



Evaluation of temperament, character, and sociotropic and autonomic personality traits of nurse students¹

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Abstract

The study was carried out to understand temperament, character, and sociotropic and autonomic personality traits of nursing students and the factors influencing them, to be able to interpret their personality structures, and contribute to their social communications and therefore their professional successes. A cross-sectional study carried out in June 2010 via a self-completed, forced choice, and open-ended structured questionnaires in Ankara, Turkey. The research population comprised of all students of the department. The study involved 222 female, 5 male nursing students (mean age, 20.78±1.71 years). The data were collected from the nursing students using three anonymous self-completed questionnaires; Personal Information Form, Temperament and Character Inventory, and Sociotropy-Autonomy Scale. Freshman students had higher Concern of Disapproval than those in other classes (p=0.009). Juniors had the highest Concern about Separation and total Sociotropy (x=71.00±14.11, p=0.0001). Disorderliness in seniors (p<0.05), fear of uncertainty in juniors (p<0.05), sentimentality in seniors and freshmen (p<0.05), dependence (p<0.05) and pure-heartedness in freshmen (p<0.01), Cooperativeness in sophomores were higher than other classes (p<0.01). Nonsmoker students had higher Sociotropy scores than smokers (p<0.05). Harm Avoidance was related to both sociotropic and autonomic personalities, Novelty Seeking to Pleasing Others, and impulsiveness to Individual Achievement. Sentimentality was only related to Sociotropy. When negative personality traits of the students are determined, measures can be taken for them to express themselves successfully and make post-graduate career plans in the future by speeding up their education activities which would help them change those characteristics at every level.

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1. Introduction

Establishing a good communication with others, succeeding, and achieving specified goals are substantial needs of an individual. Personality, the most basic factor affecting to meet those motives, is defined as a dynamic organization of psycho-physical systems that determine an individual's characteristic behavior and idea, and is a type of consistent and structured communication, separate from other individuals, established between inner and outer environments of an individual. It is continuity of specific behavior pattern and all characteristics of human shown with integrity to adapt the environment (Yalçın, 2009). As acquainting with students and being able to interpret their behaviors could substantially affect their professional behaviors, it is essential to know their personality traits and the variables affecting those characteristics.

Scientific studies on personality aim at revealing and explaining the system in ideas, emotions, and observable behaviors identifying an individual's daily life. Theories on personality provide predicting emotions, ideas, and

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behaviors of an individual by observing and understanding those systems (Dal, 2009). A psycho-biologic model was developed by Cloninger (1987) to assess personality, and temperament and character were studied together. Temperament is a tendency to react automatically against emotional stimulations in a naturally structurally certain way. Character is, on the other hand, relatively unchanging objectively observable behaviors, subjectively stated internal experiences, and as a life style, conscious or unconscious reactions and responses of an individual to continue the relations with the environment.

Cloninger (1987, 1994) defined four basic temperament characteristics: Novelty Seeking (NS), Harm Avoidance (HA), Reward Dependence (RD), and Persistence (PS). Novelty Seeking is determined by exploratory excitability, impulsiveness, extravagance, and disorderliness. Harm Avoidance is an inherited tendency to prevent or stop an unknown behavior and observed as anticipatory worry, fear of uncertainty, shyness, tiredness, fatigability, and asthenia. Reward Dependence is a tendency showing itself via sentimentality, social attachment, and dependence on others' approval. Persistence is tendency to be decisive in the face of fatigue and detention, and to complete the work with perseverance.

In the model described by Cloninger (1987, 1994) and Köse (2003), the definition of character consists of three sub-dimensions: Self-Directedness (SD), Cooperativeness (CO), and Self-Transcendence (ST). Self-Directedness has four dimensions: responsibility, purposefulness, resourcefulness, and self-acceptance. Cooperativeness is made up of congruent second natures, such as social acceptance, empathy, helpfulness, compassion, pure-heartedness. Self-Transcendence, on the other hand, consists of self-forgetfulness, transpersonal identification, and spiritual acceptance.

Knowing of temperament, character, and sociotropic and autonomic personality traits is important in appraising the personality (Köse et al., 2004). Chess and Thomas (1990), the theorists who emphasized the importance of biological and structural disposition in formation of personality, suggested that, after observing individuals from birth to adolescence, personality traits based on activities and adaptation abilities of children and stated that those traits enlightened all life-time developmental stages.

Beck studied sociotropic and autonomic personality dimensions which could be related to depression, and emphasized that life satisfaction of individuals with sociotropic traits depended on others and autonomic ones', on the other hand, depended on individual achievement, individual excellence, and environment (Kolts et al., 2004). Sociotropic traits comprise of Concern about Disapproval, Concern about Separation, and Pleasing Others. Autonomic traits, on the other hand, comprise of sub-dimensions of Individual Achievement, Freedom from Control, and Preference for Solitude. Individuals with high sociotropic traits have loving, good communications, since they are dependent on others' approval (Bagby et al., 2001; Bieling et al., 2000).

During socialization, students are affected by some internal factors such as perception, learning, memory, motivation, personality traits, feelings, and attitudes and some external factors such as age, gender, school, family, and income level. To contribute to socialization and success of the students, it is important to recognize their sociotropy and autonomy levels, and personal traits of temperament and character, and make organizations to improve positive ones and alter the negative ones. Nurses being autonomous and directing themselves with positive personality traits, and socializing increasing the feeling of individual achievement are important for both themselves and their professions.

The present study was carried out to understand temperament, character, and sociotropic and autonomic personality traits of nursing students and the factors influencing them, to be able to interpret their personality structures, and contribute to their social communications and therefore, their professional successes.

2. Material and Method

2.1. Design and setting

A cross-sectional study was carried out in June 2010, via a self-completed, forced choice, and open-ended structured questionnaires, in Ankara University, Faculty of Health Sciences, Nursing Department, Turkey. There were 325 nursing students in the department. The research population comprised of all students of the department.

Eighty-eight students refused to participate in the survey, and ten questionnaires were incomplete. Therefore, only 227 students of 325 actively participated in the study, at an overall 68.8% (n=227) response rate.

2.2. Data collection and instruments

The data were collected from the students using three anonymous self-completed questionnaires. Personal Information Form with forced choice and open-ended questions was designed by the authors for the information about demographic characteristics, socio-economic status, and individual and family-related issues, which were supposed to have possible effects on Temperament and Character Inventory (TCI) and Sociotropy-Autonomy Scale (SAS) scores. Students completed the questionnaires after final exams. The administration took approximately 50-60 minutes. The following scales were applied.

2.2.1. Sociotropy-Autonomy Scale

Sociotropy-Autonomy Scale assesses two personality traits, namely sociotropy, referring dependency on other people, and autonomy, referring independency from others. The scale contains 60 statements rated on 5-point scales ranging from 0 (0%) to 4 (100%), in which 0 means does not describe me at all; 1, somewhat describes me; 2, describes me fairly well; 3, describes me well; and 4, describes me very well. The highest possible score of the tool is 120 and the lowest is 0. A high score reflects a high level of autonomy. The subscales have high internal reliability as indicated by Chronbach alphas of 0.90 and 0.83, respectively (Beck et al., 1983). The Sociotropy Scale has been shown to have moderate to good convergent validity with other measures of interpersonal dependency and affiliation, as well as with measures of psychopathology (Barnett and Gotlib, 1988; Bieling et al., 2000). Factor analysis of the individual scales revealed three factors for each scale. The subscales Concern about Disapproval, Concern about Separation, and Pleasing Others constitute the Sociotropy Scale. The subscales Individual Achievement, Freedom from Control, and Preference for Solitude constitute the Autonomy Scale (Şahin et al., 2003). The scale is a measuring tool directed to self-evaluation of the people and can be applied to both adolescents and adults.

The tool (Beck et al., 1983) was adapted to Turkish in 1993 by Şahin, and tested for its reliability and internal consistency, with a Cronbach's alpha coefficient of 0.81 (Şahin and Ulusoy, 1993; Şahin et al., 1997).

2.2.2. Temperament and Character Inventory (TCI)

Cloninger developed a dimensional psychobiological model of personality that accounted for both normal and abnormal variations of two major components of personality: temperament and character. The TCI is a 240-item self-completed questionnaire constructed to assess four temperaments (Novelty Seeking, Harm Avoidance, Reward Dependence, and Persistence) and three character dimensions (Self-Directedness, Cooperativeness, and Self-Transcendence). Novelty Seeking reflects a tendency toward exploratory activity in response to novelty, impulsive decision-making and active avoidance of monotony. Harm Avoidance reflects a tendency to shyness, passive-avoidant behaviors and worry in anticipation of possible danger. Reward Dependence reveals a tendency to sentimentality, social attachment and dependency on others. Persistence reflects a tendency to industriousness, ambitious overachieving and perseveration despite frustration. Self-Directedness refers to control ability, and regulate and adapt one's behaviors in accordance with chosen goals and values. Cooperativeness reveals an inclination toward social tolerance, empathy, helpfulness and compassion. Finally, ST reflects a tendency toward spirituality and identification with wider world, as well as the ability to accept ambiguity and uncertainty. All dimensions, except PS, have three to five lower-order subscales with a more specific content (Cloninger et al., 1994).

Köse et al. (2009) carried out its validity and reliability in Turkey. The validity and reliability of Turkish version of TCI were 0.60 and 0.85 for temperament dimensions, and 0.82 and 0.83 for character dimensions. The final version of Turkish TCI was verified and approved by Cloninger. The TCI evaluates seven higher-order personality traits: four temperament and three character traits (Köse et al., 2009).

2.3. Pilot trial

The pilot study was conducted with 10 students, who were not a part of the main research population, at another faculty department. Based on the pilot study, forms and questions were revised. This pilot trial provided a test of comprehensibility and clarity of the questions.

2.4. Data Analysis

The data were analyzed using the Statistical Package for the Social Sciences (SPSS Inc, Chicago, IL) version 16 for descriptive statistics. Comparisons among socio-demographic variables, SAS and TCI scores were statistically carried out by independent sample t-tests. One-way analysis of variance (ANOVA) was used for continuous variables and Pearson's r bivariate correlations (two-tailed) for comparison of SAS and TCI inventory scores.

2.5. Ethical consideration

Written approvals were provided by university management. The authors contacted students in each class and explained the purpose of the study. The students signed the informed consent after reading the detailed information provided about the characteristics and aim of the study.

2.6. Participants

The study involved 222 female and five male nursing students (mean age=20.78±1.71 years). All respondents were single, but still 37% (n=84) had a partner. A few students (n=13, 5.7%) had unskilled part-time job. The reasons for students to choose nursing schools were: 8.4% (n=19) "My parents wanted", 20.7% (n=47) "I had an intention to health departments", 55.5% (n=126) "I thought that I could find a job easily", 8.8% (n=20) "I preferred to work face to face with human" and 6.6% (n=15) "No reason, only randomly".

Of the parents of the students, 7% (n=16) were living separate, 17.6% (n=40) graduates from college/university, 7.9% (n=17) unemployed, and only 7.5% (n=17) of the mothers of the students were employed. Of the students, 31.7% had one (n=69), 32.1% two (n=70), and 8.3% (n=18) five and more siblings, 11.5% (n=26) were smokers, 77.5% (n=176) had at least one scholarship. Mean household income was reported by 74.5% (n=169) and was 1271.24±600.50 TL (min: 300 TL [120€], max: 3000TL [1200 €]).

3. Results

We studied personality of nursing students by TCI and SAS scales with their interactions with demographic and various socio-economic characteristics of the students. There was no relationship between demographic characteristics such as age, gender, the reason to choose the nursing, income level, and education level of the family and temperament-character, and sociotropic-autonomic personality traits.

Table 1: Distribution of mean Sociotropy-Autonomy scores of the students according to the classes

		<i>Freshmen</i>	<i>Sophomores</i>	<i>Juniors</i>	<i>Seniors</i>	<i>F*</i>	<i>p</i>
	n	94	41	57	35		
Concern about Disapproval	×±SD	22.17±6.36	19.41±5.97	21.28±6.49	18.43±	3.93	0.009
Concern about Separation	×±SD	34.64±6.89	31.63±8.61	35.44±7.23	29.51±7.01	6.41	0.0001
Pleasing Others	×±SD	13.96±3.30	14.17±4.25	14.28±3.77	13.00±4.04	0.95	0.415
<i>Total Sociotropy</i>	×±SD	70.77±13.72	64.20±17.26	71.00±14.11	59.26±17.17	6.602	0.0001
Individual Achievement	×±SD	32.05±5.09	31.49±6.29	32.40±5.92	30.23±5.44	3.65	0.013
Freedom from Control	×±SD	32.05±5.09	31.49±6.29	32.40±5.92	30.23±5.44	1.24	0.294
Preference for Solitude	×±SD	13.99±3.87	14.34±4.98	15.40±4.21	13.46±3.70	1.99	0.116
<i>Total Autonomy</i>	×±SD	81.00±11.15	74.61±25.54	84.28±13.99	76.06±12.17	3.977	0.009

* One-way ANOVA test

Freshman students had higher concern of disapproval than the students in other classes ($p=0.009$). Juniors had the highest Concern about Separation. Total Sociotropy score was the highest in juniors ($x=71.00\pm 14.11$) and the lowest in seniors ($x=59.26\pm 17.17$) ($p=0.0001$). Furthermore, juniors had the highest total autonomy score ($x=84.28\pm 13.99$, $p=0.009$) (Table 1).

Table 2: Distribution of mean Temperament and Character Inventory scores of the students according to the classes

		Freshmen	Sophomores	Juniors	Seniors	F*	p
	n	94	41	57	35		
<i>Novelty Seeking (NS)</i>	$\times\pm SD$	18.36 \pm 4.52	19.22 \pm 5.71	19.05 \pm 4.80	20.03 \pm 5.21	1.052	0.371
NS1 (Exploratory excitability)	$\times\pm SD$	6.37 \pm 1.94	6.37 \pm 1.99	6.46 \pm 2.14	6.49 \pm 1.66	0.046	0.987
NS2 (Impulsiveness)	$\times\pm SD$	3.64 \pm 1.97	3.73 \pm 2.00	3.98 \pm 2.27	3.77 \pm 2.53	0.306	0.821
NS3 (Extravagance)	$\times\pm SD$	4.31 \pm 1.80	4.46 \pm 2.27	4.54 \pm 2.10	4.43 \pm 1.53	0.187	0.905
NS4 (Disorderliness)	$\times\pm SD$	4.09 \pm 1.68	4.46 \pm 2.20	4.07 \pm 1.55	5.20 \pm 1.92	3.784	0.011
<i>Harm Avoidance (HA)</i>	$\times\pm SD$	18.20 \pm 7.17	16.12 \pm 7.27	18.79 \pm 6.45	17.51 \pm 4.99	1.388	0.247
HA1 (Worry and pessimism)	$\times\pm SD$	6.09 \pm 2.45	5.41 \pm 2.72	6.02 \pm 2.41	6.20 \pm 2.04	0.889	0.447
HA2 (Fear of uncertainty)	$\times\pm SD$	4.31 \pm 1.98	3.85 \pm 1.96	4.51 \pm 1.84	3.49 \pm 1.14	2.826	0.040
HA3 (Shyness)	$\times\pm SD$	3.97 \pm 2.29	3.12 \pm 2.35	3.61 \pm 2.17	3.46 \pm 2.02	1.484	0.220
HA4 (Fatigability)	$\times\pm SD$	3.84 \pm 2.40	3.44 \pm 2.11	4.65 \pm 2.36	4.37 \pm 1.97	2.788	0.041
<i>Reward Dependence (RD)</i>	$\times\pm SD$	13.99 \pm 3.51	13.59 \pm 2.99	14.02 \pm 3.65	13.20 \pm 2.96	0.598	0.617
RD1 (Sentimentality)	$\times\pm SD$	7.02 \pm 1.91	6.90 \pm 1.93	7.35 \pm 1.67	6.20 \pm 1.58	2.986	0.032
RD3 (Attachment)	$\times\pm SD$	4.14 \pm 1.75	4.22 \pm 1.96	4.46 \pm 2.08	4.43 \pm 1.57	0.441	0.724
RD4 (Dependence)	$\times\pm SD$	2.76 \pm 1.16	2.17 \pm 1.20	2.21 \pm 1.46	2.57 \pm 1.29	3.202	0.024
<i>Persistence</i>	$\times\pm SD$	5.07 \pm 1.87	5.44 \pm 2.12	4.74 \pm 2.07	4.91 \pm 1.56	1.108	0.347
<i>Self-Directedness (SD)</i>	$\times\pm SD$	27.97 \pm 6.42	29.17 \pm 5.81	28.00 \pm 6.45	27.09 \pm 6.20	0.713	0.545
SD1 (Responsibility)	$\times\pm SD$	4.71 \pm 1.94	5.12 \pm 1.92	4.70 \pm 2.07	4.89 \pm 1.49	0.523	0.667
SD2 (Purposefulness)	$\times\pm SD$	5.68 \pm 1.86	5.61 \pm 1.65	5.75 \pm 1.88	5.03 \pm 1.70	1.357	0.257
SD3 (Resourcefulness)	$\times\pm SD$	3.29 \pm 1.30	3.34 \pm 1.23	3.19 \pm 1.35	3.40 \pm 1.37	0.206	0.892
SD4 (Self-acceptance)	$\times\pm SD$	5.28 \pm 2.40	5.54 \pm 2.31	5.35 \pm 2.46	5.89 \pm 2.16	0.612	0.608
SD5 (Congruent second nature)	$\times\pm SD$	9.01 \pm 1.78	8.98 \pm 1.75	9.00 \pm 1.63	8.00 \pm 2.28	2.953	0.033
<i>Cooperativeness (CO)</i>	$\times\pm SD$	29.56 \pm 6.42	30.20 \pm 5.30	29.51 \pm 5.43	26.03 \pm 5.22	4.031	0.008
C1 (Social acceptance)	$\times\pm SD$	6.13 \pm 1.73	6.24 \pm 1.64	6.30 \pm 1.45	5.89 \pm 1.90	0.484	0.693
C2 (Empathy)	$\times\pm SD$	4.44 \pm 1.57	4.49 \pm 1.46	4.42 \pm 1.36	3.74 \pm 1.40	2.226	0.086
C3 (Helpfulness)	$\times\pm SD$	4.72 \pm 1.44	4.56 \pm 1.26	4.60 \pm 1.23	3.97 \pm 1.15	2.798	0.041
C4 (Compassion)	$\times\pm SD$	7.11 \pm 2.68	7.27 \pm 3.18	7.25 \pm 2.68	6.66 \pm 1.99	0.425	0.736
C5 (Pure-hearted)	$\times\pm SD$	7.17 \pm 1.44	6.66 \pm 1.68	6.95 \pm 1.36	5.77 \pm 1.64	7.671	0.0001
<i>Self-Transcendence (ST)</i>	$\times\pm SD$	20.55 \pm 5.03	19.76 \pm 5.07	19.56 \pm 4.84	19.06 \pm 4.80	0.978	0.404
ST1 (Self-forgetful)	$\times\pm SD$	6.63 \pm 2.37	6.49 \pm 2.42	6.60 \pm 2.02	6.17 \pm 2.12	0.372	0.774
ST2 (Transpersonal identification)	$\times\pm SD$	5.24 \pm 2.00	5.07 \pm 2.21	4.89 \pm 1.82	5.14 \pm 2.10	0.364	0.779
ST3 (Spiritual acceptance)	$\times\pm SD$	8.62 \pm 2.45	7.66 \pm 2.99	7.89 \pm 2.71	7.74 \pm 2.54	1.902	0.130

* One-way ANOVA test

Disorderliness (NS4) in seniors ($p<0.05$), fear of uncertainty (HA2) in juniors ($p<0.05$), sentimentality (RD1) in seniors and freshmen ($p<0.05$), dependence (RD4) ($p<0.05$) and pure-heartedness (C5) in freshmen ($p<0.01$), and CO in sophomores were higher than other classes ($p<0.01$, Table 2).

Table 3: Distribution of mean Sociotropy-Autonomy scores of the students according to smoking

		Smokers	Nonsmokers	T*	P
	n	26	201		
Concern about Disapproval	$\times\pm SD$	18.73 \pm 6.27	21.15 \pm 6.36	1.852	0.069
Concern about Separation	$\times\pm SD$	31.65 \pm 8.28	33.75 \pm 7.49	1.324	0.187
Pleasing Others	$\times\pm SD$	13.04 \pm 3.70	14.04 \pm 3.71	1.299	0.195
<i>Total Sociotropy</i>	$\times\pm SD$	61.15 \pm 18.91	68.73 \pm 14.97	2.351	0.020
Individual Achievement	$\times\pm SD$	35.62 \pm 5.52	34.66 \pm 6.16	0.750	0.454
Freedom from Control	$\times\pm SD$	32.69 \pm 4.70	31.64 \pm 5.70	0.904	0.367
Preference for Solitude	$\times\pm SD$	16.31 \pm 3.21	14.07 \pm 4.23	2.59	0.010
<i>Total Autonomy</i>	$\times\pm SD$	84.62 \pm 10.68	79.30 \pm 16.28	1.619	0.107

* Student's t test

Nonsmoking students had higher Sociotropy scores than smokers ($p < 0.05$). Smokers, on the other hand, had higher Preference for Solitude score than nonsmokers ($p < 0.05$) (Table 3).

Table 4: Correlations between mean Temperament and Character Inventory and the Sociotropy-Autonomy Scale scores of the students

		Concern about Disapproval	Concern about Separation	Pleasing Others	Total Sociotropy	Individual Achievement	Freedom from Control	Preference for Solitude	Total Autonomy
Temperament scales and subscales									
Novelty Seeking (NS)	r	-0.086	-0.057	-0.085	-0.064	-0.017	0.040	0.029	0.075
	p	0.196	0.393	0.201	0.339	0.800	0.553	0.663	0.263
NS1 (Exploratory excitability)	r	-0.102	-0.002	-0.216**	-0.058	0.100	0.072	0.067	0.123
	p	0.125	0.971	0.001	0.385	0.131	0.279	0.312	0.064
NS2 (Impulsiveness)	r	-0.060	-0.013	0.066	0.006	-0.200**	-0.046	0.023	-0.051
	p	0.368	0.843	0.321	0.928	0.002	0.493	0.736	0.449
NS3 (Extravagance)	r	0.008	0.073	0.055	0.085	0.006	0.110	0.001	0.090
	p	0.910	0.274	0.408	0.202	0.930	0.097	0.985	0.177
NS4 (Disorderliness)	r	-0.073	-0.103	-0.103	-0.080	0.042	-0.035	0.034	0.012
	p	0.272	0.121	0.121	0.229	0.526	0.599	0.608	0.852
Harm Avoidance (HA)	r	0.375**	0.251**	0.272**	0.358**	-0.278**	-0.122	-0.181**	-0.214**
	p	0.000	0.000	0.000	0.000	0.000	0.067	0.006	0.001
HA1 (Worry and pessimism)	r	0.252**	0.243**	0.124	0.282**	-0.161*	-0.058	-0.144*	-0.124
	p	0.000	0.000	0.062	0.000	0.015	0.387	0.030	0.062
HA2 (Fear of uncertainty)	r	0.340**	0.322**	0.275**	0.392**	-0.201**	-0.110	-0.140*	-0.193**
	p	0.000	0.000	0.000	0.000	0.002	0.098	0.035	0.003
HA3 (Shyness)	r	0.349**	0.163*	0.316**	0.316**	-0.296**	-0.057	-0.123	-0.166*
	p	0.000	0.014	0.000	0.000	0.000	0.392	0.065	0.012
HA4 (Fatigability)	r	0.190**	0.150*	0.134*	0.220**	-0.190**	-0.159*	-0.125	-0.176**
	p	0.004	0.024	0.044	0.001	0.004	0.017	0.061	0.008
Reward Dependence (RD)	r	0.305**	0.492**	0.177**	0.411**	-0.169*	-0.232**	-0.255**	-0.210**
	p	0.000	0.000	0.008	0.000	0.011	0.000	0.000	0.001
RD1 (Sentimentality)	r	0.361**	0.523**	0.237**	0.488**	-0.073	-0.082	0.006	-0.084
	p	0.000	0.000	0.000	0.000	0.277	0.216	0.923	0.208
RD3 (Attachment)	r	-0.037	0.365**	-0.029	0.206**	-0.055	-0.286**	-0.379**	-0.214**
	p	0.583	0.000	0.661	0.002	0.409	0.000	0.000	0.001
RD4 (Dependence)	r	0.274**	0.193**	0.160*	0.251**	-0.244**	-0.111	-0.128	-0.130
	p	0.000	0.004	0.016	0.000	0.000	0.096	0.054	0.050
Persistence (PS)	r	0.023	0.055	-0.098	0.002	0.294**	0.197**	0.150*	0.173**
	p	0.736	0.412	0.141	0.979	0.000	0.003	0.024	0.009
Character scales and subscales									
Self-Directedness (SD)	r	-0.265**	-0.117	-0.221**	-0.245**	0.180**	-0.044	-0.094	0.025
	p	0.000	0.079	0.001	0.000	0.006	0.511	0.159	0.712
SD1 (Responsibility)	r	-0.308**	-0.112	-0.118	-0.196**	0.159*	0.006	0.004	0.045
	p	0.000	0.091	0.077	0.003	0.016	0.923	0.947	0.498
SD2 (Purposefulness)	r	-0.132*	0.064	-0.261**	-0.059	0.195**	-0.035	-0.065	0.032
	p	0.047	0.339	0.000	0.377	0.003	0.603	0.327	0.632
SD3 (Resourcefulness)	r	-0.197**	-0.118	-0.293**	-0.227**	0.324**	0.079	0.018	0.146*
	p	0.003	0.075	0.000	0.001	0.000	0.235	0.785	0.028
SD4 (Self-acceptance)	r	-0.215**	-0.115	-0.044	-0.129	-0.109	-0.185**	-0.138*	-0.136*
	p	0.001	0.083	0.511	0.052	0.102	0.005	0.038	0.041
SD5 (Congruent second nature)	r	-0.104	0.113	-0.114	-0.011	0.155*	0.017	-0.067	0.062
	p	0.119	0.089	0.085	0.873	0.020	0.796	0.314	0.356
Cooperativeness (CO)	r	-0.011	0.105	-0.042	0.020	0.081	-0.083	-0.086	-0.009
	p	0.869	0.114	0.528	0.761	0.226	0.215	0.197	0.894
C1 (Social acceptance)	r	-0.228**	-0.058	-0.177**	-0.136*	0.069	-0.098	-0.053	-0.005
	p	0.001	0.381	0.007	0.041	0.301	0.141	0.430	0.943
C2 (Empathy)	r	-0.025	0.178**	-0.048	0.095	0.117	-0.063	-0.091	0.008
	p	0.711	0.007	0.469	0.153	0.080	0.342	0.170	0.904
C3 (Helpfulness)	r	0.026	0.164*	0.018	0.133*	-0.024	-0.137*	-0.101	-0.095
	p	0.699	0.013	0.782	0.045	0.717	0.039	0.130	0.155
C4 (Compassion)	r	0.000	0.178**	0.037	0.117	0.057	-0.042	0.000	0.030
	p	0.991	0.007	0.574	0.079	0.389	0.532	0.998	0.654

C5 (Pure-hearted)	r	0.102	0.213**	0.008	0.189**	0.041	0.013	-0.055	-0.013
	p	0.125	0.001	0.910	0.004	0.542	0.842	0.409	0.845
Self-Transcendence (ST)	r	0.222**	0.209**	0.095	0.193**	0.079	0.182**	0.187**	0.186**
	p	0.001	0.002	0.154	0.003	0.235	0.006	0.005	0.005
ST1 (Self-forgetful)	r	0.206**	0.179**	0.035	0.205**	0.086	0.191**	0.176**	0.140*
	p	0.002	0.007	0.600	0.002	0.198	0.004	0.008	0.035
ST2 (Transpersonal identification)	r	0.114	0.199**	0.011	0.146*	0.089	0.067	0.176**	0.138*
	p	0.086	0.003	0.868	0.027	0.181	0.316	0.008	0.038
ST3 (Spiritual acceptance)	r	0.101	0.160*	0.090	0.148*	0.014	0.100	0.083	0.118
	p	0.128	0.016	0.175	0.025	0.829	0.133	0.211	0.077

*Correlation is significant at the level of 0.05, ** Correlation is significant at the level of 0.01.

Harm Avoidance (HA1-4) was related to both sociotropic and autonomic personality, NS with Pleasing Others, and Impulsiveness with Individual Achievement. Sentimentality was related to only Sociotropy. Attachment was related, to Concern about Separation, Freedom from Control and Preference for Solitude at various levels. Dependence had relationship with all subscales of Sociotropy and with Individual Achievement. Social acceptance was correlated with total Sociotropy and all subscales of Sociotropy, Empathy with Concern about Separation, helpfulness with Concern about Separation and Individual Achievement at various levels (Table4).

4. Discussion

It is important that individuals have positive personality traits and positive professional thoughts for a successful and sustainable profession. Socialization process, that is learning and applying the rules of social environment lived in and avoiding from the non-approved ones, is important for autonomy, and cognitive and behavioral changes in life are necessary and substantial (Mrayyan, 2005).

In the present study, freshmen had the highest Concern about Disapproval. In the first year, the young individual is affected by making new friends, acquainting with their values, and feeling of inadequacy during adaptation period. Higher social acceptance level in sophomores, who are in the effort of adaptation, is also normal, and it is important that they have a positive and continuous self-understanding and self-esteem. Sociotropy and autonomy related Self-Transcendence scores were higher in freshmen. Sustainability of self-image is dependent on others' approval and valuation. Seniors had higher concern for the future but lower Concern about Separation, since they had basic targets of organizing their lives and successfully carrying out their professions.

When NS scores were assessed, seniors were significantly different from others for disorderliness. That might be because seniors focused on individual success, but not on orderliness. Higher scores of extravagance in NS in juniors might be related to higher Freedom from Control, higher Individual Achievement, higher smoking rates, and disorganized approaches in using resources. Impulsiveness might be related to their autonomic personalities, and desires to learn and investigate. Students may change approach according to their perceptions of the topics to be learned. If the topic is uninteresting, motivation of the student may be affected negatively. If the topic is difficult and time is limited, students may copy the information without producing any meaning (Ünal and Ergin, 2006). A student may have desire to investigate novelties depending on the characteristics of the topic to be learned. If the student feels that the topic is meaningful and meets the needs, then intends to learn and utilizes efficient studying methods (Yalçın, 2009). It may be stated that seniors are interested in novelties to improve themselves in their new professional lives.

Svrakic et al. (1993) reported that depression and anxiety symptoms intended to change together with harm avoidance. In the present study, in the dimension of HA, fear of uncertainty was significantly higher in freshman and juniors than seniors. That could be explained by feeling more fear of uncertainty, anticipatory worry, and shyness and fatigability in freshmen newly acquainting nursing than those in other classes. Juniors with better adaptation to the school experience higher emotions of these types as they get closer to the profession. Their being better in purposefulness than other classes could be explained as a positive characteristic for SD. Studies showed that problem-focused coping behaviors increased as self-esteem of the students increased. That may be the reason

why juniors had higher Autonomy and SD scores. During socialization, they may be more active in taking initiatives to overcome emotional load of dealing with disease and death closely. Arslan et al. (2009) stated that individuals interfered more to overcome the stress when external stimuli were compelling.

Individual differences, social skills, social support, and individual sources have an impact on identifying coping styles of individuals to avoid harm (Lazarus and Folkman, 1984). Harm Avoidance could be explained in conjunction with NS, willingness to learn, motivation, disorderliness, and Reward Dependence. Overall higher HA may be due to shyness, fear of uncertainty, and pessimism in conditions that would not worry others (Akvardar et al., 2005). In the present study, HA, anticipatory worry, fear of uncertainty, shyness, and fatigability were associated with both sociotropic and autonomic personality traits. Juniors demonstrated the association with the highest scores in both HA and Autonomy. Reward Dependence was related to sociotropic personality and Concern about Separation. According to attachment theory of child psychoanalyst John Bowlby, if a baby develops a secure attachment in early years of life, s/he could grow up to a mentally healthy individual by exploring the environment in the light of that primary happy communication, and develop self-awareness and self-concept, since early childhood.

Juniors with higher Individual Achievement preferred freedom from control and solitude. Smoking was more common in students preferring solitude. Sociotropy scores were significantly higher in smokers compared to nonsmokers. That may be associated to adaptation of smokers to the groups. Similarly, Autonomy scores of smokers were higher, as well. Freshmen, sophomores, and juniors emphasized character traits inclined to CO more, such as empathy, social acceptance, helpfulness, pure-heartedness, and compassion, with their needs of helping. Parallel to socialization, the students might have developed higher self-satisfaction with the thought of being more helpful to their patients.

Sociotropic personality traits in juniors were higher than sophomores, but lower than freshmen. Higher levels of Pleasing Others, approval addiction, Concern about Separation, and sentimentality could be attributed to emotional intensification and desire to meet the needs of others by helping caused by fears of disease and death. Higher HA in the students, on the other hand, could be explained by inclination to low self-respect (Algül et al., 2009). Stress due to sociotropic life events might be helpful to explain the topic. Kabakçı (2001) stated that there was a significant relationship between such stress and depressive symptoms. The present study showed that the students with moderate or higher depressive symptoms had recently experienced a negatively affecting sociotropic event, compared to those without symptoms. Relationship between such social events and higher social demands in sociotropic personalities was stronger than the relationship between unsuccessfulness and higher autonomic demands. Similar studies showed that individuals, who displayed sociotropic behaviors more, experienced more stress and depression (Clark et al., 1992; Nietzel and Harris, 1990; Sato and McCann, 1997). In the present study, the highest sociotropic personality traits in freshmen may be attributed to their being away from their families, and the fear of uncertainty and shyness they experienced with the difficulties in adaptation to the university life and a new social environment, such as hostel, and house, in which they continued their education. In medical students, the highest depressive symptoms were observed in freshmen (Mayda et al., 2009).

There was no difference between freshmen and seniors for Autonomy and Preference for Solitude. Higher scores of Freedom from Control in juniors with higher Autonomy was parallel to the studies showing that the students made their own decisions, directed their activities, and behaved freely (Bagby et al., 2001; Bieling et al., 2000; Pollard, 2006).

Studies reported that sociotropic and autonomic personality traits might be related to the factors, such as age, gender, education level, demographic characteristics, and problem solving (Gorski and Young, 2002; Kabakçı, 2001; Kelleci and Gölbaşı, 2004; McBride et al., 2005; Adams and Miller, 2001). However, in the present study, there were no differences between temperament, character, and sociotropic and autonomic personality traits for external stimuli like age, gender, education level, income level, marital status. But, there may be a relation between personality traits and internal stimuli like perception, learning, motivation, attitude, emotion, and excitement and the stress caused by sociotropic events. That result was dependent on the features of the sample and generalizing for nursing students might be misleading.

Freshmen with higher sociotropic traits in the study were the students who liked to love and be loved, participate in common activities, help, and being creative through CO and had more desire for acceptance in new environments. The highest SD scores in sophomores could be associated with highest scores of PS, responsibility, and CO. The highest scores of PS, responsibility, and CO and the lowest score of HA may be because persistent people percept fatigue and obstacles as challenge and could continue their behaviors without feeling fear of uncertainty. The result was consistent with the study by Kansız and Arkar (2011) that found higher PS and lower HA.

Juniors with higher autonomic personality traits were those with congruent second natures, who targeted success. Success and reaching the targets could actually play a role in meeting the sociotropic needs. A student who thinks that s/he would be liked as long as s/he was successful can be given as an example. There may be no relationship between autonomic life events and stresses in the Autonomy Scale for there was no dimension of emotional autonomy that showed freedom from the pressure caused by need of security and approval. Their being after freshmen in sociotropic traits could be because of mixed autonomic and sociotropic needs. Higher RD could be attributed to sociotropic traits, sentimentality, and attachment to others. Individuals with higher social attachment scores are those who are sensitive to relationships, consider others' approval important, can communicate successfully because of their characteristics of pleasing others, but lose objectivity because of strong social attachment. Studies showed that NS and RD were independent of emotional status, whereas HA was affected by mood and anxiety level (Svrakic et al., 1993).

The students with higher sociotropic traits also had higher scores for approval addiction. Similar studies supported the result obtained in the present study (Bagby et al., 2001; Bieling et al., 2000; Pollard, 2006). The students developed higher sociotropic personality levels when they had difficulty in coping with stress. Level of depressive symptoms affects their personality traits. Therefore, the meaning they loaded to the events they experienced and their perception are important, and that is affected by genetics and environmental factors. Juniors with the highest autonomic traits were followed by freshmen, seniors, and sophomores. Freshmen, who preferred healthier relationships, wanted to be approved and had higher sociotropic traits were followed by juniors, sophomores, and seniors. Therefore, juniors, who had the highest scores for sentimentality and attachment and the lowest levels of dependence, and completed adaptation to the school, were less prone to depression as they were autonomic, although they were easily affected by stress. Since juniors are conscious of their emotions, they can define and organize emotional conditions. Freshmen being superior for helpfulness, pure-heartedness, and congruent second nature may be attributed to their regarding others' approval important and desire for developing secure friendships in the new environment. Therefore, when there are any problems in their communications, any detention and disappointment, they may be more prone to develop depression. Higher scores of Self-Transcendence can be related to their desire to succeed their developmental duties and prove themselves, clearing the uncertainties in the new environment. They worry about the expectations from the new period and the people they do not know yet. The highest exploratory excitability scores in seniors may be because of starting a new period where they could apply the knowledge and skills they obtained. Because of self-esteem due to professional knowledge and skills, they are at their best for resourcefulness and self-acceptance. Less helpfulness and empathic behaviors indicate that their prosocial behaviors are limited. Affective behaviors are the product of life-time experiences and interactions of primary childhood. Therefore, behaviors related to affective domain cannot only be gained during school years. Lower CO may be because they pay more attention to themselves and disregard sharing and acting together.

Higher scores of purposefulness in juniors may be explained as a positive characteristic for SD. The lowest Self-Transcendence in seniors can be attributed to difficulty in overcoming the stress due to fear of uncertainty about the future. Lower SD and disorderliness scores, and fatigability and asthenia can be explained by their not regarding school success as important as other classes as they have reached the end of their education at the university. Since they fail to define an internal target, they cannot be sure of themselves enough about the future, thus they may be prone to depression. Studies showed that autonomic personality traits could be effective in meeting the criteria of professionalization (Adams and Miller, 2001; Kelleci and Gölbaşı, 2004). University graduates with entrepreneurial features must renew themselves continuously for professional improvement.

Therefore, making sophomores and juniors gain higher SD from the first year in the university would help the students to acquaintance their genetics-based temperament and characteristics they gained with the support of

environment. Making arrangements needed to have negative characteristics of the students changed and the positive ones maintained is important in managing stress, preventing depression, and being successful in professional life as individuals who could overcome themselves.

5. Conclusion

Studies can be carried out in larger groups to reveal temperament, character, sociotropic-autonomic personality traits and affecting factors, considering healthy communication and professional success in nursing students. Especially, since sociotropy and autonomy needs can get mixed, studies could be designed taking autonomy separately and investigating emotional autonomy. Individuals may be strengthened to overcome stressful life events matching with their personality traits. Psychological consultancy services can be extended and improved in schools for students to make them take the responsibility of their decisions and accept themselves.

Learning experiences can be organized to help the students to perceive and direct themselves as a result of interaction with the environment, by acquainting their temperament as they started university life. Positive characteristics such as empathy and PS observed in the second year, in which the students can direct their mood, can be improved by education.

Considering susceptibility to depression due to lower SD, ST, and CO scores observed particularly in seniors, social activities can be organized, in which students of each level can participate and which help the students have positive perception. Precautions can be taken to improve problem solving skills with studies conducted to understand attachment styles constructed during childhood and to determine stress sources in developmental periods.

When negative personality traits of the students are determined, measures can be taken for them to express themselves successfully and make post-graduate career plans in the future by speeding up their education activities which would help them change those characteristics at every level.

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