Scientific Research

Burnout Levels and Personality Traits—The Case of Turkish Architectural Students

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The aim of this research has been to investigate the relationship between personality traits and burnout levels of architectural undergraduate students. Maslach Burnout Inventory-Student Survey (MBI) and Five Factor Model were used to collect related data. Analysis of the collected data showed variations in personality traits and burnout levels of students from first to fourth year and revealed that education process was an important role player in personality development and burnout levels of students. Architectural students tended to be more "open to experience" and "extraverted" as they proceeded from the first year to final year without having high levels of "emotional exhaustion". "Emotional exhaustion" was observed together with "neurotic" personality traits of students. Thus, one of the key recommendations of this research is that university counselors should plan and organize guidance programmes by focusing on individual requirements caused by both the student's personality traits and demands of the university education which may vary between both years and departments. Future work of this research will thus focus on civil engineering and computer engineering students in order to determine the effect of departmental differences on burnout levels of students and guide counseling programmes within the University accordingly.

Introduction

Students' burnout is one of the important areas of investigation in higher education as it may the key for understanding a wide range of students' behaviours that affect academic performance. In parallel, previous studies have determined personality as one of the key factors that affect burnout levels of different professional groups. These studies have focused on determining the relationship between personality and burnout by using Maslach Burnout Inventory (MBI) and Five Factor Model. However, limited number of studies on university students and none on architectural students have been undertaken. Thus, the aim of the current research has been to determine both the burnout levels and the personality traits of architectural students and the relationship between these two factors.

Personality, Personality Traits and Five Factor Model

The term "Personality" has been defined in many ways since 1930s when the systematic study of personality started to be a recognizable and a separate discipline (http://www.britannica.com/). It is commonly defined as the integration of physiologic, intellectual and mental characteristics that makes an individual different from other individuals (Dubrin, 1994; Davies, 1998; Morgan, 1999; Güney, 2000; Costa, 2000; Eysenck & Wilson, 2000; Eren, 2000). In other words, "Personality" is defined as the combination and interaction of various traits that is unique to each individual. Various trait theories, thus, have been developed in order to identify (theories of Freud, Adler, Horney, Fromm and Jung (Deniz, 2007)) and also to measure (theories of Adler, Horney, Fromm, Jung, Cattel, Fiske, Eysenck, Norman (Deniz, 2007)) these traits.

The "Five Factor Theory" or the so called "Big Five", has been one of the most widely used trait measurement theories. It has been used by various researchers like Goldberg (1990); Somer and Goldberg, (1999); Chernyshenko (2001); Kokkonen and Pulkkinen (2001); Somer et al. (2002); Storm and Rothmann (2003); Bühler and Land (2004); Tomic et al. (2004); Tichon (2005); Bakker et al. (2006); Demirkan (2006); Şimşek (2006); Kokkinos (2007); Morgan (2008); Kim et al. (2009); Lent (2010); Swider and Zimmerman (2010) and Zopiatis et al. (2010) for different groups of individuals and professionals. The theory was developed by Norman (1963). Working on Allport and Odbert (1936)'s Factor Theory, Norman (1963) declared that five major factors; i.e. dimensions were sufficient to account for a large set of personality data. The model has been preferred by many researchers, since then, due to its ability in responding the modelling requirements of personality traits of different individuals from all age groups in a short period of time. The following paragraphs summarise the relationship between "Five Factor Dimensions" and related behaviors.

Extraversion—Introversion

This dimension is described as "the interest to the outer world" and includes some features like friendliness, loving

people, being assertive, excitement seeking, being energetic, and thinking positive (Demirkan, 2006). Extraverted individuals are optimistic, enthusiastic, full of energy and they love being together with people. They react to situations without thinking, and they are likely to say "yes" to the opportunities. (McCrae, Costa, 2000; Loveland, 2004). Introverts, on the other hand, lack enthusiasm, energy and mobility tendencies of extraverts. But, their lack of social involvement is not related with shyness or depression. They simply have less stimulation than extraverts and they choose to have more time alone.

Agreeableness—Offensiveness

This dimension of personality reflects individual differences related to collaboration and social compliance. Agreeable individuals are respectful, friendly, helpful, generous and get along with others easily as they have an optimistic view of human nature. They believe people are basically honest, decent, and trustworthy. Meanwhile, offensive individuals place self-interest above getting along with others. They are generally unconcerned with others' well-being. Sometimes their scepticism causes them to be suspicious, unfriendly, and uncooperative (Martinez, Thomas, 2005; Friday, 2004).

Conscientiousness—Aimlessness

Conscientiousness is about controlling, organizing and managing one's instincts. It includes some personality traits like being analytical, responsible, prudent, patient and working hard. Conscientious individuals are attributed as intelligent and reliable. The downside, on the other hand, is that these individuals can sometimes be perfectionist, workaholic, conservative and boring. Contrarily, individuals with low conscientiousness are criticized about not being reliable, enthusiastic and consistent (Perry, 2003).

Neuroticism—Emotional Stability

This dimension of personality includes features like anxiety, anger, hatred, depression, inconsideration and thoughtlessness. People who are emotionally tend to be calm, free from persistent negative feelings and are not easily upset (Martinez & Thomas, 2005; Cook, 2005). Neurotic individuals, on the other hand, experience at least one of the feelings like concern, anger or depression very easily. These individuals generally have tendency to worry, to be sad, to feel lonely and dejected. However, they don't feel shy even with strangers (Costa & McCrae, 2000).

Openness to Experience—Conservatism

This dimension expresses an individual's tendency to be open to different beliefs, view points and experiences (Aghaee & Ören, 2004). Individuals who are open to experience are intellectually curious, appreciative of art, and sensitive to beauty (Turner, 2003). They tend to be more aware of their feelings. Conservative people who are not open to innovations, are against changes, and they perceive art and science with suspicion and they prefer traditional to contemporary (Ehrler, 2005).

Limitations of Five Factor Model

While the model has been used for determining the personal-ity traits of different groups by various number of researchers as listed in the previous section, it has also been criticised by some researchers related with the its limitations in reflecting the differences caused by factors like gender and culture (Costa et al. (2001), McRae et al. (2005), Schmitt et al. (2008), Cheung et al. (2011)).

Burnout

"Burnout" is a psychological term for the experience of long-term exhaustion and diminished interest (http://en. wikipedia.org/wiki/Burnout_(psychology)). "Burnout" syndrome has not been studied extensively until 1970s and early studies on the subject prevailed conceptual confusion (Schaufeli & Enzmann, 1998). However, Maslach and Jackson's measurement method that is, Maslach Burnout Inventory (MBI), ended the foregoing confusion and has been the most well-studied measurement of burnout (Maslach et al., 1996). Storm & Rothmann, 2003; Bühler & Land 2004; Tomic et al., 2004; Bakker et al., 2006; Kokkinos, 2007; Ghorpade et al., 2007; Kim et al., 2009; Lent, 2010; Swider & Zimmerman, 2010; Zopiatis et al., 2010 have been some of the recent researchers who used MBI to measure the burnout levels of different individuals and professionals. MBI measures burnout level of individuals according to three dimensions. These are "emotional exhaustion", "cynicism" and "reduced personal accomplishment".

Emotional Exhaustion

Emotional exhaustion refers to chronic state of physical and emotional depletion (http://en.wikipedia.org/). The major sources of emotional exhaustion are work overload and personal conflict at work. People feel drained and used up without any source of replenishment. They lack enough motivation to face another day or another person in need. This component represents the basic stress dimension of burnout (Maslach & Goldberg, 1998; Jackson & Rothmann, 2005).

Cynicism (Depersonalization)

Cynicism (Depersonalization) refers to a negative, cruel or excessively detached response to other people, and it often includes a loss of idealism. It usually develops in response to the overload of emotional exhaustion in form of a self-protection by putting an emotional buffer with other individuals. This component represents the interpersonal dimension of burnout (Maslach & Goldberg, 1998; Pienarr & Wyk, 2006).

Personal Accomplishment

Personal accomplishment reflects feelings of competence (Maslach et al., 1996). Reduced personal accomplishment refers to a decline in one's self competence and productivity at work. A growing sense of inadequacy is experienced about one's own personal ability to help people, and this may result in a self-imposed verdict of failure. This component represents the self-evaluation dimension of burnout (Maslach & Goldberg, 1998).

Students' Academic Burnout

In legal sense, students are not formal workers but, from a psychological point of view, most of student activities related

to their studies are comparable to formal work. Students have specified roles and they perform activities that require effort, just like formal workers. They have to attend regular activities (classes) and undertake specific tasks under the control of their supervisors, and their performances are regularly assessed. The main difference of study settings from formal work settings is the lack of a direct relationship with the money. But, in one sense, there is an indirect relationship between student activities and money as most of the students obtain grants or financial support depending on their academic achievements (Esteve, 2003).

Students' burnout can be noticeable in several ways like; feeling exhausted because of academic demands, having a cynical and detached attitude towards their studies, and feeling incompetent as a student (Lee et al., 2010). Thus, a student version of Maslach Burnout Inventory, i.e. Maslach Burnout Inventory—Student Survey (MBI-SS), was developed by Schaufeli et al. (2002) in order to measure students' burnout.

MBI-SS provides norm-referenced measures of students' academic burnout syndrome through exhaustion, cynicism, academic efficacy and academic inefficacy. It has been used by various researchers like Esteve (2003), Lingard et al. (2007), Gan ve Shang (2007), Breso et al. (2007), Zhang et al. (2007), Jia et al. (2009a), Salanova et al. (2009), Jia et al. (2009b), Hu ve Schaufeli (2009), Lee et al. (2010), Breso et al. (2011). Meanwhile, among all of these researchers, only Jia et al. (2009) studied burnout levels of architecture students and observed "low" burnout levels for both emotional exhaustion and academic efficacy and "very low" burnout levels for cynicism.

Previous Research Findings on Relationship between Personality Traits and Burnout Levels

Table 1 shows previous research results on the relationship between personality traits and burnout levels and these results are discussed in the following paragraphs considering the fact

Table 1.
Relationship between personality traits and burnout levels.

			Five factor personality traits				
			Extraversion	Neuroticism	Conscientiousness	Agreeableness	Openness to experience
Research No	Research	Burnout sub-dimensions	Correlation coefficients				
1	Storm and Rothmann (2003) on pharmaceutical corporate employees	Emotional exhaustion	−0.310	0.210	−0.210	−0.190	−0.060
		Cynicism	−0.260	0.210	−0.130	−0.230	−0.030
		Personal accomplishment	0.270	−0.210	0.210	0.090	0.340
2	Tomic et al. (2004) on church ministers	Emotional exhaustion	−0.414	0.640	-	-	-
		Cynicism	−0.314	0.359	-	-	-
		Personal accomplishment	−0.463	−0.496	-	-	-
3	Bakker et al. (2006) on volunteer counselors	Emotional exhaustion	−0.010	0.360	0.100	−0.050	−0.080
		Cynicism	−0.200	0.260	0.080	−0.150	−0.230
		Personal accomplishment	0.350	−0.170	−0.010	0.250	0.170
4	Kokkinos (2007) on school teachers	Emotional exhaustion	−0.230	0.500	0.360	-	0.060
		Cynicism	−0.220	0.290	0.180	-	−0.160
		Personal accomplishment	0.330	−0.260	−0.150	-	0.150
5	Ghorpade et al. (2007) on university instructors	Emotional exhaustion	−0.213	0.338	−0.101	−0.135	0.015
		Cynicism	−0.800	0.354	−0.164	−0.438	−0.770
		Personal accomplishment	0.221	−0.321	0.307	0.356	0.251
6	Morgan (2008) on university students	Emotional exhaustion	−0.129	0.343	−0.167	−0.077	−0.096
		Cynicism	−0.139	0.266	−0.229	−0.174	−0.060
		Academic efficacy	0.211	−0.245	0.444	0.226	0.250
7	Kim et al. (2009) on quick service restaurants employees	Emotional exhaustion	−0.120	0.400	−0.130	−0.100	−0.090
		Cynicism	0.210	0.380	−0.240	−0.280	−0.070
		Personal accomplishment	0.100	−0.170	0.410	0.260	0.110
8	Lent (2010) on professional counselors	Emotional exhaustion	0.215	0.642	0.349	0.281	0.056
		Cynicism	0.142	0.388	0.234	0.373	0.025
		Personal accomplishment	0.196	0.430	0.288	0.350	0.405
9	Swider and Zimmerman (2010) on various individuals	Emotional exhaustion	−0.290	0.520	−0.190	−0.180	−0.090
		Cynicism	−0.230	0.420	−0.240	−0.310	−0.100
		Personal accomplishment	0.410	−0.380	0.280	0.310	0.210
10	Zopiatis et al. (2010) on hotel managers	Emotional exhaustion	−0.396	0.493	−0.385	−0.234	−0.218
		Cynicism	−0.409	0.365	−0.437	−0.527	−0.113
		Personal accomplishment	0.305	−0.208	0.337	0.160	0.211

that relationship between variables are weak for 0.1 - 0.23, medium for 0.24 - 0.36, and strong for 0.37 and over correlation coefficient values (Cohen et al., 2002).

In **Table 1**, results show that although some are weakly correlated, there is generally a negative correlation between "extraversion" and both "emotional exhaustion" and "cynicism", and there is a positive correlation between "extraversion" and "personal accomplishment". These results are in good agreement with the positive correlation values between "neuroticcism" and both "emotional exhaustion" and "cynicism" and negative correlation values between "neuroticism" and "personal accomplishment". Thus, it can be underlined that while "emotional exhaustion" and "cynicism" go together with "neuroticism" but happen to be in opposite directions with "extraversion", "personal accomplishment" behaves parallel with "extraversion". Positive correlation of "personal accomplishment/academic efficacy" with both "conscientiousness" and "agreeableness" additionally show that it is not only "extraversion" but also "conscientiousness" and "agreeableness" which are in parallel direction with "personal accomplishment" for most of the professionals studied.

Research Methodology

Big Five Inventory (BFI) (John & Srivastava, 1999) and Maslach Burnout Inventory-Student Survey (MBI-SS) (Schaufeli et al., 2002) questionnaires were used together in order to achieve the objectives of the current research. Questionnaires were first translated to Turkish and then applied to 208 architectural students in Çukurova University in Turkey. Students were asked to respond to questionnaire items by using the 5-point Likert scale that ranged from "disagree strongly" to "agree strongly". For BFI, high Likert scale scores were the indicators of extraversion, agreeableness, conscientiousness, neuroticism and openness to experience. For MBI-SS, responses were interpreted according to the criterion given in **Table 2** (Gökdaş, 1996; Tekin, 1996). High Likert scale scores on emotional exhaustion, cynicism and academic inefficacy, and low scale scores on academic efficacy were considered as the indicators of burnout (Breso et al., 2007).

The relationship between academic burnout and personality traits were additionally investigated by undertaking correlation calculations. Statistical analysis was evaluated by using "Microsoft Office Excel 2007 for Windows" and "SPSS 17.0 for Windows" software programs. The strength of the correlation coefficients are interpreted as in previous section.

Research Findings and Discussion

Reliability of Scales

Cronbach Alpha Coefficient (CAC) was used to determine the reliability of the questionnaires (Myburgh et al., 2011). The minimum CAC value being over 0.6 (see **Table 3**) shows that the Turkish interpretation of the questionnaires are fairly reliable.

Profile and Demographic Characteristics of the Respondents

Profile and demographic characteristics of the respondents are given in **Table 4**.

Table 2.
The sub-dimension rating criterion of MBI-SS.

Score	Lower - upper limit	Emotional exhaustion/cynicism/academic inefficacy	Academic efficacy
1.00	1.00 - 1.79	Very low burnout	Very high burnout
2.00	1.80 - 2.59	Low burnout	High burnout
3.00	2.60 - 3.39	Medium/moderate burnout	Medium/moderate burnout
4.00	3.40 - 4.19	High burnout	Low burnout
5.00	4.20 - 5.00	Very high burnout	Very low burnout

Table 3.
Cronbach alfa coefficient values of the questionnaire sections.

Scale cronbach alfa coefficient	
Personality (as a whole)	0.761
Extraversion	0.734
Agreeableness	0.601
Conscientiousness	0.628
Emotional stability	0.611
Openness to experience	0.798
Burnout (as a whole)	0.718
Emotional exhaustion	0.835
Cynicism	0.729
Academic efficacy	0.717
Academic inefficacy	0.671

Table 4.
Profile of the respondents.

Grade	Number of respondents	% of respondents	Gender of respondents (%)	
			Male	Female
First year	48	23	6	17
Second year	44	21	7	14
Third year	24	12	2	10
Fourth year	92	44	19	25
Total	208	100	34	66

Burnout Levels of Architectural Students

The questionnaire findings related with the burnout levels of architectural students are given in **Table 5**. The mean value ($\overline{X}$) being 2.59 for "emotional exhaustion" indicates "low level" of burnout at this sub-dimension and the coefficient of variation ($\overline{V}$) being smaller than 0.5 shows the homogeneity of the students' answers. This result indicates that the education and academic atmosphere in Architectural Department in Çukurova University doesn't cause students an unnecessary stress. Meanwhile, the "medium level" emotional exhaustion results for first and third year students may be due to the characteristics of these two classes. These are the years of transition during which first year students try to adapt to university life and architectural thinking and third year students undertake three important projects ("Architectural Project", "City Planning

Project" and "Conservation and Restoration Project") simultaneously. Inevitable, these two years require a more intense working tempo.

Low cynicism and academic inefficacy together with high academic efficacy results in Table V show that students are able to cope with the academic demands of their department and feel adequate and competent. The project based education system in the department requires students to be the part of the process and is an important motivation for the students which results in emotional attachment between the students and their work.

When students' expectations on their architectural design lesson grades are compared with their actual grades, it is observed that the expected grades are much higher than the actual grades (**Table 6**). 77 per cent of the students didn't get marks as high as they expected which shows that the students are too optimistic about their "academic efficacy".

Relationship between the Sub-Dimensions of Burnout

Inter item correlation values for burnout sub-dimensions for architectural students are given in **Table 7**. Results which are in good agreement with the previous studies like Schaufeli et .al. (2002), Tomic (2004), Breso et al. (2007), Gan et al. (2007), Ghorpade et al. (2007), Kokkinos (2007), Lingard et al. (2007), Zhang et al. (2007), Morgan, (2008); Hu and Schaufeli (2009), Kim et al. (2009), Salanova et al. (2009), Swider and Zimmerman (2010), Zopiatis (2010), show that "emotional exhaustion", "cynicism" and "academic inefficacy" are strongly correlated with each other. Additionally, "academic efficacy", is negatively correlated with "cynicism" and "academic inefficacy": These findings are parallel to the findings of Breso et al. (2007) which prove that while there is a significant positive correlation between "academic inefficacy" and "cynicism" of university

Table 5.
Burnout levels of architectural students.

	Emotional Exhaustion	Cynicism	Academic Efficacy	Academic Inefficacy
1st year	2.68	2.24	3.38	2.09
2nd year	2.56	2.05	2.55	2.31
3rd year	2.99	2.55	23.63	2.06
4th year	2.46	2.31	3.76	1.99
$\bar{X}$	2.59	2.26	3.64	1.98
σ	1.03	0.92	0.74	0.73
$\bar{V}$	0.40	0.41	0.20	0.37

Table 6.
"Architectural design" lesson grades.

Grade	% of Respondents		
	Expectation higher than the achievement	Expectation the same with the achievement	Expectation lower than the achievement
1st grade	69	23	9
2nd grade	76	13	11
3rd grade	75	20	5
4th grade	81	11	8
Total	76	15	8

Table 7.
Inter-item correlation between burnout sub-dimensions.

Variables	1	2	3	4
1) Emotional Exhaustion	1			
2) Cynicism	0.659**	1		
3) Academic Efficacy	−0.195**	−0.284**	1	
4) Academic Inefficacy	0.554**	0.621**	−0.408**	1

Note: **Indicates $p < 0.01$ (2-tailed).

students, there is a negative correlation between "academic inefficacy" and "academic efficacy". Findings of Breso et al. (2007) also show that both "emotional exhaustion" and "cynicism" have higher correlation with "academic inefficacy" than with "academic efficacy".

Personality Traits of Architectural Students

Five Factor Personality scores of architectural students according to the BFI data are given in **Table 8**. First year students' scores show that "agreeableness", "openness to experience" and "conscientiousness" are more dominant personality traits of these students. When the results of first and final year students are compared, it is observed that the education process has an effect on personality traits of students. Results show that, after four years in architectural department, students become more "extraverted" and more "open to experience". This is probably due to the fact that project based education enables the students' communication skills to develop, as they have to communicate with different types of people related with their project subject and have to carry out regular presentations to their classmates and lecturers. The intense communication requirements of this process enhance the extravert traits of the students. Additionally, the requirements of architectural design process to follow the new technologies and developments also enhance the extravert traits of students. Strong correlation between "extraversion" and "openness to experience" (similar to the findings of Morgan (2008), Swider and Zimmerman (2010) and Zopiatis (2010)) additionally show that these two traits support each other during personality development of students (see **Table 9**). Meanwhile, "neuroticism" dimension scores res show that students have a moderate emotional stability during their educational process. The results in **Table 8** finally show that architectural education has no significant effect on "conscientious" and "agreeableness" personality traits. This finding is also supported by the positive correlation values between these two personality traits (see **Table 9**).

Relationship between Burnout Levels and Personality Traits of Architectural Students

Results in **Table 10** show the correlation coefficient values between "Burnout" and "Five Factor Personality Traits" sub dimensions.

Results show that the strongest correlations are between "academic efficacy" and "conscientiousness" (0.534), "emotional exhaustion" and "neuroticism" (0.406) and "academic efficacy" and "extraversion" (0.346). These results are in good agreement with the results of both Ghorpade et al. (2007), Kim et al. (2009), Zopiatis et al. (2010) who investigated correlation between "professional efficacy" and "conscientiousness" for

Table 8.
Five factor personality trait scores of architectural students.

	Extraversion	Neuroticism	Openness to experience	Agreeableness	Conscientiousness
1st year	3.13	3.14	3.89	3.94	3.65
2nd year	3.46	2.94	3.88	3.92	3.69
3rd year	3.37	3.07	3.69	3.82	3.53
4th year	3.52	2.89	4.03	3.94	3.70
$\overline{X}$	3.40	2.97	3.92	3.92	3.67
σ	0.72	0.73	0.75	0.53	0.64
⁻V⁻	0.21	0.25	0.19	0.14	0.17

Table 9.
Correlation coefficient values between five factor personality dimensions.

Variables	1	2	3	4	5
1) Extraversion	1				
2) Neuroticism	−0.243**	1			
3) Openness to experience	0.395**	−0.040	1		
4) Agreeableness	0.159*	0.107	0.255**	1	
5) Conscientiousness	0.173*	−0.250**	0.218**	0.225**	1

Note: *Indicates $p < 0.05$, **Indicates $p < 0.01$ (2-tailed).

Table 10.
Correlation coefficient values between burnout sub dimensions and five factor personality sub dimensions.

Variables	Extraversion	Neuroticism	Open to experience	Agreeableness	Conscientiousness
1) Emotional exhaustion	−0.166	0.406	−0.174	−0.071	−0.251
2) Cynicism	−0.118	0.255	−0.180	−0.143	−0.324
3) Academic efficacy	0.346	−0.207	0.298	0.206	0.534
4) Academic inefficacy	−0.226	0.207	−0.304	−0.158	−0.429

various professional groups and Bakker et al. (2006), Kokkinos (2007), Morgan (2008), Kim et al. (2009), Swider and Zimmerman (2010), Lent (2010), Zopiatis et al. (2010), Tomic et al. (2004), Ghorpade et al. (2007) who established positive correlation between "emotional exhaustion" and "neuroticism".

The results in **Table 10** additionally show that while "conscientiousness" and "extraversion" are two important characteristics that come together with "academic efficacy", neurotic personality traits go together with "emotional exhaustion" and "academic inefficacy". These results are also in good agreement with the results of Bakker et al. (2006), Kokkinos (2007), Swider and Zimmerman (2010), Zopiatis et al. (2010) on professional efficacy. Additionally, the negative correlation result between architectural students' "cynicism" with "conscientiousness" is also supported by the findings of Storm and Rothmann (2003), Ghorpade et al. (2007), Morgan (2008), Kim et al. (2009), Swider and Zimmerman (2010) and Zopiatis's et al. (2010).

Conclusion

Literature shows that personality is one of the key factors that affect burnout levels of different professional groups. Little research has been undertaken related with architectural students. Thus, the aim of the current research has been to determine both the burnout levels and the personality traits of architectural students and the relationship between these two factors. Maslach Burnout Inventory—Student Survey and Five Factor Model were used in order to achieve this. Turkish interpretation of both of the surveys is verified to be fairly reliable and can be used to determine the burnout levels and personality traits of Turkish students.

Findings of the current research show that architectural students have low burnout levels in general, and levels of "emotional exhaustion", "cynicism" and "academic inefficacy" are all strongly related with each other. While it is undeniable that "emotional exhaustion" levels of students increase under stress, "neurotic" personality is also an important trait that is related with "emotional exhaustion". Other two key personality traits related with burnout levels are "conscientiousness" and "extraversion", which are strongly related with "academic efficacy".

Comparison of personality traits between four academic years gives evidence that while architectural education process does not have any significant effect on "conscientiousness" and "agreeableness" personality traits of students; it has a positive effect on not only "openness to experience" and "extraversion" traits, but also on "neuroticism".

It can be concluded from these findings that while the nature of the architectural education inevitably directs the personality

of students towards "openness to experience" and "extraversion", educators should additionally find out ways to increase the "conscientiousness" and "agreeableness" traits of students. Furthermore, future research additionally should focus on surveys on finding out if the accomplished "openness to experience" and "extraversion" of final year students still continues during their professional life or are these findings just an "empty promise" to the employers.

It should be finally added that counseling programmes in Universities should be planned and organized by understanding the burnout levels of students which are affected by both the personality traits of students and education requirements of different years in different departments. Future work of this research will thus focus on civil engineering and computer engineering students in order to determine the effect of departmental differences on burnout levels of students and guide counseling programmes within the University accordingly.

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