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#### **Original Article**

# Studying the flourishing of Iranian students based on Seligman model and its comparison based on demographic variables

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## Abstract

**Introduction**: The basic objective of this paper was to study the flourishing of Iranian students based on Seligman model and its comparison based on demographic variables.

**Methods:** 400 subjects of all students enrolled in the second semester of academic year of 2014-2015 in Ferdowsi University of Mashhad were randomly classified and studied as the sample group. Flourishing questionnaire was used to test the hypotheses. The flourishing questionnaire includes four components of positive emotions, relationships, meaning and achievement. To analyze the research data, the followings were used: percentage, mean, system dynamics (SD), multivariate analysis of variance, univariate analysis of variance and post hoc least significant difference (LSD) test.

**Results:** Descriptive results showed that 5% of students are at wilting point; 30% have relative mental health and 65% are at flourishing state. The highest percentage of flourishing students was in the meaning component (72.5%), while the lowest percentage of them was found in the positive emotions component (59.75%). The results of MANOVA test and follow-up tests also showed that the flourishing rate of the students is not affected by father's education, mother's education, father's occupation, mother's occupation, school and residence of the students (native or non-native); however, the flourishing rate of the students in the relationships component was significantly different with regard to the gender and education of the students; This means that the female students compared to the male students, and master and PhD students compared to the undergraduate students had earned higher scores in the relationships component.

**Conclusion:** At the end, according to the results of the present study, it is suggested to develop a unique intervention program to promote and foster flourishing of the students, while considering gender and educational differences in the relationships component.

**Declaration of Interest:** None.

**Keywords**: Flourishing, Positive emotions, Relationships, Meaning, Achievement, Seligman.

## Introduction

The issue of where to find happiness and what the source of happiness can be, is something very important, which has become a mystery to mankind. Modern psychology has introduced a new concept as positive psychology". Positive psychology is in fact the science of human happiness and flourishing (1). This particular field of psychology whose founder is Martin Seligman focuses on humans' success (2).

Flourishing is one of the important factors in the success of humans in this regard. The term "flourish" in the Concise Oxford Dictionary (1964) is defined as growth with passion and hilarity, growth and development, succeeding and being prominent. The word derives from the Latin word of "Flor", meaning flower, which itself has derived from the Indo-European word of "Bhlo" with the meaning of Blooming. Flourishing can be metaphorically related to the

flowers blooming. Colloquial usage of the term "Flourishing" mostly concentrates on meanings of realization of individual potential (intellectual, developmental, economic, etc), succeeding, thriving, or providing significant contributions to the community. The phenomenon shows the realization of inherent nature of the organism and development of self-well-being and others in a social or ecological system (3). Self-flourishing or self-actualization is in fact a concept that most of humanist psychologists also contribute as well. According to Rogers, everyone has an innate tendency to unlock and flourish his unique talent. According to Maslow, the self-actualized people deficiencies are less motivated by deprivations and primarily motivated by growth incentives and constantly motivated to test their ability and extent of views (4). In Maslow's belief, one of the self-actualization barriers is that many people do not see their potential powers, and instead, they tend to doubt their abilities or even fear from them. In addition, the social environment often prevents the onset of flourishing. In fact, the humans generally need a facilitating community to maximize their human potentials (5). Performed research suggests that the prevalence of flourishing in an American national sample has been as 18.1%, while relative mental health and wilting have been as 65.1% and 16.8%, respectively (6). In a study of adolescents aged 12-18, the people aged between 12 and 14 years old had the highest levels of selfactualization, and relative mental health was more common between age group of 15-18 years old (7). Babapoor study also showed that the students in humanities fields show more social selfactualization than the students of technicalengineering group (8).

Based on previous research, a large number of students in Iran benefit from a relative mental health; however, in case of neglect, they may fall into the category of students with wilting. Since the students of each nation will be in accountable key positions in a near future and would also play important roles in education and training of children, teenagers and college students in education and training issues, the investment and planning in the flourishing area of students appear to be crucially necessary. The importance of issue comes to further attention once the evidence suggests that high levels of well-being and

flourishing are followed by good consequences for individuals and the society. It has been shown in cross-sectional, longitudinal and experimental studies that high levels of well-being are linked to a range of positive outcomes, including effective learning, fertility and creativity, good relationships, pro-social behaviors, good health and life expectancy (9-12). Thus, according to the theoretical issues and research findings, the fundamental question in this study was to evaluate the flourishing of Iranian students based on Seligman model and its comparing based on demographic variables. It should be noted that any planning in the area of flourishing and development of positive emotions, finding meaning, relationships and progress would initially require an understanding of the current status of flourishing. Obviously, if the flourishing rate is influenced by demographic variables, using a same interventional flourishing program for all students would lead to ignoring the differences and insufficient efficacy; However, if flourishing is not affected by demographic variables, the use of a single interventional flourishing program for all the students would be appropriate, and developing separate programs will lead to a waste of facilities, manpower and resources. Therefore, given that no research has been so far done in this regard in Iran, the purpose of this study was to investigate the status of students flourishing according to Seligman model and its comparison based on the demographic variables.

#### **Methods**

The study methodology was a causalcomparative type and a descriptive one. The study sample included all the students enrolled in the second semester of the academic year of 2014-2015 in Ferdowsi University of Mashhad. The selected sample size was considered based on Cochran formula as 400 subjects. The 400 subjects were selected from the students of Ferdowsi University of Mashhad, including 146 males and 254 females. The samples were selected in a classified and random approach (according to schools) from the students of 12 faculties, including Literature, Theology, Physical Education, Basic Sciences, Administrative Sciences, Education Agriculture, Natural Resources, Sciences, Mathematics, Architecture, Engineering and Veterinary.

In this research, the "Flourishing Questionnaire" was used to measure the flourishing. The 28question flourishing questionnaire (HFQ) was made by Soleimani, Rezaei, Kianersi, Hojabrian and Khalili (2014) (13) based on the five-factor Seligman model (positive emotions, relationships, meaning, achievement and engagement). The structural validity of flourishing questionnaire was assessed by factor analysis method, convergent validity and divergent validity. Analysis of data factors by principal components method with using orthogonal rotation of Varimax type led to the extraction of four factors. These factors were named as positive emotions, relationships, meaning and achievement based on the theoretical basics of the study. The questions of engagement factor had not a good loading on this factor and were excluded from the analysis. The convergent validity of flourishing questionnaire (HFQ) was examined and confirmed through its concurrent implementation with Ahvaz self-actualization (r = (0.82) (14) and Diner flourishing (r = 0.90) (15) questionnaires, while its divergent validity was examined and confirmed through the Beck Inventory (r = -0.66) (16) (p  $\leq$  0.001). In addition, the reliability results of the HFQ using internal consistency method (Cronbach's alpha) showed that the HFQ has a suitable reliability coefficient, so that the reliability of factors of positive emotions, relationships, meaning, achievement and the entire questionnaire were respectively as 0.91, 0.83, 0.88, 0.87 and 0.95, which are optimal and satisfactory.

#### Results

The findings are presented in two descriptive and inferential parts. Descriptive findings examine the status of flourishing of the Iranian students, the mean and standard deviation for each of the flourishing components based on demographic variables such as gender, parents' education level and occupation, and the students' education level and place of residence. In the inferential part, each of the flourishing components (positive emotions, relationships, meaning and achievement) were compared according to the demographic variables and by using MANOVA test. Given that the flourishing questionnaire was a 6-option inventory, the results were categorized as follows: Results of totally disagree and somewhat disagree: Wilting students. Results of slightly agree and slightly disagree: Students with relative mental health. Results of totally agree and somewhat agree: Flourishing students. According to the classification mentioned, the results of surveying the status of students flourishing for each component of flourishing and the total score of flourishing are given in the following table.

Table 1. Flourishing status of the students based on flourishing components and total score

Flourishing levels	Positive emotions	Relationships	meaning	achievement	Total
Wilting state	8.25	3.5	3.25	5.75	5
Relative mental health	32	29.25	24.25	31.5	30
Flourishing	59.75	67.25	72.5	62.75	65

As can be seen, 5% of the students are at wilting state, while 30% have a relative mental health and 65% of them are in a flourishing status. The highest percentage of flourishing students occurs in the meaning component (72.5%), while the lowest percentage of them occurs in the positive emotional component (59.75%). The highest percentage of wilting students

occurs in the positive emotions component, while the lowest percentage of them occurs in the meaning (3.25%) and relationships (3.5%) components.

The descriptive findings of the students flourishing level are presented based on demographic variables separately.

Table 2. Descriptive findings of students flourishing rate by school, gender, residence location

		Positive emotions	Relationships	Meaning	Achievement
School	Theology	$30.9(8.2)^{1}$	31.4(7.2)	33(7.4)	31.6(6.7)
	Literature	30.2(8.6)	32.6(6.5)	33.6(7.5)	31.4(7.6)
	Administrative Science	30.5(8.2)	31.3(6.5)	33.9(6.9)	31.2(7.3)
	Engineering	29.3(7.7)	30.7(6.5)	32.6(6.1)	30.9(6.8)
	Physical education	29.6(5.3)	30.2(3.3)	30.9(4.6)	27.8(5.7)
	Veterinary	32.7(5.5)	33.5(6.6)	33.6(5.2)	34.1(5.4)
	Educational Science	32.1(7.2)	34.4(5.3)	33.5(7.2)	31.5(7.3)
	Basic sciences	32.7(7.8)	33(5.4)	34.9(6.8)	32.6(6.8)
	Agriculture	29.7(6.8)	31.5(6.3)	33.7(5.8)	30.7(6.6)
	Architecture	31.1(5.6)	33.7(3.6)	34.1(4.4)	32.3(5.9)
	Natural resources	32.9(8.4)	33.2(6.2)	33.5(6.4)	30.6(7.5)
	Mathematics	31.1(7.3)	32.5(5.4)	32.6(6.7)	30.7(7.6)
Gender	Female	30.7(7.8)	32.8(5.9)	33.6(6.6)	31.5(7)
	Male	30.6(7.4)	30.9(6.6)	32.9(6.5)	31(6.9)
Residency	Native	30.8(7.9)	31(6.7)	32.8(6.5)	31(7.2)
	Non-native	30.5(7.6)	32.6(6)	33.6(6.7)	31.4(6.9)

Table 3. Descriptive findings of students flourishing rate by school education levels and their parents' education levels

	-	Positive emotions	Relationships	Meaning	Achievement
Education	B.S	30(7.7)	29.9(6.5)	32.1(6.7)	29.8(7.2)
	M.A	30.9(7.7)	33(6)	33.9(6.4)	31.8(6.6)
	PhD	31.4(7.5)	33.3(5.4)	33.7(6.6)	32.5(7.4)
Father's Education level	Literate	28.9(9.4)	33(5)	31.5(7.8)	29.3(8.8)
	Primary degree	32(6.5)	33(5.4)	34.2(6.3)	32.1(6.8)
	Elementary degree	32.2(6.2)	33.3(5.4)	34.8(5.2)	32.6(5.7)
	Diploma	30.3(7.8)	31.5(6.9)	33.3(6.9)	31.8(6.7)
	Associate	29.2(8.8)	31.7(5.8)	33.5(7.2)	30.7(7.7)
	BA	30.3(8.2)	32(6.2)	33.3(6.4)	30.9(6.9)
	Master	30.5(7.1)	30(7.9)	32.1(5.3)	29.4(6.9)
Mother's Education level	Literate	30.2(8)	33.3(5.8)	32.7(7.2)	30.7(8.1)
	Primary degree	32.2(7.4)	32.7(5.5)	34.1(6.4)	31.7(6.5)
	Elementary degree	31.5(6.7)	32.9(5.4)	34(6.6)	32(7)
	Diploma	29.1(8.3)	31.2(6.9)	32.4(6.7)	30.6(6.9)
	Associate	32.8(6.6)	33.4(6.2)	35.3(5.2)	32.8(4.9)
	BA & Master	31.5(6.1)	31.3(6.3)	34.5(4.8)	32(6.4)

Table 4. Descriptive findings of students flourishing rate by parents' occupation

		Positive emotions	Relationships	Meaning	Achievement
Father's job	Self-employment	30.5(7.4)	31.9(6.3)	33(6.6)	31.2(6.8)
	Employee	31.1(7.4)	32.2(6)	33.9(5.8)	31.2(6.8)
	Retired	30.7(8)	32.6(6)	34(6.7)	32(7)
Mother's job	Employee	32.2(5.8)	32.7(5)	34.9(4.6)	32.3(5.2)
	Retired	27.2(8.6)	34.5(4.5)	34.1(5.6)	32(4.6)
	Housewife	30.6(7.7)	32(6.3)	33.2(6.6)	31.2(7.1)

 $<sup>^{1}</sup>$ . Numbers in parentheses indicate the standard deviation, while the numbers outside parentheses represent the mean  $^{1}$ .

The multivariate variance analysis (MANOVA) test was used to analyze data and compare the flourishing (positive students' relationships, meaning and achievement). Before performing the MANOVA test, its assumptions were investigated. Levine's test was used to verify the equality of error variance. The results showed that the assumption of error variance similarity in positive emotions variable with regard to the father's education level and in the meaning variable according to the mother's occupation was established at the level of p>0.01, while it was seen at p>0.05 for other variables.

of The assumption covariance matrix homogeneity was also examined using the Box test. The results showed that the assumption of covariance matrix homogeneity occurs for the variables of gender, student's education level, father's occupation and place of residence (p>0.05), while it is not seen for variables of school, father's education level, mother's education level, and mother's occupation (p<0.05). Therefore, Wilks's lambda was used as reporting basis for variables of gender, student's education level, father's occupation and place of residence, while the P-value effect was used for variables of school, father's education level, mother's education level, and mother's occupation.

After ensuring the establishment of assumptions, the MANOVA test was conducted. The MANOVA results indicated that the students

flourishing is not affected by variables of father's education, mother's education, father's occupation, mother's occupation, the students' school of education and residence place (native & non-native); however, but rate of students flourishing showed significant differences according to gender and the students' educational level. Regarding the gender differences effect on students' flourishing, the MANOVA results showed that the Wilks's lambda was equal to 0.965 and the result of F test was significant (F (4.395) = 3.584; P=0.007). The Multivariate eta squared was also equal to 0.035; this means that 4% of the dependent variables changes are related to the subjects' gender factor. ANOVA test was used to determine significant differences in the dependent variables between male and female students. The type I error rate was controlled by the Bonferroni method. To this end, the alpha value of 0.05 was divided by the number of comparisons, meaning 4. Therefore, a comparison will be considered significant if its significance level is less than or equal to 0.012. The results of Table 5 indicate that the value of ANOVA is only significant for the variable of relationships (P = 0.003), and the rate of female students flourishing in the relationships component (with a mean of 32.8) is higher than the male students (with a mean of 30.9); while there are no significant differences on other component of flourishing between male and female students (P > 0.012).

Table 5. Results of ANOVA test for each dependent variable

Table 3. Results of 1110 VII lest for each dependent variable										
Flourishing components	Sum	of	Degrees	of	Mean	of	F	P	Separated	Etta
	squares		freedom		squares				square	
Positive emotions	1.31		1		1.31		0.022	0.882	0.0001	
Relationships	341.37		1		341.37		8.833	0.003	0.022	
Meaning	54.01		1		54.01		1.236	0.267	0.003	
Achievement	23.64		1		23.64		0.482	0.488	0.001	

The MANOVA test results to compare the flourishing rate with respect to the students education levels also showed that the Wilks's lambda was equal to 0.91 and the F test result was significant (F(8. 790)=4.420;  $P \le 0.0005$ ). The Multivariate eta squared was also equal to 0.043; this means that 4% of the dependent variables changes are related to the students' education levels factor. ANOVA test was used

to determine significant differences in the dependent variables between male and female students. The type I error rate was controlled by the Bonferroni method. The results of Table 6 indicate that the value of ANOVA is only significant for the variable of relationships (P < 0.012). The Least Significant Difference (LSD) test was used to determine the significant difference between education levels in the

relationship component. The results showed no significant difference on students flourishing between master and PhD students in the relationship component; however, the flourishing rate of PhD and master students on relationship component was higher than BA students.

Table 6. Results of ANOVA test for each dependent variable

Flourishing	Sum of	Degrees	of	Mean	of	F	P	Separated	Etta
components	squares	freedom		squares				square	
Positive emotions	93.085	2		46.543		0.786	0.456	0.004	
Relationships	861.323	2		430.661		11.504	0.0001	0.055	
Meaning	272.042	2		136.021		3.143	0.044	0.016	
Achievement	410.055	2		205.027		4.251	0.015	0.021	

## **Conclusion**

The main objective of this study was to evaluate the flourishing of Iranian students based on Seligman model and its comparison according to demographic variables in order to suggest single or distinct interventional programs (by separate demographic variables) for fostering and promoting the students flourishing. The results showed that 5% of students are wilting, while 30% have relative mental health and 65% are flourishing. The highest percentage of flourishing students was in the meaning component (72.5%), while the lowest percentage of them was found in the positive emotions component (59.75%). The highest percentage of wilting students occurs in the positive emotions component, while the lowest percentage of them occurs in the meaning (3.25%) and relationships (3.5%) components.

In Nosratabadi et al. study (2011), entitled as "Are Iranian students flourishing?" conducted based on three measures of emotional wellbeing (6), psychological well-being (17), and social well-being (18), the findings revealed that about 16% of students are flourishing, while 20% are wilting and 64% have a relative mental health that show a clear difference with the results of the present study. The causes of these differences can be mentioned as follows: 1. In Nosratabadi et al. study (2011), to assess flourishing, three measures of emotional wellbeing, psychological well-being, and social well-being have been used, while in the present study, the Flourishing Inventory (Soleimani et al., 2014) (13) was used, which had been specifically developed to measure flourishing based on Seligman model.2. The study population in Nosratabadi et al. research (2011) included Tehran University students, while the students of Mashhad University were examined in the present study.3. The education levels and the ratio of each level in Nosratabadi et al. research (2011) and the present study were different; thus, Nosratabadi et al. study, a sample of 424 students (226 females, 198 males) with the mean age of 21 years were non-randomly selected, while in the present study, 400 students (254 females, 146 males) were randomly selected by a stratified method (based on the school) and education levels (BA, MA, PhD) from the students of 12 schools.4. Nosratabadi et al. research was conducted in 2011, and the present study was done in 2014.

Examining the demographic factors in relation with flourishing also showed that there is a significant difference on flourishing rate based on gender and educational level of the students. Descriptive findings indicated that the flourishing rate of female students, merely in the relationships component (with a mean of 32.8) is higher than the male students (with a mean of 30.9), while there are no significant differences between male and female students on other flourishing components (positive emotions, meaning and achievement). In Nosratabadi et al. study (2011) (19), no significant difference was seen between the students according to their gender. The recent result is in agreement with the findings of Joshanlo and Rastegar (2008) (20) and Kiez (2007) (21). There was no significant difference in scores of well-being between the sexes in these studies as well. In another study (Kiez,

2007), the prevalence of flourishing among the adult population was about 20%, and no gender differences were observed regarding the flourishing.

The results of reviewing the students' education levels showed that the flourishing rate of graduate and PhD students in the relationships component was higher than undergraduate students. Also, some studies have shown that the health rate has a positive correlation with increasing degree of education; however, some of academic stresses may adversely affect. Thus, there is no linear relationship between these variables (18). It seems that the mentalphysical maturity and increased awareness and life skills of master and doctoral students were involved. Morag Farkor showed in a research that people with higher education levels in the areas of general health, mental health and ability to perform the tasks influenced by the emotional problems had a better situation than others (22). Also, Rafati (2004) showed in his study that higher education has a positive effect on general health status (19). In addition, the results of Abdullah Tabar et al. (2009) also indicated that the mean scores of social health of graduate students are higher than undergraduate students, and there is a significant correlation between social health variable and the variables of education level and gender. Regarding the comparison of different aspects of social health of students according to gender, the findings also showed no significant difference between male and female students in terms of social integration, social flourishing and social acceptance, while the male students had higher scores than female students on measures of social cohesion and social participation (24).

It is noteworthy that the flourishing rate based on other variables (father's education, mother's education. father's occupation, mother's occupation, school and residence place of students (native- non-native) had no significant differences. The results of Abdullahi Tabar et al. (2009) also indicated that there is no significant correlation between social health variable with the variables of academic field, parents' education levels and the students age (24). In Yar Mohammedian and Kamali study, no significant relationship was also found between gender, parental education, parental occupation and the number of children and self-actualization (25). The results Babapoor et al. (2010) also showed that there is a significant difference between the students of different fields merely on small scale of social flourishing at significant level of p < 0.05. The result related to the variables of gender, ethnicity, parent's education and social-economical situation also showed that the mentioned variables have no impact on students' social health.

According to the obtained results, one can infer that demographic variables such as father's education, mother's education, father's occupation, mother's occupation, school of education and the residence place of students (non-native, native) do not directly influence the flourishing rate. Thus, based on the research results, it is suggested to develop a unique and single intervention program to promote and foster flourishing of the students, while considering gender and educational differences in the relationships component. In addition, it is recommended to develop a suitable intervention program for wilting students to prevent them from capturing by psychological disease and problems such as negative emotions, depression, anxiety, stress, etc. Finally, we would like to sincerely appreciate the authorities in Mashhad University and all the dear students of the university in the academic year of 2014 for their time, accuracy and cooperation in helping us to do the research.

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