

PERSONALITY TRAITS AND JOB SATISFACTION

Study Of The Relationship Of Personality Traits And Job Satisfaction Among
Professional Sales Representatives In The Pharmaceutical Industry In Turkey

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ABSTRACT

This research aims to explore sales people working in the pharmaceutical industry. Study has examined effects of the personality traits on job satisfaction. It was also considered the role of the demographic variables as moderator between different personality trait and job satisfaction.

Literature was reviewed for theoretical framework selection. A survey was conducted from 450 sales persons from Turkish pharmaceutical companies. The instrument was comprised of a personality traits and job satisfaction scale, and the moderator demographic variables scales.

The results were examined by using SPSS software. The results studied the effect of demographic variables such as pharmaceutical experience, educational level, and age on the job satisfaction. Furthermore the effects of the personality traits were also observed.

Key words: pharmaceutical companies, personality traits, job satisfaction

INTRODUCTION

In the pharmaceutical industry, competitive manufacturers need to have an effective sales team in addition to a Research and Development team. Most Turkish pharmaceutical companies do not have sufficient time or capital to develop new medicines. Human resource management has become very important in the 21st century, and the pharmaceutical industry is currently thinking about ways to keep a good sales force in the field in order to retain their continued contribution to professional knowledge, to keep well-trained professional staff in the organization, and save time and money for other investments in the drug industry. After that, the R& D department can get more budgets, or the marketing department can expand the product to other potential markets. The research aims to explore relationship of the personality traits and job satisfaction of PSR's in Turkey.

OBJECTIVE OF THE RESEARCH

- 1- To study the impact of the personality traits on job satisfaction
- 2- To study the impact of demographic variables such as experience, age and education on job satisfaction

LITERATURE REVIEW

Allport and Odbert (1936) identified 18,000 English significant personality terms, or more words than Shakespeare used. Allport (1937), who is the pioneer of the personality trait approach, saw traits as an organized mental structure, varying from person to person,

and which initiates and guides behavior. He also stated that his theory was an attempt to consolidate the diverse personality theories of this century.

Gordon Allport defined personality as "the dynamic organization within the individual of those psychophysical systems that determine his characteristic behavior and thought" (1961, p. 29). He also mentioned "a trait is a neuropsychic structure having the capacity to render many stimuli functionally equivalent, and to initiate and guide equivalent (meaningfully consistent) forms of adaptive and expressive behavior" (Allport, 1961). Cattell (1973) pointed out that traits cannot be measured only by verbal report and behavior in the laboratory. Real world actions must be assessed too. Allport (1961) explicitly stated that any given trait may fail to predict behavior in a single situation. All behavioral aggregations have to be combined. The most important traits, such as extraversion and neuroticism (a broad tendency to experience negative emotions), are assumed by some to be related to some fundamental, core quality of the person, which may even be genetically influenced (Eysenck, 1967).

Cattell (1946) began his personality research with the lexicon of trait-descriptive words, but shifted the main focus of his work to questionnaire items early in his research career. He reduced the number of trait variables to thirty five, and used sixteen personality factor questionnaires (16 RF.) to measure 16 of the most robust dimensions. Even though the 16 PF became a major tool for personality measurement, some psychologists have proposed other alternatives, primarily due to the limited access to measurement tools that are subjective to opinions at that time.

Fiske (1949) re-analyzed Cattell's rating data using personality trait terms, summarized Cattell's 35 traits variables, and then found five additional factors. This conclusion was in turn confirmed by Digman and Takemoto-Chock (1981).

Norman (1963) showed that five similar factors could be recovered from personality ratings made by the subject's peers. Tupes and Christal (1961) analyzed the trait correlational patterns and they found five robust factors. However, it was not the currently accepted big five, but the following factors:

1. S urgency
2. Agreeable
3. Dependability
4. Emotional stability
5. Culture

Cattell (1973) concluded there are two kinds of personality traits. One is the "source trait," which is the basic element of personality, and can only be identified by using factor analysis. The other one is "surface trait," which is a combination of more than one source trait. Big Five Model

Following the development of personality traits, many researchers see eye-to-eye on this complex structure of personality, and they also reached an initial and common cognition. Costa and McCrae (1992) developed the NEO-PI-R personality traits inventory that includes five factors: Neuroticism; Extraversion; Openness; Agreeableness; and Conscientiousness. The origin of Costa and McCrae's (1976) research was Cattell's 16 personality factors, extracted to the three domains of Neuroticism, Extraversion, and Openness. This was the original model called the NEO.

Trait facets associated with the five domains of the Costa and McCrae five factor model of personality.

Neuroticism	Anxiety, angry hostility, depression, self-consciousness, impulsiveness, vulnerability
Extraversion	Warmth, gregariousness, assertiveness, activity, excitement-seeking, positive emotions
Openness	Fantasy, aesthetics, feelings, actions, ideas, values
Agreeableness	Trust, straightforwardness, altruism, compliance, modesty, tender-mindedness
Conscientiousness	Competence, order, dutifulness, achievement striving, self-discipline, deliberation

Wiggins (1996) has also proposed a big five factor structure:

1. "The Big Five personality factors appear to provide a set of highly replicable dimensions that parsimoniously and comprehensively describe most phenotypic individual differences.
2. Given the variety of conceivable exclusion criteria for defining personality attributes, the Big Five are meaningful at all levels, but more comprehensive and parsimonious under narrower definitions of personality.
3. The Big Five factors are not necessarily of equal importance and replicability.
4. The Big Five do not form tight and discrete clusters of variables; rather, as a general rule, each factor represents a major concentration in a continuous distribution of attributes in descriptive space.
5. A complete taxonomy of personality attributes must include both horizontal and vertical features of their meanings.
6. Rather than the final chapter for personality research, the Big Five is but an important beginning.

7. As a representation of phenotypes based on the natural language, the Big Five structure is indifferent and thus complementary to genotypic representations of causes, motivations, and internal personality dynamics." (Wiggins, 1996, pp. 36-42).

8. "The five factor taxonomy of personality dimensions, in part due to the great amount of research that has contributed to establishing its validity, now stands as a model of reference amongst the hierarchical models of personality" (Cattell, 1996; Eysenck, 1991,1992; McCrae & Allik, 2002).

JOB SATISFACTION

Hoppock (1935) introduced the concept of job satisfaction in his book Job Satisfaction. He thought that job satisfaction is a worker's physiological and psychological feeling. Job satisfaction is the individual's affective response or feeling for work (e.g., Blum & Naylor, 1968; Muchinsky, 1990; Smith, Kendall, & Hulin, 1969).

Some psychologists maintain that satisfaction is determined by the differences between the actual outcomes a person receives and some other outcome level (Lawler, 1973). Equity theory says people are concerned not only with the exact amount of reward they receive for their endeavors, but also with the relationship of this to what others receive. Adams (1963) was the earliest scholar who proposed this theory. He suggested that higher pay levels corresponding to higher performance can motivate workers to increase their input. This theory was developed from social comparison theory.

Herzberg, Mausner, Peterson, and Capwell (1957) developed the Two-factor theory. The theory showed that job satisfaction is not opposite to dissatisfaction, but independent and apart from each other. Job satisfaction is the opposite of no satisfaction, such as employees are not satisfied with their working condition or compensation, and so forth. It

does not mean the employees will be more satisfied if those conditions are improved. Katzell (1964) and Locke (1968; 1976) have probably presented the two most.

Completely developed discrepancy theory approaches to satisfaction (Lawler, 1973). Locke's (1976) advanced job satisfaction theory considers it to be someone's good or bad emotion as the evaluation of job experience.

According to Seashore and T'aber (1975), there are two major factors influencing job satisfaction: personal attributes, and environment. They also identified three aspects of job satisfaction:

1. Job satisfaction represents a valuable outcome of society.
2. Job Satisfaction can be a warning index of organizational problems.
3. It can provide organization or management an important variable.

PERSONALITY TRAITS AND JOB SATISFACTION

Some researchers think that personality traits are correlated to job satisfaction (Fisher & Hanna, 1931; Hoppock, 1935; Judge, Locke, & Durham, 1997; Locke, 1976; Smith, 1955). In Weitz's (1952) research, he discovered that the person who is dissatisfied with their earnings is dissatisfied with his/her job. But Staw, Bell, and Clausen (1986) revealed that the person who holds a positive emotion and keeps it for a long time has positive job satisfaction. Also, Staw and Ross (1985) discovered that different timing and work conditions influenced job satisfaction.

MODEL AND JOB SATISFACTION

Some research has shown that a person's personality can serve as a predictor of job satisfaction. Tokar and Subich (1997) used several different measures to survey the job

satisfaction of adults employed in various occupations and concluded that the big five personality dimensions contributed significantly to the prediction of job satisfaction.

Greenberg and Baron (1993) pointed out "there are many different personality variables which could have been associated with job satisfaction." Barrick and Mount (1991) found that conscientiousness was a strong predictor of job performance in occupational groups. Some studies indicated that age and job satisfaction are also positively related (Reiner & Zhao, 1999). There is no research to suggest that gender plays a role in job satisfaction (Brush, Moch & Pooyan, 1987).

Some studies showed that job satisfaction and job performance are positively related, and both are negatively related with turnover rate (McLean & Andrew, 2000; Reiner & Zhao, 1999)

PERSONALITY TRAITS, JOB SATISFACTION AND DEMOGRAPHIC VARIABLES

The research on the relationship between age and job satisfaction has produced conflicting results. Some researchers found that age and job satisfaction were positively related (Lee, 1999), on the other hand, others found no relationship (Lee, 1996). Gender was also a popular independent variable in research on predicting job satisfaction. Some research showed that male workers have more job satisfaction than female workers (Lee, 1999). And also that education level and job satisfaction are positively related (Lee, 1999), despite Lee's (1996) earlier research where he found no relationship with education level. The research conclusions regarding work experience and job satisfaction are also conflicting. Research by Lee in 1996 showed there is a correlation of gender and

job satisfaction, and later on, another researcher Lee (1999) concluded that there is a U-shaped correlation of experiences.

ANALYSIS AND RESULTS

This section discuss the correlation of ; 1) the big five personality traits with general perfomans; and (2) the demographic variables with general job satisfaction.

The correlation analysis shows the positive or negative relationship between each variable.

Correlations between Big Five personality Traits and General Job satisfaction

The correlation of the data analysis is shown in table. Here are the correlation between personality traits and general job satisfaction. Extraversion to job satisfaction($r=.562, p<.01$), Extraversion with gorev($r=.557, p<.01$) and Extraversion with job satisfaction ($r=.527, p<.01$) are significantly positively correlated. neuroticism is negatively correlated to job satisfaction($r=-.466, p<.01$), Neuroticism is also ($r=-.434, p<.01$) and ($r=-.452, p<.01$) significantly negatively correlated with gorev and baglam repectively. agreeableness was positively correlated with job satisfaction($r=.649, p<.01$), and also agreeableness was correlated with girev ($r= .543, p<.01$) and baglam ($r=.572, p<.01$), respectively. Conscientiousness was also significantly positively correlated ($r= ,710, p<.01$) and ($r= .630, p<.01$) with gorev and job satisfaction respectivel as well as with job satisfaction($r=.690, p<.01$). openness and job satisfaction were significantly positively correlated($r=.585, p<.01$), openness was also positively correlated with gorev($r=.527, p<.01$) and job satisfaction ($r=.561, p<.01$). Extraversion is significantly positively correlated with job satisfaction($r=.562, p<.01$), Extraversion is also positively significantly correlated with gorev($r=.557, p<.01$) and job satisfaction ($r=.527, p<.01$), respectively

Hypothesis testing

H01. neuroticism is not correlated with job satisfaction

Ha1. neuroticism is negatively correlated with job satisfaction

with a correlation value of ($r=-.466, p<.01$) shows that the relation between two variables is negatively correlated. So hypothesis was rejected. Negative correlation means one variable increase the other one decrease. Neuroticism is also ($r=-.434, p<.01$) and ($r=-.452, p<.01$) significantly negatively correlated with gurev and baglam respectively.

H02; agreeableness is not correlated with job satisfaction

Ha2. agreeableness is positively correlated with job satisfaction

The results indicated that there was a significant positive correlation between agreeableness and job satisfaction ($r=.649, p<.01$), therefore the null hypothesis was rejected. Not only agreeableness was positively correlated with job satisfaction but also agreeableness was correlated with gurev ($r=.543, p<.01$) and baglam ($r=.572, p<.01$), respectively.

H03. Conscientiousness is not correlated with job satisfaction

Ha3. Conscientiousness is positively correlated with job satisfaction

The results of analysis on Conscientiousness shows that there was a significant positive correlation between Conscientiousness and job satisfaction ($r=.690, p<.01$), therefore the null hypothesis was rejected. Conscientiousness was also significantly positively correlated ($r= .710, p<.01$) and ($r= .630, p< .01$) with gorev and job satisfaction respectively.

H04. openness is not correlated with job satisfaction

Ha4.. openness is positively correlated with job satisfaction

This result showed that openness and job satisfaction were significantly positively correlated ($r=.585, p<.01$), therefore the null hypothesis was rejected. On the other hand the openness was also positively correlated with gorev ($r=.527, p<.01$) and job satisfaction ($r=.561, p<.01$), respectively.

H05. Extraversion is not correlated with job satisfaction

H05. Extraversion is positively correlated with job satisfaction

the result showed that Extraversion is significantly positively correlated with job satisfaction ($r=.562, p<.01$), therefore the null hypothesis was rejected. On the other hand Extraversion is also positively significantly correlated with gorev ($r=.557, p<.01$) and job satisfaction ($r=.527, p<.01$), respectively.

Correlations

			Gorev	baglam	job satisfaction
Spearman rho	Extraversion	Correlation Coefficient	.557**	.527**	.562**
		Sig. (2-tailed)	.000	.000	.000
		N	268	268	268
	Agreeableness	Correlation Coefficient	.543**	.635**	.649**
		Sig. (2-tailed)	.000	.000	.000
		N	268	268	268
	Conscientiousness	Correlation Coefficient	.710**	.639**	.690**
		Sig. (2-tailed)	.000	.000	.000
		N	268	268	268
	neuroticism	Correlation Coefficient	-.434**	-.452**	-.466**
		Sig. (2-tailed)	.000	.000	.000
		N	268	268	268
	openness	Correlation Coefficient	.527**	.561**	.585**
		Sig. (2-tailed)	.000	.000	.000
		N	268	268	268

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

H06. There is no correlation between gender and job satisfaction

Ha6. There is a positive correlation between gender and job satisfaction.

The results in the table showed that there is no significant correlation ($r=.05, p>.05$)

between gender and job satisfaction, therefore null hypothesis is not rejected. On the

other hand there is also no significant relationship between gender to gorev($r=.04, p>.05$)

and baglam($r=.050, p>.05$), respectively.

H07. There is no significant correlation between meden and job satisfaction.

Ha7. There is a positive significant correlation between meden and job satisfaction.

The results in the table showed that there is significant correlation between meden and job satisfaction ($r=.136, p<.05$). Therefore the null hypothesis is rejected. On the other hand there is significant positive correlation meden to baglam ($r=.137, p>.05$) and there is no significant correlation between meden and baglam ($r=.116, p<.059$).

H08. There is no significant correlation between calypma and job satisfaction.

Ha8. There is a significant positive correlation between calypma and pereformans.

The results in the table showed that there is a positive significant correlation between calypma and job satisfaction ($r=.144, p<.05$). therefore the null hypothesis is rejected. On the other hand there is positive significant correlation of calypma with gorev ($r=.141, p<.05$) and baglam ($r=.138, p<.05$), respectively.

H09. There is no significant correlation between age and job satisfaction.

Ha9. There is a significant correlation between age and job satisfaction

The results in the table showed that there is no significant correlation between yap and job satisfaction ($r=.066, p<.05$). therefore the null hypothesis is not rejected. On the other hand there is also no positive significant correlation of yap to gorev ($r=.066, p>.05$) and baglam ($r=.047, p>.05$), respectively.

Ho10. There is no significant correlation between income and job satisfaction

Ha 10. There is a positive correlation between income and job satisfaction.

The results in the table showed that that there is no positive correlation between income and job satisfaction ($r=.106, p>.05$). therefore the null hypothesis is not rejected. On the

other hand there is also no significant correlation of gellir with ($r=.76, p>.05$)gorev and balgam($r=.112p>.05$), respectively.

		gorev	baglam	job satisfaction
Gender	Pearson Correlation	.044	.050	.050
	Sig. (2-tailed)	.470	.414	.414
	N	268	268	268
meden	Pearson Correlation	.116	.137*	.136*
	Sig. (2-tailed)	.059	.026	.027
	N	265	265	265
experience	Pearson Correlation	.141*	.138*	.144*
	Sig. (2-tailed)	.021	.024	.019
	N	267	267	267
Age	Pearson Correlation	.066	.047	.054
	Sig. (2-tailed)	.284	.443	.384
	N	264	264	264
Income	Pearson Correlation	.076	.112	.106
	Sig. (2-tailed)	.217	.069	.085
	N	267	267	267
Education	Pearson Correlation	.124*	.092	.103
	Sig. (2-tailed)	.048	.144	.100
	N	254	254	254

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

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

H0: There is no significant mean difference between male and female job satisfaction

H(a): There is a significant mean difference between male and female job satisfaction

Group Statistics

		N	Mean	Std. Deviation	Std. Error Mean
job satisfaction	Female	72	87.0417	15.82246	1.86470
	Male	196	88.6429	13.55085	.96792

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
job satisfaction	Equal variances assumed	1.168	.281	-.819	266	.414
	Equal variances not assumed			-.762	111.468	.448

Comparison of Means for job satisfaction

95.0% confidence interval for mean of gender=1: 87.0417 +/- 3.7181 [83.3236, 90.7598]

95.0% confidence interval for mean of gender=2: 88.6429 +/- 1.90894 [86.7339, 90.5518]

95.0% confidence interval for the difference between the means

assuming equal variances: -1.60119 +/- 3.85097 [-5.45217, 2.24978]

t test to compare means

Null hypothesis: $\text{mean1} = \text{mean2}$

Alt. hypothesis: $\text{mean1} \neq \text{mean2}$

assuming equal variances: $t = -0.818657$ P-value = 0.413715

Do not reject the null hypothesis for $\alpha = 0.05$.

t-test was applied to compare the means of the two samples. It also constructs confidence intervals or bounds for each mean and for the difference between the means. Of particular interest is the confidence interval for the difference between the means, which extends from -5.45217 to 2.24978. Since the interval contains the value 0, there is not a statistically significant difference between the means of the two samples at the 95.0% confidence level. These results assume that the variances of the two samples are equal. In this case, that assumption appears to be reasonable based on the results of an F-test to compare the standard deviations. Since the computed P-value is not less than 0.05, we cannot reject the null hypothesis.

REGRESSION ANALYSIS

H₀: There is no relationship between personality traits and job satisfaction

H (a): There is a significant relationship between personality traits and job satisfaction

Dependent variable: job satisfaction

Independent variables:

Extraversion

agreeableness

Conscientiousness

neuroticism

openness

Parameter	Estimate	Standard Error	T Statistic	P-Value
CONSTANT	-8.60823	6.64922	-1.29462	0.1966
Extraversion	0.378829	0.145087	2.61105	0.0095
agreeableness	0.837231	0.148396	5.64187	0.0000
Conscientiousness	0.799635	0.154356	5.18045	0.0000
neuroticism	0.248721	0.123942	2.00676	0.0458
openness	0.515242	0.116575	4.41984	0.0000

Analysis of Variance

Source	Sum of Squares	Df	Mean Square	F-Ratio	P-Value
Model	36571.8	5	7314.35	111.77	0.0000
Residual	17145.1	262	65.4394		
Total (Corr.)	53716.9	267			

R-squared = 68.0825 percent

R-squared (adjusted for d.f.) = 67.4733 percent

Standard Error of Est. = 8.08946

Mean absolute error = 5.57692

Durbin-Watson statistic = 2.17291 (P=0.9213)

Lag 1 residual autocorrelation = -0.0897129

The output shows the results of fitting a multiple linear regression model to describe the relationship between job satisfaction and 5 independent variables. The equation of the fitted model is

$$\text{job satisfaction} = -8.60823 + 0.378829 * \text{Extraversion} + 0.837231 * \text{agreeableness} + 0.799635 * \text{Conscientiousness} + 0.248721 * \text{neuroticism} + 0.515242 * \text{openness}$$

Since the P-value in the ANOVA table is less than 0.05, there is a statistically significant relationship between the variables at the 95.0% confidence level.

The R-Squared statistic indicates that the model as fitted explains 68.0825% of the variability in job satisfaction. The adjusted R-squared statistic, which is more suitable for comparing models with different numbers of independent variables, is 67.4733%. The standard error of the estimate shows the standard deviation of the residuals to be 8.08946. This value can be used to construct prediction limits for new observations by selecting the Reports option from the text menu. The mean absolute error (MAE) of 5.57692 is the average value of the residuals. The Durbin-Watson (DW) statistic tests the residuals to

determine if there is any significant correlation based on the order in which they occur in your data file. Since the P-value is greater than 0.05, there is no indication of serial autocorrelation in the residuals at the 95.0% confidence level.

In determining whether the model can be simplified, notice that the highest P-value on the independent variables is 0.0458, belonging to neuroticism. Since the P-value is less than 0.05, that term is statistically significant at the 95.0% confidence level.

CONCLUSION

Keeping good employees mean retaining the company's best asset, which could reduce recruiting and training costs, especially with the PSRs who possesses special abilities. They maintain good relationships with doctors, who are the PSRs' customers. Their job satisfaction is negatively correlated with turnover meaning they stay on the regardless of their job satisfaction level (Udo, Guimaraes, & Igarria, 1997). In this research, it was found that there was a relationship between four pairs of personality traits studied and job satisfaction. Therefore, one suggestion for the manager who wishes to hire a PSR is to consider the personality traits when recruiting and hiring PSRs in order to bias toward for satisfaction.

Test the personality traits before hiring a PSR. Since personality traits can be an important factor and make a difference in job satisfaction, managers can utilize the personality traits questionnaire as a first screening in recruiting. It could be a useful tool in selecting and retaining a good PSR, thus reducing the turnover rate and associated costs with employee turnover.

Age, pharmaceutical experience, and education level could be factors affecting job satisfaction

Even though the PSRs need the professional knowledge, PSRs generally do not require a high level of education. The results of this research indicated that the higher education level PSRs had lower job satisfaction. Also, the younger PSRs had higher job satisfaction relative to older PSRs.

The PSR who had more pharmaceutical experience also had higher job satisfaction. Managers should consider people who are younger but with more pharmaceutical work experience when hiring, and use professional pharmacy knowledge as a substitute for education level to provide the company with a more satisfying working environment. For the PSRs who have higher education levels, managers can train them as supervisor to lead the other PSRs. Put the certification system into practice

PSRs who earn the pharmacy professional certificate might have the more experience and professional knowledge. Certified PSRs may not only provide good quality service to customers, but also can ensure the quality of this industry.

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