An Analysis of Five Factors of Personality Traits of Turkish Late Adolescents According to Computer Anxiety

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Abstract: The aim of this study was to analyze the relationship between five factors of personality traits of Turkish late adolescents and computer anxiety in a Turkish study group. The study group consisted of 119 students: 97 females and 22 males. The study data was collected using the Adjective-Based Personality Test and Personal Information Form. Findings of this study revealed that there is no significant statistical difference among the participant scores for the Personality Test Based on Adjectives (ABPT)'s dimensions of emotional instability/neuroticism, extraversion, openness to experience, agreeableness and responsibility, owning computers and anxiety during the use of computers.

Keywords: Five factor personality traits, computer anxiety, late adolescence.

1. INTRODUCTION

The personality traits of an individual that become consistent over time may be determinative of controlling or coping with anxiety, which falls into the emotional dimension of behavior. Anxiety means distress, uneasiness and worry without an apparent cause, which arises out of unconscious fears or unfulfilled desires. In other words, anxiety denotes the disturbing emotion that emerges out of insecurity (Bakırcıoğlu, 2006). Anxiety could be defined as a disturbing emotion or irrational fear without a clearly identifiable reason. In daily usage, the word *worry* could be used instead of anxiety. Anxiety is a state of being stimulated that reveals itself with physical, emotional and mental changes when the individual is faced with a stimulator (Cüceloğlu, 1999).

Trait anxiety, which is one of the types of anxiety, could be defined as giving anxious reactions to many situations in a spontaneous manner. State anxiety, on the other hand, is the anxiety that is felt in a particular situation (Biggs and Moore, 1993). Therefore, computer anxiety is generally accepted as a form of state anxiety (Chua, Chen and Wong, 1999; Hakkinen, 1994). Therefore, what is actually important for the individual to understand anxiety and learn is how to control it (Eisenberg and Patterson, 1979). As a form of anxiety, computer anxiety could be specified as related to using computers and its consequences (Marcoulides, 1989; Torkzadeh and Angula, 1992). On the other hand, Jay (1981) has specified the emotional aspect of computer anxiety in terms of fear of and concerns about computers.

From the standpoint of personality, which plays an important role in anxiety, the personal traits of an individual have an active role in the behavioral, cognitive and sensory determination of his/her behaviors, both antecedently and subsequently. Five Factors, which is one of the theories on personality traits is a hierarchical model of the structure of personality traits. Personality traits are defined as consistent characteristics of individual differences that display coherent patterns of thoughts, emotions and actions. Traits reflect permanent states (McCrae & Costa, 1990, CITED IN: Costa &Widiger, 2002). Many studies had been conducted until Cattell and Norman put forward Five Factor Personality Dimensions based on personality traits; namely, emotional instability/neuroticism, extroversion, openness to experience, agreeableness and conscientiousness (Norman, 1963, CITED IN: De Raad, 2000; Howard & Howard, 1995).

One of the Big Five personality dimensions, openness to experience is both intellectual and cultural and its facets are related to imagination, curiosity, broad-mindedness and artistic sensitivity. Agreeableness dimension is known as pleasantness and its facets are related to kindness, flexibility, trust, good nature, cooperation, forgiveness and empathy. Conscientiousness dimension is known as trustworthiness, prudence and compliance; its facets reflect both trustworthiness (for example; attention, consideration, dutifulness, orderliness, competence, being planned) and willpower (for example;

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industriousness, achievement, centralism and determination). At the same time, emotional instability/neuroticism is being emotionally unstable and extroversion regarding the temperament of an individual. Each dimension is considered as a continuum (Viswesvaran& Ones, 2003).

Five factor model covers the basic tendencies, characteristic adaptations, attitudes, habits, personal endeavours as well as the own identity of an individual. Characteristic adaptations occur as a result of the interaction between external influences and basic tendencies. According to this theory, the five factors mature during adolescence and early adulthood and after this period, although small changes are observed in middle and late adulthood, they remain relatively constant and stable (Roterts, Walton, & Viechtbauer, 2006, CITED IN: McCrae & Löckenhoff, 2010).

Jovanović (2011) proved that emotional instability, anxiety and activity have a direct influence on subjective well-being. Witt, Massman and Jackson (2011) found that five factor personality dimensions can predict the use of technologies such as video games, computers and communication technologies. Meanwhile, other studies can be found in the literature about the correlation between five factor personality dimensions, healthy personality dimensions, sexual offences (Voller& Long, 2010), other personality scales (Betz &Borgen, 2010), and Internet use and well-being (Aa, Overbeek, Engels, Scholte, Meerkerk, & Van den Eijnden, 2009).

When they reviewed the literature on five factor personality dimensions, Raynor& Levine (2009) determined that conscientiousness and extroversion in college students accompany healthy behaviours. In their study, Schmitt, Allik, Mccrae, & Benet-Martínez (2007) found that the level of conscientiousness dimension in people living in Africa and East Asia is significantly different from those living in other regions of the world. Krüger (2009) indicated that the ability of school leaders change from school to school according to five factor personality dimensions of conscientiousness, emotional instability, extroversion, agreeableness and openness to experience. Robinson, Wright, & Kendall (2011) determined that there is a high correlation between being less attached to parents and agreeableness, openness to experience and emotional instability. In their study on post-graduate students studying psychology, Grehan, Flanagan &Malgady (2011) found that there is a meaningful correlation between conscientiousness dimension and internship evaluation.

Meanwhile, some other studies can be found in the literature. For instance, contentual and task based performance (Raduan, Ramalu,Uli, & Kumar, 2010), the value of being successful (Veage, Ciarrochi, & Heaven, 2011), and occupation (Lounsbury, Smith, Levy, Leong, & Gibson, 2009; Johnson, Rowatt, &Petrini, 2011). Similarly, there are other studies into the cooperation (Volk, Thöni, &Ruigrok, 2011), and educational gains, returns and conscientiousness (O'Connell & Sheikh, 2011).

In Turkey, on the other hand, in their study on university students aged between 18-26, Basım, Cetin and Tabak (2009) found that openness to development and compatibility personality traits predict all approaches of resolving conflicts. In another study conducted by Erkuş&Tabak (2009), it was found that there are meaningful positive correlations between adaptability personality trait and cooperative, conciliatory, helpful, and withdrawing conflict management styles.

As indicated above, five factors of personality traits involve the characteristics, attitudes, habits and the own sense of ego of a person, together with his/her own personal efforts. Accordingly, although minor alterations occur in five factors of personality traits, it becomes consistent in time. What is important is to understand and control anxiety, which reveals itself as state of stimulation, when the individual is confronted with physical, emotional and mental changes. In this regard, it could be argued that personality has an effect on anxiety, especially on computer anxiety. Consequently, this study aims to analyze the relationship between the evaluations about five factors of personality traits of Turkish late adolescents and computer anxiety.

2. METHOD

In this study, a convenience sampling method (Wallen&Fraenkel, 2001; Cohen, Manion, & Morrison, 2007) was used by the researcher, who involved the participants who were available during the course of the study. This study was designed as a cross-sectional study.

2.1. Study Group

The sampling group consisted of 119 fourth year students studying at Kırıkkale University Faculty of Arts

and Science's department of mathematics, physics, biology, and sociology during the spring semester 2011-2012 academic year. There were 119 female students 97 (81.5%, mean age=22.40, SD=1.36) and 22 (18.5%, mean age=23.68, SD=3.03) male students who participated in the study.

Data Collection Tools

The "Personality Test Based on Adjectives" and the "Personal Information Form" developed for this study, were used as data collection tools.

Personality Test Based on Adjectives (ABPT), developed by Bacanlı, Ilhan and Aslan (2009) *ABPT* is a Likert type scale consisting of 40 pairs of adjectives which can be graded between 1-7. *ABPT* is composed of five dimensions extraversion, agreeableness, conscientiousness, emotional instability/neuroticism, and openness to experience. The factor loadings of ABPT were as follows for different dimensions: .56 to .79 for extraversion, .60 to .77 for agreeableness, .66 to .86 for responsibility, .36 to .71 for emotional instability/neuroticism, and .49 to .79 for openness to experience. Cronbach's alpha coefficients were .73 for emotional instability/neuroticism, .89 for extraversion, .80 for openness to experience, .87 for agreeableness, and .88 for responsibility.

In addition*, Personal Information Form* developed by the researcher was used as a data collection tool in this study. This forms contains research independent variables' questions (own computer and computer use anxiety situation etc.).

2.2. Process

Scale and Personal information form were implemented on students in a classroom environment as a group. Prior to the implementation, the students were informed of the aim of the study. During the administration, the participants were also informed about the purpose and completion of the study, and were assured about the anonymity and confidentiality of their responses. All of the participants completed the scale and personal information.

2.3. Data Analysis

Data analysis was carried out through SPSS 11.5 package programmes. The t-test and one way Anova were made use of in the evaluation of data. The scores of ABPT gained from the students were tested to find out whether these scores correspond parametric statistical assumptions (normal distribution and homogeneity of variance). In order to assess the scores' complience with the norm, Shapiro-Wilks test is used when the group size is less than 50 persons, wheares Kolmogorov-Smirnovis used when it is more than 50 persons (Büyüköztürk, 2005). Since this study consisted of 119 university students, the latter test is used. The data gathered from this test was analyzed through Kolmogorov-Smirnov Test to see whether they show normal distribution. Also, the homogeneity of the score differentiation was tested by means of Levene Test. Except openness to experience, the data showed normal distribution and the variance was homogeneous.

3. FINDINGS

Below, extraversion, agreeableness, responsibility, emotional instability/neuroticism, and openness to experience dimensions of the Personality Test Based on Adjectives (ABPT) students' their own computer distributions and t-test results are given in Table **1**.

Table 1: t Test of Results; The Findings Regarding to Sub-Dimesion Points of Adjective Based Personality Scale (ABPS) According to their Own Computer of the Students

Personality Test Based on Adjectives' subdimesions	Yes n=103		No n=16		t	P
	x	S	x	s		
Emotional instability/neuroticism	23.08	6.74	25.75	6.34	1.49	.140
Extraversion	46.49	9.49	41.81	10.75	1.80	.074
Openness to experience	42.65	7.78	40.56	7.28	1.01	.316
Agreebleness	50.59	8.51	49.81	7.85	0.34	.731
Conscientiousness	38.61	6.36	37.69	6.49	0.54	.591

*p<.05, **p<.01, ***p<.001.

Table 2: ANOVA Analysis Test of Results; The Findings Regarding to Sub-Dimesion Points of Adjective Based Personality Scale (ABPT) According to Computer Use Anxiety Situation of the Students

Personality Test Based on Adjectives' subdimesions	Anxious n=4		Not anxious n=60		Not sure n=55		F	p
	x	s	x	s	x	s		
Emotional instability/neuroticism	20.75	3.30	24.03	6.91	22.98	6.71	0.68	.510
Extraversion	42.25	7.41	47.70	9.45	44.11	9.98	2.28	.107
Openness to experience	36.50	1.00	43.55	7.32	41.51	8.17	2.25	.110
Agreebleness	50.50	8.19	49.93	8.80	51.09	8.07	0.27	.764
Conscientiousness	39.75	3.30	37.73	6.62	39.22	6.21	0.86	.425

*p<.05, **p<.01, ***p<.001.

In Table **1**, the Personality Test Based on Adjectives (ABPT)'s dimensions of emotional instability/neuroticism, extraversion, openness to experience, agreeableness, and responsibility dimensions scores were not significantly different in terms of students' own computer.

The one way Anova results of whether there is a difference regarding computer use anxiety situation between the five dimensions of the Personality Test Based on Adjectives (ABPT), extraversion, agreeableness, responsibility, emotional instability/ neuroticism, and openness to experience are given in Table **2**.

In Table **2**, the Personality Test Based on Adjectives (ABPT)'s dimensions of emotional instability/neuroticism, extraversion, openness to experience, agreeableness, and responsibility dimensions scores were not significantly different in terms of students' computer use anxiety situation.

4. DISCUSSION

The results of the study showed that in terms of the late adolescents' having their own computers and anxiety during their use of computers, there is no significant difference among the Personality Test Based on Adjectives' (ABPT) dimensions of emotional instability/neuroticism, extraversion, openness to experience, agreeableness and responsibility. This study is restricted to senior undergraduate students. Because of this, it could be argued that they have learnt throughout the first, second and third grades, to recognize and control anxiety during their use of computers for preparing assignments, browsing and using social networking sites etc.

Apart from these, five factors of personality traits happen to develop from temporary childhood tendencies into adolescence and late young adulthood. After these phases they become rather unchangeable and stable. Again, five factors of personality traits involve the characteristics, attitudes, habits and the own sense of ego of a person, together with his/her own personal efforts **(**Roterts, Walton, & Viechtbauer, 2006, CITED IN: McCrae & Löckenhoff, 2010). In this respect, it could be stated that in late adolescence, the individual recognizes the states, objects or events that make him/her anxious or not, and take relevant precautions beforehand. Due to this fact, it could be argued that in terms of the late adolescents having their own computer, there is no significant difference among the Personality Test Based on Adjectives (ABPT)'s dimensions of emotional instability/ neuroticism, extraversion, and openness to experience, agreeableness and responsibility.

This study is restricted to the study group. It could be repeated by including students from other grades as well. This study could also be repeated by including students from different universities. Moreover, this study may be tested for its consistency over time by looking at its outcomes from a longitudinal perspective.

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