PRINT: ISSN 0972-0073 ONLINE: 2456-6802
Anthropologist, 23(1,2): 245-250 (2016)
DOI: 10.31901/24566802.2016/23.1-2.31

Medical Faculty Students' Academic Motivation Types: A Comparison with Respect to Various Variables

Bulent Alci

Department of Educational Sciences, Education Faculty, Yildiz Technical University, Istanbul, Turkey
E-mail: bulent_alci@hotmail.com

KEYWORDS Extrinsic and Intrinsic Motivation. Gender. Medical Education. Type of University

ABSTRACT The purpose of this paper is to determine the types of academic motivation of medical faculty students according to the type of university they study at and their gender. The study group of this descriptive paper consists of 165 students who study at a state university and 162 students who study at two private universities. The total number of the study group was 327 medical faculty students. In order to find out the motivation types of the students, the Turkish version of "Academic Motivation Scale" was used. After t-tests analysis, it was found out that, statistically there is no significant difference between the motivation types of the state university students and private university students. On the other hand, when compared the motivation types of the female and male students, the paper concluded that there is a significant difference regarding intrinsic, extrinsic and total motivation types in favour of female students.

INTRODUCTION

The rapidly globalizing world has caused dramatic changes and novel developments in every field of life. Triggered by constantly improving information and communication technologies, especially with the age of individualism, accordingly, in the second half of the twentieth century, individual values and differences were recognized, respected and carried into the centre of every layers of the modern society (Arnold and Fonseca 2004). As a result, the human being started to be considered not only as a physical construct but also as a whole construct of physical, cognitive and affective variables (Akbari and Hosseini 2008). This new tendency has made it possible for human beings to be accepted as "human" literally.

This shift of attention has exerted its impact on how education is viewed and practiced. As a result, the individual differences of the learners were injected into the heart of educational processes and procedures. The focus on individual differences began to occupy such an important part of the debate related to the literature about teaching/learning that the professional literature was obsessed with a number of terms and phrases indicating the indefinable concepts that distinguish people from each other (Crystal 1997). Consequently, the perceptions that all students were different in terms of physical, cognitive and affective variables, all of which have crucial influence on the outcome of academic performance were incorporated into education. In this perspective, educational researchers and psychologists set out to conduct studies on the differences that distinguish human beings from one another. These differences are defined as "variations or deviations among individuals with regards to a single characteristic or a number of characteristics" (Good 1959).

Out of a number of variations or similarities among people ranging from psychological aspects such as intelligence, personality, interest, and aptitude to physical factors such as body size, gender, age, the current paper has attempted to shed light on the impact of motivation on learners' academic performance (Aydin 2014). Motivation of students in education is seen as one of the most prominent factor exerting a determining impact on academic performance and as a result occupies a wide range of space in the related literature. In this respect, a number of studies with diverse populations have been conducted by different researchers in different contexts on the student's self-motivation and its relationships with many variables ranging from academic performance to gender (Schunk 1991; Williams et al. 1994; Barnett et al. 1998; Von Bothmer and Fridlund 2005; Aunola et al. 2006; Meece et al. 2006; Tella 2007; Jurišević et al. 2008; Martin and Dowson 2009; Kaya 2015; Pekrun et al. 2009; Kusurkar et al. 2010; Othman and Leng 2011).

Motivation is accepted as a theoretical construct explaining the drives behind the students'

behaviours including the reasons for their actions, desires, and needs (Acar et al. 2015). Within the scope of this paper, as an indicator of academic achievement, motivation is defined in a number of ways. While it is used by some researchers to simply refer to some factors that activate, direct, and sustain goal-directed behaviour (Nevid 2013), some other researchers such as Maehr and Meyer define motivation as to include the concepts like initiation, direction, intensity, persistence, and quality of behaviour and goal-directed behaviour (Maehr and Meyer 1997).

Motivation is adopted from different angles by different researchers, as a result of which it has evolved into many different theories throughout the history. Brophy puts this flow of development in four theories as *Behavior Reinforcement Theories, Need Theories, Goal Theories, and Intrinsic Motivation Theories*. He details this classification as follows "Theories of human motivation have evolved from an emphasis on reactive responses to pressures (external reinforcement contingencies or internally felt needs) to an emphasis on intrinsically motivated, self-determined actions" (Brophy 2013; Lafer 2014).

Within this perspective, based on the factors affecting the motivation, motivation is classified in different ways in the literature. The current paper is conceptually based on the *Self-Determination Theory* put forward by Deci and Ryan. This theory and accordingly the current paper embrace "both an organismic and a dialectical framework for the study of personality growth and development" (Deci and Ryan 2002).This indicates how much crucial humans' evolved inner resources are for personality development and behavioural self-regulation (Hall and Quinn 2014; Ryan et al. 1997). This dialectical relationship takes place between people's active organisms and their social environment to satisfy their three main needs: *competence, autonomy and relatedness* (Deci and Ryan 2000a). As a result of these interactions, they put forward three types of motivation as *intrinsic motivation* referring to the drive for accomplishing a task or an activity simply for the pleasure or satisfaction; *extrinsic motivation* referring to the drive of pursuing an activity with the sense of obligation; and *a motivation* referring to the lack of absence of drive to pursue an activity (Deci and Ryan 1985, 2000a, 2000b, 2002). Then, they expanded extrinsic motivation classifying it into four types as *external regulation, introjected regulation, identified regulation and integrated regulation*, all of which differ according to the degree of self-determination that the individual associates with the behaviour itself. Therefore, the focus of *SDT* is on "the investigation of people's inherent growth tendencies and innate psychological needs that are the basis for their self-motivation and personality integration, as well as for the conditions that foster those positive processes" (Deci and Ryan 2000a).

A body of research on the construct of motivation seem to signal the importance of motivational problems that are likely to arouse in today's educational contexts. These results fortify the need to investigate students' motivational problems (Uzbas 2009). In this respect, in this paper, the researcher used the *Academic Motivation Scale (AMS)* to collect data about the motivational beings of university students (Vallerand et al. 1989; Vallerand and Bissonnette 1992; Vallerand 1993). The AMS, originally developed in French in 1989, consists of 28 items and seven subscales. Based on self-determination theory of Ryan and Deci, the scale is divided into seven subscales, one standing for subscale of *amotivation*, three for subscales of *intrinsic motivation* and three for subscales of *extrinsic motivation* (Deci and Ryan 1985). The current paper administered the Turkish adaptation of the scale, which is explored to be linguistically equivalent to the original scale in addition to being used as a valid and reliable indicator of Turkish university students' motivation types ($\alpha = 0.97$) (Karatas and Erden 2012).

In conclusion, acknowledging that motivation is an important variable that could easily exert its impact on many variables in educational settings. This paper attempts to shed light on the motivational sources of the university students enrolled at medicine department together with the impact of gender on them. As a result, the paper promises important results that should be taken into regard by the teachers to reconstruct and trim their teaching according to students' attitudes or motives to study.

METHODOLOGY

Participants

A total of 327 medical faculty students formed the study group, 175 (53.5%) of whom were female and 152 (46.5%) were male students. 165 (50.5%) students of the study group attend a

state university and 162 (49.5%) students attend two private universities.

Instruments

In order to determine the students' motivation types towards English, Academic Motivation Scale which was developed by Vallerand et al. (1992) and translated into Turkish by Karatas and Erden (2012) was used. The scale consists of 27 items and three sub-scales, which assess three types of intrinsic motivation (intrinsic motivation to know, to accomplish things and to experience stimulation), three types of extrinsic motivation (external, introjected and identified regulation) and amotivation (Karatas and Erden 2012). The reliability coefficient (Cronbach Alpha) for the scale was calculated as 0.91.

Data Collection

In the process of data collection, two petitions attached with Academic Motivation Scale were written to two private universities for the purpose of permission. After the approval of the petitions, the scale was applied to the students of the state university and one of the private universities by the researcher himself before the classes. The scale was applied to the students of other private university by their teachers before the classes.

Data Analysis

In accordance with the purpose of this paper, in order to determine the motivation types of students in terms of university that they attend and their gender, descriptive statistics was used. Furthermore, independent samples t-test analysis was employed to find out whether the students' academic motivation types differentiate in terms of the university they study at and their gender.

RESULTS

Table 1 shows the descriptive statistics related with the study's variables. For the total of 327 students, the minimum intrinsic motivation value is 15.00; the maximum value is 77 and arithmetic mean is 52.38. In extrinsic motivation, the minimum value is 22.00; maximum value is 84.00 and arithmetic mean is 55.96. In total motivation, the minimum value is 42.00; maximum value is 158 and arithmetic mean is 108.32.

Table 1: Descriptive statistics

	N	*Min.*	*Max.*	*X*	*SD*
IM	327	15.00	77.00	52.38	14.12
EM	327	22.00	84.00	55.96	13.04
Total	327	42.00	158.00	108.32	24.38

Intrinsic Motivation (IM), Extrinsic Motivation (EM)

Table 2 displays separately the t-test analysis results of intrinsic, extrinsic and total motivation type in terms of the university they study at. In this respect, the state university students' arithmetic mean in intrinsic motivation is 53.31; the private university students' arithmetic mean is 51.44. Although there is a difference in arithmetic mean in favour of state university students, it was found out that, regarding the analysis, p value is .23 (p=.23) and this value is not significant at the level of 0.05.

In the case of extrinsic motivation, it is inferred that, the state university students' arithmetic mean is 53.31; the private university students' arithmetic mean is 55.39. Despite the fact that there is a difference in arithmetic mean in favour of state university students, it was found out that, regarding analysis, p value is .43

Table 2: The independent samples t-test results of medical faculty students' intrinsic, extrinsic and total motivation types in terms of the type of university

	Gender	*N*	*X*	*SD*	*t*	*df*	*p*
IM	State	165	53.31	14.93	1.19	3253	.23
	Private	162	51.44	13.22	1.20	21.5	
EM	State	165	56.52	12.28	.78	325	
	Private	162	55.39	13.78	.77	319.31	.43
Total	State	165	109.80	24.73	1.10	325	
	Private	162	106.81	24.01	1.11	324.95	.26

$p<0.05$
Intrinsic Motivation (IM), Extrinsic Motivation (EM)

(p=.43) and this value is not significant at the level of 0.05.

Similarly, it was calculated that in total motivation, the state university students' arithmetic mean is 109.80; the private university students' arithmetic mean is 106.81. Although there is a difference in arithmetic mean in favour of state university students, it was found out that, regarding analysis p value is .26 (p=.26) and this value is not significant at the level of 0.05.

According to the data in Table 2, although motivation types of state university medical faculty students in intrinsic, extrinsic and total motivation are higher than those who study at private university medical faculty, it can be said that, the difference is not a significant one.

Table 3 shows the t-test results of medical faculty students' intrinsic, extrinsic and total motivation levels in terms of their gender. According to the results, in intrinsic motivation the female students' arithmetic mean is 54.87; male students' arithmetic mean is 49.52, which indicate that there is a difference in favour of female students. It is inferred that p value is .00 (p<0.01) and this value is significant at the level of 0.01.

In extrinsic motivation, the female students' arithmetic mean is 58.58 and male students' arithmetic mean is 52.94, which indicats that there is a difference in favour of female students. It is inferred that p value is .00 (p<0.01) and this value is significant at the level of 0.01.

In the same way, in total motivation level, the female students' arithmetic mean is 113.37; male students' arithmetic mean is 102.51, which indicate that there is a difference in favour of female students. It is inferred that p value is .00 (p<0.01) and this value is significant at the level of 0.01.

DISCUSSION

In Self-Determination Theory, Deci and Ryan (1995) distinguished between different types of motivation based on the different reasons or goals that give rise to an action. The most basic distinction is between intrinsic motivation, which refers to doing something because it is inherently interesting or enjoyable, and extrinsic motivation, which refers to doing something because it leads to a separable outcome. Over three decades of research has shown that the quality of experience and performance can be very different when one is behaving for intrinsic versus extrinsic reasons (Deci and Ryan 2000a).

On the other hand, it was found out that there is a significant difference in favour of female students regarding medical faculty students' intrinsic, extrinsic and total motivation levels. Hence, it can be deduced that gender (male-female) is a significant variable. This finding of this paper is in line with the previous researches. Past research has shown that females tend to have higher levels of motivation than males (Deci and Ryan 2000a; Karatas and Erden 2014). Also, the result was quite similar with Vallerand and Bissonnette (1992) and Vallerand et al. (1992) concerning gender differences.

Unlike this finding, there is also some other opposite results in some of the previous studies. Male students showed greater extrinsic motivation than female students (Anderman and Anderman 1999; Midgley and Urdan 1995; Roeser et al. 1996; Urdan et al. 1998), while differences are not found in levels of intrinsic motivation (Patrick et al. 1999) as in terms of gender.

Higher observed levels of motivation among females is consistent with previously reported findings. Though, in a recent study by Bedel (2016) no significant result according to gender was found. Males may require tailored efforts to reduce their disparity in academic motivation. Research to improve understanding about factors influencing academic motivation among female

Table 3: The independent samples t-test results of medical faculty students' intrinsic, extrinsic and total motivation types in terms of their gender

	Gender	*N*	*X*	*SD*	*t*	*df*	*p*
IM	Female	175	54.87	15.05	3.47	325	
	Male	152	49.52	12.40	3.52	324.11	.00*
EM	Female	175	58.58	11.81	3.98	325	
	Male	152	52.94	13.75	3.94	299.67	.00*
Total	Female	175	113.37	24.21	4.11	325	
	Male	152	102.51	23.34	4.12	321.48	.00*

*p<.01
Intrinsic Motivation (IM), Extrinsic Motivation (EM)

and male students is needed to inform policy and practice in efforts to promote optimal growth and development at each level of education (Brouse et al. 2010).

Other than these, a very recent study by Ng and Ng (2015) has shown that motivation, both intrinsic and extrinsic, is affected by other variables such as personality, attitudes of learners and their learning styles; which may also be noted as a limitation of this paper. In another recent study by Jurick et al. (2014), it was found and confirmed that deep-teacher questioning and feedback were other variables contributed to motivation positively and where gender was returned with the same insignificant difference.

On the other hand, knowing the variables in academic motivation is really significant in that it directly affects academic performance (Dogan 2015). However, this doesn't mean that academic motivation will give an idea about the students' GPAs (Cetin 2015).

CONCLUSION

In this paper, it was aimed to determine the types of academic motivation of medical faculty students in terms of the type of university that they study at and their gender. The results indicated that there is no significant difference between the state and private university students' intrinsic, extrinsic and total motivation levels. In this respect, it can be inferred that motivation is not an important variable in terms of state and private university.

Throughout the pile of research on motivation levels, females have a dominant history of overwhelming males in terms of higher motivation levels. These results haven't also contradicted the data that have piled up until now in Turkey.

One contradictory finding was that for the extrinsic motivation type, males were found to have more extrinsic motivation than females. The result is that this paper has made some contributions to the previous literature and it is in tune with the previous data in general.

RECOMMENDATIONS

The motivation types of the female and male students were compared in this paper. It may be surveyed whether any differences exist between different classes in the further studies. Also, this paper was conducted among undergraduate students. The researchers may change target population from undergraduate students to graduates or mix both and compare. Moreover, this paper is specific with only one category of academia. It may be surveyed students studying many categories of university in the future.

REFERENCES

Acar O, Turkmen L, Bilgin A 2015. Examination of gender differences on cognitive and motivational Factors that Influence 8th graders' science achievement in Turkey. *Eurasia Journal of Mathematics, Science & Technology Education,* 11(5): 1027-1040.

Akbari R, Hosseini K 2008. Multiple intelligences and language learning strategies: Investigating possible relations. *System,* 36(2): 141-155.

Anderman LH, Anderman EM 1999. Social predictors of changes in students' achievement goal orientations. *Contemporary Educational Psychology,* 25: 21-37.

Arnold J, Fonseca C 2004. Multiple intelligence theory and foreign language learning: A brain-based perspective. *International Journal of Earth Sciences,* 4(1): 119-136.

Aunola K, Leskinen E, Nurmi JE 2006. Developmental dynamics between mathematical performance, task motivation, and teachers' goals during the transition to primary school. *Br J Educ Psychol,* 76(1): 21-40.

Aydin H 2014. A comparative study between the United States and Turkey on teachers' lesson planning effort. *Review of Research and Social Intervention,* 46(1): 99-117.

Barnett RC, Carr P, Boisnier AD, Ash A, Friedman RH, Moskowitz MA, Szalacha L 1998. Relationships of gender and career motivation to medical faculty members' production of academic publications. *Academic Medicine,* 73(2): 180-186.

Bedel EF 2016. Exploring academic motivation, academic self-efficacy and attitudes toward teaching in pre-service early childhood education teachers. *Journal of Education and Training Studies,* 4(1): 142-149.

Brophy JE 2013. *Motivating Students to Learn.* 3rd Edition. New York, NY: Routledge.

Brouse CH, LeBlanc M, McKnight KR, Basch CE, Lei T 2010. College students' academic motivation: Differences by gender, class, and source of payment. *College Quarterly,* 13(1): 1-10.

Cetin B 2015. Academic motivation and approaches to learning in predicting college students' academic achievement: Findings from Turkish and US samples. *Journal of College Teaching & Learning,* 12(2): 141-150.

Crystal D 1997. *English as a Global Language*. Cambridge, UK: Cambridge University Press.

Deci EL, Ryan RM 1985. *Intrinsic Motivation and Self-determination in Human Behaviour.* New York/USA: Springer Science and Business Media.

Deci EL, Ryan RM 2000a. Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist,* 55: 68-78.

Deci EL, Ryan RM 2000b. The "what" and "why" of goal pursuits: Human needs and the self determination of behaviour. *Psychological Inquiry*, 11: 227-268.

Deci EL, Ryan RM 2002. *Handbook of Self-determination Research.* New York, NY: University Rochester Press.

Dogan U 2015. Student engagement, academic self-efficacy, and academic motivation as predictors of Academic Performance. *Anthropologist*, 20(3): 553-561.

Good CV 1959. *Dictionary of Education*. New York: McGraw-Hill.

Jurik V, Gröschner A, Seidel T 2014. Predicting students' cognitive learning activity and intrinsic learning motivation: How powerful are teacher statements, student profiles, and gender? *Learning and Individual Differences*, 32: 132-139.

Juriševiè M, Gla•ar SA, Puèko CR, Devetak I 2008. Intrinsic motivation of pre-service primary school teachers for learning chemistry in relation to their academic achievement. *International Journal of Science Education*, 30(1): 87-107.

Hall N, Quinn R 2014. Parental involvement at the high school level: Parents' perspectives. *Journal of Ethnic and Cultural Studies*, 1(1): 13-21

Karatas H, Erden M 2012. Akademik motivasyon ölçeginin dilsel esdegerlik, geçerlik ve güvenirlik çalismasi. *NWSA: Education Sciences*, 7(4): 983-1003.

Karatas H, Erden M 2014. Academic motivation: Gender, domain and grade differences. *Procedia Soc Behav Sci*, 143: 708-715.

Kaya Y. 2015. Teachers' perceptions on culturally responsiveness in Education. *Journal of Ethnic and Cultural Studies*, 2(2): 33-46**.**

Kusurkar R, Kruitwagen C, Cate O, Croiset G 2010. Effects of age, gender and educational background on strength of motivation for medical school. *Advances in Health Sciences Education*, 15(3): 303-313.

Lafer S 2014. Democratic design for the humanization of education. *Journal of Ethnic and Cultural Studies*, 1(1): 6-12.

Maehr M, Meyer H 1997. Understanding motivation and schooling: Where we have been, where we are, and where we need to go. *Educational Psychology Review*, 9: 371-409.

Martin AJ, Dowson M 2009. Interpersonal relationships, motivation, engagement, and achievement: Yields for theory, current issues, and educational practice. *Review of Educational Research*, 79(1): 327-365.

Meece JL, Anderman EM, Anderman LH 2006. Classroom goal structure, student motivation, and academic achievement. *Annu Rev Psychol*, 57: 487-503.

Meece JL, Glienke BB, Burg S 2006. Gender and motivation. *Journal of School Psychology*, 44(5): 351-373.

Midgley C, Urdan T 1995. Predictors of middle school students' use of self-handicapping strategies. *Journal of Early Adolescence*, 15: 389-411.

Nevid J 2013. *Psychology: Concepts and Applications.* Belmont, CA: Wadworth.

Ng CF, Ng PK 2015. A review of intrinsic and extrinsic motivations of ESL learners. *International Journal of Languages, Literature and Linguistics*, 1(2): 98-105.

Othman N, Leng KB 2011. The relationship between self-concept, intrinsic motivation, self-determination and academic achievement among Chinese primary school students. *Int J Psychol Stud*, 3(1): 90.

Patrick H, Ryan AM, Pintrich PR 1999. The differential impact of extrinsic and a mastery goal orientation on males and females self-regulated learning. *Learning and Individual Differences*, 11: 153-171.

Pekrun R, Elliot AJ, Maier MA 2009. Achievement goals and achievement emotions: Testing a model of their joint relations with academic performance. *Journal of Educational Psychology*, 101(1): 115.

Roeser RW, Midgley C, Urdan TC 1996. Perceptions of the school psychological environment and early adolescents' psychological and behavioural functioning in school: The mediating role of goals and belonging. *Journal of Educational Psychology*, 88: 408-422.

Ryan RM, Kuhl J, Deci EL 1997. Nature and autonomy: Organizational view of social and neurobiological aspects of self-regulation in behavior and development. *Development and Psychopathology*, 9: 701-728.

Schunk DH 1991. Self-efficacy and academic motivation. *Educational Psychologist*, 26(3-4): 207-231.

Tella A 2007. The impact of motivation on student's academic achievement and learning outcomes in mathematics among secondary school students in Nigeria. *Eurasia Journal of Mathematics, Science and Technology Education*, 3(2): 149-156.

Urdan T, Midgley C, Anderman EM 1998. The role of classroom goal structure in students' use of self-handicapping strategies. *American Educational Research Journal*, 35: 101-122.

Uzbas A 2009. Okul psikolojik danismanlarinin okulda saldirganlik ve siddete yönelik görüslerinin degerlendirilmesi. *Mehmet Akif Ersoy Üniversitesi Egitim Fakültesi Dergisi*, 18: 90-110.

Vallerand RJ, Blais MR, Brière NM, Pelletier LG 1989. Construction et validation de l'échellede motivation en éducation (EME). *Can J Behav Sci*, 21: 323-349.

Vallerand RJ, Bissonnette R 1992. Intrinsic, extrinsic, and amotivational styles as predictors of behavior: A prospective study. *Journal of Personality*, 60: 599-620.

Vallerand RJ, Pelletier LG, Blais MR, Briere NM, Senecal C 1993. On the assessment of intrinsic, extrinsic and amotivation in education: Evidence on the concurrent and construct validity of the academic motivation scale. *Educational and Psychological Measurement*, 53: 159-172.

Vallerand RJ, Pelletier LG, Blais MR, Briere NM, Senecal C, Vallieres EF 1992. The academic motivation scale: A measure of intrinsic, extrinsic and amotivation in education. *Educational Psychological Measurement*, 52: 1003-1017.

Von Bothmer MI, Fridlund B 2005. Gender differences in health habits and in motivation for a healthy lifestyle among Swedish university students. *Nurs Health Sci*, 7(2): 107-118.

Williams GC, Wiener MW, Markakis KM, Reeve J, Deci EL 1994. Medical students' motivation for internal medicine. *J Gen Intern Med*, 9(6): 327-333.