(A)	(SA)
63	I have an active fantasy life.	(SD)	(D)	(N)	(A)	(SA)
64	I believe that most people will take advantage of you if you let them.	(SD)	(D)	(N)	(A)	(SA)
65	I keep myself informed and usually make intelligent decisions.	(SD)	(D)	(N)	(A)	(SA)
66	I am known as hot-blooded and quick-tempered.	(SD)	(D)	(N)	(A)	(SA)
67	I usually prefer to do things alone.	(SD)	(D)	(N)	(A)	(SA)
68	Watching ballet or modern dance bores me.	(SD)	(D)	(N)	(A)	(SA)
69	I couldn't deceive anyone even if I wanted to.	(SD)	(D)	(N)	(A)	(SA)
70	I am not a very methodical person.	(SD)	(D)	(N)	(A)	(SA)
71	I am seldom sad or depressed.	(SD)	(D)	(N)	(A)	(SA)
72	I have often been a leader of groups I have belonged to.	(SD)	(D)	(N)	(A)	(SA)
73	How I feel about things is important to me.	(SD)	(D)	(N)	(A)	(SA)
74	Some people think of me as cold and calculating.	(SD)	(D)	(N)	(A)	(SA)
75	I pay my debts promptly and in full.	(SD)	(D)	(N)	(A)	(SA)
76	At times I have been so ashamed I just wanted to hide.	(SD)	(D)	(N)	(A)	(SA)
77	My work is likely to be slow but steady.	(SD)	(D)	(N)	(A)	(SA)
78	Once I find the right way to do something, I stick to it.	(SD)	(D)	(N)	(A)	(SA)
79	I hesitate to express my anger even when it's justified.	(SD)	(D)	(N)	(A)	(SA)
80	When I start a self-improvement programme, I usually let it slide after a few days.	(SD)	(D)	(N)	(A)	(SA)
81	I have little difficulty resisting temptation.	(SD)	(D)	(N)	(A)	(SA)
82	I have sometimes done things just for 'kicks' or 'thrills'.	(SD)	(D)	(N)	(A)	(SA)
83	I enjoy solving problems or puzzles.	(SD)	(D)	(N)	(A)	(SA)
84	I am better than most people, and I know it.	(SD)	(D)	(N)	(A)	(SA)
85	I am a productive person who always gets the job done.	(SD)	(D)	(N)	(A)	(SA)
86	When I'm under a great deal of stress, sometimes I feel like I'm going to pieces.	(SD)	(D)	(N)	(A)	(SA)
87	I am not a cheerful optimist.	(SD)	(D)	(N)	(A)	(SA)
88	I believe we should look to our religious authorities for decisions on moral issues.	(SD)	(D)	(N)	(A)	(SA)
89	We can never do too much for the poor and elderly.	(SD)	(D)	(N)	(A)	(SA)
90	Occasionally I act first and think later.	(SD)	(D)	(N)	(A)	(SA)
91	I often feel tense and jittery.	(SD)	(D)	(N)	(A)	(SA)
92	Many people think of me as somewhat cold and distant.	(SD)	(D)	(N)	(A)	(SA)
93	I don't like to waste my time daydreaming.	(SD)	(D)	(N)	(A)	(SA)
94	I think most of the people I deal with are honest and trustworthy.	(SD)	(D)	(N)	(A)	(SA)



95	I often come into situations without being fully prepared.	(SD)	(D)	(N)	(A)	(SA)
96	I am not considered a touchy or temperamental person.	(SD)	(D)	(N)	(A)	(SA)
97	I really feel the need for other people if I am by myself for long.	(SD)	(D)	(N)	(A)	(SA)
98	I am intrigued by the patterns I find in art and nature.	(SD)	(D)	(N)	(A)	(SA)
99	Being perfectly honest is a bad way to do business.	(SD)	(D)	(N)	(A)	(SA)
100	I like to keep everything in its place so I know just where it is.	(SD)	(D)	(N)	(A)	(SA)
101	I have sometimes experienced a deep sense of guilt or sinfulness.	(SD)	(D)	(N)	(A)	(SA)
102	In meetings, I usually let others do the talking.	(SD)	(D)	(N)	(A)	(SA)
103	I seldom pay much attention to my feelings of the moment.	(SD)	(D)	(N)	(A)	(SA)
104	I generally try to be thoughtful and considerate.	(SD)	(D)	(N)	(A)	(SA)
105	Sometimes I cheat when I play solitaire.	(SD)	(D)	(N)	(A)	(SA)
106	It doesn't embarrass me too much if people ridicule and tease me.	(SD)	(D)	(N)	(A)	(SA)
107	I often feel as if I'm bursting with energy.	(SD)	(D)	(N)	(A)	(SA)
108	I often try new and foreign foods.	(SD)	(D)	(N)	(A)	(SA)
109	If I don't like people, I let them know it.	(SD)	(D)	(N)	(A)	(SA)
110	I work hard to accomplish my goals.	(SD)	(D)	(N)	(A)	(SA)
111	When I am having my favorite foods, I tend to eat too much.	(SD)	(D)	(N)	(A)	(SA)
112	I tend to avoid movies that are shocking or scary.	(SD)	(D)	(N)	(A)	(SA)
113	I sometimes lose interest when people talk about very abstract, theoretical matters.	(SD)	(D)	(N)	(A)	(SA)
114	I try to be humble.	(SD)	(D)	(N)	(A)	(SA)
115	I have trouble making myself do what I should.	(SD)	(D)	(N)	(A)	(SA)
116	I keep a cool head in emergencies.	(SD)	(D)	(N)	(A)	(SA)
117	Sometimes I bubble with happiness.	(SD)	(D)	(N)	(A)	(SA)
118	I believe that the different ideas of right and wrong that people in other societies have may be valid for them.	(SD)	(D)	(N)	(A)	(SA)
119	I have no sympathy for panhandlers (beggars).	(SD)	(D)	(N)	(A)	(SA)
120	I always consider the consequences before I take action.	(SD)	(D)	(N)	(A)	(SA)
121	I'm seldom apprehensive about the future.	(SD)	(D)	(N)	(A)	(SA)
122	I really enjoy talking to people.	(SD)	(D)	(N)	(A)	(SA)
123	I enjoy concentrating on a fantasy or daydream and exploring all its possibilities, letting it grow and develop.	(SD)	(D)	(N)	(A)	(SA)
124	I'm suspicious when someone does something nice for me.	(SD)	(D)	(N)	(A)	(SA)
125	I pride myself on my sound judgment.	(SD)	(D)	(N)	(A)	(SA)
126	I often get disgusted with people I have to deal with.	(SD)	(D)	(N)	(A)	(SA)

127	I prefer jobs that let me work alone without being bothered by other people.	(SD)	(D)	(N)	(A)	(SA)
128	Poetry has little or no effect on me.	(SD)	(D)	(N)	(A)	(SA)
129	I would hate to be thought of as a hypocrite.	(SD)	(D)	(N)	(A)	(SA)
130	I never seem to be able to get organized.	(SD)	(D)	(N)	(A)	(SA)
131	I tend to blame myself when anything goes wrong.	(SD)	(D)	(N)	(A)	(SA)
132	Other people often look to me to make decisions.	(SD)	(D)	(N)	(A)	(SA)
133	I experience a wide range of emotions or feelings.	(SD)	(D)	(N)	(A)	(SA)
134	I'm not known for my generosity.	(SD)	(D)	(N)	(A)	(SA)
135	When I make a commitment, I can always be counted on to follow through.	(SD)	(D)	(N)	(A)	(SA)
136	I often feel inferior to others.	(SD)	(D)	(N)	(A)	(SA)
137	I'm not as quick and lively as other people.	(SD)	(D)	(N)	(A)	(SA)
138	I prefer to spend my time in familiar surroundings.	(SD)	(D)	(N)	(A)	(SA)
139	When I've been insulted, I just try to forgive and forget.	(SD)	(D)	(N)	(A)	(SA)
140	I don't feel like I'm driven to get ahead.	(SD)	(D)	(N)	(A)	(SA)
141	I seldom give in to my impulses.	(SD)	(D)	(N)	(A)	(SA)
142	I like to be where the action is.	(SD)	(D)	(N)	(A)	(SA)
143	I enjoy working on "mind-twister" type puzzles.	(SD)	(D)	(N)	(A)	(SA)
144	I have a very high opinion of myself.	(SD)	(D)	(N)	(A)	(SA)
145	Once I start a project, I almost always finish it.	(SD)	(D)	(N)	(A)	(SA)
146	It's often hard for me to make up my mind.	(SD)	(D)	(N)	(A)	(SA)
147	I don't consider myself especially "light-hearted."	(SD)	(D)	(N)	(A)	(SA)
148	I believe that loyalty to one's ideals and principles is more important than "open-mindedness."	(SD)	(D)	(N)	(A)	(SA)
149	Human need should always take priority over economic considerations.	(SD)	(D)	(N)	(A)	(SA)
150	I often do things on the spur of the moment.	(SD)	(D)	(N)	(A)	(SA)
151	I often worry about things that might go wrong.	(SD)	(D)	(N)	(A)	(SA)
152	I find it easy to smile and be outgoing with strangers.	(SD)	(D)	(N)	(A)	(SA)
153	If I feel mind starting to drift off into daydreams, I usually get busy and start concentrating on some work or activity instead.	(SD)	(D)	(N)	(A)	(SA)
154	My first reaction is to trust people.	(SD)	(D)	(N)	(A)	(SA)
155	I don't seem to be completely successful at anything.	(SD)	(D)	(N)	(A)	(SA)
156	It takes a lot to get me mad.	(SD)	(D)	(N)	(A)	(SA)
157	I'd rather vacation at a popular beach than at an isolated cabin in the woods.	(SD)	(D)	(N)	(A)	(SA)
158	Certain kinds of music have an endless fascination for me.	(SD)	(D)	(N)	(A)	(SA)
159	Sometimes I trick people into doing what I want.	(SD)	(D)	(N)	(A)	(SA)
160	I tend to be somewhat fastidious or exacting.	(SD)	(D)	(N)	(A)	(SA)
161	I have a low opinion of myself.	(SD)	(D)	(N)	(A)	(SA)
162	I would rather go my own way than be a leader of others.	(SD)	(D)	(N)	(A)	(SA)

163	I seldom notice the moods or feelings that different environments produce.	(SD)	(D)	(N)	(A)	(SA)
164	Most people I know like me.	(SD)	(D)	(N)	(A)	(SA)
165	I adhere strictly to my ethical principles.	(SD)	(D)	(N)	(A)	(SA)
166	I feel comfortable in the presence of my bosses or other authorities.	(SD)	(D)	(N)	(A)	(SA)
167	I usually seem to be in a hurry.	(SD)	(D)	(N)	(A)	(SA)
168	Sometimes I make changes around the house just to try something different.	(SD)	(D)	(N)	(A)	(SA)
169	If someone starts a fight, I'm ready to fight back.	(SD)	(D)	(N)	(A)	(SA)
170	I strive to achieve all I can.	(SD)	(D)	(N)	(A)	(SA)
171	I sometimes eat myself sick.	(SD)	(D)	(N)	(A)	(SA)
172	I love the excitement of roller coasters.	(SD)	(D)	(N)	(A)	(SA)
173	I have little interest in speculating on the nature of the universe of the human condition.	(SD)	(D)	(N)	(A)	(SA)
174	I feel that I am not better than others, no matter what their condition.	(SD)	(D)	(N)	(A)	(SA)
175	When a project gets too difficult, I'm inclined to start a new one.	(SD)	(D)	(N)	(A)	(SA)
176	I can handle myself pretty well in a crisis.	(SD)	(D)	(N)	(A)	(SA)
177	I am a cheerful, high-spirited person.	(SD)	(D)	(N)	(A)	(SA)
178	I consider myself broad-minded and tolerant of other people's lifestyles.	(SD)	(D)	(N)	(A)	(SA)
179	I believe all human beings are worthy of respect.	(SD)	(D)	(N)	(A)	(SA)
180	I rarely make hasty decisions.	(SD)	(D)	(N)	(A)	(SA)
181	I have fewer fears than most people.	(SD)	(D)	(N)	(A)	(SA)
182	I have strong emotional attachments to my friends.	(SD)	(D)	(N)	(A)	(SA)
183	As a child I rarely enjoyed games of make believe.	(SD)	(D)	(N)	(A)	(SA)
184	I tend to assume the best about people.	(SD)	(D)	(N)	(A)	(SA)
185	I'm a very competent person.	(SD)	(D)	(N)	(A)	(SA)
186	At times I have felt bitter and resentful.	(SD)	(D)	(N)	(A)	(SA)
187	Social gatherings are usually boring to me.	(SD)	(D)	(N)	(A)	(SA)
188	Sometimes when I am reading poetry or looking at a work of art, I feel a chill or wave of excitement.	(SD)	(D)	(N)	(A)	(SA)
189	At times I bully or flatter people into doing what I want them to.	(SD)	(D)	(N)	(A)	(SA)
190	I'm not compulsive about cleaning.	(SD)	(D)	(N)	(A)	(SA)
191	Sometimes things look pretty bleak and hopeless to me.	(SD)	(D)	(N)	(A)	(SA)
192	In conversations, I tend to do most of the talking.	(SD)	(D)	(N)	(A)	(SA)
193	I find it easy to empathize - to feel myself what others are feeling.	(SD)	(D)	(N)	(A)	(SA)
194	I think of myself as a charitable person.	(SD)	(D)	(N)	(A)	(SA)
195	I try to do jobs carefully, so they won't have to be done again.	(SD)	(D)	(N)	(A)	(SA)
196	If I have said or done the wrong thing to someone, I can hardly bear to face his or her again.	(SD)	(D)	(N)	(A)	(SA)

197	My life is fast-paced.	(SD)	(D)	(N)	(A)	(SA)
198	On a vacation, I prefer going back to a tried and true spot.	(SD)	(D)	(N)	(A)	(SA)
199	I'm hardheaded and stubborn.	(SD)	(D)	(N)	(A)	(SA)
200	I strive for excellence in everything I do.	(SD)	(D)	(N)	(A)	(SA)
201	Sometimes I do things on impulse that I later regret.	(SD)	(D)	(N)	(A)	(SA)
202	I'm attracted to bright colors and flashy styles.	(SD)	(D)	(N)	(A)	(SA)
203	I have a lot of intellectual curiosity.	(SD)	(D)	(N)	(A)	(SA)
204	I would rather praise others than be praised myself.	(SD)	(D)	(N)	(A)	(SA)
205	There are so many little jobs that need to be done that I sometimes just ignore them all.	(SD)	(D)	(N)	(A)	(SA)
206	When everything seems to be going wrong, I can still make good decisions.	(SD)	(D)	(N)	(A)	(SA)
207	I rarely use words like "fantastic" or "sensational" to describe my experiences.	(SD)	(D)	(N)	(A)	(SA)
208	I think that if people don't know what they believe in by the time they're 25, there's something wrong with them.	(SD)	(D)	(N)	(A)	(SA)
209	I have sympathy for others less fortunate than me.	(SD)	(D)	(N)	(A)	(SA)
210	I plan ahead carefully when I go on a trip.	(SD)	(D)	(N)	(A)	(SA)
211	Frightening thoughts sometimes come into my head.	(SD)	(D)	(N)	(A)	(SA)
212	I take a personal interest in the people I work with.	(SD)	(D)	(N)	(A)	(SA)
213	I would have difficulty just letting my mind wander without control or guidance.	(SD)	(D)	(N)	(A)	(SA)
214	I have a good deal of faith in human nature.	(SD)	(D)	(N)	(A)	(SA)
215	I am efficient and effective at my work.	(SD)	(D)	(N)	(A)	(SA)
216	Even minor annoyances can be frustrating to me.	(SD)	(D)	(N)	(A)	(SA)
217	I enjoy parties with lots of people.	(SD)	(D)	(N)	(A)	(SA)
218	I enjoy reading poetry that emphasized feelings and images more than story lines.	(SD)	(D)	(N)	(A)	(SA)
219	I pride myself on my shrewdness in handling people.	(SD)	(D)	(N)	(A)	(SA)
220	I spend a lot of time looking for things I've misplaced.	(SD)	(D)	(N)	(A)	(SA)
221	Too often, when things go wrong, I get discouraged and feel like giving up.	(SD)	(D)	(N)	(A)	(SA)
222	I don't find it easy to take charge of a situation.	(SD)	(D)	(N)	(A)	(SA)
223	Odd things - like certain scents or the names of distant places - can evoke strong moods in me.	(SD)	(D)	(N)	(A)	(SA)
224	I go out of my way to help others if I can.	(SD)	(D)	(N)	(A)	(SA)
225	I'd really have to be sick before I'd miss a day of work.	(SD)	(D)	(N)	(A)	(SA)
226	When people I know do foolish things I get embarrassed for them.	(SD)	(D)	(N)	(A)	(SA)
227	I am a very active person.	(SD)	(D)	(N)	(A)	(SA)
228	I follow the same route when I go someplace.	(SD)	(D)	(N)	(A)	(SA)
229	I often get into arguments with my family and co-workers.	(SD)	(D)	(N)	(A)	(SA)

230	I'm something of a "workaholic."	(SD)	(D)	(N)	(A)	(SA)
231	I am always able to keep my feelings under control.	(SD)	(D)	(N)	(A)	(SA)
232	I like being part of the crowd at sporting events.	(SD)	(D)	(N)	(A)	(SA)
233	I have a wide range of intellectual interests.	(SD)	(D)	(N)	(A)	(SA)
234	I'm a superior person.	(SD)	(D)	(N)	(A)	(SA)
235	I have a lot of self-discipline.	(SD)	(D)	(N)	(A)	(SA)
236	I'm pretty stable emotionally.	(SD)	(D)	(N)	(A)	(SA)
237	I laugh easily.	(SD)	(D)	(N)	(A)	(SA)
238	I believe that the "new morality" of permissiveness is no morality at all.	(SD)	(D)	(N)	(A)	(SA)
239	I would rather be known as "merciful" than as "just."	(SD)	(D)	(N)	(A)	(SA)
240	I think twice before I answer a question.	(SD)	(D)	(N)	(A)	(SA)

You have now completed well over half of the questionnaire. If you need to, have a break at this point. The remainder should only take approximately 15 minutes.



## Questionnaire 1

### Part B.

On the following statements, which are related to various aspects of your thoughts, feeling and goals with regard to work, indicate if:

SD = **strongly disagree**, if the statement is definitely false or if you strongly disagree

D = **disagree**, if the statement is mostly false or if you disagree

N = **neutral**, if the statement is about equally true or false, if you cannot decide, or if you are neutral on the statement.

A = **agree**, if the statement is mostly true or if you agree.

SA = **strongly agree**, if the statement is definitely true or if you strongly agree.

		<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>
1	My job is what I make it.	(SD)	(D)	(N)	(A)	(SA)
2	I think I could easily become as attached to another centre as I am to this one.	(SD)	(D)	(N)	(A)	(SA)
3	If I were unhappy with a decision made by my supervisor/manager, I would do something about it.	(SD)	(D)	(N)	(A)	(SA)
4	In my work if something looks too complicated I will not even bother to try it.	(SD)	(D)	(N)	(A)	(SA)
5	I would be very happy to spend the rest of my career in this centre.	(SD)	(D)	(N)	(A)	(SA)
6	Whether or not I advance on the job depends on whether I'm lucky enough to be in the right place at the right time.	(SD)	(D)	(N)	(A)	(SA)
7	It wouldn't be too costly for me to leave my centre in the near future.	(SD)	(D)	(N)	(A)	(SA)
8	In my work when I make plans, I am certain I can make them work.	(SD)	(D)	(N)	(A)	(SA)
9	Although I might have the necessary abilities, I will not be given leadership responsibility without appealing to those in positions of power.	(SD)	(D)	(N)	(A)	(SA)
10	I am not afraid of what might happen if I quit my job without having another one lined up.	(SD)	(D)	(N)	(A)	(SA)
11	When I get what I want on a job, it's usually because I worked hard for it.	(SD)	(D)	(N)	(A)	(SA)
12	Considering all aspects of my work I am a high performer.	(SD)	(D)	(N)	(A)	(SA)
13	In my work when I set important goals for myself, I rarely achieve them.	(SD)	(D)	(N)	(A)	(SA)
14	I enjoy discussing my centre with people outside it.	(SD)	(D)	(N)	(A)	(SA)
15	Right now, staying with my organization is a matter of necessity as much as desire.	(SD)	(D)	(N)	(A)	(SA)
16	On my job, I can pretty much accomplish whatever I set out to accomplish.	(SD)	(D)	(N)	(A)	(SA)
17	I do not feel like "part of the family" at my centre.	(SD)	(D)	(N)	(A)	(SA)
18	In my work I avoid trying to learn new things when they look too difficult.	(SD)	(D)	(N)	(A)	(SA)
19	I believe that I have too few options to consider leaving this centre.	(SD)	(D)	(N)	(A)	(SA)
20	Getting the job I want is a matter of luck.	(SD)	(D)	(N)	(A)	(SA)
21	In my work when I decide to do something, I go right to work on it.	(SD)	(D)	(N)	(A)	(SA)

22	It would be very hard for me to leave my centre right now, even If I wanted to.	(SD)	(D)	(N)	(A)	(SA)
23	I do not feel "emotionally attached" to this centre.	(SD)	(D)	(N)	(A)	(SA)
24	It's not always wise for me to plan ahead on the job because things turn out to be a matter of good or bad fortune.	(SD)	(D)	(N)	(A)	(SA)
25	In my work I feel insecure about my ability to do things.	(SD)	(D)	(N)	(A)	(SA)
26	One of the few negative consequences of leaving this centre would be the scarcity of available alternatives.	(SD)	(D)	(N)	(A)	(SA)
27	When required I can have a good deal of influence on my supervisor.	(SD)	(D)	(N)	(A)	(SA)
28	I would be given a promotion based on how well I perform on the job.	(SD)	(D)	(N)	(A)	(SA)
29	This centre has a great deal of personal meaning to me.	(SD)	(D)	(N)	(A)	(SA)
30	When I make plans on my job, I am almost certain to make them work.	(SD)	(D)	(N)	(A)	(SA)
31	When unexpected problems occur at work, I don't handle them very well.	(SD)	(D)	(N)	(A)	(SA)
32	One of the major reasons I continue to work for this centre is that leaving would require considerable personal sacrifice: another centre may not match the overall benefits I have here.	(SD)	(D)	(N)	(A)	(SA)
33	I really feel as if the centres problems are my own.	(SD)	(D)	(N)	(A)	(SA)
34	Getting a salary rise is primarily a matter of good fortune.	(SD)	(D)	(N)	(A)	(SA)
35	I do not seem capable of dealing with most problems that come up in my work.	(SD)	(D)	(N)	(A)	(SA)
36	I do not feel a strong sense of belonging to my centre.	(SD)	(D)	(N)	(A)	(SA)
37	I am capable of doing my job well if I make the effort.	(SD)	(D)	(N)	(A)	(SA)
38	Too much of my life would be disrupted if I decided I wanted to leave my centre right now.	(SD)	(D)	(N)	(A)	(SA)
39	When it comes to landing a really good job, whom I know is more important than what I can do.	(SD)	(D)	(N)	(A)	(SA)
40	If I had not already put so much of myself into this centre, I might consider working elsewhere.	(SD)	(D)	(N)	(A)	(SA)
41	In my work failure just makes me try harder.	(SD)	(D)	(N)	(A)	(SA)
42	For me to be an outstanding employee on most jobs, it would take a lot of luck.	(SD)	(D)	(N)	(A)	(SA)
43	In my work when trying to learn something new, I soon give up if I am not initially successful.	(SD)	(D)	(N)	(A)	(SA)
44	In order to get a really good job I would need to have family members or friends in high places.	(SD)	(D)	(N)	(A)	(SA)
45	In my work when I have something unpleasant to do, I stick to it until I finish it.	(SD)	(D)	(N)	(A)	(SA)
46	Getting rewarded on my job would depend on how well I perform.	(SD)	(D)	(N)	(A)	(SA)
47	If I can't do a job the first time, I keep trying until I can.	(SD)	(D)	(N)	(A)	(SA)
48	I believe that promotions are usually a matter of good fortune.	(SD)	(D)	(N)	(A)	(SA)
49	In order to get a salary rise I would have to know the right people.	(SD)	(D)	(N)	(A)	(SA)
50	If I know what I want out of a job, I can find a job that gives it to me.	(SD)	(D)	(N)	(A)	(SA)
51	Considering all things I am overall satisfied with my job.	(SD)	(D)	(N)	(A)	(SA)



## General Health Questionnaire.

Please read this carefully:

We would like to know how your health has been in general, *over the past few weeks*. Please answer all the questions simply by **circling** the answer which you think most nearly applies to you.

Remember that we want to know about present and recent situations, not those you had in the past. It is important that you try to answer ALL the questions.

### Have you recently

1	been able to concentrate on whatever you're doing?	Better than usual	Same as usual	Less than usual	Much less than usual.
2	lost much sleep over worry?	Not at all	No more than usual	Rather more than usual.	Much more than usual.
3.	felt that you are playing a useful part in things?	More so than usual.	Same as usual.	Less useful than usual.	Much less useful.
4.	felt capable of making decisions about things?	More so than usual.	Same as usual.	Less useful than usual.	Much less useful.
5.	felt constantly under strain?	Not at all	No more than usual	Rather more than usual.	Much more than usual.
6.	felt you couldn't overcome your difficulties?	Not at all	No more than usual	Rather more than usual.	Much more than usual.
7.	been able to enjoy your normal day-to-day activities?	More so than usual.	Same as usual.	Less useful than usual.	Much less useful.
8.	been able to face up to your problems?	More so than usual.	Same as usual.	Less useful than usual.	Much less useful.
9.	been feeling unhappy and depressed?	Not at all	No more than usual	Rather more than usual.	Much more than usual.
10.	been losing confidence in yourself?	Not at all	No more than usual	Rather more than usual.	Much more than usual.
11.	been thinking of yourself as a worthless person?	Not at all	No more than usual	Rather more than usual.	Much more than usual.
12.	been feeling reasonably happy, all things considered?	More so than usual.	Same as usual.	Less useful than usual.	Much less useful.

## Part A Demographic Questionnaire

**Are you:** female ☐ male ☐

**Age:** Under 20 ☐  
 20 - 29 ☐  
 30 - 39 ☐  
 40 - 49 ☐  
 50 - 59 ☐  
 60 - plus ☐

**Tick the square that identifies the ethnic group you most identify with.**

NZ Maori	<input type="checkbox"/>	NZ European or Pakeha	<input type="checkbox"/>
Samoan	<input type="checkbox"/>	Cook Island Maori	<input type="checkbox"/>
Tongan	<input type="checkbox"/>	Niuean	<input type="checkbox"/>
English	<input type="checkbox"/>	Dutch	<input type="checkbox"/>
Australian	<input type="checkbox"/>	Scottish	<input type="checkbox"/>
Irish	<input type="checkbox"/>	Fijian	<input type="checkbox"/>
Other	.....		

**Marital Status:** Single ☐ Married ☐  
 De facto ☐ Divorced ☐ Widowed ☐

Number of Children: .....

Number of Dependents (e.g. elderly parents, children) .....

**Currently Working:** Part-time/casual (less than 30 hours per week) ☐  
 Full-time (30 hours or more per week) ☐

**Hourly Pay Rate** \$.....

**Predominately work with:** Under 2's ☐ Over 2's ☐  
 Mixed Ratio ☐

**Is your centre:** Sessional ☐ Full Day ☐

How long have you been working in childcare? .....

**Are you a centre supervisor?** Yes ☐ No ☐

**Who have you asked to complete Part B?** Co-worker ☐  
 Supervisor ☐

**I consider myself a person whose life is governed by religious convictions.**

Yes ☐ Partially ☐ No ☐

### Level of Training.

Please tick the box that best recognizes your highest level of training achieved. **If you have, for example, completed training at a certificate level and currently in training for diploma, please tick both the in training box and the certificate box.**

Highest Level of Training Recognized for Work in the Early Childhood Sector.	Tick	Highest Level of Training Achieved Since Leaving School.	Tick
No Training		No Training	
In Training		In Training	
NZQA - less than 80 points		Certificate	
NZQA - 80 points and above		Diploma	
Diploma of Education (Early Childhood)		Bachelor	
Diploma of Teaching (Early Childhood)		Masters	
Bachelor of Education (Early Childhood)		Doctorate	
Bachelor of Teaching (Early Childhood)			
Other:			

How many, including yourself, early childhood educators and care providers work at your centre ? .....

How many, including yourself, do you work with closely on a daily basis ? .....

Identify, by marking the appropriate abbreviation, if you strongly disagree, disagree, are neutral on, agree, or strongly agree with the following statements concerning why you are working in early childcare.

SD = **strongly disagree**, if the statement is definitely false or if you strongly disagree

D = **disagree**, if the statement is mostly false or if you disagree

N = **neutral**, if the statement is about equally true or false, if you cannot decide, or if you are neutral on the statement.

A = **agree**, if the statement is mostly true or if you agree.

SA = **strongly agree**, if the statement is definitely true or if you strongly agree.

1	I choose childcare because my children were/are involved.	(SD)	(D)	(N)	(A)	(SA)
2.	I choose childcare because I feel I have the energy and enthusiasm to be with young children.	(SD)	(D)	(N)	(A)	(SA)
3.	I choose childcare because I wanted to see young children socialised and educated from a sound moral perspective.	(SD)	(D)	(N)	(A)	(SA)
4.	I choose childcare because I wanted to see more mothers have opportunity to be part of the 'work-force'.	(SD)	(D)	(N)	(A)	(SA)
5.	I choose childcare because of the ability I seem to have to care for young children.	(SD)	(D)	(N)	(A)	(SA)
6.	I choose childcare because I didn't think I had what it takes to be a primary school teacher.	(SD)	(D)	(N)	(A)	(SA)

If you had your working life over again would you choose childcare. Yes ☐ No ☐

Thank you for taking the time to complete this questionnaire. A Freepost envelope has been provided for you to return the questionnaire to the researcher.





MASSEY  
UNIVERSITY

A L B A N Y

DEPARTMENT OF PSYCHOLOGY

## Questionnaire Two

A participant in a research project has asked you to fill-in in this Questionnaire. There are 32 statements related to various aspects of work-related behaviour and responsibility.

You are asked to rate the extent to which you agree or disagree with the statements in terms in which they reflect the participants work-related behaviour in the centre: 1, "strongly disagree," to 7, "strongly agree." The questionnaire should take approximately 15 minutes to complete.

When you have completed the questionnaire, return the questionnaire in the self addressed, Freepost envelope provided to the researcher. You do not give the completed questionnaire back to the participant but mail it directly to the researcher.

The numeric code on Questionnaire Two is used only to match responses with a questionnaire completed by the participant. It will not be possible to identify you, the participant or your centre in any reports that are prepared from this study.

**Do not** put your name, or the name of the participant, on this document.

Researcher's Address

Freepost 80057  
Christine Barrow  
Psychology Department  
Massey University Albany  
Private Bag 102904  
North Shore Mail Centre.

In relation to the participant are you:

a co-worker ☐  
a supervisor ☐

Please rate the extent to which you agree or disagree with the following statements in terms in which they reflect the participants work-related behaviour in the centre.

- 1 = **Strongly disagree**, if the statement is definitely false or if you strongly disagree.  
The work related behaviour has not been observed.
- 2 = The work related behaviour is rarely observed.
- 3 = The work related behaviour is erratic.
- 4 = **Neutral**, if the statement is about equally true or false, if you cannot decide **or** if the statement is not applicable to the work the co-worker is currently involved.
- 5 = The work related behaviour is occasionally observed.
- 6 = The work related behaviour is often observed.
- 7 = **strongly agree**, if the statement is definitely true or if you strongly agree.  
The work-related behaviour is frequently observed.

		1	2	3	4	5	6	7
1	This particular co-worker volunteers to do things for this centre.	1	2	3	4	5	6	7
2	This particular co-worker demonstrates empathic concern for children and families.	1	2	3	4	5	6	7
3	This co-worker is able to maintain a well-balanced developmentally appropriate programme for the children.	1	2	3	4	5	6	7
4	This particular co-worker fulfills the responsibilities specified in his/her job description.	1	2	3	4	5	6	7
5	This particular co-worker is energetic.	1	2	3	4	5	6	7
6	This particular co-worker speaks up in this centre with ideas for new projects/activities or changes in procedures.	1	2	3	4	5	6	7
7	This particular co-worker helps orient new employees in this centre.	1	2	3	4	5	6	7
8	This particular co-worker can follow directions.	1	2	3	4	5	6	7
9	This co-workers interaction with the children is positive.	1	2	3	4	5	6	7
10	This particular co-worker attends functions that help this centre.	1	2	3	4	5	6	7
11	This particular co-worker is able to remain alert to the total group of children even when dealing with an individual child or small group.	1	2	3	4	5	6	7
12	This particular co-worker develops and makes recommendations concerning issues that affect this centre.	1	2	3	4	5	6	7
13	This particular co-worker keeps abreast with emerging trends in the field of ECE.	1	2	3	4	5	6	7

14	This particular co-worker performs the tasks that are expected as part of the job.	1	2	3	4	5	6	7
15	This particular co-worker is able to demonstrate his/her knowledge about the meaning of specific activities children are involved in.	1	2	3	4	5	6	7
16	This co-worker relates positively and confidently with parents.	1	2	3	4	5	6	7
17	This particular co-worker remains controlled in difficult and/or trying situations.	1	2	3	4	5	6	7
18	This co-worker is actively involved with the children.	1	2	3	4	5	6	7
19	This particular co-worker assists others in this group with their work for the benefit of the centre.	1	2	3	4	5	6	7
20	This co-worker is able to articulate clearly his/her knowledge of the centre aims, methods and philosophy.	1	2	3	4	5	6	7
21	This particular co-worker gets involved in issues that affect the quality of work life here in this centre.	1	2	3	4	5	6	7
22	This particular co-worker is known for his/her responsive and warm interactions with children.	1	2	3	4	5	6	7
23	This particular co-worker gets involved to benefit this centre.	1	2	3	4	5	6	7
24	This particular co-worker keeps well informed about issues where his/her opinion might be useful to this centre.	1	2	3	4	5	6	7
25	This particular co-worker meets performance expectations.	1	2	3	4	5	6	7
26	This particular co-worker helps others in this centre learn about the work.	1	2	3	4	5	6	7
27	This particular co-worker adequately completes responsibilities.	1	2	3	4	5	6	7
28	This particular co-worker speaks up and encourages others in this group to get involved in issues that affect the centre.	1	2	3	4	5	6	7
29	This particular co-worker reflects on his/her own performance for the purpose of self-improvement.	1	2	3	4	5	6	7
30	This particular co-worker helps others at this centre with their work responsibilities.	1	2	3	4	5	6	7
31	This particular co-worker is enthusiastic about the influence that they can have in a child's life.	1	2	3	4	5	6	7
32	This particular co-worker communicates his/her opinions about work issues to others at the centre even if his/her opinion is different and others at the centre disagree with him/her.	1	2	3	4	5	6	7
33	Considering all aspects of work the participant is a high performer.	1	2	3	4	5	6	7

Thank you for taking the time to complete this questionnaire. Please return the questionnaire directly to the researcher in the self-addressed, Freepost envelope.

All centres invited to participate in this study will receive a newsletter giving a summary of the findings.



APPENDIX THREE

Results

Table 4	Pearson product-moment correlations of facet personality scores, single trait personality scores, and outcome variables.	Page 167
---------	--	-------------

Appendix 3 Table 4. Correlations of facet personality scores, single trait personality scores and outcome variables.

		N1	N2	N3	N4	N5	N6	E1	E2	E3	E4	E5	E6	O1	O2	O3
N1	Anxiety															
N2	Angry Hostility	.400**														
N3	Depression	.648**	.503**													
N4	Self-consciousness	.582**	.362**	.628**												
N5	Impulsiveness	.296**	.354**	.346**	.253**											
N6	Vulnerability	.554**	.401**	.646**	.580**	.248**										
E1	Warmth	-.163**	-.240**	-.250**	-.257**	.004	-.312**									
E2	Gregariousness	-.086	-.087	-.212**	-.212**	.039	-.161**	.524**								
E3	Assertiveness	-.374**	.028	-.382**	-.432**	.063	-.490**	.293**	.270**							
E4	Activity	-.187**	-.062	-.207**	-.251**	-.008	-.277**	.332**	.246**	.432**						
E5	Excitement-seeking	-.032	.167*	-.056	-.086	.220**	-.079	.259**	.397**	.268**	.231**					
E6	Positive Emotions	-.205**	-.188**	-.342**	-.306	.062	-.312**	.618**	.353**	.276**	.371**	.252**				
O1	Fantasy	.089	.072	.030	-.028	.276**	.036	.224**	.091	.154**	.043	.196**	.342**			
O2	Aesthetics	-.059	-.062	-.103*	-.175	.001	-.081	.240**	.101*	.127**	.136*	.118*	.281**	.304**		
O3	Feelings	.006	-.006	-.086	-.093	.084	-.071	.174**	.019	.121*	.116*	.071	.185**	.135**	.571**	
O4	Actions	-.123*	-.157**	-.185**	-.255**	-.005	-.176**	.148**	.127**	.166**	.113*	.150*	.100*	.117*	.188**	.505**
O5	Ideas	-.065	-.044	-.102*	-.176**	.019	-.188**	.200**	.061	.254**	.122*	.202**	.160**	.173**	.241**	.513**
O6	Values	-.076	-.042	-.142**	-.100**	.071	-.090	.103*	.008	.121*	.117*	.067	.160**	.120*	.547**	.493**
A1	Trust	-.171**	-.453**	-.252**	-.266**	-.102*	-.209**	.328**	.178**	.080	.091	-.103*	.262**	.095	.106*	.113*
A2	Straightforwardness	-.101*	-.374**	-.175**	-.014	-.202**	-.057	.157**	-.002	-.176**	.018	-.147**	.114*	-.069	-.040	.008
A3	Altruism	-.092	-.392**	-.218**	-.120*	-.123*	-.258**	.569**	.219**	.053	.176**	-.036	.357**	.001	.031	.011
A4	Compliance	-.057	-.543**	-.144**	-.004	-.292**	-.036	.286**	.035	-.289**	-.053	-.229**	.123*	-.100*	.054	-.032
A5	Modesty	-.087	-.139**	.094	.197**	-.047	.086	.014	-.137**	-.286**	-.169**	-.200**	-.084	-.089	-.054	-.089
A6	Tender-Mindedness	-.076	-.311**	-.136**	-.115*	-.048	-.094	.346**	.089	-.041	.049	-.072	.230**	.129**	.191**	.117*
C1	Competence	-.354**	-.280**	-.410**	-.365**	-.173**	-.549**	.375**	.115*	.441**	.281**	.030	.343**	.004	.136**	.113*
C2	Order	-.023	.026	-.098*	-.063	-.219**	-.187**	.066	.056	.158**	.172**	.022	.001	-.147**	.049	.020
C3	Dutifulness	-.240**	-.245**	-.294**	-.238**	-.307**	-.340**	.274**	.068	.157**	.175**	-.152**	.145**	-.189**	.020	.024
C4	Achievement Striving	-.213**	-.071	-.229**	-.228**	-.117*	-.341**	.328**	.145**	.369**	.429**	.141**	.264**	-.009	.150**	.102*
C5	Self-Discipline	-.260**	-.265**	-.364**	-.300**	-.355**	-.455**	.224**	.143**	.247**	.312**	.056	.157**	-.174**	.049	.062
C6	Deliberation	-.080	-.198**	-.145**	-.109*	-.416**	-.181**	.081	-.057	-.096*	-.077	-.256**	-.066	-.286**	.019	.063
LOC	Work Locus of Control	-.233**	-.236**	-.348**	-.196**	.021	-.360**	.202**	.148**	.340**	.198**	.063	.276**	.111*	.025	.074
GWS	General Work Self-efficacy	-.261**	-.185**	-.352**	-.269**	-.009	-.503**	.416**	.206**	.442**	.421**	.161**	.400**	.059	.092	.135**
AFC	Affective Commitment	-.110*	-.062	-.130**	-.084	.027	-.152**	.194**	.093	.172**	.116*	-.011	.178**	.030	-.024	.045
CC	Continuance Commitment	.152*	.105*	.206**	.159**	.103*	.175**	-.016	-.083	-.104**	-.039	-.073	-.026	-.038	.002	.041
SRP	Self-rated Performance	-.140*	-.013	-.205**	-.155**	-.053	-.222**	.230**	.115*	.346**	.357**	.207**	.231**	.023	-.031	.058
GJS	Global Job Satisfaction	-.130*	-.169**	-.222**	-.158**	.004	-.188**	.176**	.195**	.194**	.155**	.029	.237**	.043	.062	.065
PWB	Psychological well-being	.368**	.302**	.514**	.406**	.201**	.389**	-.245**	-.237**	-.230**	-.094	-.0060	-.291**	.008	-.111*	-.011
TP	Total Performance	-.011	-.152**	-.156**	-.056	-.057	-.125*	.016	.022	.222**	.031	-.010	.045	.035	-.059	-.065

\*\* Correlation is significant at the 0.01 level (2 tailed)

\* Correlation is significant at the 0.05 level (2 tailed)

n = 416

Table X continued.

		O4	O5	O6	A1	A2	A3	A4	A5	A6	C1	C2	C3	C4	C5	C6
O5	Ideas	.702**														
O6	Values	.086	.080													
A1	Trust	.180**	.138**	.050												
A2	Straightforwardness	.041	-.045	-.108*	.287**											
A3	Altruism	.004	.000	.003	.367**	.414**										
A4	Compliance	.008	-.049	-.032	.364**	.535**	.428**									
A5	Modesty	-.105*	-.180**	-.054	.093	.348**	.223**	.338**								
A6	Tender-Mindedness	.120*	.084	.054	.362**	.258**	.421**	.340**	.238**							
C1	Competence	.066	.204**	.134**	.336**	.147**	.378**	.100*	-.086	.183**						
C2	Order	-.149**	-.0062	.001	-.034	.042	.056	.020	-.076	-.116*	.301**					
C3	Dutifulness	-.038	.033	.024	.189**	.315**	.408**	.243**	.049	.125*	.486**	.365**				
C4	Achievement Striving	.098*	.208**	.067	.159**	.108*	.187**	.053	-.121*	.116*	.520**	.372**	.436**			
C5	Self-Discipline	.059	.102*	.013	.160**	.0235**	.283**	.166**	-.031	.097*	.553**	.529**	.526**	.522**		
C6	Deliberation	-.032	-.012	-.039	.158**	.271**	.190**	.274**	.024	.084	.299**	.386**	.445**	.279**	.399**	
LOC	Work Locus of Control	.130**	.156**	.127**	.278**	.152**	.202**	.032	-.017	.157**	.415**	.052	.227**	.317**	.240**	.013
GWS	General Work Self-efficacy	.140**	.191**	.155**	.248**	.178**	.318**	.062	.001	.228**	.540**	.174**	.354**	.493**	.435**	.059
AFC	Affective Commitment	-.051	.087	.024	.166**	.095	.139**	.043	-.028	.108*	.224**	.065	.138**	.204**	.147*	.070
CC	Continuance Commitment	-.163**	-.048	-.036	-.055	.003	-.004	-.015	-.005	-.045	-.038	.057	-.055	-.054	-.097*	.001
SRP	Self-rated Performance	.018	.090	.077	.087	.054	.189**	-.036	-.114*	.051	.381**	.205**	.251**	.458**	.342**	.085
GJS	Global Job Satisfaction	.025	.051	.150**	.223**	.038	.139**	.002	-.068	.077	.184**	-.008	.095	.129**	.086	.047
PWB	Psychological well-being	-.113*	-.067	-.119*	-.230**	-.083	-.132**	-.116*	.097*	-.082	-.263**	-.071	-.190**	-.125**	-.219**	-.129**
TP	Total Performance	-.070	-.002	.030	.128*	.065	.124*	.026	.057	.095	.201**	.095	.106	.112*	.121	-.008

\*\* Correlation is significant at the 0.01 level (2 tailed)

\* Correlation is significant at the 0.05 level (2 tailed)

n = 416