

Running Head: Success Predicted by HPI

Thesis: The Hogan Personality Inventory as a Predictor of Employee Success

Hiring the right person for a position can potentially save organizations many thousands of dollars via augmented employee productivity and longevity, as well as in decreased absenteeism. Toward this end, organizations have long been seeking the best formula that will culminate in the most profitable hiring decisions. Personality assessment approaches such as situational judgment tests, assessment centers, structured interviews and biodata have been explored. While found more costly and time-consuming than self-report personality tests, they were not found to perform better than tests of personality (Ones, et al., 2007). Thus, many organizations have turned to personality self-report measures to assist in hiring decisions.

In 2005, pre-employment testing for employee selection was estimated to be a \$400-million-dollar industry with approximately 65 percent of employers using a marketed personality or psychological test (Katunich, 2005). Additionally, Hsu (2004, as cited in Rothstein & Goffin, 2006) found the personality testing industry to be growing at an average of 10 percent per year. Further, personality measures are utilized as employment screening instruments for more than 40 percent of Fortune 100 companies (Erickson 2004, as cited in Rothstein & Goffin, 2006). Much research has been done to investigate the relationship of personality traits and job performance with mixed results.

Up until the early 1990's, personality assessment was questioned as a valid means of personnel decisions. Since then, a great deal of research has been done which supports its use in assessing job performance and, thus, in hiring decisions. A widely cited study, Guion and Gottier (1965), reported that making hiring decisions based on personality measures was difficult to support. Pessimism surrounding the personality-performance relationship prior to the 1990's stemmed from the multitude of personality traits to be measured, along with reliance on mostly

narrative reviews that limited the nature of inferences that could be made (Mount & Barrick, 1998). A better way to assess the personality and performance relationship was greatly needed.

### **Emergence of the Five-Factor Model**

Research on the relationship between personality-job performance continued producing unsatisfactory results until the Five-Factor Model (FFM) was introduced. This model is posited by Mount and Barrick (1998) as the “missing link” in developing research on the relationship between personality and job performance. The FFM offered a standardized taxonomy that allowed for multiple traits to be organized into common factors. The five factors comprising the FFM (also known as the Big 5) are Conscientiousness, Extraversion, Agreeableness, Openness to Experience, and Emotional Stability. Ones, et al., (1994) described the significance of the FFM by noting its introduction of a framework that could summarize relationships between predictor variables and performance, thus allowing meaningful collection and comparisons of the information.

Salgado (2003) completed an important study that compared the personality /performance relationship between FFM-based inventories and non-FFM-based inventories. He found that validities for Agreeableness, Openness to Experience and Extraversion were similar for both types of inventories. On the other hand, Conscientiousness and Emotional Stability had much higher validities with the FFM-based inventories. This suggests that the FFM is a more valid measure of the predictor to performance relationship than other currently available measures.

### **Validation Studies**

Many studies assessing the validity of the FFM support a relationship between personality and performance. Meta-analyses investigating validity of the FFM produced some of the most compelling support for the relationship between personality and performance. One

analysis, Tett, et al., (1991), actually found support for all of the FFM dimensions in relation to job performance. However, most of the research has found support for more limited FFM domains. Several studies (Barrick & Mount, 1991; Salgado, 1997; Mount & Barrick, 1998; Hertz & Donovan, 2000; and Barrick, Mount & Judge, 2001) found conscientiousness to be predictive of job performance across occupations and job criteria. Yet another factor, Emotional Stability, received extensive support as a predictor of performance (Mount & Barrick, 1998; Barrick, Mount & Judge, 2001; Salgado, 1997). Salgado's (1997) research supported the relationship of both conscientiousness and emotional stability to job performance in a European community. This study extended the generalizability of the previous findings, which were based solely on American samples.

### **Moderators**

Research findings on the personality-performance relationship are highly varied. It is not surprising that the overall findings are so varied since some studies explore the relationship between personality and performance without considering moderators (factors that intervene in the relationship between personality and performance thereby moderating that relationship) affecting outcomes. Many researchers have posited that the personality/predictor validities vary by specific job characteristics. Moderators include the factors of: the type of job, type of work groups, environmental factors, specific job traits, narrow traits, rating source, and interactions between FFM factors.

The impact of these moderator variables has been demonstrated across multiple studies. Some components of the big 5 have demonstrated predictive validity in regard to specific job types (Hertz and Donovan, 2000), occupational work groups or job performance criteria (Barrick & Mount, 1991, Barrick, Mount & Judge, 2001, Ones, et al., 2007). Ones, et al., (2007)

concluded that various combinations of the big five factors are valid depending on the occupation(s) to which they are being applied. Moderators appear to play a large role in the accuracy of the Big 5 as predictors of job performance. Therefore, we will examine how different types of moderators impact on the prediction/performance relationship. The moderators to be reviewed include environmental moderators, specific job traits, broad factors, source of ratings and interactions between factors.

An environmental moderator example is situational strength (crisis situations or factors determined as important by one's supervisor), as it relates to autonomy for managers. One study found higher validities in conscientiousness and extraversion when managerial jobs were high in autonomy than when they were not (Barrick & Mount, 1993). Specific jobs (in this case management positions) can be subject to external situations (strength of situational pull in the above example) that moderate the predictor/performance relationship. The above example demonstrates how external situations that influence the job may also influence the predictive relationship.

Another important moderator group is the specific job traits required in the position. Tett, Jackson and Rothstein (1991) addressed the need for job analyses that would identify the best FFM predictors of the unique traits required for a specific job. Murphy (2005) similarly reported personality-performance relations as varying across jobs, organizations and settings. Identification of the traits needed for the specific job seems to be an important component in predicting successful job performance.

The very broad factors of the FFM may not always identify the underlying smaller components of personality (referred to as narrow factors) relevant to assessing performance. Hurtz and Donovan (2000) recognized the possible importance of narrow traits and suggested

that future studies focus on the narrow traits underlying the broader factors of the FFM. Dudley, et al., (2006), determined that the underlying (narrow) trait of dependability may be the motivating factor of conscientiousness, thus illustrating the value of focusing future research on narrow traits.

The source of the personality ratings (observer versus self) may also be an important moderator. Observer ratings, based on actual work performance, seem to provide more valid predictors of performance than self-report (Murphy, 2003). Comparison of both self-report measures and observer ratings based on longitudinal work performance should provide accurate ratings over time for both sources. This will assist in providing a more accurate comparison of these rating sources within the predictor-performance relationship.

The interactions between individual factors of the FFM may assist in predictability of job performance (Tett & Christensen, 2007; Witt, Murphy, 2003; Burke, Barrett & Mount, 2002). Such interactions are largely an untapped resource. Being mindful of the moderators discussed, consideration of the moderators should result in greater accuracy of prediction.

### **Issues**

Concerns remain regarding moderators as well as the current use of personality measures for personnel selection. Morgeson, Dipboye, Campion, Hollenback, Murphy and Schmitt (2007) report that overall validities for personality measures in the prediction of job performance remain quite low, and thus, may not be justified in making employment decisions about individuals (2007). Specific concerns and recommendations are offered in two reviews by Morgeson, et al. (2007 Autumn, 2007 Winter). They report that some of the meta-analytic research relied to a great extent on data from the producers of the tests. They note the possibility that non-

supportive results regarding personality-performance relations may not have been acknowledged (Morgeson, et al., Autumn 2007). These concerns highlight the need for unbiased studies.

Schmitt (in Morgeson, et al., Autumn 2007) states that having knowledge of the desired goal of testing before employing personality measures will result in higher validity and the ability to defend use of the particular test, if such defense should become necessary. This statement goes beyond simply applying a job analysis. The tests are not to be used identically in all situations. They must be applied in a way that is clearly tied to the desired outcome (performance) and the traits (via accurate predictors) that will help ensure that outcome. Morgeson, et al. (Winter, 2007) recommend the use of customized tests for specific jobs and/or organizations. They further suggest focusing on the individual traits related to a specific job; along with the use of objective measures (rather than subjective) and the use of actual applicants (rather than lab simulated circumstances) to obtain more accurate predictive validities.

### **Why Predict Performance?**

In 1991, Irving claimed that the major contribution of personality measures to organizations was the cost savings gained when the selection devices in use demonstrated validity. Many companies employ personality measures in the hope that they are indeed selecting the best employees, and are thus reaping returns in cost savings via productivity. It is imperative that the tools in use enable decision making that contributes to the overall viability of the organization. In this time of financial constraints and managed care, cost savings are critical to the viability of hospital organizations. The FFM taxonomy, combined with appropriate consideration of moderators, offers a way to examine the predictor-performance relationship. Quality predictors may allow organizations to choose and develop employees that will best fulfill corporate goals.

Since the present study will look at Graduate Nurse Externs (GNEs) in a hospital setting, the FFM may offer useful information. In this competitive environment, patient quality of care is extremely important and is often the main contributor to customer loyalty and resulting company longevity. Quality of care can be affected by absenteeism. Previous research (Unruh, et al., 2007) regarding Registered Nurses' employee absence has determined that with the resulting heightened workload, patient care suffers. The present study will look at the FFM to determine predictor variables that may correlate with GNE absence. Research (Judge, et al., 1997) on employee absence and FFM based inventories has found that high Extraversion and low Conscientiousness are associated with high absence. The ability to predict future absence rates among employment prospects offers great advantages within the medical field.

### **The Proposed Study**

Given the paucity of research regarding personality-performance complexities, a study examining these factors is required. Additionally, longitudinal studies are notably missing from prior research in this field. With the current focus in the healthcare industry on the need to maintain good customer relationships, while providing excellent care (accomplished within managed care constraints), choosing the appropriate employees is critical. The present study will examine the use of an FFM-based inventory in determining employee performance. We will review four-years of archival data to ascertain whether or not the inventory can predict the most successful employees over time.

### Method

#### **Participants**

Archival data, including personality measures and job performance measures were obtained for 235 Graduate Nurse Externs (GNEs) hired by a major midwest healthcare system

between 2004 and 2007. GNE refers to those who have graduated from a credited nursing program and are seeking placement within a medical facility to gain hands-on experience through an externship. Graduates retain a GNE status for one year. Our GNE sample includes 144 females and 6 males (85 were sent as unknown) who are hired as either full (n=139) or part-time (n=11) employees (data was missing for 85 personnel). GNEs ranged in age from 20 to 52, with 23 being the median age. The department in which the participants worked was provided (but was not used in this study); however information on race, ethnicity and graduating school is not available. Applicants who were not offered GNE positions are not included in this sample.

### **Measures**

The Hogan Personality Inventory (HPI) is a measure of personality based on the framework of the Five-Factor Model. The HPI consists of seven scales: Adjustment, Ambition, Sociability, Interpersonal Sensitivity, Prudence, Inquisitiveness, and Learning Approach (Hogan, Hogan & Warrenfeltz, 2007). Table 1 (below) lists what each scale measures (Hogan, Hogan & Warrenfeltz, 2007). The HPI is given to all potential job candidates who apply at the researched healthcare system. An electronic file provided total scores for each of the seven scales as well as scores for each individual trait included in the overall scale. Validity data for each of the seven scales is reported as Adjustment (.43), Ambition (.35), Interpersonal Sensitivity (.34), Prudence (.36), Inquisitiveness (.34), and Learning Approach (.25) (Hogan, Hogan & Warrenfeltz, 2007). There are 41 individual traits that make up the seven higher-level scales. Scores for all 41 individual traits were also provided. The average alpha for the scales is .80, while test-retest reliabilities range from .74 to .86 (Hogan, Hogan & Warrenfeltz, 2007).

Measures of organizational success analyzed for this study include: manager performance appraisals (PA) and attendance (attendance data included episodes of time off,

overall days off, time span in months, leave of absence days and number of leaves of absence). Vacation days were not included as time off. Manager PA scores (overall totals) were received in an electronic file. The file consisted of one-year manager PA total scores for each year the employee was employed (including after receiving promotion to a non-extern, permanent status). This score is a composite of the numeric measures evaluated by the managers. Attendance data (sick days used, leave of absence days and LOA episodes) was received in a separate electronic file. Merit increases (by percentage), number of promotions (and type where available), and retention data (e.g., resigned, fired, quit, retained) were also received electronically, but were not analyzed in the present study.

Information was gathered for 235 GNEs from 2004 through 2007. Only 17 GNE data files overlapped as rehires, providing 256 records over four years. Sample sizes were 23 for 2004, 47 for 2005, 83 for 2006 and 103 for 2007. Years 2004 and 2005 had sample sizes too small to provide statistical power. Only years 2006 and 2007 were analyzed in the present study.

For all grouped traits (higher-level scales), both an actual score and a percentage score were provided by the testing company. The percentage scores differ slightly from the actual score and are used in the manual to determine whether scorers are high, average or low for that grouping. For this reason, percentage scores were used for the overall grouped trait calculations in this study

### **Procedure**

All electronic files were received with numeric identifier codes in order to protect the identity of the participants. Microsoft Access was used to combine these files. The consistent numeric identifier code (per GNE) was received in each file and was used as a primary key for matching data. Names and other potentially identifying information were not included in the

files. For this reason, individual informed consent was not required. The project was reviewed by the healthcare system administrators and received approval from the organization's IRB before files were released.

Table 1, HPI Scales and Measurements

<b>HPI Scale</b>	<b>Measures</b>
Adjustment	Calmness and self-acceptance.
Ambition	Social confidence, leader-like, competitive and energetic.
Sociability	Individuals seeming need or enjoyment of interaction with others.
Interpersonal Sensitivity	Perception, tact and social sensitivity.
Prudence	Conscientiousness, conforming, and dependable.
Inquisitiveness	Perception of brightness, creativity and interest in intellectual matters.
Learning Approach	Enjoyment of academic activities and value educational achievement.

## Results

Analyses were conducted to determine if the scales comprising the Hogan Personality Inventory, or their individual traits, were predictive of successful employees or rates of absence.

### **Performance Outcomes**

Analyses were completed comparing the predictive validity of the HPI specific traits and their higher-level grouped traits in a series of multiple regressions. Analyses were completed for years 2006 and 2007 only. Years 2004 and 2005 samples were not large enough to provide statistical power. In total, seven multiple regressions assessing the grouped traits were completed. Grouped traits (i.e. Adjustment, Ambition, Sociability, Interpersonal Sensitivity, Prudence, Inquisitive and Learning Approach) were entered as the IVs in each regression analysis, predicting PA score for each of the years, 2006 through 2007. Multiple regressions

analyses were completed for the 41 individual traits that make up the seven grouped traits. The individual traits falling into each grouped trait category will be outlined below.

A multiple regression was completed in which the percentage totals of eight individual traits subgrouped under the grouped trait heading of Adjustment were entered into a regression equation predicting performance appraisal score (Table 1.1). Additionally, a multiple regression was completed for the eight individual traits comprising the heading of Adjustment for PA years 2006 (Table 1.2) and 2007 (Table 1.3). These individual traits included: Empathy, Not Anxious, No Guilt, Calmness, Even Tempered, No Somatic Complaint, Trusting, and Good Attachment. Three individual traits were significant for the 2007 PA year, these three traits were so strongly significant as to effectively render the grouping of the individual traits for 2007 as significant (see Table 1.3). The percentage grouped traits were not significant for either year (see Table 1.1).

Table 1.1 Percentage Totals for Adjustment traits predicting performance appraisal scores across years.

PA YEAR	F	df	R <sup>2</sup>	p
2006	2.14	1,81	.03	.15
2007	2.12	1,101	.14	.15

Table 1.2 Individual Totals for Adjustment traits predicting performance appraisal scores for year 2006.

Individual Trait	F	df	R <sup>2</sup>	p	$\beta$	t	p
Empathy	.91	8,74	.08	.30	.02	.10	ns
Not Anxious					-.21	-1.07	ns
No Guilt					-.32	-1.72	ns
Calmness					.24	1.21	ns
Even Tempered					.27	1.35	ns
No Somatic Complaint					.21	1.34	ns
Trusting					.22	1.20	ns
Good Attachment					-.24	-1.50	ns

Table 1.3 Individual Totals for Adjustment traits predicting performance appraisal scores for year 2007.

Individual Trait	F	df	R <sup>2</sup>	p	$\beta$	t	p
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Empathy	2.42	8,94	.17	*	.04	.39	ns
Not Anxious					.27	2.65	**
No Guilt					-.24	-2.00	*
Calmness					-.05	-.46	ns
Even Tempered					.03	.23	ns
No Somatic Complaint					-.07	-.65	ns
Trusting					-.07	-.62	ns
Good Attachment					.29	2.68	**

\* ≤ .05

\*\* ≤ .01

\*\*\* ≤ .001

Note: This significance scale is applicable to each of the following tables.

A second multiple regression equation was completed for the percentage totals of the grouped trait heading of Ambition (Table 2.1) and the six individual traits comprising that grouping (Competitive, Self Confidence, No Depression, Leadership, Identity, No Social Anxiety) for both the 2006 PA year (Table 2.2) and the 2007 PA Year (Table 2.3). Due to lack of variability in responses, the trait “No Depression” was not used in the calculation for the overall grouped trait of Ambition; however, results are available for the individual trait of No Depression. Results were not significant for Percentage Totals and the 2006 PA year. Although for 2007, both the grouping of the individual traits and the individual trait of Self Confidence were significant, it is important to note that self confidence was the only significant individual trait. Self confidence was so strongly significant as to skew the entire grouping into the significance range. This would indicate that the individual traits were better predictors in this category for 2007.

Table 2.1 Percentage totals for Ambition traits predicting performance appraisal scores for 2006 and 2007 PA years.

PA YEAR	F	df	R <sup>2</sup>	p
2006	.43	1,81	.005	.51
2007	2.31	1,101	.02	.13

Table 2.2 Individual Totals for Ambition traits predicting performance appraisal scores for year 2006.

Individual Trait	F	df	R <sup>2</sup>	p	β	t	p
Competitive	1.03	6,76	.08	.41	.14	1.23	ns

Self Confidence					-.17	-1.51	ns
No Depression					.15	1.32	ns
Leadership					.01	.10	ns
Identity					-.06	-.48	ns
No Social Anxiety					-.03	-.25	ns

Table 2.3 Individual Totals for Ambition traits predicting performance appraisal scores for year 2007.

Individual Trait	F	df	R <sup>2</sup>	p	β	t	p
Competitive	2.73	6,96	.15	*	-.20	-1.87	ns
Self Confidence					.40	3.20	**
No Depression					-.02	-.21	ns
Leadership					-.06	-.49	ns
Identity					-.02	-.17	ns
No Social Anxiety					.16	1.48	ns

A multiple regression analysis was completed for the percentage totals of the grouped trait heading of Sociability (Table 3.1). An additional multiple regression was completed which included the five specific traits that make up the general heading of Sociability: Likes Parties, Likes Crowds, Experience Seeking, Exhibitionistic, and Entertaining. Individual traits were looked at for both the 2006 PA year (Table 3.2) and the 2007 PA year (Table 3.3). No significant findings were reported for any of these regressions.

Table 3.1 Percentage Totals for Sociability traits predicting performance appraisal scores across years.

PA YEAR	F	df	R <sup>2</sup>	p
2006	1.97	1,81	.02	.17
2007	1.06	1,101	.01	.31

Table 3.2 Individual Totals for Sociability traits predicting performance appraisal scores for year 2006.

Individual Trait	F	df	R <sup>2</sup>	p	β	t	p
Likes Parties	1.06	5,77	.06	.39	.09	.74	ns
Likes Crowds					-.03	-.26	ns
Experience Seeking					-.07	-.52	ns
Exhibitionistic					.19	1.55	ns
Entertaining					.08	.57	ns

Table 3.3 Individual Totals for Sociability traits predicting performance appraisal scores for year 2007.

Individual Trait	F	df	R <sup>2</sup>	p	β	t	p
Likes Parties	.71	5,97	.04	.62	.05	.44	ns
Likes Crowds					.16	1.40	ns
Experience Seeking					.03	.26	ns
Exhibitionistic					-.06	-.51	ns
Entertaining					-.02	.20	ns

The fourth grouped trait heading of Interpersonal Sensitivity consisted of five individual traits: Easy to Live With, Sensitive, Caring, Likes People, No Hostility. The Percentage Total for the overall grouping was entered into a multiple regression equation and the results can be found below in table 4.1. Additionally, the individual traits were entered into multiple regression equations for both the 2006 (Table 4.2) and 2007 (Table 4.3) PA years. Only the individual trait of Likes People was significant in these regressions.

Table 4.1 Percentage Totals for Interpersonal Sensitivity traits predicting performance appraisal scores across years.

PA YEAR	F	df	R <sup>2</sup>	p
2006	.92	1,81	.011	.34
2007	1.23	1,101	.012	.27

Table 4.2 Individual Totals for Interpersonal Sensitivity traits predicting performance appraisal scores for year 2006.

Individual Trait	F	df	R <sup>2</sup>	p	β	t	p
Easy to Live With	.30	5,77	.02	.91	-.02	-.12	ns
Sensitive					-.04	0.32	ns
Caring					.07	.51	ns
Likes People					-.08	-.54	ns
No Hostility					-.10	-.76	ns

Table 4.3 Individual Totals for Interpersonal Sensitivity traits predicting performance appraisal scores for year 2007.

Individual Trait	F	df	R <sup>2</sup>	p	β	t	p
Easy to Live With	2.15	5.97	.10	.07	-.11	-.95	ns
Sensitive					-.10	-1.02	ns
Caring					.10	1.07	ns
Likes People					.30	2.71	**
No Hostility					.07	.72	ns

A multiple regression was completed for the overall percentage total for the grouped trait heading of Prudence (Table 5.1). The seven individual traits subgrouped under the grouped trait heading of Prudence (Moralistic, Mastery, Virtuous, Not Autonomous, Not Spontaneous, Impulse Control, and Avoids Trouble) were entered into a regression equation predicting performance appraisal score for years 2006 (Table 5.2) and 2007 (Table 5.3). No significant results were found for either the individual or grouped traits in the Prudence category.

Table 5.1 Percentage Totals for Prudence traits predicting performance appraisal scores across years.

<b>PA YEAR</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>
2006	.326	1,81	.004	.57
2007	1.99	1,101	.019	.16

Table 5.2 Individual Totals for Prudence traits predicting performance appraisal scores for year 2006.

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Moralistic	.67	7,75	.06	.70	.05	.36	ns
Mastery					-.10	.86	ns
Virtuous					-.24	-1.77	ns
Not Autonomous					-.07	-.53	ns
Not Spontaneous					-.01	-.05	ns
Impulse Control					.03	.24	ns
Avoids Trouble					-.01	-.09	ns

Table 5.3 Individual Totals for Prudence traits predicting performance appraisal scores for year 2007.

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Moralistic	.41	7,95	.03	.89	-.16	-1.33	ns
Mastery					.02	.21	ns
Virtuous					.08	.62	ns
Not Autonomous					.06	.52	ns
Not Spontaneous					-.07	-.65	ns

Impulse Control						-.02	-.19	ns
Avoids Trouble						.04	.38	ns

The grouped trait heading of Inquisitive was comprised of six individual subgroupings that included: Science Ability, Curiosity, Thrill Seeking, Intellectual Games, Generates Ideas and Culture. Multiple regressions were completed for the percentage totals of the overall grouped trait of Inquisitive (Table 6.1) and for the individual traits comprising this grouping (listed below) for PA Years 2006 (Table 6.2) and 2007 (Table 6.3). Again, there were no significant findings for the grouped or individual traits in this category.

Table 6.1 Percentage Totals for Inquisitive traits predicting performance appraisal scores across years.

PA YEAR	F	df	R <sup>2</sup>	P
2006	2.11	1,81	.03	.15
2007	.85	1,101	.01	.36

Table 6.2 Individual Totals for Inquisitive traits predicting performance appraisal scores for year 2006.

Individual Trait	F	df	R <sup>2</sup>	p	β	t	p
Science Ability	1.12	6,76	.08	.36	-.20	-1.37	ns
Curiosity					-.08	-.62	ns
Thrill Seeking					.06	.52	ns
Intellectual Games					-.06	-.50	ns
Generates Ideas					-.14	-1.06	ns
Culture					.19	1.43	ns

Table 6.3 Individual Totals for Inquisitive traits predicting performance appraisal scores for year 2007.

Individual Trait	F	df	R <sup>2</sup>	p	β	T	p
Science Ability	1.38	6,96	.08	.23	-.19	-1.62	ns
Curiosity					.03	.23	ns
Thrill Seeking					-.12	-1.12	ns
Intellectual Games					.08	.77	ns
Generates Ideas					.17	1.58	ns

Culture					-.11	-.97	ns
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The seventh grouped trait heading of Learning Approach (percentage total calculations for this grouping can be seen in Table 7.1) consisted of four individual traits: Education, Math Ability, Good Memory and Reading. These individual traits were entered into a multiple regression equation for PA years 2006 (Table 7.2) and 2007 (Table 7.3). Only the individual trait of Reading was found to be significant (for year 2006).

Table 7.1 Percentage Totals for Learning Approach traits predicting performance appraisal scores across years.

PA YEAR	F	df	R <sup>2</sup>	P
2006	1.88	1,81	.02	.17
2007	.05	1,101	.00	.83

Table 7.2 Individual Totals for Learning Approach traits predicting performance appraisal scores for year 2006.

Individual Trait	F	df	R <sup>2</sup>	p	$\beta$	t	p
Education	1.69	4,78	.08	.16	*	.20	ns
Math Ability					-.09	-.74	ns
Good Memory					.15	1.26	ns
Reading					-.28	-2.35	*

Table 7.3 Individual Totals for Learning Approach traits predicting performance appraisal scores for year 2007.

Individual Trait	F	df	R <sup>2</sup>	p	$\beta$	t	p
Education	.53	4,98	.02	.71	-.06	-.51	ns
Math Ability					-.04	-.37	ns
Good Memory					.16	1.42	ns
Reading					-.04	-.37	ns

Individual traits reflected significant findings for performance appraisals for two years of the study. Reading, an individual trait subgrouped under Learning Approach, reflected a significant result for performance appraisal outcome in year 2006 ( $t=-2.353$ ,  $p=.02$ ). For 2007 performance appraisals, five individual traits were found to be significant. Three were from the Adjustment grouping and included: Not Anxious ( $t=2.651$ ,  $p=.009$ ), No Guilt ( $t=-2.001$ ,

p=.048), and Good Attachment (t=2.682, p=.009). The individual trait of Self Confidence, under the grouped trait heading of Ambition was also significant for 2007 performance appraisal scores (t=3.197, p=.002). Likes People (under the general category of Interpersonal Sensitivity) also reported significance for 2007 performance appraisal scores (t=2.706, p=.008).

These results indicate that being well attached, having self confidence and liking people were predictive of higher performance appraisal score within this job for the 2007 year. Further, not being anxious and experiencing some guilt were also predictive of higher performance appraisal scores for GNE's in 2007. Reading ability was predictive of high performance appraisal score for this job in the 2006 year. The overall results indicate better prediction from specific traits rather than more generalized groupings.

### **Absenteeism Outcomes**

A multivariate Analysis of Variance (MANOVA) was completed for the seven grouped traits. The independent variables included the Hogan Personality Inventory grouped trait scales of: Adjustment, Ambition, Sociability, Interpersonal Sensitivity, Prudence, Inquisitive and Learning Approach. The Individual traits within each scale are consistent with those reported in the Performance Outcome section of this study. Dependant variables for absenteeism included: Episodes of Time Off, Overall Days absent, Time Span of Time Off (in months), Number of Leaves of Absence, and Number of Leave of Absence Days. Again, for this study, percentage totals received from the testing company will be reflected in the reported results (rather than the actual scores) due to the HPI manual usage of these scores in determining employee score level (low, average, high).

Multivariate tests were not significant for any of the overall grouped traits. These included the seven grouped trait headings of: Adjustment (F=1.06 (1,17), p>.05), Ambition

( $F=.65$  (1,13),  $p>.05$ ), Sociability ( $F=.79$  (1,19),  $p>.05$ ), Interpersonal Sensitivity ( $F=.73$  (1,6),  $p>.05$ ), Prudence ( $F=.61$  (1,12),  $p>.05$ ), Inquisitive ( $F=.83$  (1, 17),  $p>.05$ ) and Learning Approach ( $F=1.15$  (1,11),  $p >.05$ ).

Multiple regression analyses were completed for the 41 individual traits comprising each of the above listed grouped headings. Results for the individual traits comprising the grouped trait of Adjustment can be found in the tables below as follows: Adjustment individual traits predicting episodes of time off (Table 8.1), Overall days (Table 8.2), Timespan in Months (Table 8.3), Number of LOAs (Table 8.4) and Leave of Absence Days (Table 8.5). No significant findings are reported for the overall grouping; however, the individual trait of Trusting is significant for Time Span (Months) (Table 8.3).

Table 8.1 Individual Totals for Adjustment traits predicting Episodes of Time Off

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Empathy	1.64	8,104	.11	.12	-.22	-.183	ns
Not Anxious					-.03	-.28	ns
No Guilt					.03	.23	ns
Calmness					.18	1.51	ns
Even Tempered					-.18	-1.53	ns
No Somatic Complaint					.01	.13	ns
Trusting					-.12	-1.01	ns
Good Attachment					-.01	0.07	ns

Table 8.2 Individual Totals for Adjustment traits predicting Overall Days

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Empathy	.50	8,104	.04	.85	-.10	-.80	ns
Not Anxious					-.00	-.03	ns
No Guilt					.04	.34	ns
Calmness					-.09	-.74	ns
Even Tempered					.04	.34	ns
No Somatic Complaint					.13	1.18	ns
Trusting					-.05	-.46	ns

Good Attachment					.05	.50	ns
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Table 8.3 Individual Totals for Adjustment traits predicting Time Span (Months)

Individual Trait	F	df	R <sup>2</sup>	p	β	t	p
Empathy	1.57	8,104	.11	.14	-.15	-1.28	ns
Not Anxious					.09	.81	ns
No Guilt					.05	.41	ns
Calmness					.14	1.22	ns
Even Tempered					-.18	-1.56	ns
No Somatic Complaint					.10	1.00	ns
Trusting					-.22	-1.95	*
Good Attachment					.16	1.53	ns

Table 8.4 Individual Totals for Adjustment traits predicting Number of LOAs

Individual Trait	F	df	R <sup>2</sup>	p	β	t	p
Empathy	.26	8,103	.02	.98	-.02	-.13	ns
Not Anxious					.05	.45	ns
No Guilt					.04	.37	ns
Calmness					-.06	-.48	ns
Even Tempered					.32	.26	ns
No Somatic Complaint					-.10	-.92	ns
Trusting					-.01	-.11	ns
Good Attachment					.08	.74	ns

Table 8.5 Individual Totals for Adjustment traits predicting Leave of Absence Days

Individual Trait	F	df	R <sup>2</sup>	p	β	t	p
Empathy	.73	8,104	.05	.73	-.11	-.90	ns
Not Anxious					.02	.15	ns
No Guilt					.05	.39	ns
Calmness					-.09	-.73	ns
Even Tempered					.09	.77	ns
No Somatic Complaint					.13	1.24	ns
Trusting					-.07	-.60	ns
Good Attachment					.06	.58	ns

Results for the individual traits comprising Ambition can be found in the tables below as follows: Ambition individual traits predicting episodes of time off (Table 9.1), Overall days (Table 9.2), Time span in Months (Table 9.3), Number of LOAs (Table 9.4) and Leave of Absence Days (Table 9.5). The individual trait of No Depression was not used in the calculations below due to insufficient variability. No significant findings are reported for this grouping or the individual traits making up the grouping.

Table 9.1 Individual Totals for Ambition traits predicting Episodes of Time Off.

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Competitive	.35	5,107	.02	.88	-.04	-.41	ns
Self Confidence					.02	.19	ns
No Depression					--	--	--
Leadership					.00	.00	ns
Identity					.09	.87	ns
No Social Anxiety					.07	.72	ns

Table 9.2 Individual Totals for Ambition traits predicting Overall Days.

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Competitive	.19	8,107	.01	.97	-.02	-.15	ns
Self Confidence					.06	.57	ns
No Depression					--	--	--
Leadership					.06	.57	ns
Identity					.03	.31	ns
No Social Anxiety					-.02	-.22	ns

Table 9.3 Individual Totals for Ambition traits predicting Time Span (Months).

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Competitive	.52	5,107	.02	.76	-.07	-.62	ns
Self Confidence					-.01	-.08	ns
No							

Depression					--	--	--
Leadership					.11	1.03	ns
Identity					.04	.40	ns
No Social Anxiety					.07	.63	ns

Table 9.4 Individual Totals for Ambition traits predicting Number of LOAs

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Competitive	.41	5,106	.02	.84	-.01	-.07	ns
Self Confidence					-.12	-1.09	ns
No Depression					--	--	--
Leadership					.06	.58	ns
Identity					.07	.67	ns
No Social Anxiety					.03	.29	ns

Table 9.5 Individual Totals for Ambition traits predicting Leave of Absence Days

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Competitive	.22	5,107	.01	.95	.02	.17	ns
Self Confidence					.02	.18	ns
No Depression					--	--	--
Leadership					.09	.83	ns
Identity					.01	.09	ns
No Social Anxiety					-.05	-.50	ns

Results for the individual traits comprising Sociability can be found in the tables below as follows: Sociability individual traits predicting episodes of time off (Table 10.1), Overall days (Table 10.2), Timespan in Months (Table 10.3), Number of LOAs (Table 10.4) and Leave of Absence Days (Table 10.5). The individual trait of Exhibitionistic was significant for both Number of LOAs and Leave of Absence Days. These results indicate the individual traits are more predictive than the grouped traits in this instance.

Table 10.1 Individual Totals for Sociability traits predicting Episodes of Time Off.

<b>Individual</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
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<b>Trait</b>							
Likes Parties	.44	5,107	.14	.82	-.03	-.25	ns
Likes Crowds					-.04	-.35	ns
Experience Seeking					-.01	-.13	ns
Exhibitionistic					.15	1.41	ns
Entertaining					-.02	-.13	ns

Table 10.2 Individual Totals for Sociability traits predicting Overall Days.

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Likes Parties	.55	5,107	.03	.74	.03	.27	ns
Likes Crowds					.08	.69	ns
Experience Seeking					.00	.02	ns
Exhibitionistic					-.14	-1.33	ns
Entertaining					.09	.82	ns

Table 10.3 Individual Totals for Sociability traits predicting Time Span (Months)

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Likes Parties	.08	5,107	.004	.995	.05	.45	ns
Likes Crowds					-.01	-.05	ns
Experience Seeking					-.06	-.50	ns
Exhibitionistic					.01	.10	ns
Entertaining					.02	.21	ns

Table 10.4 Individual Totals for Sociability traits predicting Number of LOAs

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Likes Parties	1.45	5,106	.06	.21	.10	.86	ns
Likes Crowds					.14	1.30	ns
Experience Seeking					-.05	-1.95	ns
Exhibitionistic					-.20	-1.95	*
Entertaining					.12	1.10	ns

Table 10.5 Individual Totals for Sociability traits predicting Leave of Absence Days

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Likes Parties	1.29	5,107	.06	.28	.07	.66	ns
Likes Crowds					.11	.97	ns
Experience Seeking					-.03	-.27	ns
Exhibitionistic					-.23	-2.19	*
Entertaining					.11	.99	ns

Results for the individual traits comprising Interpersonal Sensitivity can be found in the tables below as follows: Interpersonal Sensitivity individual traits predicting episodes of time off (Table 11.1), Overall days (Table 11.2), Timespan in Months (Table 11.3), Number of LOAs (Table 11.4) and Leave of Absence Days (Table 11.5). The individual trait of No Hostility was significant for Episodes of Time Off. No significant findings are reported for the overall groupings. These results indicate the individual traits are more predictive than the grouped traits in this instance.

Table 11.1 Individual Totals for Interpersonal Sensitivity traits predicting Episodes of Time Off

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Easy to Live With	.98	5,107	.04	.44	.13	1.13	ns
Sensitive					-.01	-.15	ns
Caring					-.03	-.29	ns
Likes People					-.07	-.62	ns
No Hostility					-.21	-2.05	*

Table 11.2 Individual Totals for Interpersonal Sensitivity traits predicting Overall Days

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Easy to Live With	.89	5,107	.04	.49	.14	1.15	ns
Sensitive					.05	.56	ns
Caring					-.05	-.55	ns
Likes People					-.15	-1.35	ns
No Hostility					-.13	-1.28	ns

Table 11.3 Individual Totals for Interpersonal Sensitivity traits predicting Time Span (Months)

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Easy to Live With	.66	5,107	.03	.66	.13	1.11	ns
Sensitive					-.01	-.17	ns
Caring					.02	.20	ns
Likes People					-.08	-.72	ns
No Hostility					-.16	-1.57	ns

Table 11.4 Individual Totals for Interpersonal Sensitivity traits predicting Number of LOAs

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Easy to Live							

With	.29	5,106	.01	.92	.06	.49	ns
Sensitive					.04	.45	ns
Caring					.02	.23	ns
Likes People					-.13	-1.10	ns
No Hostility					.00	.02	ns

Table 11.5 Individual Totals for Interpersonal Sensitivity traits predicting Leave of Absence Days

Individual Trait	F	df	R <sup>2</sup>	p	β	t	p
Easy to Live With	.89	5,107	.04	.49	.13	1.07	ns
Sensitive					.03	.30	ns
Caring					-.06	-.64	ns
Likes People					-.16	-1.44	ns
No Hostility					-.12	-1.24	ns

Results for the individual traits comprising Prudence can be found in the tables below as follows: Prudence individual traits predicting episodes of time off (Table 12.1), Overall days (Table 12.2), Timespan in Months (Table 12.3), Number of LOAs (Table 12.4) and Leave of Absence Days (Table 12.5). The individual trait of Not Spontaneous was significant for Episodes of Time Off. This indicates that the overall grouped trait is not as predictive as the individual traits that comprise the Prudence category.

Table 12.1 Individual Totals for Prudence traits predicting Episodes of Time Off

Individual Trait	F	df	R <sup>2</sup>	p	β	t	p
Moralistic	1.47	7,105	.09	.19	-.02	-.19	ns
Mastery					-.06	-.61	ns
Virtuous					-.00	-.04	ns
Not Autonomous					-.09	-.87	ns
Not Spontaneous					.23	2.25	*
Impulse Control					-.12	-1.16	ns
Avoids Trouble					-.17	-1.79	ns

Table 12.2 Individual Totals for Prudence traits predicting Overall Days

Individual Trait	F	df	R <sup>2</sup>	p	β	t	p
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Moralistic	.31	7,105	.02	.95	.04	.38	ns
Mastery					-.04	-.43	ns
Virtuous					.03	.30	ns
Not Autonomous					-.06	-.56	ns
Not Spontaneous					.10	.98	ns
Impulse Control					.03	.31	ns
Avoids Trouble					.03	.27	ns

Table 12.3 Individual Totals for Prudence traits predicting Time Span (Months)

Individual Trait	F	df	R <sup>2</sup>	p	β	t	p
Moralistic	.77	7,105	.05	.61	.18	1.65	ns
Mastery					.01	.09	ns
Virtuous					-.13	-1.18	ns
Not Autonomous					-.06	-.64	ns
Not Spontaneous					.04	.35	ns
Impulse Control					-.04	-.34	ns
Avoids Trouble					-.12	-1.24	ns

Table 12.4 Individual Totals for Prudence traits predicting Number of LOAs

Individual Trait	F	df	R <sup>2</sup>	p	β	t	p
Moralistic	.60	7,104	.04	.76	-.14	-1.26	ns
Mastery					.01	.14	ns
Virtuous					.03	.26	ns
Not Autonomous					.04	.35	ns
Not Spontaneous					.03	.26	ns
Impulse Control					.11	1.02	ns
Avoids Trouble					.07	.68	ns

Table 12.5 Individual Totals for Prudence traits predicting Leave of Absence Days

Individual Trait	F	df	R <sup>2</sup>	p	β	t	p
Moralistic	.37	7,105	.02	.92	.06	.56	ns
Mastery					-.00	-.02	ns

Virtuous					-.01	-.12	ns
Not Autonomous					.04	.43	ns
Not Spontaneous					.03	.28	ns
Impulse Control					.11	1.06	ns
Avoids Trouble					.03	.29	ns

Results for the individual traits comprising Inquisitive can be found in the tables below as follows: Inquisitive individual traits predicting episodes of time off (Table 13.1), Overall days (Table 13.2), Timespan in Months (Table 13.3), Number of LOAs (Table 13.4) and Leave of Absence Days (Table 13.5). No significant findings are reported for the Inquisitive grouping or the individual traits making up the grouping.

Table 13.1 Individual Totals for Inquisitive traits predicting Episodes of Time Off

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Science Ability	1.34	6,106	.07	.25	.15	1.23	ns
Curiosity					-.18	-1.47	ns
Thrill Seeking					.05	.52	ns
Intellectual Games					-.01	-.11	ns
Generates Ideas					-.07	-.66	ns
Culture					-.17	-1.49	ns

Table 13.2 Individual Totals for Inquisitive traits predicting Overall Days

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Science Ability	.31	6,106	.02	.93	-.12	-1.01	ns
Curiosity					-.05	-.41	ns
Thrill Seeking					.08	.76	ns
Intellectual Games					.04	.37	ns
Generates Ideas					.04	.42	ns
Culture					.01	.05	ns

Table 13.3 Individual Totals for Inquisitive traits predicting Time Span (Months)

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Science Ability	1.11	6,106	.06	.36	.10	.85	ns
Curiosity					.09	.80	ns
Thrill Seeking					-.03	-.31	ns
Intellectual Games					-.15	-1.47	ns
Generates Ideas					-.12	-1.17	ns
Culture					-.15	-1.32	ns

Table 13.4 Individual Totals for Inquisitive traits predicting Number of LOAs

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Science Ability	.55	6,105	.03	.77	-.10	-.80	ns
Curiosity					-.05	-.41	ns
Thrill Seeking					.01	.07	ns
Intellectual Games					-.05	-.47	ns
Generates Ideas					.16	1.54	ns
Culture					.07	.65	ns

Table 13.5 Individual Totals for Inquisitive traits predicting Leave of Absence Days

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Science Ability	.68	6,106	.04	.67	-.22	-1.79	ns
Curiosity					.08	.65	ns
Thrill Seeking					.10	.96	ns
Intellectual Games					.04	.36	ns
Generates Ideas					.08	.74	ns
Culture					.06	.50	ns

Results for the individual traits comprising Learning Approach can be found in the tables below as follows: Learning Approach individual traits predicting episodes of time off (Table 14.1), Overall days (Table 14.2), Timespan in Months (Table 14.3), Number of LOAs (Table 14.4) and Leave of Absence Days (Table 14.5). The individual trait of Reading was significant

for Time Span (months) while no significant results were found for the grouping of Learning Approach, again indicating the individual traits are more predictive of time off.

Table 14.1 Individual Totals for Learning Approach traits predicting Episodes of Time Off

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Education	.67	4,108	.02	.62	.52	.61	ns
Math Ability					-.12	-1.22	ns
Good Memory					.09	.91	ns
Reading					-.07	-.66	ns

Table 14.2 Individual Totals for Learning Approach traits predicting Overall Days

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Education	.55	4,108	.02	.7	-.13	-1.27	ns
Math Ability					.02	.16	ns
Good Memory					.10	.95	ns
Reading					-.03	-.27	ns

Table 14.3 Individual Totals for Learning Approach traits predicting Time Span (Months)

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Education	1.81	4,108	.06	.13	-.08	-.81	ns
Math Ability					-.04	-.45	ns
Good Memory					.18	1.80	ns
Reading					-.20	-.202	*

Table 14.4 Individual Totals for Learning Approach traits predicting Number of LOAs

<b>Individual Trait</b>	<b>F</b>	<b>df</b>	<b>R<sup>2</sup></b>	<b>p</b>	<b>β</b>	<b>t</b>	<b>p</b>
Education	2.00	4,107	.07	.10	-.15	-1.48	ns
Math Ability					-.19	-1.94	ns
Good Memory					.13	1.29	ns
Reading					.06	.65	ns

Overall, five individual traits were significant. Grouped under the overall category of Adjustment, the individual trait of Trusting was significant for Time Span (months) ( $t=-1.945$ ,  $p=.05$ ). The individual trait of Exhibitionistic, under the general grouping of Sociability, was significant for Number of LOAs ( $t=-1.953$ ,  $p=.054$ ) and LOA days ( $t=-2.186$ ,  $p=.031$ ). Within

the Interpersonal Sensitivity grouping, the individual trait of No Hostility was significant for Episodes of Time Off ( $t=-2.045$ ,  $p=.04$ ). Not Spontaneous, an individual trait under the grouped trait of Prudence, was significant for higher Episodes of Time Off ( $t=2.245$ ,  $p=.027$ ). Under the grouped trait of Learning Approach, the individual trait of Reading was significant for Time Span (months) ( $t=-2.033$ ,  $p=.046$ ).

These findings suggest that Reading and Trusting are predictive of Time Span (Months) with lower scores predicting higher time spans of time off. Lower No Hostility scores and higher Not Spontaneous scores both predict higher Episodes of time off. The trait of Exhibitionistic is predictive of Number of LOAs and Leave of Absence (LOA) Days, in that higher Exhibitionistic scores predict lower number of LOAs and lower LOA Days.

## Discussion

### **Performance Appraisal**

Of the six individual traits found to correlate with performance appraisal scores, three were under the grouping of Adjustment. These three were: Not Anxious, No Guilt and Good Attachment. The HPI Manual defines high scorers for Not Anxious as “seems relaxed” and low No Guilt scorers as “prone to worry about past mistakes” (Hogan, Hogan & Warrenfelz, 2007).

In a high stress job like nursing, being able to stay relaxed and avoid anxiety appear to be valuable and predictive traits for success. Given that GNEs are required to make quick decisions and to often carry them out without hesitation, low anxiousness is likely to contribute to successful performance in a GNE position.

There are multiple ways in which guilt may mediate performance. Baumeister, Stillwell and Heatherton (1994) posit that guilt may actually motivate prosocial, relationship-enhancing behaviors. Thus, guilt may assist in developing working relationships based on reciprocity and

goodwill that could act as a buffer for the stresses of the job. Additionally, guilt has been found to contribute to work satisfaction through the discovery of necessary coping resources (Hochwarter, Perrewe, Meurs, & Kacmar, 2007). Guilt may act as a negative reinforcer to motivate some to do a job well.

Good Attachment is defined as having a “positive attitude toward authority” (Hogan, et al., 2007). In an environment where it is necessary to respond quickly to the authority of a nursing supervisor, good attachment would be conducive to a positive performance evaluation.

The individual trait of Likes People was also found to correlate with higher PA scores. In a service industry profession where GNEs are working with coworkers, physicians, supervisors and a continual stream of new patients, enjoying the company of others would be a positive trait.

Another trait found to predict high PA scores was self-confidence. In a GNE position, the ability to have confidence in making clinical judgments is of utmost value. A study by Oermann and Moffitt-Wolf (1997) found that self-confidence on the job was negatively correlated with stress in GNEs. Self-confidence at the time of GNE hire could potentially mediate the stress experienced during the clinical externship, thereby, increasing ability to perform. Further, a report in Nursing Standard (2008), claimed that retention of nursing employees is more likely to occur when that employee is self-confident. Self-confidence is also one of the behaviors associated with overall adjustment scale scores in the HPI. Self-confidence would appear to be a critical trait in the selection of GNEs.

In 2006, higher PA scores correlated with the individual trait of reading. GNEs are required to chart their daily activities and to refer to the previous charting to assist with clinical decisions. As such, reading skill may be an important contributor to effective performance.

The picture that emerges for predicting the successful GNE is a confident person with skills (reading) and a personality capable of dealing with stress by avoiding anxiety, and experiencing some guilt as well as enjoying people.

### **Time off**

Five categories were assessed for time off. Episodes of time off recorded the number of episodes (each episode is defined as concurrent days off), Overall days reflected the total number of days missed due to sick calls, Time Span (months) reported the total span of months sick calls were recorded, Number of LOAs included the number of leaves of absence taken, and LOA days indicate the overall days taken as leaves of absence.

Five individual traits correlated with aspects of time off. Higher Not Spontaneous scores and lower No Hostility scores were correlated with higher Episodes of time off (frequency). The Hogan Guide defines high Not Spontaneous scores as “planful in his/her approach” (Hogan, et al., 2008). Low No Hostility is defined as being “critical of others” (Hogan, et al., 2008). Stress may be a mediating factor in these findings. Lower no hostility scores may reflect a tendency to become more critical of others as situations become more stressful. A link between perceived stress and sickness absence for health care workers has been established (Verhaeghe, Mak, Van Maele, Kormitzer & De Backer, 2003). Further, they posit that this link is mediated through work social supports. Those individuals who are more critical of others are likely to experience lowered social supports on the job. They may then experience stress levels as higher and, in turn, take more sick days. Further, those who are not spontaneous may plan more days off as a way to cope with the high stress of the job.

Both the individual traits of Reading and Trusting were significant for Time Span (months). Low Trusting is defined by the HPI manual as “questions others’ intentions” (Hogan,

et al., 2007). High scores for these individual traits are predictive of shorter time spans (in months) of time off. This indicates that having skills (reading) that are contributory to performing this job well, and being trusting (a specific trait that contributes to secure relationships with others) may both mediate absences through shorter time spans of time off.

High exhibitionism scores correlated with both low LOA days and low LOA episodes in the present study. High Exhibitionism is defined by Hogan, et al., (2007) as “wanting attention”. Exhibitionism is an HPI individual trait grouped under the heading of Sociability.

In his assessment of the FFM, Hogan, et.al, (2007) determined that the FFM category of Surgency could be broken into two groupings, Sociability and Ambition. Judge, et.al, (1997), posited that Extroversion (defined as a need for social interactions or Sociability) would contribute to absence through the need to enhance the dull and routine nature of work. They found that extroversion positively predicted absence.

Their findings are in direct opposition to the findings in this study. One reason for this discrepancy may be that GNEs would have many interactions with multiple persons throughout their day. These interactions offer ample opportunity for attention. Missing many days during a LOA would decrease these opportunities. As a result, a trait of exhibitionism may lessen the length of time those seeking attention are willing to be away from the perceived rewards of this environment. This finding offers support for the need for job analysis in determining personality scale application.

The composition of a GNE who would predictably miss less work would be trusting, higher in exhibitionism, more spontaneous with lower hostility and would have skills that may assist in this particular job (reading).

### **Use of Narrow Traits**

Much research has directly addressed the need for using narrow traits to predict performance. Tett, et al., (2003) posit three main issues which could be resolved by using narrow rather than broad traits. They found narrow traits to yield higher predictive values, they determined narrow traits helped explain higher level findings and, they uncovered meaningful information that was obscured as it became part of a higher level grouping (broad trait). The present research would seem to support these conclusions.

Additionally, although Ones and Viswesvaran (1996) posit use of broad traits in the selection of personnel, two responses to this view discuss reasons to use narrow rather than broad traits for personnel selection. Schneider, et al., (1996) maintain that narrow traits offer the strongest validities when specific traits are matched to relevant and specific job performance dimensions. They also claim that analyses at the broad trait level will fail to uncover much of the meaningful knowledge that may be hidden in the narrow traits. Sampo, et al., (1999) agreed that narrow traits offer advantages in the prediction of performance by allowing selection of a predictor set of variables known (or thought) to be contributory to performance. They support the use of individual (narrow) traits to provide useful data regarding job specific work behaviors while still providing generality.

In the present study, individual (or narrow) traits were found to correlate to both performance and time off variables while higher-level grouped (or broad) traits did not. Further, predicting GNE success and job specific outcomes would have been unsuccessful at a broad (grouped) trait level. Our results provide clear and specific support for the use of narrow traits over broad traits in predicting performance success. These findings have clear ramifications for Human Resource Departments and for individuals involved in employment decisions.

### **Job Analyses**

Tett, Jackson and Rothstein (1991) and Murphy (2005) both suggested the need for knowledge of the job traits required in a specific position when applying personality scales. In the case of GNEs, the traits predictive of performance fit with the job requirements. The six traits that were found to have significance could potentially fit with most job descriptions. However, a lack of findings at the broad trait level indicates the need to use very specific traits in determining success as a GNE. Additionally, the discrepancies between existing data and the current study, with regard to absence, support the need for job analyses to determine optimal employee characteristics specific to the type of work.

### **Limitations and Future Research**

There are limitations in this study. The sample sizes for the 2004 and 2005 years were limited. The numbers available for 2006 may have limited our statistical analysis through insufficient power. Racial/ethnic makeup and socioeconomic status of the sample was not available.

Additional predictors of success such as promotions, merit increases and retention may have yielded more comprehensive information, but were not used in this study. These could be valuable indicators for future research.

Suggestions for future research would include a more comprehensive longitudinal study of appropriate sample sizes. Due to the limited sample sizes, the longitudinal information gained was quite limited. Future research should include other organizations for comparisons.

More studies of personnel experiencing success in their current positions would offer a deeper understanding of the success traits as they apply to specific jobs. Additionally, more

studies at the individual trait level to determine absenteeism for specific jobs could offer insight into intricacies of time off that are not currently fully understood.

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