

The relationship between happiness, meta cognitive skills (self- regulation, problem- solving) and academic achievement of students in Tehran

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Abstract: The aim of this study was to investigate the relationship between happiness, meta cognitive Skills and academic achievement of students at state universities in Tehran. Sample was 100 students both of gender. Sampling was available. Method of research was descriptive correlation. Tools of research were 1-Oxford happiness scale consists of 29 statements in which five domains of life satisfaction, positive effect, health, and self-efficacy and Self-esteem can be evaluated, its reliability was .93. 2- Meta cognitive Skills Test which only one of its sub-scales related to self-regulation skills was chosen, its reliability was calculated as .95. 3- Eysenc logical Test, which only one of its sub-scales related to problem-solving was chosen and through retest its reliability was estimated at .98. 4- To evaluate the academic progress of students, the students' average score was used as an evaluation criterion. Descriptive statistics, Pearson's correlation and Regression tests were used for data analysis. Data indicated significantly positive relation between 3 variable ($p \leq 0.05$) in which happiness could predict academic achievement & problem- solving, self- regulation of Students and moreover, keep them away from depression and other mental and physical disorders

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1. Introduction:

In recent decades, many researchers and writers have shown interest in the subjects of joy, happiness and life satisfaction (Myers 2002). It seems that the focus of studies has shifted from human pains and sufferings to life satisfaction and happiness. However, these studies on happiness are still in the early stages (Schimmel, 2009). In the distant past, people's understanding of happiness was synonymous with luck. It means an external force would leave an impact on the person and would

prompt him/her to do something. Concurrent with the Age of Enlightenment this belief went through radical changes. In this age the common belief was that reasoning and personal responsibility was to such an extent that people were able to determine their own destiny, without any dependence on a ruler. Therefore, the concept of happiness turned into a concept which was accessible to everyone and at any given time and space. The fact that we can be happy, can wish to be happy and have to be happy, made happiness a value for communities and formed the basis of the public welfare system of our

communities (McMahon 2006). According to Veenhoven (1996) happiness is defined as the rate or the degree of life desirability for a person. In other words, happiness means how much a person enjoys his/her life. Bostic (2003) has introduced happiness as an inner experience with profuse energy. The source for happiness energy is derived from itself. This energy originates from internal sources rather than threats by people in the environment of origin. Happy people feel more secure, decide easier, have a higher sense for cooperation and feel more satisfied compared to those who live with them (Myers, 2002) they enjoy better physical and mental health, have greater longevity, and are more successful in their jobs and society (Frisch, 2006).

Diener (2001) believes a happy man lives an objective life, makes calculated choices about their goals and puts a lot of effort to materialize them. Avoiding wasting time, positive approach to life and the hope of success in life trigger success in their life (Ghazanfari quoted as saying, 2006).

Happiness is comprised of a number of factors such as quantitative satisfaction with life, satisfaction with certain categories of life, the existence of plenty of positive emotions (pleasant moods and emotions) and the relative absence of negative emotions (unpleasant moods and emotions) (Eddington and Shuman, 2004), Diener, 2005.

Metacognition, as viewed by Flavel (1979), is any knowledge or cognitive activity which revolves around recognition and regulating aspects of it. In other words, metacognition is the knowledge about knowledge. Flavel believes organizing and coordinating cognitive processes are among the tasks of metacognition (Lotfabadi 1994, Abdoos quoted as saying 2001). Lefrancois (1995) considers metacognition as the ability which enables a person to deeply reflect the growth of recognition in human beings and helps them facilitate learning by organizing the data (Abdoos quoted as saying 2001). Problem solving has been studied by cognitive psychologists as a cognitive process. In general, cognitivists believe in consecutive and fixed stages in solving problems. In their opinion, the problem solver must understand the difference between the current state of affairs and the desired state. In fact, the desired situation is the goal and the person who is solving the problem takes the responsibility for a series of mental actions to resolve the issue (Seif 2004).

Mahya Poor (1998) has conducted a research on the effects of competition on performance in problem solving and the motivation of secondary school

students. The results showed that the use of rewards and extrinsic motivation reduces the intrinsic motivation of earners in attractive activities. They also studied background factors to assess gender, intelligence and social interaction in the use of meta cognitive skills.

Caren and Carens (1991) by presenting a model in the form of study skills engaged in teaching self-education and paid their attention to the students' awareness of meta cognitive skills and strategies of learning while pursuing the training. After the training, the results showed that the study skills and academic achievement of students in the experimental group had a significant improvement compared to the control group (Abdoos quoted as saying 2001).

Ashya and Ashya (1994) in a componential analysis of metacognition on reading comprehension, has examined the relative effects of awareness of reading goals and self-regulation strategies on reading comprehension. The results showed that in the reading goals section the students had a better function with self-regulation strategies (Abdoos quoted as saying 2001).

Salari Far (1996) in a study investigated the role of meta cognitive components on problem-solving function and academic achievement of secondary school students. The results showed that the problem solving is related to meta cognitive knowledge. The higher the meta cognitive knowledge, the better the problem solving function and academic achievement (Abdoos quoted as saying 2001).

Academic achievement is one of the aspects of progress in education system and it means success of students in passing the basic courses of a particular grade or success in learning the educational syllabus (Bagherzadeh Golmakany, 2005) (Farahani 1994), Malek Malekan quoted as saying 1999). The following factors have been cited as the best predictor of academic achievement:

- (A) Internal (individual) factors, including: intelligence, motivation, self-perception, self-esteem, self-efficacy and place of control.
- (B) External (environment) factors, including: family, teachers and the way they communicate with students, educational equipment and space.

(Jackson, Wiz & Lundquist, 2003) concluded that happiness is directly related to adaptive functions such as psychological adjustment, physical health, and problem solving skill. Furthermore, happiness is highly correlated with the academic performance and other measurement scales.

Petengele (2002) in a study along with 600 students at Indiana Wesleyan University examined the relationship between happiness, College Student Inventory (CSI) and spiritual health surveys. The result of the study showed that there was a significantly positive relationship between happiness and success in academic tests and the spiritual health of students. So, happiness, as a measurable structure, is a critical component in the success of students in facing the challenges of transferring to the college community.

Snider (2005) in a study on new students assessed their academic achievement during a period of 6 years. The results showed that there is a correlation between happiness and the graduation of students. Test subjects in the GPA category scored higher than students who are less happy. They also had the highest graduation rates and the lowest rates of academic failure. (Jackson, 2005) believes happiness is directly related to academic stressors. Happiness causes positive interactions and active confrontations and it has a reverse relationship with avoidance strategies and lack of engagement.

Benson (2006) in a review of studies related to happiness says higher levels of happiness, is not only linked to academic success in elementary school, high school and college, but also it has a positive and significant relations with athletic performance, physical and psychological health, higher self-esteem, positive thinking and extraordinary social interaction. Taking into consideration the existing records and because there are reports about depression, substance abuse, and academic failure in colleges, we feel there is a need to pay attention to the mental health of students through examining emotional issues such as happiness, optimism, sense of security, sense of participation in decision-making

and problem solving skills in a way they would gain a valuable feeling and have a relatively higher feeling of life satisfaction.

2. Methodology

This research is descriptive and correlation type. The study population consists of undergraduate and graduate students from universities in the city of Tehran who were enrolled in the 2010-11 Academic Year. The study sample consists of 100 undergraduate and graduate students from universities of Tehran, Allameh Tabatabai and Tarbiyat Moallem who were selected through sampling of different fields of study.

2.1. Tools

1 - Oxford Happiness Scale, a Revised Form: This scale was prepared by Argyle, Martine & Crossland (1989) and was revised in the year 1998. The scale consists of 29 statements in which five domains of life satisfaction, positive affect, health, and self-efficacy and Self-esteem can be evaluated. Cronbach's Alpha Reliability Coefficient of /93 is calculated (Argyle is quoted as saying, 2001).

2- Meta cognitive Skills Test with 19 questions which includes 7 questions in the area of evaluation skills, 7 questions in the area of designing skills and 5 questions on adjustment expertise and the questions were only related to self-regulation skills. Its reliability was calculated as /95.

3- Eysenc logical Test, which has 8 subsets each of which has 40 questions and only one of its sub-scales related to problem-solving was chosen and through retest its reliability was estimated at /98.

4-To evaluate the academic progress of students, the students' average score was used as an evaluation criteria.

2.2. Statistical analysis

Table1: the results of frequency according to Academic field

Academic field	Frequency
Humanities	65
Basic sciences	35
Total	100

Table2: the results of frequency according to gender

gender	Frequency
female	61
male	39

Table3: the results of percentage and frequency according to students' average score

average score	Frequency	Percentage
Under 15	17	17
15-17	39	39
17-20	44	44
Total	100	100

Table4: the results of mean and standard deviation of happiness subscales, self- regulation, problem- solving and academic achievement

variable	Mean	SD
Life satisfaction	24/95	6/46
Positive effect	18/83	4/63
health	14/75	3/87
self-efficacy	8/73	2/32
Self-esteem	6/82	1/24
Total happiness	67/71	13/49
self- regulation	15/54	3/54
problem- solving	67/8	15/5
academic achievement	4/64	16/91

Table5.the Pearson correlation coefficient between happiness, meta cognitive skills& academic achievement

Variables	happiness	self- regulation	problem- solving	academic achievement
Happiness	1			
Self- regulation	0/49	1		
Problem- solving	0/45	0/43	1	
Academic achievement	0/72	0/50	0/43	1

Table6: stepwise regression model for Analysis of Variance

Variables	SS	DF	MS	F	P	R	R2
Regression 1	8547.25	3	8547.25	536.5	.005	.84	.68
Remainder	30359.2	96	157062				
Regression 2	75194.242	2	7519424	368.4	.005	.80	.64
Remainder	39723.1	97	215.5				
Regression3	352879.9	1	52879.9	89.3	.005	.65	.38
Remainder	2521.43	98	229.46				

2.3. Results

Descriptive statistics indices such as: Frequency, Percentage, Mean, Standard Deviation, Minimum and the Maximum were taken into concern. Pearson's correlation and regression tests were used for data analysis. The results were reported significant at the P value less than to equal to 0.05 ($p \leq 0.05$). As shown in table 1, the 65 % of subjects are Human Sciences and 35% are basic Sciences. As indicated in table 2, the max of subjects is female and the minimum of that is for male 39%. As shown in table 3, the max of average score in subjects is 17-20 and the minimum of that is for under 15. As it is indicated in Table 4, the max of mean in happiness subscales is for life satisfaction 24.95 and the minimum of that is for self esteem 6.82 and also the max of mean in meta cognitive skills subscales is for problem- solving 67.8 with $SD = 15.5$. As shown in table 5, there is a positive correlation between happiness, meta cognitive skills & academic achievement. According to the results of Table 6, .68 of academic achievement variable is determined by the happiness variable. $R^2 = .68$. Furthermore, predictor of regression coefficient shows that happiness can significantly determine students' academic achievement. As it is also indicated in Table 6, .64 of self- regulation variable is determined by the happiness variable. $R^2 = .64$. Furthermore, predictor of regression coefficient shows that happiness can significantly determine students' self- regulation as one of the meta cognitive skills. As it is also indicated in Table 6, .38 of problem- solving variable is determined by the happiness variable. $R^2 = .38$. Furthermore, predictor of regression coefficient shows that happiness can significantly determine students' problem- solving.

3. Discussion

The aim of this study was to investigate the relationship between happiness, meta cognitive Skills and academic achievement of students at state universities in the city of Tehran. Research data suggest a positive and significant relationship between the components of happiness and meta cognitive skills on the one hand and academic achievement at a significant level ($p \leq 0.05$) on the other hand. It means students who have the power of meta cognition, such as problem-solving and self-regulation skills, do not resort to escape, avoidance, or merely competition procedures when faced with challenges, because they enjoy cognitive and meta-cognitive abilities. Because of their understanding

and good command of their environment, they make sound and useful evaluations of themselves and have a sense of self-efficacy and have a relatively higher self-esteem and, moreover, keep themselves away from depression and other mental and physical disorders. The findings of this study are consistent with researches carried out by Jackson (2005), Petengele (2002) Jackson, Wiz & Lundquist (2003), and Benson (2006) and Snider (2005). It should be noted that there is a reverse relationship between happiness and meta cognitive skills and anxiety. Researches by Taghizadeh (2008) Salari Far (1996) support these findings.

Restriction: Not including students of other fields of study, especially art students.

Suggestion: Making the syllabus applied based on problem solving and self-regulating skills, especially in the fields of science.

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