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## School Culture, Basic Psychological Needs, Intrinsic Motivation and Academic Achievement: Testing a Casual Model

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### Abstract

Culture is a common system of beliefs, values and artifacts that the members of a society use it in their relations, and it transfers from one generation to another. The school culture is a system of norms, meanings and values between school members. One of SDT (self-determination theory) components is basic psychological needs that emphasizes on Relatedness, Competence and Autonomy to accomplish the motivation. Motivation involves the processes that energize, direct, and sustain behavior. It seems that school culture, basic psychological needs and motivation has immense effect on academic achievement. The purpose of the present research was to examine the relation between students' perceived school culture, basic psychological needs, intrinsic motivation and academic achievement in a causal model. 296 high school students (159 females and 137 males) in Tabriz, north – west of Iran, participated in this research and completed the students' perceived school culture questionnaire based on Hofstede's cultural dimensions (femininity, uncertainty avoidance, collectivism and power distance), basic psychological needs and intrinsic motivation. The results of the path analysis showed that fulfillment of basic psychological needs and intrinsic motivation has positive effect on academic achievement. Uncertainty avoidance and power distance have also negative effect on fulfillment of psychological needs, but the influence of femininity on this variable was positive. Also, collectivism has no significant effect on it. In general, the findings showed that if school culture supports students' autonomy, they will experience fulfillment of their basic psychological needs, and attain higher intrinsic motivation and academic achievement.

**Keywords:** School culture, Hofstede's cultural dimensions, self-determination theory, basic psychological needs, intrinsic motivation, academic achievement.

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## 1 Introduction

Students' academic achievement is one of the main criteria for evaluating the success of any educational system, i.e. its ultimate goal is fulfilling this issue [1]. Accordingly, educational researchers and psychologists have always considered measuring students' academic achievement and its effecting factors as one of the main variables in education [2]. Stimulus – response approach, in addition to intelligence as a main predictor of academic achievement, has been dominated on educational systems for many years, and no need of saying, it still has a strong effect on them. According to this, teachers use supervision, evaluations and external controls, accompanied by punishment or encouragement, to be confident of his/her students' learning. Therefore, under such a controlling situation, students' feelings of pleasure, eagerness, and interest that formed under the influence of nature of learning, replaced with anxiety, indisposition, tiredness, and alienation. This creates a vicious circle which dictates that students are not mainly interested in studying and learning and teachers should create internal learning by external control [3]. The purpose of the present research was to examine the relation between students' perceived school culture, basic psychological needs, intrinsic motivation and academic achievement in a causal model [1].

## 2 Self Determination Theory

Organistic approaches of motivation in psychology believe that innate characteristics of human nature make him ready to take an active role of involving in social and physical environments. Based on these characteristics, human beings are innately active and creative creatures interested in learning and internalizing knowledge, customs, rituals, and values of his environmental and social life. These innate trends to curiosity and knowledge acquisition could be a resource for educational experts to lead students' learning, growth and academic achievement [3]. One of the main trends in this regard is the self-determination theory (SDT), which is a major one on humans' motivation, emotion and development [4]. SDT consists of three basic elements which called psychological needs: relatedness, competence, and autonomy [5, 6]. Need for relatedness refers to the individual's tendency for the feeling of relation and connection with others, competence refers to the individual's tendency for the feeling of effectiveness in reaching valuable and useful results and autonomy refers to the individual's tendency to begin and regulate his behaviors. Based on SDT, these needs could be fulfilled through the person's involvement in wide range of behaviors that differ from one person to another and one culture to another. Regardless of the way of fulfilling these needs, the main point is that their fulfillment is essential for individuals' healthy development and psychological adjustment in any cultures [7]. If students' basic psychological needs fulfill, they will have higher intrinsic motivation, and academic achievement. Intrinsic motivation has an important basic role in SDT, since it shows the individual's tendency to perform behavioral and psychological activities without any external controls and dependencies [8]. In fact, obtaining intrinsic motivation in learning and leading learning through internal guides is one of the main purposes of education [3]. Carried out Studies indicate positive relationship between intrinsic motivation and academic achievement [8, 9]. Moreover, studies have shown that fulfillment of students' basic psychological needs has positive effect on their academic achievement [10]. Also, researches indicate positive effect of basic psychological needs on intrinsic motivation [11, 12].

## 3 School Culture and Its Dimensions

Based on the self determination theory, environmental and social contexts that provide autonomy for the individuals, lead to fulfillment of basic psychological needs, and in contrast, external controls prevent it [13]. Sadeghi, Amani and Mahmudi [14] divided environmental supporting autonomy into two groups: (a) flexible environments, like supporting teachers' or principal's providing autonomy and (b) stable environments, like organizational culture or school culture. Studies, concerning the effect of environmental

supporting autonomy on fulfillment of students' basic psychological needs, consider more flexible environments such as classrooms i.e. teacher's supporting of students' autonomy [12, 15]. These studies have dealt more with the effect of supporting autonomy in micro level (such as classrooms) on fulfillment of psychological needs and have ignored macro level while, based on the theory of ecological systems, factors of macro level like existing culture in schools could have strong effect on students' beliefs and behaviors [16]. In any educational systems, these environments could be the existing culture at school, the structure of educational system in a country, and in more macro level, the existing culture in that country. School culture is a system of norms, meanings, and values that are common among its members such as students, teachers and other staffs [17]. The main characteristic of culture is its high stability; i.e. it has a very strong resistance against environmental effects, to say in other word, it hardly changes. This characteristic causes the culture to have strong and wide and almost similar effect on various types of students, entering in a specific school [18]. Following Hofstede [19], Akour [20] and Sadeghi et al., [14] have also identified four dimensions for environment cultures in educational systems, such as schools and universities. These dimensions include femininity, uncertainty avoidance, collectivism and power distance. Femininity refers to the extent to which one believes in distinction between gender roles in the society. Uncertainty avoidance concerned with how people face the unknown aspects of future, and referring to the degree of which members of a culture feel danger in vague and uncertain situations. Collectivism deals with the common relationship between an individual and a group in a specific society. And power distance refers to the extent to which less powerful members of institutes and organizations (such as families) accept and expect unequally distributed power [18, 19]. Hofstede's cultural dimensions have attracted special attention of researches in management, organizational behavior and information technology domains [21, 22]. But applying these dimensions in educational researches, especially on students has confronted with some limitations and reviewing literature shows that no study has already dealt with investigation of students' perception of school culture based on Hofstede's cultural dimensions. Based on Hofstede's cultural dimensions, if the culture of an organization, such as school, supports students' autonomy, they will experience fulfillment of their basic psychological needs [14]. For example, in feminine cultures, individuals pay more attention to quality of life and relations with each other. In these cultures, people support each other [18]. They provide many facilities for people to seek their own interests rather than competition with others, and as a result, such cultures put more value on the individual's autonomy, which leads to fulfillment of their psychological needs [14]. In collectivistic cultures, much more social pressure is on empathy. In these cultures more emphasis is on group acceptance, and group values are preferred over personal values and tendencies [14, 20, 21]. This issue increases the rate of environmental controlling in collectivistic cultures and limits fulfillment of students' psychological needs. There are many pre-determined regulations, norms and action structures in cultures with high uncertainty avoidance. Regulations may have negative effects on the individuals' independent judgment and causes the people to have less autonomy. Therefore, cultures with high uncertainty avoidance could be an autonomy controlling environment and have negative effect on fulfillment of individuals' psychological needs [14, 23, 24]. In cultures with high power distance, norms of stability and empathy help stability of power distribution and social order. In these cultures, innovation and autonomy are not promoted. People recognize that social rewards are provided for their empathy, not autonomy. Meanwhile, centralism and presence of hierarchy power in these cultures, extremely, limits the people's power of innovation. People with high power distance respect authority more and have fewer tendencies to challenge the existing knowledge of systems. When the power distance is high in a society, more emphasis is on hierarchical symbols like power distribution, and rewards; and presents opportunities, credits, unequal power distribution and privilege are considered as norms. Since people's performance is a criterion for rewards distribution, they have fewer tendencies toward initiation and innovation. Moreover, low-power people, in such cultures, may feel that they have less resources and opportunities for autonomy and as a result they have less feeling of basic psychological needs fulfillment [14, 23]. Review of research

literature shows that no research has already dealt with the investigation of the relationship between students' perception of school culture based on Hofstede's cultural dimensions with SDT constructs; such as fulfillment of basic psychological needs, and the present research is the first of its kind. Integrating these dimensions in the SDT could be an important step in boasting this theory. Therefore, the present study is the first attempt in testing the effect of cultural dimensions on students' innate psychological processes e.g. their psychological needs. Other researchers, on the other hand, paid more attention to direct environments, like classroom, while Sadeghi et al (2013), proposed the necessity of paying attention to indirect environments [14]. Considering the important role of cultural dimensions in formation of people's personality (Hofstede et al., 2010), investigating how these dimensions effect on people's psychological processes like psychological needs, and its relation with SDT is felt logical [18]. Considering the above mentioned issues, the purpose of the present study is to examine the relationship among students' perceived school culture based on Hofstede's cultural dimensions, basic psychological needs, intrinsic motivation and academic achievement in a causal model. Theoretical model of research has been presented in Figure 1.

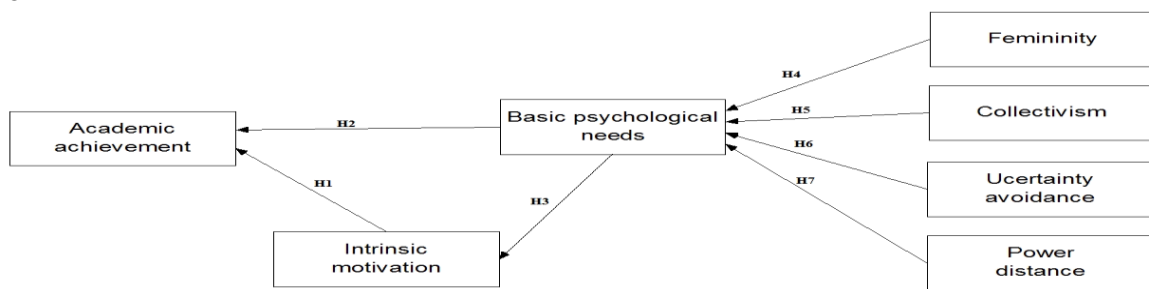


Figure 1: Theoretical model of research

According to the above theoretical framework (depicted above as Fig. 1), the following hypotheses are put forward:

1. Intrinsic motivation has positive effect on students' academic achievement.
2. Fulfillment of basic psychological needs has positive effect on student's academic achievement.
3. Fulfillment of basic psychological needs has positive effect on student's intrinsic motivation.
4. Femininity has positive effect on fulfillment of students' basic psychological needs.
5. Collectivism has negative effect on fulfillment of students' basic psychological needs.
6. Ucertainty avoidance has negative effect on fulfillment of students' basic psychological needs.
7. Power distance has negative effect on fulfillment of students' basic psychological needs.

## 4 Methodology

### 4.1. Research Design

The present research is a correlation one, using path analysis method that investigates causal relationships among seven latent variables of femininity, collectivism, uncertainty avoidance, power distance, fulfillment of the basic psychological needs, intrinsic motivation and academic achievement. Research data have been collected, using a questionnaire that includes two sections: demographic characteristics and items which measure each of variables in theoretical model.

### 4.2. Research Participants and Data Collection

The research population included all male and female high school students in Tabriz Education District 1, in the eastern Azerbaijan province, located in north-west of Iran. The entire population comprised 1852 students, of whom 924 were male and 928 were female. These students came from 14 schools for boys and 8 schools for girls in the academic year of 2012–2013. In order to obtain an appropriate school culture variance, all the schools were included in the study and the questionnaires were randomly distributed to

296 students from all schools. 53.7 percent of participants were females and remaining was male. All of them were bilingual Turkish- Persian students. Mean age of these students was 16.50 years (S.D =1.16). Most of these students (31.8 percent) were studying in third grade. Also, mathematics – physics field of study had the higher number of participants (32.4 percent). Before delivering the research questionnaires, participants were informed about the research purposes briefly and they were told they could avoid from involving in the study whenever they want. In total, answering the items takes no more than 10 minutes. Table 1 represents demographic characteristics of the research sample.

Table 1: Demographic information of research participants (n=296)

Variable	Category	Frequency	Percent of frequency
<b>Gender</b>	Female	159	53.7
	Male	137	46.3
<b>Field of study</b>	Mathematics- physics	96	32.4
	Empirical science	91	30.8
	Human science	53	17.9
	First grade of high school	56	18.9
<b>Educational course</b>	First	56	18.9
	Second	80	27
	Third	94	31.8
	Pre university	66	22.3
<b>Age</b>		Mean= 16.2	S.D=1.16

### 4.3. Measurement Instruments

Academic achievement: to measure academic achievement, students' mean in the first semester of the educational year of 2012-2013 has been used. Basic psychological needs and intrinsic motivation: to measure these variables, the scale used by Carreira (2012) was applied. This scale is comprised of 16 items that measure three psychological needs: autonomy (4 items), competence (4 items), relatedness (4 items) and intrinsic motivation (4 items). Participants responded to items such as "I am willing to participate in this class activities, (Autonomy)", "I fully understand what I have been taught in this class, (Competence)", "I enjoy studying with teachers and classmates in this class, (Relatedness)" and "I study the lessons of this class, because I like to learn new things, (Intrinsic motivation)" on 5-point scale. Carreira (2012) has reported Cronbach's alpha for autonomy (0.84), competence (0.75), relatedness (0.78) and intrinsic motivation (0.91) [25]. In current study these coefficients were (0.80), (0.81), (0.82) and (0.86) respectively. Students' perception of school culture based on Hofstede's cultural dimensions: to measure Hofstede's cultural dimensions, Sadeghi et al (2013) questionnaire was used. Considering that this questionnaire has been designed to measure teachers' perception of school culture, some changes have been made to be consistent with high school students' sample. This scale is comprised of 16 items that measure four dimensions of school culture: femininity (4 items), collectivism (4 items), uncertainty avoidance (4 items) and power distance (4 items). The sample items of this questionnaire were "It is important to help others on the tasks, (Femininity)", "It is better to work in a group than as individuals, (Collectivism)", "If I am uncertain about the responsibilities of a task, I get very anxious, (Uncertainty avoidance)" and "In this school, the teachers make most decisions without consulting students, (Power distance)". All items have been set based on 5 point Likert scale from completely incorrect (1) to completely correct (5). Sadeghi et al (2013) have reported Cronbach's alpha (0.76) for femininity, (0.71) for collectivism, (0.82) for uncertainty avoidance, and (0.87) for power distance. Also In this study these coefficients were (0.81), (0.82), (0.79) and (0.81) respectively [14].

## 5 Results

The statistical analyses, in this section, include descriptive statistics and examination of research hypotheses.

### 5.1. Descriptive Statistics of Variables

Table 2 reports descriptive statistics of variables including mean, standard deviation, skewness and kurtosis. To ensure a fair level of normality of variables, Kline (2011) recommended that the skewness and kurtosis indices should not exceed |3| and |10|, respectively, to ensure that univariate normality is achieved [26]. Considering Table 2, the absolute values of these indices for all variables are lower than 1. So in this study univariate normality is achieved.

Table 2: Descriptive statistics of research variables (n= 296)

Variable	Mean	S.D.	Skewness	Kurtosis
Power distance	3.32	0.96	- 0.35	- 0.45
Uncertainty avoidance	2.89	0.93	0.17	- 0.58
Collectivism	2.86	1.03	0.07	- 0.85
Femininity	3.05	1.08	-0.25	- 0.87
Basic psychological needs	3.42	0.80	- 0.48	- 0.04
Intrinsic motivation	4.05	0.85	- 0.92	0.52
Mean academic achievement	16.05	2.29	- 0.09	- 0.97

In Table 3, correlation matrix of variables has been reported. According to this Table, the power distance, uncertainty avoidance and collectivism have significant and negative relation with basic psychological needs; the relationship between femininity and needs is positive and significant. Academic achievement has positive relation, with basic psychological needs and intrinsic motivation. Also the relation between basic psychological needs and intrinsic motivation is positive and significant.

Table 3: Correlation matrix of the research variables

No	Variable	Power distance	Uncertainty avoidance	Collectivism	Femininity	Basic psychological needs	Intrinsic motivation	Academic achievement
1	Power distance	1						
2	Uncertainty avoidance	0.52**	1					
3	Collectivism	-0.30**	-0.26**	1				
4	Femininity	-0.22**	-0.29**	0.31**	1			
5	Basic Psychological needs	-0.41**	-0.43**	-0.29**	0.36**	1		
6	Intrinsic motivation	-0.19**	-0.22**	0.02	0.15**	0.59**	1	
7	Academic achievement	-0.22**	-0.07	0.14*	0.05	0.40**	0.37**	1

\*P<0.05, \*\*P<0.001

### 5.2. Examination of Research Hypotheses

Maximum Likelihood estimation (ML) has been used to examine research hypotheses and test the model. Because the use of ML estimation requires multivariate normality of the variables, the data for this study



were examined with respect to multivariate normality. Multivariate normality was examined using Mardia's normalized multivariate kurtosis value. The Mardia's coefficient for the data in this study was 3.30, indicating multivariate normality of the data as the value was lower than the value of 63 computed based on the  $P(P+2)$  formula, where P equals the number of observed variables in the model [27]. In order to test the theoretical model, the criteria proposed by Gefen, Straub & Boudreau (2000) were used. These include the following indices:  $X^2/df$ , in which values lower than 3 are acceptable; Goodness of Fit Index (GFI), and Comparative Fit Index (CFI), in which values more than 0.9 indicate fitness of model; Adjusted Goodness of Fit Index (AGFI), in which values more than 0.8 are acceptable; and Root Mean Square Error of Approximation (RMSEA), in which values lower than 0.08 demonstrate fitness of model. Table 4, reports these indices.

Table 4: Goodness of fit indices for tested model

RMSEA	AGFI	CFI	GFI	X <sup>2</sup> /d.f	X <sup>2</sup>	d.f
0.07	0.93	0.97	0.98	2.61	18.30	7

Table 4 indicates that goodness of fit indices for tested model is higher than the values proposed by Gefen, et al (2000) [28]. Therefore, it can be concluded that tested model provides suitable fitness. The results of tested model are shown in Table 5. Considering this Table, 6 of 7 hypotheses have been supported. All hypotheses related to SDT, (i.e. positive effect of fulfillment of basic psychological needs on academic achievement and intrinsic motivation and also positive effect of intrinsic motivation on academic achievement) have been supported. From those hypotheses related to the influence of student's perception of school culture on fulfillment of psychological needs, three hypotheses (i.e. negative effect of power distance and uncertainty avoidance and positive effect of femininity on this variable) have been supported. Finally, the hypothesis related to the effect of collectivism on fulfillment of psychological needs has not been supported. Figure 2 shows tested model of the research.

Table 5: Results of examining research hypotheses

Hypothesis	Causal direction	Beta	t	P	Result
1	Intrinsic motivation >> academic achievement	0.19	2.99	0.003	supported
2	Basic psychological needs >> academic achievement	0.29	4.51	0.001	supported
3	Basic psychological needs >> Intrinsic motivation	0.60	12.89	0.001	supported
4	Femininity >> Basic psychological needs	0.22	4.13	0.001	supported
5	Collectivism >> Basic psychological needs	-0.10	-1.88	0.06	Not supported
6	Uncertainty avoidance >> Basic psychological needs	-0.24	-4.04	0.001	supported
7	Power distance >> Basic psychological needs	-0.21	-3.67	0.001	supported

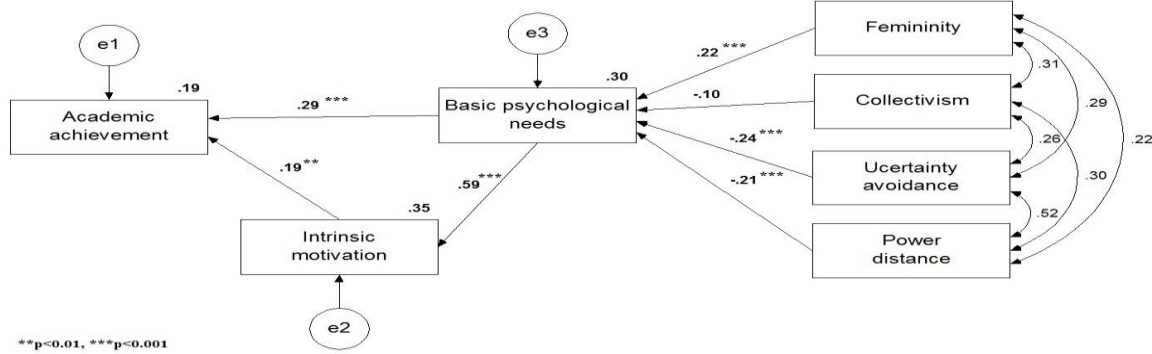


Figure 2: Research tested model

In Table 6, direct, indirect and total effects and explained variance of variables have been reported. According to this Table, fulfillment of basic psychological needs and intrinsic motivation, predicts 19 percent of variance in academic achievement. Basic psychological needs explain 35 percent of variance of intrinsic motivation. And dimensions of power distance, uncertainty avoidance, collectivism and femininity explain 30 percent of variance in basic psychological needs.

Table 6: Direct, indirect and total effects and explained variance of variables

Routes	Direct effect	Indirect effect	Total effect	R <sup>2</sup>
<b>On academic achievement from:</b>				0.19
Intrinsic motivation	0.19	-	0.19	
Basic psychological needs	0.29	0.11	0.40	
Femininity	-	0.09	0.09	
Collectivism	-	-0.04	-0.04	
Uncertainty avoidance	-	-0.10	-0.10	
Power distance	-	-0.09	-0.09	
<b>On Intrinsic motivation from:</b>				0.35
Basic psychological needs	0.59	-	0.59	
Femininity	-	0.13	0.13	
Collectivism	-	-0.06	-0.06	
Uncertainty avoidance	-	-0.14	-0.14	
Power distance	-	-0.13	-0.13	
<b>On Basic psychological needs from:</b>				0.30
Femininity	0.22	-	0.22	
Collectivism	-0.10	-	-0.10	
Uncertainty avoidance	-0.24	-	-0.24	
Power distance	-0.21	-	-0.21	

## 6 Discussion

The purpose of the present research was to examine the relation between student's perception of school culture based on Hofstede's cultural dimensions with basic psychological needs, intrinsic motivation and academic achievement, by means of path analysis. The results showed that constructs of the theory of self-determinate, (i.e. fulfillment of basic psychological needs and intrinsic motivation) could predict academic achievement. Also, the results showed that student's perception of school culture could predict the rate of fulfillment of basic psychological needs. Significant influence of fulfillment of the basic psychological needs and intrinsic motivation on academic achievement indicates that students who feel autonomy, improvement and competence for learning and doing their homework, and have a friendly and intimate relationship in the classroom and more intrinsic motivation and innate interest in learning; showed better



academic achievement. This finding is consistent with theoretical base of the SDT, which proposes that students' fulfillment of basic psychological needs in the classroom, facilitates their self-regulation for learning, academic performance and well being [3]. The findings of the present research are consistent with the results of the researches by Areepattamannil & Freeman (2011); Tanha Rashvanlou & Hejazi (2010); Marshik (2010); Ejei et al (2009) and Hänze & Berger (2007) [8, 9,10,12]. Based on the self-determination theory, fulfillment of basic psychological needs is influenced by the person's life environment, as well as his personality traits [29]. In the present research, one of the most influential environmental factor i.e. existing cultures at school is considered. The research findings showed that students' perception of the school culture effects on psychological needs fulfillment. The research findings show that when students evaluate school environment femininely, this has positive effect on fulfillment of their psychological needs. Presence of social support and paying attention to the other's needs are the main characteristics of feminine cultures [20]. Presence of social support at school leads students to have friendly relations with others and fulfill their need to relatedness. Meanwhile, this support causes them to select their own style and material of learning with more confidence and this, in turn, has positive effect on their autonomy. Also, feeling freedom in selecting activities based on one's own ability and that one learns his/her interested material at school, causes him/her to have more competence. This finding about the positive effect of social support on fulfillment of basic psychological needs is consistent with research findings by Ghalavandi et al. (2013) and Sadeghi et al. (2013) [14,30]. The research findings showed that when students perceived school environment with high uncertainty avoidance, it has negative effect on fulfillment of their basic psychological needs. When uncertainty avoidance is high, there are a lot of limiting norms and rules at school, and school authorities have little confidence in future [21]. Presence of limiting norms at school limits students' innovations and has negative effect on their autonomy need. On the other hand, competence need has close relationship with the belief that the individual could perform a task well. Presence of limitation to do innovative tasks causes these students to feel inability doing such tasks which has negative influence on their competence need. On the other hand, many social norms in such schools leads the students' relations with each other to be systematic and become more like a role playing, it means that instead of having intimate relations with others, they just play a role dictated by culture, which has a negative influence on the need to relatedness. The research results showed that when students perceive school environment with high power distance, it has negative effect on fulfillment of their basic psychological needs. From the students' point of view, presence of high power distance at school indicates the unequal distribution of power and in comparison to them, teachers have more power. This means that teachers make more decisions for them and have distance with them [21]. Teacher's decision-making for students cause them; 1) to feel that they have less autonomy to select their way of learning and doing homework and this, in turn, has negative effect on fulfillment of need to autonomy, and 2) to accept that they don't have competence to decide for themselves. Additionally, not giving responsibility to perform their main tasks, leads fulfillment of competence need to be decreased. On the other hand, the presence of distance between teachers and students causes them to be less intimate with each other and their need to relatedness is overshadowed. The findings of this research are consistent with the results of a research by Sadeghi et al. (2013) in that they examined teachers [14]. The findings of the present research showed that collectivism don't have significant influence on fulfillment of basic psychological needs. Individualistic cultures put more emphasis on initiation which leads to support individuals' autonomy by the environments. Collectivistic cultures provide more social support for the person and as it was indicated above, social support leads to fulfillment of psychological needs. Generally, the research findings put emphases on presence of autonomy, promotion of innovation and initiation, friendly relationship of teachers and students and valuating them as competent people and also social support at the school environment and its positive effect on students' needs. These findings support the SDT and show that presence of supporting autonomy at school environment, and in smaller environments like the classroom could have strong influence on students' psychological needs. Since STD theory has

already ignored the effect of wide and more stable constructs like culture on students, these findings could be an expansion to it in education. Considering findings of the present research and statement of Hofstede et al (2010), on relative stability of culture, it could be said that the rate of fulfillment of students' psychological needs is influenced by flexible and relatively stable aspects of the environment and personality traits [18]. Flexible aspects of the environment includes the amount of teachers' support for their students at the present time and its relatively stable aspect includes school culture that is inherited by students from previous generations, has strong influence on students' behavior style in that environment. As it was mentioned, researchers consider the culture as relatively stable part of the environment that is almost sustainable against changes. Therefore, to make the research results applicable, special attention should pay to the school principals' role as macro decision- makers at school level. Regarding strong influence of the culture on students' motivation at school, it is necessary for principals to consider the evaluation of school culture. If the school culture focuses on presence of cooperation and collaboration among students and teachers, high social support, and promotes innovation, and at the same time has less uncertainty avoidance and low distance, it is necessary for principals take action to maintain and improve such kind of culture. These actions could include improvement of collaboration among students, less focus on competition, creating teachers' and students' constructive comments space, and also improvement of creativity and innovations. If school culture has less focus on collaboration and cooperation and there is high power distance and uncertainty avoidance, in addition of taking the above actions, it is essential for principals to try to create and improve confidence between teachers and students. In fact, confidence, gives feeling of being accepted as a constructive member of an organization. This causes the person to have a good and intimate cooperation with the organization, as well as creating positive emotions toward it.

## 7 Conclusion

The present research is the first one of this field, examining the relationship between school culture based on Hofstede's cultural dimensions and the student's basic psychological needs. In this study, school culture was assessed in individual level, and the results showed that students' perception of school culture in the same school could be different, it could be said that several factors effect on these differences. Based on Hofstede's perspective, these factors could be classified into two groups: personality traits and cultural values [18]. Personality traits indicate the people's innate tendencies to perceive a phenomenon, and cultural values show presentation of society norms and values in the people's minds, and both of these factors affect the way of individuals' perception and behavior. A research recommendation could be the examination of the way in which personality traits and cultural values effect on students' perception of school culture. Also, in this research, students' beliefs about school culture were considered. So, other research recommendation is to examine the effect of culture of different schools on students' basic psychological needs fulfillment by HLM. By using this method, one can evaluate if culture of other schools could predict fulfillment of students' psychological needs. Since this research is a correlation one, we can infer cause and effect based on the theory, but to study the effect of independent on dependent variable, we need experimental research. For example, by using intervention methods, we could examine the effect of managerial methods of school principals, e.g. the rate of trust making, improvement innovations and creativity, and methods of increasing group involvement in changing school culture and students' or teachers' psychological needs. Since the studied sample in the present research was high school students in Tabriz, Iran, generalization of the findings to the students of other cities and countries is limited. To increase the generalizability of the results of this research, repetition of research with other groups of school and university students is recommended.

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