

# The relationship between personality dimensions and job satisfaction

**S. Rothman**

*Potchefstroom University for CHE*

**E.P. Coetzer**

*Potchefstroom University for CHE*

## ABSTRACT

Job satisfaction among employees is an indicator of organisational effectiveness, and is influenced by organisational and dispositional factors. The objective of this research was to determine the relationship between personality dimensions and job satisfaction in a pharmaceutical organisation. A cross-sectional design was used to address the research objective. The sample consisted of 159 employees in a pharmaceutical organisation. The Minnesota Satisfaction Questionnaire (MSQ) and the NEO Personality Inventory Revised (NEO-PI-R) were used as measuring instruments. The results showed that job satisfaction has a negative relationship with Anger-hostility (a component of Neuroticism), while it has a positive relationship with positive emotions (a facet of Extraversion), Confidence, Altruism, and Compliance (facets of Agreeableness), as well as facets of Conscientiousness. Personality dimensions explain 28% of the variance of job satisfaction.

## INTRODUCTION

Most employers realise that the optimal functioning of their organisations depends in part on the level of job satisfaction of employees. Employees' full potential is needed on all levels in organisations, which stresses the importance of their being satisfied (Kreitner & Kinicki, 1998). This is specifically important in the pharmaceutical industry in South Africa, which is characterised by a shortage of pharmacists as well as by an increasing number of pharmacists leaving South Africa for other countries (South African Pharmacy Council, 1999).

Job satisfaction is a reaction to a job, which stems from the incumbent's comparison of actual outcomes with the required outcomes (Cranny, Smith & Stone, 1992). According to Weiss, Dawis, England and Lofquist (1967),

employees seek to achieve and maintain correspondence with their environment. Correspondence with the environment can be described in terms of the individual's fulfilling the requirements of the environment, and the environment fulfilling the requirements of the individual (Cook, Hepworth, Wall & Warr, 1981). This means that employees will experience job satisfaction if they feel that their individual capacities, experience and values can be utilised in their work environment and that, in exchange, the work environment offers them opportunities and rewards (Dawis, 1992; Roberts & Roseanne, 1998).

Information on the job satisfaction of employees and correlates thereof is valuable to organisations. In a literature study, Roznowski and Hulin (1992) found that job dissatisfaction are related to absenteeism, trade union activities and psychological withdrawal. According to Oshagbemi (1999), job satisfaction is related to the physical and psychological well-being of employees. Visser (1990) explains that a person who is dissatisfied with work experiences stress, which may cause illness. Steel and Rentsch (1995) found that job dissatisfaction correlated with absenteeism and employee turnover. According to Day, Bedeian and Conte (1998), employees who are dissatisfied with their jobs (compared with those who are satisfied) have a higher propensity to quit. Makin, Cooper and Cox (1996) state that employees' satisfaction with aspects of their jobs may influence their motivation. Brown and Petersen (1993) showed that job satisfaction affects employees' organisational commitment. Agho, Price and Mueller (1992) state that individuals who are satisfied with their jobs are good ambassadors for their organisations. However, Iaffaldano and Muchinsky (1985) found an estimated correlation of only 0.17 between job satisfaction and job performance.

Interactional explanations of job satisfaction are generally accepted, but the weight attached to dispositional and situational aspects varies. Dispositionists (e.g. House,

Shane & Herold, 1996) have contended that work attitudes and behaviour are determined by, or at least directly linked to, individual attributes. Situationists (e.g. Davis-Blake & Pfeffer, 1989), on the other hand, have argued that the world of work, job characteristics, organisational situations and economic conditions affect people much more strongly than do individual differences. Arvey, Carter and Buerkley (1991) suggested that dispositional factors account for 10-30% of the variance in job satisfaction, that 40-60% of the variance is associated with situational factors, and that interactive elements account for 10-20%. Since Staw, Bell and Clausen (1986) discovered a link between childhood personality and job satisfaction, there has been considerable interest in the relationship between individual dispositions and job satisfaction.

Dispositional variables can be described as personality characteristics, needs, attitudes, preferences and motives that result in a tendency to react to situations in a predetermined (predisposed) manner (House et al., 1996). In recent years, researchers have begun to explore the psychological processes that might underlie dispositional causes of job satisfaction. Weiss and Cropanzano (1996) suggested that affective temperament may influence the experience of emotionally significant events at work, which in turn influence job satisfaction. However, House et al. (1996) noted in their review of dispositional literature that affective disposition is only one of many traits that can and should be studied. Judge, Locke, Durham and Kluger (1998) explained dispositional determinants of job satisfaction in terms of "core evaluations" (incorporating self-esteem, generalised self-efficacy, low Neuroticism and locus of control), which can be described as fundamental evaluations that individuals make about themselves. Judge et al. (1998) found that individuals with a positive self-evaluation were more likely to assess their job satisfaction at higher levels than individuals with less positive self-evaluations.

Traditionally industrial psychologists have questioned the usefulness of personality measures in predicting job-related criteria (such as job satisfaction), because of pessimistic conclusions of early reviews of the topic (Guion & Gottier, 1965) and concerns that most personality measures are faked (Reilly & Warech, 1993). However, evidence has suggested that personality measures are valid predictors of diverse job-related criteria (Goldberg, 1993). Unlike many measures of cognitive ability, personality measures typically do not have an adverse impact on disadvantaged employees (Hogan, Hogan & Roberts, 1996) and thus can enhance fairness in personnel decisions. Furthermore, intentional faking does not attenuate the criterion-related validity of personality measures (Ones, Viswesvaran & Reiss, 1996).

In this study the relationship between personality dispositions and job satisfaction is studied from a trait perspective, and more specifically the five-factor model of personality dimensions as conceptualised by Costa and McCrae (1992). The five-factor model of personality represents a structure of traits, developed and elaborated over the last five decades. Factors are defined by groups of intercorrelated traits, which are referred to as facets (McCrae & Costa, 1997). The five-factor model of personality as measured by the Revised Neo Personality Inventory (NEO-PI-R) includes Neuroticism, Extraversion, Openness, Agreeableness and Conscientiousness (McCrae & Costa, 1997). The reason for deciding on this conceptualisation is because the validity of broad personality dimensions is superior to narrowly defined dimensions (Ashton, 1998).

Various studies have been done to assess the role of personality dimensions in job satisfaction. Extraversion and Conscientiousness predicted employees' job satisfaction in various contexts (De Fruyt & Mervielde, 1999; Tokar & Subich, 1997; Schneider, 1999; Vinchur, Schippmann, Switzer & Roth, 1998; Wright, Kacmar, McMahan & Deleeuw, 1995). Furthermore, Cropanzo, James and Konovsky (1993) found that low Neuroticism is a good predictor of the job satisfaction of employees. However, most of the studies regarding the relationships between personality dimensions and job satisfaction were carried out elsewhere in the world than in South Africa. According to McCrae, Costa, Pilar, Rolland and Parker (1998) the unique contribution of personality dimensions to dependent variables could differ according to cultural contexts. Therefore, a need exists to determine the relationship between personality dispositions and job satisfaction in South African organisations. More information about the relationship between personality dimensions and job satisfaction could help to make decisions about the recruitment, selection and career development of employees.

The objective of this study was to assess the relationship between job satisfaction and personality dimensions.

## **THE ROLE OF PERSONALITY DIMENSIONS IN JOB SATISFACTION**

In this study, the relationship between personality dimensions and job satisfaction is studied from the perspective of the five-factor model of personality. Researchers agree that almost all personality measures could be categorised according to the five-factor model of personality, also referred to as the "Big Five" personality dimensions (Goldberg, 1990; Hogan et al., 1996). The five personality dimensions seem to be relevant to different

cultures (McCrae & Costa, 1997) and have been recovered consistently in factor analyses of peer- and self-ratings of trait descriptors involving diverse conditions, samples, and factor extraction and rotation methods (Costa & McCrae, 1988). Research also showed that the five personality factors could have a genetic basis (Digman, 1989) and that they are probably inherited (Jang, Livesley & Vernon, 1996). The five dimensions of the five-factor model of personality are Neuroticism, Extraversion, Openness to experience, Agreeableness and Conscientiousness.

**Neuroticism.** Neuroticism is a dimension of normal personality indicating the general tendency to experience negative affects such as fear, sadness, embarrassment, anger, guilt, and disgust. High scorers may be at risk of some kinds of psychiatric problems. A high neuroticism score indicates that a person is prone to having irrational ideas, being less able to control impulses, and coping poorly with stress. A low neuroticism score is indicative of emotional stability. These people are usually calm, even-tempered, relaxed and able to face stressful situations without becoming upset. Tanoff (1999) found that Neuroticism is the primary factor which explained the variance in job satisfaction in an international organisation. Neuroticism is a valid predictor of job dissatisfaction (Clark & Watson, 1991; Cropanzo, James & Konovsky, 1993; Tokar & Subich, 1997).

**Extraversion.** Extraversion includes traits such as sociability, assertiveness, activity and talkativeness. Extraverts are energetic and optimistic. Introverts are reserved rather than unfriendly, independent rather than followers, even-paced rather than sluggish. Extraversion is characterised by positive feelings and experiences and is therefore seen as positive affect (Clark & Watson, 1991). Furnham and Zacherl (1986) found a moderately positive relationship between Extraversion and job satisfaction among senior staff members of a large computer firm. A possible explanation of this finding is that Extraversion is associated with positive affectivity (McCrae & Costa, 1995), which has been proposed as a core affective component of job satisfaction (George, 1992). Day et al. (1998) found a positive relationship between Extraversion and job satisfaction, although it explained less than 2% of the variance in job satisfaction.

**Openness.** Openness includes active imagination, aesthetic sensitivity, attentiveness to inner feelings, a preference for variety, intellectual curiosity and independence of judgement. People scoring low on openness tend to be conventional in behaviour and conservative in outlook. They prefer the familiar to the

novel, and their emotional responses are somewhat muted. People scoring high on openness tend to be unconventional, willing to question authority and prepared to entertain new ethical, social and political ideas. Open individuals are curious about both inner and outer worlds, and their lives are experientially richer. They are willing to entertain novel ideas and unconventional values, and they experience both positive and negative emotions more keenly than closed individuals do. In studies of various occupations, Schneider (1999) found no significant relationships between Openness and job satisfaction. However, Judge, Higgs, Thoresen and Barrick (1999) proposed that individuals who measure high on Openness would tend to be dissatisfied in conventional occupations.

**Agreeableness.** An agreeable person is fundamentally altruistic, sympathetic to others and eager to help them, and in return believes that others will be equally helpful. The disagreeable/antagonistic person is egocentric, sceptical of others' intentions, and competitive rather than co-operative. According to Judge et al. (1999), agreeable individuals would compromise their own job satisfaction to please others. Day and Bedeian (1995) and Schneider (1999) found that Agreeableness is not related to job satisfaction. According to Rust (1999), there has been a tendency within working populations to low Agreeableness (tough-mindedness), to correlate with high openness to experience. This is the result of the relationship between status and education. Tough-minded individuals are generally more senior and at a higher educational level. Such individuals tend to be more able, which in turn relates to lower scores on conformity. Low conformity scorers aim to change their own way of thinking, while high conformity scorers are more willing to take things on faith.

**Conscientiousness.** Conscientiousness refers to self-control and the active process of planning, organising and carrying out tasks (Barrick & Mount, 1993). The conscientious person is purposeful, strong-willed and determined. A high level of Conscientiousness is associated with academic and occupational achievement, as well as being scrupulous, punctual and reliable. On the negative side, high Conscientiousness may lead to annoying fastidiousness, compulsive neatness or workaholic behaviour. Low scorers may not necessarily lack moral principles, but they are less exacting in applying them. Schneider (1999), who studied the relationship between Conscientiousness and job satisfaction in various occupations, found significant relationships between them.

Various studies have focussed on the personality variables of negative affectivity (or Neuroticism) and positive affectivity (the core of Extraversion). Cropanzano, James and Konovsky (1993) reported that both lower negative affectivity and higher positive affectivity predicted global job satisfaction of employees at a pathology laboratory. Decker and Borgen (1993) confirmed that negative affectivity predicted lower job satisfaction. Meir, Melamed and Dinur (1995) found Israeli professionals' job satisfaction linked negatively to negative affectivity and positively to self-esteem. Judge and Hulin (1993) demonstrated support for the argument that affective disposition was indirectly related to job satisfaction via its effect on subjective well-being. Current mood was not responsible for the relation of well-being to satisfaction.

Other personality dimensions have received less emphasis. In a sample of 395 employees, Tokar and Subich (1997) found that a combination of Big-Five dimensions predicted a small amount of variance in job satisfaction. Lower Neuroticism and higher Extraversion were unique contributors to higher satisfaction.

## **METHOD**

### **Research design**

A survey design was used to address the research objectives. The specific design was the cross-sectional design, by means of which a sample is drawn from a population at a particular point in time (Shaughnessy & Zechmeister, 1997).

### **Sample**

The sample included employees of a corporate pharmacy group with 14 retail and 16 hospital pharmacies in the North West Province, Free State, Mpumalanga and Gauteng, as well as a head office (N = 159). The total population of pharmacists (n = 59) and non-pharmacists (n = 100) was included in the empirical study. All pharmacists had a B.Pharm. degree or a Diploma in Pharmacy, while the qualifications of non-pharmacists varied from Grade 10 to a master's degree. About 57% of the sample had some form of post-school education. The total population of employees participated in the research. Approximately 83% of the sample consisted of females. The ages of the participants varied between 18 and 58 years, with 53% in the age group between 21 and 30. A total of 57.2% of the participants were married.

### **Measuring instruments**

The *NEO Personality Inventory Revised (NEO-PI-R)* (Costa & McCrae, 1992) was used to measure the

personality of individuals, based on the five-factor model of personality, which includes the dimensions of Extraversion, Neuroticism, Agreeableness, Openness to experience and Conscientiousness. The five personality dimensions are each divided into six facets. The NEO-PI-R has 240 items (Costa & McCrae, 1992). The Cronbach coefficient alphas of the personality dimensions vary from 0.86 (Openness) to 0.92 (Neuroticism), and those of the personality facets from 0.56 (Tender-minded) to 0.81 (Depression). Costa and McCrae (1992) report test-retest reliability coefficients (over six years) for Extraversion, Neuroticism and Openness varying from 0.68 to 0.83 and for Agreeableness and Conscientiousness (over three years) of 0.63 and 0.79 respectively. Costa and McCrae (1992) showed construct validity for the NEO-PI-R for different gender, race and age groups. Convergent validity of the NEO-PI-R is evident from the fact that all 30 facets have shown substantial correlation coefficients upon alternative measures thereof.

The *Minnesota Satisfaction Questionnaire (MSQ)* (Weiss et al., 1967) was used to measure employees' job satisfaction and its components. The MSQ consists of 100 items which measure 20 components of job satisfaction. Test-retest reliabilities of 0.70 and 0.80 were found over a span of a week and a year respectively (Cook et al., 1981). Rothmann (2000) found a Cronbach alpha coefficient of 0.96 for total job satisfaction. The mean inter-item correlation is 0.22, which is acceptable for broad higher order constructs (Clark & Watson, 1995). According to Durham and Smit (1997), the MSQ provides a valid indication of job satisfaction.

### **Statistical analysis**

The statistical analysis was carried out by means of the SAS program (SAS Institute, 1996). Descriptive statistics (means, standard deviations, skewness and kurtosis) were used to analyse the results. Cronbach alpha coefficients were computed to assess the internal consistencies of the measuring instruments. Because a non-probability sample was used in this study, effect sizes (rather than inferential statistics) were used to decide on the significance of the findings. Cronbach alpha coefficients were calculated to assess the internal consistency of the measuring instruments. Inter-item correlation coefficients were used to assess whether the internal consistencies of the constructs were not so high that they affected their validity. Pearson product-moment correlation coefficients were used to specify the relationships between the variables. A cut-off point of 0.30 (medium effect, Cohen, 1988) was set for the practical significance of correlation coefficients. A cut-off point of 0.80 (large effect, Cohen, 1988) was set for the practical significance of differences.

A stepwise multiple regression analysis was conducted to determine the proportion of variance in the dependent variable (career anchors) that is predicted by the independent variables (personality preferences and traits). The effect size (which indicates practical significance) in the case of multiple regression is given by the following formula (Steyn, 1999):

$$f^2 = R^2 / 1 - R^2$$

A cut-off point of 0.35 (large effect, Steyn, 1999) was set for the practical significance of  $f^2$ .

## RESULTS

The descriptive statistics, Cronbach alpha coefficients and mean inter-item correlation coefficients of the MSQ scales are reported in Table 1.

Table 1 shows that the total job satisfaction of the sample is 535.38, which indicates an above-average total job satisfaction. Participants experience the most satisfaction regarding:

Moral values - the extent to which they are of the opinion that they are not expected to perform work that interferes with their moral values.

Social service - the extent to which they have the opportunity to render a service to other persons.

Achievement - the extent to which they experience fulfilment in their work.

Ability - the extent to which employees feel that their abilities and skills are utilised.

Participants experienced less satisfaction with:

**TABLE 1**  
**DESCRIPTIVE STATISTICS OF THE MINNESOTA SATISFACTION QUESTIONNAIRE (N=159)**

Item	M	SD	Skewness	Kurtosis	Mean inter-item r	
Ability	28.21	5.49	-1.05	1.22	0.43	0.79
Achievement	28.81	4.63	-0.91	1.18	0.34	0.71
Activity	26.95	4.32	-0.12	-0.59	0.11	0.34
Advancement	24.94	6.69	-0.60	-0.06	0.56	0.86
Authority	25.24	5.62	-0.37	-0.13	0.43	0.79
Company Policy	26.33	5.64	-0.67	-0.09	0.53	0.85
Compensation	23.90	6.37	-0.57	0.09	0.50	0.84
Co-workers	27.64	5.27	-1.01	1.22	0.40	0.77
Creativity	26.79	5.22	-0.88	0.60	0.38	0.77
Independence	27.62	5.34	-1.18	1.92	0.41	0.77
Moral Values	29.42	4.80	-0.73	-0.22	0.26	0.64
Recognition	23.20	7.62	-0.46	-0.64	0.69	0.92
Responsibility	26.42	4.82	-0.52	0.21	0.35	0.71
Security	26.46	5.13	-0.42	-0.14	0.34	0.72
Social Service	29.39	4.63	-0.87	0.44	0.38	0.75
Social Status	26.89	4.97	-0.47	-0.00	0.34	0.72
Supervisor-Human	26.04	6.13	-0.76	0.22	0.46	0.80
Supervisor-Technical	26.64	6.25	-0.71	0.15	0.54	0.85
Variety	26.58	6.09	-1.07	1.33	0.47	0.81
Work Conditions	27.91	6.15	-0.95	0.43	0.52	0.84
Total Satisfaction	535.38	77.65	-0.33	-0.56		0.97

Recognition - the recognition which they receive for work well done.

Compensation - the compensation which they receive for their efforts.

Advancement - the extent to which opportunities for advancement and growth exist in the job.

Authority- the extent to which opportunities exist to give assignments to others.

A small skewness and kurtosis were found on some sub-scales. However, it seems that most of the scores are relatively normally distributed. The Cronbach alpha coefficients for the scales of the MSQ vary from 0.34 (Activity) to 0.97 (Total Job Satisfaction). All the scales, except Activity and Moral Values, show acceptable alpha coefficients when compared with the guideline of  $\alpha > 0.80$  (Nunnally & Bernstein, 1994). The mean inter-item

correlation coefficients vary between 0.11 and 0.69. The mean inter-item correlation coefficients of the sub-scales Advancement, Company Policy, Recognition, Supervision (Technical) and Work Conditions are somewhat higher than the guideline of 0.50 given by Clark and Watson (1995). It may be concluded that some of the items of the scales are redundant because they correlate too highly with each other. Activity showed a lower mean inter-item correlation coefficient than the guideline of 0.15 given by Clarke and Watson (1995), which may indicate that the items of this scale are not valid. For the purpose of this study only total job satisfaction was used in subsequent analyses and scales with unacceptable internal consistencies were therefore not used.

The descriptive statistics of the NEO-PI-R for the total sample are given in Table 2.

**TABLE 2**  
**DESCRIPTIVE STATISTICS OF THE NEO-PI-R (N=158)**

Item	Mean	SD	Skewness	Kurtosis	r (Mean)	
Neuroticism	88.73	24.34	0.08	0.10	0.49	0.86
Anxiety	17.31	5.72	-0.15	-0.31	0.29	0.76
Angry-Hostility	13.90	5.16	0.06	-0.34	0.24	0.72
Depression	15.38	5.75	-0.33	0.37	0.32	0.79
Self-consciousness	16.27	5.77	-0.13	-0.33	0.28	0.76
Impulsiveness	15.69	4.41	-0.22	0.92	0.14	0.57
Vulnerability	10.18	4.93	0.47	0.26	0.33	0.79
Extraversion	115.53	22.53	0.23	0.28	0.46	0.83
Warmth	23.19	4.36	-0.32	0.22	0.24	0.71
Gregariousness	17.77	5.85	-0.23	0.07	0.31	0.78
Assertiveness	16.18	5.77	0.22	-0.24	0.35	0.81
Activity	19.23	4.27	0.10	0.28	0.15	0.55
Excitement-seeking	18.23	5.18	-0.09	-0.68	0.20	0.65
Positive Emotions	20.92	4.96	-0.04	-0.16	0.30	0.77
Openness	111.82	16.65	0.43	-0.06	0.36	0.77
Fantasy	16.53	5.48	0.37	-0.53	0.29	0.77
Aesthetics	19.84	5.20	-0.06	-0.31	0.24	0.72
Feelings	21.72	3.89	-0.27	0.29	0.17	0.61
Actions	15.87	4.02	0.32	0.60	0.14	0.57
Ideas	19.25	5.31	0.30	-0.17	0.28	0.76
Values	18.22	4.04	0.06	1.18	0.10	0.48
Agreeableness	127.20	18.45	0.07	0.26	0.36	0.76

**TABLE 2 (CONT.)  
DESCRIPTIVE STATISTICS OF THE NEO-PI-R (N=158)**

Item	Mean	SD	Skewness	Kurtosis	r (Mean)	
Trust	18.34	5.31	-0.10	-0.20	0.33	0.79
Straightforwardness	23.78	4.68	-0.59	0.18	0.22	0.70
Altruism	24.01	4.07	-0.24	-0.24	0.24	0.70
Compliance	19.03	5.05	-0.35	-0.13	0.22	0.70
Modesty	19.94	4.63	-0.24	-0.30	0.20	0.66
Tender-mindedness	22.10	3.37	-0.12	0.26	0.07	0.34
Conscientiousness	132.68	17.48	-0.31	0.13	0.38	0.78
Competence	22.39	3.72	-0.20	-0.11	0.23	0.66
Order	20.49	4.28	-0.29	0.72	0.17	0.60
Dutifulness	26.25	3.63	-0.67	0.56	0.22	0.67
Achievement Striving	21.83	4.19	-0.33	0.14	0.19	0.62
Self-discipline	23.25	4.50	-0.65	0.96	0.26	0.73
Deliberation	18.47	4.93	-0.44	0.25	0.24	0.71

Table 2 shows that the participants (compared with American norms) measured average on the five personality dimensions. The participants obtained the highest scores on the following personality facets:

Dutifulness (facet of Conscientiousness) - live strictly according to their ethical beliefs.

Altruism (facet of Agreeableness) - concern about the well-being of others and willingness to help.

Competence (facet of Conscientiousness) - perception of the self as effective, competent, and wise. High competence is also associated with self-regard and an internal locus of control.

Straightforwardness (facet of Agreeableness) - genuine, sincere and resourceful. Low scores are associated with misleading and deceiving.

Participants obtained the lowest scores on the following personality facets:

Vulnerability (facet of Neuroticism) - susceptibility to stress.

Angry-hostility (facet of Neuroticism) - tendency to experience feelings of anger, frustration and bitterness.

Impulsiveness (facet of Neuroticism) - inability to control urges.

Openness (facet of Openness) - willingness to try new things.

Regarding skewness and kurtosis, the values in Table 2

show minor deviations from 0, which indicate that the scores are relatively normally distributed.

The Cronbach alpha coefficients for the five personality dimensions vary from 0.76 (Agreeableness) to 0.86 (Neuroticism). These alpha coefficients could be regarded as acceptable when they are compared with the cut-off point of 0.80 recommended by Nunnally and Bernstein (1994). The alpha coefficients of the facets of the NEO-PI-R vary between 0.34 (Tender-mindedness) and 0.79 (Depression). The alpha coefficients of the following facets of the NEO-PI-R do not compare favourably with the guideline of  $> 0.80$  recommended by Nunnally and Bernstein (1994): Impulsiveness, Activity, Excitement-seeking, Actions, Values, Modesty, Tender-mindedness, Competence, Order, Dutifulness and Achievement striving. The mean inter-item correlation coefficients of the personality dimensions vary from 0.36 to 0.49, which compare favourably with the range of 0.15 to 0.50 recommended by Clark and Watson (1995). The mean inter-item correlation coefficients of the personality facets vary from 0.07 to 0.35. The correlation coefficients of the following facets are not acceptable: Impulsiveness, Activity, Actions, Values and Tender-mindedness.

Pearson correlation coefficients between personality dimensions and facets (as measured by the NEO-PI-R) and job satisfaction were computed. However, only the correlations with total job satisfaction are reported (see Table 3).

**TABLE 3**  
**PEARSON CORRELATION COEFFICIENTS BETWEEN THE NEO-PI-R AND TOTAL JOB SATISFACTION (N=159)**

Item	Total Group	Non-pharmacists	Pharmacists
Neuroticism	-0.29	-0.20	-0.30*
Anxiety	-0.17	-0.13	-0.14
Angry-Hostility	-0.33*	-0.27	-0.36*
Depression	-0.28	-0.28	-0.16
Self-consciousness	-0.13	0.01	-0.23
Impulsiveness	-0.18	-0.10	-0.19
Vulnerability	-0.23	-0.19	-0.19
Extraversion	0.19	0.14	0.20
Warmth	0.25	0.25	0.24
Gregariousness	0.12	0.12	0.20
Assertiveness	0.03	-0.15	0.10
Activity	0.16	0.04	0.21
Excitement-seeking	0.02	0.06	-0.04
Positive Emotions	0.31*	0.31*	0.28
Openness	-0.09	0.01	-0.26
Fantasy	-0.14	-0.09	-0.15
Aesthetics	0.00	0.06	-0.13
Feelings	-0.10	0.11	-0.10
Actions	0.02	-0.09	0.09
Ideas	0.02	0.09	-0.16
Values	0.08	0.09	-0.05
Agreeableness	0.43*	0.45*	0.35*
Trust	0.36*	0.27	0.46*
Straightforwardness	0.28	0.35*	0.24
Altruism	0.33*	0.30*	0.32*
Compliance	0.30*	0.25	0.36*
Modesty	0.20	0.26	0.09
Tender-mindedness	0.28	0.21	0.41*
Conscientiousness	0.34*	0.33*	0.16
Competence	0.31*	0.30*	0.17
Order	0.09	0.02	0.14
Dutifulness	0.36*	0.36*	0.28
Achievement Striving	0.24	0.23	0.15
Self-discipline	0.38*	0.38*	0.33*
Deliberation	0.08	0.04	0.02

\* Correlation is practically significant  $r > 0.30$  (medium effect)

\*\* Correlation is practically significant  $r > 0.50$  (large effect)

Table 3 shows practically significant correlations (of medium effect) between job satisfaction and personality:

One facet of Neuroticism, namely Angry-hostility, correlated negatively with job satisfaction.

One facet of Extraversion, namely Positive emotions, correlated positively with job satisfaction.

Agreeableness, and also the facets Trust, Altruism and Compliance, correlated positively with job satisfaction.

Conscientiousness, and also the facets Competence, Dutifulness and Self-discipline, correlated positively with job satisfaction.

For the non-pharmacists, Angry-hostility, Trust and Compliance did not correlate with job satisfaction, while Openness did correlate with job satisfaction. For the

pharmacist sample, Table 3 shows practically significant correlation coefficients (medium effect) between personality dimensions and facets on the one hand and job satisfaction on the other hand. Job satisfaction correlates negatively with Neuroticism (and specifically Angry-hostility as a facet thereof). Furthermore, job satisfaction correlates with Agreeableness (and specifically Trust, Altruism, Compliance and Tender-mindedness as components thereof). Lastly, job satisfaction correlates with Self-discipline (a facet of Conscientiousness).

A multiple regression analysis was carried out to determine the percentage of the variance in total job satisfaction (as measured by the MSQ) explained by the personality dimensions (as measured by the NEO-PI-R). A significance level of  $p < 0.15$  was set. The results of the multiple regression analysis are reported in Table 4.

**TABLE 4**  
**REGRESSION ANALYSIS OF PERSONALITY DIMENSIONS AND TOTAL JOB SATISFACTION FOR NON-PHARMACISTS**

ANALYSIS OF VARIANCE				
	Source of variance	Degrees of Freedom	Sum of Squares	Mean Square
R = 0.49	Regression	5	248247.83	49649.57
Adjusted R <sup>2</sup> = 0.28	Residual	152	699096.52	4599.32
		F = 10.795	$f^2 = 0.36$	
VARIABLES IN THE EQUATION				
Independent Variables	B	Standard Error of B	F	p
Constant	266.65	84.80	3.15	0.0020
Neuroticism	-0.06	0.30	-0.20	0.8424
Extraversion	0.26	0.31	0.84	0.4007
Openness	-0.67	0.35	-1.93	0.0552
Agreeableness	1.57	0.32	4.98	0.0001
Conscientiousness	0.90	0.38	2.37	0.0188

Table 4 shows that 28% of the variance in total job satisfaction (as measured by the MSQ) is explained by personality dimensions (as measured by the NEO-PI-R). The multiple correlation ( $R = 0.49$ ) is practically significant (large effect) ( $f^2 = 0.36$ ). It seems that low Neuroticism, Extraversion, low Openness, Agreeableness and Conscientiousness explained about 28% of the variance in total job satisfaction.

The results of a multiple regression analysis for the sample of pharmacists are reported in Table 5.

company continuously stresses the importance of ethical conduct regarding medicine usage and distribution and that managers adhere to ethical practices. The business of the company entails service to the public, which may explain the high satisfaction with social service. Employees also reported a high level of satisfaction with opportunities to perform and utilise their abilities.

Employees were less satisfied with recognition, rewards, promotion and authority, which are probably all related to the way employees are managed. Most managers in the

**TABLE 5**  
**REGRESSION ANALYSIS OF PERSONALITY DIMENSIONS AND TOTAL JOB SATISFACTION FOR PHARMACISTS**

ANALYSIS OF VARIANCE				
	Source of variance	Degrees of freedom	Sum of squares	Mean square
R = 0.61	Regression	3	120161.04	40053.68
Adjusted R <sup>2</sup> = 0.37	Residual	51	203981.79	3999.64
		F = 10.01	$f^2 = 0.59^*$	
VARIABLES IN THE EQUATION				
Independent variables	Parameter	Partial R <sup>2</sup>	F	p
Agreeableness	1.33	0.17	10.65	0.002
Openness	-1.75	0.09	6.10	0.017
Neuroticism	-1.25	0.12	9.40	0.004

Table 5 demonstrates that Agreeableness, Openness and Neuroticism predict a total of 37% of the variance of total job satisfaction of pharmacists (as measured by the MSQ). The multiple correlation of 0.61 is practically significant (large effect) ( $f^2 = 0.59$ ). These findings indicate that Agreeableness (high score), Openness (low score) and Neuroticism (low score) predict approximately 37% of the variance in job satisfaction of pharmacists.

## DISCUSSION OF EMPIRICAL RESULTS

The results of this study showed that the total job satisfaction of the participants in the corporate pharmacy group are relatively high compared with that of senior police personnel, managers in the dairy industry, employees in a financial institution, representatives in the fertiliser industry and supervisors in a manufacturing industry (Rothmann, 2000). The high level of satisfaction with moral values may be related to the fact that the

pharmaceutical company were educated as pharmacists, and they do not have much experience as managers. Furthermore, they did not participate in training programmes in management skills. It appears, however, that they could have some control over the aspects about which employees are more dissatisfied.

Regarding personality dimensions and facets, the sample recorded the highest scores on Conscientiousness (Dutifulness and Competence) and Agreeableness (Altruism and Openness). The mean scores compare favourably with the mean scores in American samples. The results of this study confirm the finding of Costa and McCrae (1992) that Neuroticism is significantly (negatively) related to Conscientiousness. The practically significant negative relationship between Neuroticism and Extraversion could be explained by the fact that these two dimensions represent positive versus negative affect (Larsen & Ketelaar, 1991; McCrae & Costa, 1987).

The results indicate that employees who are more satisfied with their jobs (compared with those who are less satisfied) tend to experience less Angry-hostility (that is Anger, Frustration and Bitterness, a facet of Neuroticism). This finding supports previous findings (Decker & Borgen, 1993; Cropanzano et al., 1993; Meir et al., 1995) that negative affectivity is negatively related to job satisfaction. Furthermore, employees who are more satisfied with their jobs (compared with those who are less satisfied) are more inclined to experience positive emotions (Happiness, Love and Joy). This finding supports previous findings (Clark & Watson, 1991; Furnham & Zacherl, 1986) that Extraversion is associated with Positive affect, which is related to job satisfaction.

Employees who are more satisfied with their jobs are more agreeable, especially regarding the facets of Trust, Altruism and Compliance. It is possible that agreeable employees compromise their job satisfaction to please others (Judge et al., 1999), especially when Agreeableness is valued in the organisational culture. It should also be taken into account that employees in the study were mainly women utilised in service-oriented jobs and that they obtained high scores on Agreeableness. The fact that facets of Conscientiousness are related to job satisfaction confirms previous findings (Day & Bedeian, 1995; Schneider, 1999).

Different relationships between job satisfaction on the one hand and personality dimensions and facets on the other hand were found for pharmacists and non-pharmacists. The results of pharmacists showed that low Neuroticism (and especially low Anger-hostility), Agreeableness including Trust, Altruism, Compliance and Tender-mindedness) and Self-discipline were related to job satisfaction. In the case of non-pharmacists, job satisfaction was related to Positive emotions (a facet of Extraversion), Agreeableness (including Straight-forwardness and Altruism) and Conscientiousness (including Competence, Dutifulness and Self-discipline). Employees with a high level of Competence, Dutifulness and Self-discipline would probably exercise self-control, which may reduce job stress and promote job satisfaction (Day et al., 1998).

Regarding the best prediction, the regression analysis for pharmacists showed that Agreeableness (high score), Openness (low score) and Neuroticism (low score) predicted approximately 37% of the variance in their job satisfaction. In the total sample, 28% of the variance in job satisfaction was explained by personality dimensions and facets.

## LIMITATIONS

This study has various shortcomings. Firstly, a convenient sample in one corporate pharmacy group was used and few males were included. The results could therefore not be generalised to other settings. Secondly, causality of relationships cannot be proven because of the particular research design that was employed.

## MANAGERIAL IMPLICATIONS

The following application-oriented recommendations were generated by this study. Firstly, the corporate pharmacy group should attend to dispositional factors that are related to job satisfaction. In this regard it may be beneficial for the company to measure the personality dimensions and facets of employees during selection in order to predict their job satisfaction. Personality dimensions such as Neuroticism, Agreeableness and Openness should be considered in this regard. However, because the results of this study were not obtained in a selection context, further research is needed in this regard.

Secondly, the results of this study should be used in decision-making for purposes of career development. Self-development programmes, which focus on intrapersonal development, interpersonal skills and coping strategies) should be conducted to affect employees' job satisfaction. Although personality characteristics as conceptualised here show resistance to change, research indicates that dispositional characteristics that relate to coping styles seem to be subject to change (Lachman, 1989).

Thirdly, managers in the company should be trained to create circumstances conducive to job satisfaction. It is clear that the job satisfaction of employees is not only predicted by dispositional variables, but also by situational variables within the organisation. Therefore, managers should be made aware of the role of organisational factors in job dissatisfaction and how these factors could be managed to promote the job satisfaction of employees.

The relationship between the Big Five personality dimensions and job satisfaction should be researched in larger samples and in other organisations. Further research is also needed regarding the relationship between the Big Five personality dimensions and job performance, stress and burnout. Furthermore, research should also be done into organisational factors that are related to job satisfaction in corporate pharmacy groups. The possible effects of demographic variables that could affect the relationships between personality variables and job satisfaction should also be researched.

## REFERENCES

- Agho, A.O., Price, J.L., & Mueller, C.W. 1992. Discriminant validity of measures of job satisfaction, positive affectivity and negative affectivity. Journal of Occupational and Organizational Psychology, vol. 65, pp. 185-196.
- Arvey, R.D., Carter, G.W., & Buerkley, D.K. 1991. Job satisfaction: Dispositional and situational influences. In C.L. Cooper & I.T. Robertson (Eds.). International Review of Industrial and Organizational Psychology. Chichester: Wiley.
- Ashton, M.C. 1998. Personality and job performance: The importance of narrow traits. Journal of Organizational Behavior, vol. 19, pp. 289-303.
- Barrick, M.R. & Mount, M.K. 1991. The big five personality dimensions and job performance: A meta-analysis. Personnel Psychology, vol. 44, pp. 1-26.
- Brown, S.P. & Peterson, R.A. 1993. Antecedents and consequences of salesperson job satisfaction: Meta-analysis and assessment of causal effects. Journal of Marketing Research, vol. 30, pp. 63-77.
- Clark, L.A. & Watson, D. 1991. General affective dispositions in physical and psychological health. In C.R. Snyder & D.R. Forsyth (Eds.). Handbook of social and clinical psychology: The health perspective. New York: Pergamon.
- Clark, L.A. & Watson, D. 1995. Construct validity: Basic issues in objective scale development. Psychological Assessment, vol. 7, pp. 309-319.
- Cohen, J. 1988. Statistical power analysis for the behavioural sciences (2<sup>nd</sup> ed.). Hillsdale, N.J.: Lawrence Erlbaum & Associates.
- Cook, J.D., Hepworth, S.J., Wall, T.D., & Warr, P.B. 1981. The experience of work: A compendium and review of 249 measures and their use. London: Academic Press.
- Costa, P.T., Jr. & McCrae, R.R. 1988. Personality in adulthood: A six-year longitudinal study of self-reports and spouse ratings on the NEO Personality Inventory. Journal of Personality and Social Psychology, vol. 54, pp. 853-863.
- Costa, P.T. & McCrae, R.R. 1992. Revised NEO Personality Inventory (NEO-PI-R) and NEO Five Factor Model (NEO-FFI) professional manual. Odessa, F.L.: Psychological Assessment Resources.
- Cranny, C.J., Smith, P.C., & Stone, E.F. 1992. Job satisfaction: How people feel about their jobs and how it affects their performance. New York: Lexington Books.
- Cropanzano, R., James, K., & Konovsky, M.A. 1993. Dispositional affectivity as a predictor of work attitudes and job performance. Journal of Organizational Behaviour, vol. 14, pp. 595-606.
- Davis-Blake, A. & Pfeffer, J. 1989. Just a mirage: The search for dispositional effects in organizational research. Academy of Management Review, vol. 14, pp. 385-400.
- Dawis, R.V. 1992. Person-environment fit and job satisfaction. In C.J. Cranny, P.C. Smith & E.F. Stone (Eds.). Job satisfaction: How people feel about their jobs and how it affects their performance, (pp. 69-88). New York: Macmillan.
- Day, D.V. & Bedeian, A.G. 1995. Personality similarity and work related outcomes among African-American nursing personnel: A test of the supplementary model of person-environment congruence. Journal of Vocational Behaviour, vol. 46, pp. 55-70.
- 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, vol. 28, pp. 2068-2088.
- Decker, P.J. & Borgen, F.H. 1993. Dimensions of work appraisal: Stress, strain, coping, job satisfaction and negative affectivity. Journal of Counselling Psychology, vol. 40, pp. 470-478.
- De Fruyt, F. & Mervielde, I. 1999. RIASEC types and Big Five traits as predictors of employment status and nature of employment. Personnel Psychology, vol. 52, pp. 701-727.
- Digman, J.M. 1989. Five robust trait dimensions: Development, stability, and utility. Journal of Personality, vol. 57, pp. 195-214.
- Durham, R.B. & Smith, C.A. 1997. The measurement and dimensionality of job characteristics. Journal of Applied Psychology, vol. 61, pp. 404-409.
- Furnham, A. & Zacherl, M. 1986. Personality and job satisfaction. Personality and Individual Differences, vol. 7, pp. 453-459.
- George, J.M. 1992. The role of personality in organizational life: Issues and evidence. Journal of Management, vol. 18, pp. 185-213.
- Goldberg, L.R. 1990. An alternative "description of personality": The big five factor structure. Journal of Personality and Social Psychology, vol. 59, pp. 1216-1229.
- Goldberg, L.R. 1993. The structure of phenotypic types. American Psychologist, vol. 48, pp. 26-34.
- Guion, R.M. & Gottier, R.F. 1965. Validity of personality measures in personnel selection. Personnel Psychology, vol. 18, pp. 135-164.
- Hogan, R., Hogan, J., & Roberts, B.W. 1996. Personality measurement and employment decisions: Questions and Answers. American Psychologist, vol. 51, pp. 469-477.

- House, R.J., Shane, S.A., & Harold, D.M. 1996. Rumours of the death of dispositional research are vastly exaggerated. Academy of Management Review, vol. 21, pp. 203-224.
- Iaffaldano, M.T., & Muchinsky, P.M. 1985. Job satisfaction and job performance: A meta-analysis. Psychological Bulletin, vol. 97, pp. 251-273.
- Jang, K.L., Livesley, W.J., & Vernon, P.A. 1996. Heritability of the big five personality dimensions and their facets: A twin study. Journal of Personality, vol. 64, pp. 577-591.
- Judge, T.A., Higgins, C.A., Thoresen, C.J. & Barrick, M.R. 1999. The big five personality traits, general mental ability, and career success across the life span. Personnel Psychology, vol. 52, pp. 621-652.
- 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, vol. 56, pp. 388-421.
- Judge, T.A., Locke, E.A., Durham, C.C., & Kluger, A.N. 1998. Dispositional effects on job and life satisfaction: The role of core evaluations. Journal of Applied Psychology, vol. 83, pp. 17-34.
- Kreitner, R. & Kinicki, A. 1998. Organizational behavior (4<sup>th</sup> ed.). Boston, MA: McGraw-Hill.
- Larsen, R.J. & Ketelaar, T. 1991. Personality and susceptibility of positive and negative emotional states. Journal of Personality and Social Psychology, vol. 61, pp. 132-140.
- Makin, P.J., Cooper, C.L., & Cox, C.J. 1996. Organizations and the psychological contract: Managing people at work. Leicester: British Psychological Society.
- 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, vol. 52, pp. 81-90.
- McCrae, R.R. & Costa, P.T. 1995. Positive and negative valence within the five-factor model. Journal of Research in Personality, vol. 29, pp. 443-460.
- McCrae, R.R. & Costa, P.T. 1997. Personality trait structure as human universal. American Psychologist, vol. 52, pp. 509-516.
- McCrae, R.R., Costa, P.T., Pinar, G.H., Rolland, J.P., & Parker, W.D. 1998. Cross-cultural assessment of the Five-Factor model. Journal of Cross-Cultural Psychology, vol. 29, pp. 171-188.
- Meir, E.I., Melamed, S., & Dinur, C. 1995. The benefits of congruence. Career Development Quarterly, vol. 43, pp. 257-266.
- Nunnally, J. & Bernstein, I.H. 1994. Psychometric theory (3<sup>rd</sup> ed.). New York: McGraw-Hill.
- Ones, D.S., Viswesvaran, C., & Reiss, A.D. 1996. Role of social desirability in personality testing for personnel selection: The red herring. Journal of Applied Psychology, vol. 81, pp. 66-679.
- Oshagbemi, T. 1999. Overall job satisfaction: How good are single versus multiple-item measures? Journal of Managerial Psychology, vol. 14, pp. 388-403.
- Reilly, R.R. & Warech, M.A. 1993. The validity and fairness of alternatives to cognitive tests. In C.C. Wing & B.R. Gifford (Eds.). Policy issues in employment testing (pp. 131-224). Norwell, MA: Kluwer Academic.
- Roberts, H.E., & Roseanne, F.J. 1998. Evaluating the interaction between self-leadership and work structure in predicting job satisfaction. Journal of Business and Psychology, vol. 12, pp. 257-267.
- Rothmann, S. 2000 (July). Sense of coherence, locus of control, self-efficacy and job satisfaction. Paper presented at the 28th International Congress of Psychology, Stockholm: Sweden.
- Roznovski, M. & Hulin, C. 1992. The scientific merit of valid measures of general constructs with special reference to job satisfaction and job withdrawal. In C.J. Cranny, P.J. Smith & E.F. Stone (Eds.). Job satisfaction: How people feel about their jobs and how it affects their performance. New York: Lexington Books.
- Rust, J. 1999. Discriminant validity of the "big five" personality traits in employment settings. Social Behavior and Personality, vol. 27, pp. 99-108.
- SAS Institute. 1996. SAS Users Guide: Basics (6th ed.) Cary, NC: SAS Institute.
- Savery, K. 1982. The influence of job factors and employee satisfaction. Journal of Management Psychology, vol. 4, pp. 37-31.
- Schneider, M.H. 1999. The relationship of personality and job settings to job satisfaction. Dissertation Abstracts International: Section B: The Science and Engineering, vol. 59, p. 6103.
- Shaughnessy, J.J. & Zechmeister, E.B. 1997. Research methods in psychology (4<sup>th</sup> ed.). New York: McGraw-Hill.
- South African Pharmacy Council. 1999. Are more pharmacists leaving the country? Pharmaciae, vol. 2, pp. 1-2.
- Staw, B.M., Bell, N.E., & Clausen, J.A. 1986. The dispositional approach to job attitudes: A lifetime longitudinal test. Administrative Science Quarterly, vol. 31, pp. 56-77.
- Steel, R.P. & Rentsch, J.R. 1995. Influence of cumulative strategies on the long-range prediction of absenteeism. Academy of Management Journal, vol. 38, pp. 616-1634.

- Steyn, H.S. 1999. Praktiese betekenisvolheid. Die gebruik van effekgroottes. Wetenskaplike bydraes reeks B: Natuurwetenskappe Nr. 117. Potchefstroom: PU vir CHO.
- Tanoff, G.F. 1999. Job satisfaction and personality: The utility of the five-factor model of personality. Dissertation Abstracts International: Section B: The Sciences and Engineering, vol. 60, p. 1904.
- 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, vol. 53, pp. 115-153.
- Tokar, D.M. & Subich, L.M. 1997. Relative contributions of congruence and personality dimensions to job satisfaction. Journal of Vocational Behaviour, vol. 50, pp. 482-491.
- Vinchur, A.J., Schippmann, J.S., Switzer, F.S., & Roth, P.L. 1998. A meta-analytic review of predictors of job performance for salespeople. Journal of Applied Psychology, vol. 83, pp. 586-597.
- Visser, E. 1990. Organisatoriese veranderlikes en lewenstyl as voorspellers van werkstevredenheid en prestasie. Ongepubliseerde meestersgraadskripsie, UOVS, Bloemfontein.
- Weiss, H.M. & Cropanzano, R. 1996. Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. Research in Organizational Behaviour, vol. 18, pp. 1-74.
- Weiss, D.J., Dawis, R.V., England, G.W., & Lofquist, L.H. 1967. Manual for the Minnesota Satisfaction Questionnaire. Minneapolis, MN: University of Minnesota.
- Wright, P.M., Kacmar, K.M., McMahan, G.C., & Deleeuw, K. 1995. Cognitive ability and job performance. Journal of Management, vol. 21, pp. 1129-1139.