International Journal of Schooling *www.ijschooling.com*
Vol. 1, No. 1, Spring 2019 *Print ISSN: 2588-6703*
Pp. 17-26 *Doi: 10.22034/ijsc.2019.86923*

The Influence of Positive Affect on Students Motivation in both Sport and Academic Achievement

Mohammad Javadipour[*1], Azadeh Fadavi Roodsari[2], Monireh Ali[3], Fatemeh Abadi[4]

[1] Associate Professor, Faculty of Psychology and Education, University of Tehran, Tehran, Iran

[2] Ph.D Student, Faculty of Psychology and Education, University of Tehran, Tehran, Iran

[3] Senior expert, Iran Ministry of sports and Youth, Tehran, Iran

[4] Curriculum Ph.D Student, Faculty of Psychology and Education, University of Tehran, Tehran, Iran

Abstract

Background: positive emotion causes to pleasure and increases the potential enjoyable activities because it is believed that positive emotion can influence the job motivation, as more important duties have more motivation.

Objectives: this research studies the effectiveness of positive affect induction on the students' motivation in sport and the role of increasing this motivation on Tehran high school students' academic achievements.

Methods: In this study the population included all Tehran high schools. Harter's classroom affect and motivational scale and the Sport Motivation Scale (SMS) were used as the instruments. Generally, 4 groups of students have been chosen. In 3 groups of positive affect induction, the first group watched a comic movie, the second group received a gift and the third group listened to a joke, while the control group didn't receive any change. Again the students' academic achievement motivation and their motivation in sport were tested.

Results: the results showed that positive affect induction had increased the boys' academic achievement motivation significantly but had no effect on the girls'.

Conclusions: This study showed that when the motivation in sport increases the academic achievement motivation increases as well.

Keywords: positive affect induction; academic motivation; sport motivation; high school students, student's motivation.

[*] corresponding Author Email: *javadipour@ut.ac.ir*

Introduction

The importance of studying on positive affect was revealed since 1973 when the word 'happiness' entered the psychological researches literature for the first time and then at the beginning of twenty first century and the advantage of the positive psychology movement, it got to its height (Seligman & Csikszentmihalyi, 2000). These movements led to the conduct of different researches on positive affect field and its influence on various factors (Argyle & Lu, 1990). Studies showed that positive affect improves creation, cognitive flexibility, and efficiency in decision making, solving problem and the other indexes of useful thinking (Ambady & Gray, 2002).

In Mood Induction Procedure too much attention is paid to the relations between cognition and emotion. This method tries to produce affection and pleasant & positive emotion through positive illustration, repeating the positive and empathic statements, and creating a happy facial expression so that it could lead to improvement of happiness (Rouhani & Aboutalebi, 2011). The findings show that positive and negative affect induction influence on behavioural and cognitive performance. Frederickson believes that practical and intellectual tendency is one of the ways through which emotions can guide the behaviour and information processing (Frederickson, 2001). All the above studies show that positive emotion causes to pleasure and increases the potential enjoyable activities because it is believed that positive emotion can influence the job motivation, as more important duties have more motivation. In learning environments, academic motivation is referred to the behaviours which are related to learning and development. As a whole different motivation theories have agreed that there is a positive relation between the students' academic motivation and their academic performance(Pintrich, 2004).

Deci and Ryan (Deci & Ryan, 2002) have represented a strong relationship between academic motivation and academic achievement. Academic achievement is in counterpoint to academic failure and burnout (Narimani, AlisariNasirloo, & Moosazadeh, 2014). Deci and Ryan's self-determination theory (SDT) is the most famous one on motivation. According to this theory motivation rarely includes the same phenomenon. People are different not only in their level of motivation but also in its directions and kinds as this conflict in kinds of motivation is related to basic ideas and goals in doing the work. According to SDT, people's performance can be as a result of either their intrinsic, extrinsic motivations or amotivation. Intrinsic motivation means people are motivated from within, by interests, curiosity, care or abiding values and refers to doing an activity simply for the enjoyment of the activity itself- just the activity is important (Deci & Ryan, 1985). The intrinsic motivation itself contains engaging in an activity for understanding, accomplishing or obtaining stimulating experiences. The extrinsic motivation refers to doing something because it leads to a separable outcome and thus contrasts with intrinsic motivation. The extrinsic motivation contains integrated regulation, interjected regulation and external regulation. Amotivation is the state of lacking an intention to act i.e. a person's behaviour lacks intentionality and a sense of personal causation (Deci & Ryan, 2002). Lyubomirsky, King and Diener studied the advantages of positive affect. The results showed that positive affect and happiness accompany and precede the success. They presented that the students' self-efficacy has a relationship with their academic motivation and when their self-efficacy increases, the academic motivation will also increase quickly (Lyubomirsky, King, & Diener, 2005).

This research is going to increase the students' motivation in sport by positive affect induction so that their academic motivation could also increase as a result of their motivation in sport and physical health. Considering the students as our future hopes in the country, we can improve the introduction of their growth in sport field through creating their motivation in sport. In this way through creating sport sprit and public health and training the students' sport talents in early ages; we can improve them in both national and international sport activities.

Objectives

This research studies the effectiveness of positive affect induction on the students' motivation in sport and the role of increasing this motivation on Tehran high school students' academic achievements.

Method

The population of this research included all Tehran first level high schools and the samples have been selected by Random Cluster Sampling. First among all 23 Tehran educational districts, we selected four districts randomly. Then referring to Morgan sampling table we chose 357 students. Estimating these 400 students equally among four districts we chose 50 girls and 50 boys separately from each girls and boys high school. The selected districts were numbers 8, 2, 9 and 18.

Then a girls and a boys' high school were selected in the list of the first level high schools in 4 districts. Using each high school headmaster's support, we could select 50 of their students. All of these students answered both academic motivation and motivation in sport questionnaires. The questionnaires were graded and in each school 20 students whom had gained the lowest scores in both questionnaires were selected and put randomly in four groups.

In the first group the positive affect induced through watching a 30-minute movie. In the second group the positive affect induced through listening to a joke. In the third group the positive affect induced through receiving a gift (stationery). The fourth group (the control group) didn't receive any change. Then again both academic motivation and motivation in sport tests repeated.

Harter's classroom affect and motivational scale and The Sportal Motivation Scale (SMS) questionnaires were used in the research. The Sportal Motivation Scale (SMS-28) was designed by Pelletier (1995) based on Deci and Ryan's (1985) self-determination theory (SDT) in order to study the intrinsic, extrinsic motivations or amotivation in sport (ShabaniBahar, Erfani, & Hekmati, 2013). The students should respond the questionnaire in a seven–level Likert scale (doesn't correspond at all = 1 to corresponds exactly = 7) in order to show the role of each item in sport activities. The test contains 7 sub-scales (4 items for each of them) as: Intrinsic motivation - to know, intrinsic motivation - to accomplish, intrinsic motivation - to experience stimulation, extrinsic motivation – identified, extrinsic motivation – interjected, extrinsic motivation - external regulation, and motivation. Bahari reported the Cronbach's alpha coefficients 0.74 to 0.8. (Bahrani, 2009). Harter's classroom affect and motivational scale has designed and validated mainly to be used in high schools and universities and is used frequently in national researches as well. Harter's scale is one of the few motivational scales which can be used in elementary schools too. Harter's classroom affect and motivational standard scale contains 33 items ant it aims to assess the students' academic motivation.

The validity of Harter's modified scale was confirmed through significant correlation between intrinsic motivation and the teacher's reports on intrinsic motivation. There was also a significant correlation between intrinsic and extrinsic motivations and their sub-scales and two objective indexes of academic achievement such as: the exam scores and the academic achievement scores (Wubbels, Brekelmans, & Hooymayers, 1991).

Results

The pre-test and post-test scores in all four girls and boys students groups (movie group, gift group, joke group and the control group) were analysed by SPSS software. The quality of the model was studied to compare the means of more than two groups and to use analysis of covariance (ANCOVA). Examining the hypothesis of normality by Kolmogrov-Smirnov Test resulted to the following table information.

Table 1. One - Sample Kolmogrov- Smienov Test

		Post sport	Post edu
N		160	160
Normal Parameters[a.b]	Mean	101.14	116.19
	Std. Devition	14.736	29.337
Most Extreme	Absolout	0.061	0.060
Difference	Positive	0.054	0.045
	Negative	-0.061	-0.060
Kolmogorov- Smornov Z		0.770	0.756
Asymp . Sig. (2-tailed)		0.594	0.617

a. Test distribution is Normal

As table 1 shows the hypothesis of normal distribution for both motivation in sport and academic motivation was examined by Kolmogrov-Smirnov Test. In significance 0.59 for the first and 0.62 for the latter, the hypothesis of normality in 0.05 significance level isn't rejected for both variables.

Leven's test was used to examine the homogeneity of variance (homoscedasticity) and the results showed that the hypothesis of stable variance for both variables (motivation in sport and academic motivation) among different positive affect induction approaches in 0.05 significance level isn't rejected. To examine the hypothesis of Independence errors the Standard Residual vs. Predicted Value Diagram was used and showed that that the error variances were stable.

ANCOVA method was used to study the influences of different positive affect induction approaches on academic motivation.

Table 2 resulted by ANCOVA method to study the influences of different positive affect induction approaches on academic motivation (test statistic: 1.512 and significance level: 0.214) shows that the influences of different positive affect induction approaches on academic motivation in 0.05significance level isn't accepted. It means that none of the positive affect induction approaches increase the academic motivation significantly. Using ANCOVA method to study the influences of different positive affect

induction approaches on motivation in sport was also resulted to the following information in table 2.

Table 2. Tests of Between – Subjects Effects, Dependent Variable: post edu and

Tests of Between – Subjects Effects, Dependent Variable: post sport

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	79160.686[a]	8	9895.086	25.908	0.000
Intercept	4623.070	1	4623.070	12.102	0.001
Preedu	62525.486	1	62525.486	163.680	0.000
Sex	1224.159	1	1224.159	3.205	0.075
method	581.849	3	193.950	0.508	0.678
sex* method	1732.767	3	577.589	1.512	0.214
Error	57681.689	151	381.998		
Total	2296768.000	160			
Corrected	13642.375	159			
Total					

a. P Squared = .578 (Adjusted R Squared = .556)

Tests of Between – Subjects Effects, Dependent Variable: post sport

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	10716.895[a]	8			
Intercept	13693.611	1	1339.612	8.496	0.000
presport	7678.960	1	13693.611	86.843	0.000
Sex	1357.406	1	7678.960	48.699	0.000
method	831.310	3	1357.406	8.608	0.004
sex* method	1053.703	3	277.103	1.757	0.158
Error	23810.080	151	351.234	2.227	0.087
Total	1670034.000	160	157.683		
Corrected Total	34526.975	159			

a. R Squared = .310 (Adjusted R Squared = .274)

Using ANCOVA method to study the influences of different positive affect induction approaches on motivation in sport (test statistic: 8.608 and significance level: 0.004) shows that gender influences the motivation in sport. The student t-Test was used to study that which one of the groups- girls or boys- is influenced by the positive affect induction approaches. The t-Test statistic: 2.047 and significance level: 0.042 shows a significant difference between the two groups- girls and boys. As in post-test motivation in sport, the academic motivation means equal 103.47 for boys and 98.75 for girls so after inducing the positive affect approaches, motivation in sport influences the boys more. Therefore we are going to study

the influence of different positive affect induction approaches on boys' sport and academic motivation as follow:

Using ANCOVA method to study the influences of different positive affect induction approaches on boys' motivation in sport was resulted to the following information in table 4:

Table 3. Tests of Between – Subjects Effects, Dependent Variable: post sport

Source		Type III Sum of Squares	Df	Mean Square	F	Sig.
Intercept	Hypothesis	2407.588	1	2407.588	16.749	0.000
Error		11111.749	77.300	143.747[a]		
Presport	Hypothesis	7781.395	1	7781.395	56.133	0.000
Error		10396.855	75	138.625[b]		
Method	Hypothesis	1117.655	3	372.552	2.687	0.052
Error		10396.855	75	138.625[b]		

a. 0.022 MS (method) + 0.978 MS (Error)

b. MS (Error)

Table 4 resulted by ANCOVA method to study the influences of different positive affect induction approaches on boys (test statistic: 2.687 and significance level: 0.05) shows that the influence in 0.05 significance level is significant.

Now that we know these positive affect induction approaches have influences on motivation in sport, so we use Tukey Test to find the most influential approach. Among all the three induction approaches, telling joke approach has the most influence on boys. The following results show the use of regression method to study the influences of different positive affect induction approaches on boys (Table 4).

Table 4

The use of regression method also shows that the influence of telling joke approach on boys in 0.05 significance level is significant. The following regression method also shows that telling joke approach has the most influence on bovs.

$$\text{sport} = 96.75 + 61\ \text{film} + 6.75\ \text{gift} + 13.3\ \text{joke} \qquad (1)$$

The t statistic: 2.719 to study the influence of telling joke approach on boys' motivation in sport shows that the influence in 0.05 significance level is significant among boys and the other positive affect induction approaches like Gift and Movie with statistics 1.38 &1.25 in order aren't significant in 0.05 significance level. In regression method the big number of coefficient in telling joke approach shows the same result.

Studying the influence of motivation in sport on academic motivation by regression method (table 7).

Table 5

Using regression method to study the influence of motivation in sport on academic motivation (F statistic: 5.951) shows that the regression method is significant in 0.05 significance level and R= 0.26 shows about %30 changes of motivation in sport on academic motivation changes.

The regression method is as follow

$$edu = 79.907 + 0.437\ sport \quad (2)$$

Discussion and Conclusion

The results of this research shows that positive affect induction increases academic motivation and the increase in motivation in sport and positive affect induction designs a model which predicts the academic motivation increase.

The regression method to study the influence of positive affect induction approaches among boys (R = 0.3) shows that just about %30 changes in motivation in sport is caused by the three induction approaches and probably there are more influential variables which their influences should be studied.

The regression method to study the influence of motivation in sport on academic motivation also (F statistic: 5.951) shows that the regression method is significant in 0.05 significance level while R = 0.26 shows about %30 changes of motivation in sport on academic motivation changes. This small number shows that there are also other variables which influence the academic motivation and need to be examined. Because of the small number we can't predict but we can just express that the influence of motivation in sport on academic motivation is significant.

Different researches have studied the relationship between academic motivation and academic achievement for years (Seligman & Csikszentmihalyi, 2000, Argyle & Lu, 1990). So those items which increase the academic motivation will increase the academic achievement as well. Also academic achievement is in counterpoint to academic failure and burnout (Narimani et al., 2014). Wubbels, Brekelmans and Hooymayers indicated that positive emotion increases emotional and cognitive successes and decreases the probability of academic burnout so it has a negative correlation with academic burnout (Wubbels et al., 1991).

The findings of this research indicate that the positive affect induction increases the students' academic motivation and as a result of the increase in their motivation in sport and happiness, academic motivation will also grow. This research reveals the necessity of the educational organization managers' attention to design the plans which use the psychological aspects to increase happiness, intimacy and positive mood and influence on students' academic achievement improvement. Considering the students as our future hopes in the country, we can improve the introduction of their growth in sport field through creating their motivation in sport. In this way through creating sport sprit and public health and training the students' sport talents in early ages; we can improve them in both national and international sport activities. Consequently with their better physical health and improving sport sprit and team work among them, we can empower their academic achievement motivation in order to have aware, efficient, and educated students in future.

Footnotes

Authors' Contribution: Study concept and design: Javadipour; analysis and interpretation of data: Javadipour and Fadavi Roodsari; collecting data: Abadi and Fadavi Roodsari; All of the authors participated in writing the manuscript.

Financial Disclosure: The authors report no conflicts of interest.

Funding/Support: This study is supported by the Tehran University Postgraduate Research Grant in department of psychology & education in 2014 (project number: 29955-1).

References

Ambady, Nalini, & Gray, Heather M. (2002). On being sad and mistaken: Mood effects on the accuracy of thin-slice judgments. *Journal of Personality and Social Psychology, 83*(4), 947-961. doi: 10.1037//0022-3514.83.4.947

Argyle, M., & Lu, L. (1990). The happiness of extraverts. *Journal of Personality and Individual Differences, 11*, 1011-1017.

Bahrani, M. (2009). The Study of Validity and Reliability of Harter's Scale of Educational Motivation. *Alzahra University Journal of Psychological Studies, 5*.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.

Deci, E. L., & Ryan, R. M. (2002). *Handbook of self-determination research*. Rochester, NY.

Frederickson, BL. (2001). The role of positive emotions in positive psychology Am Psychol. *Am Psychol, 56*(3), 218-226.

Lyubomirsky, S., King, L., & Diener, Ed. (2005). The Benefits of Frequent Positive Affect: Does Happiness Lead to Success. *Psychological Bulletin, 131*(6), 803-855.

Narimani, M., AlisariNasirloo, K., & Moosazadeh, T. (2014). Comparing the Effectiveness of Focused Training on Excitement, Impulse control on Academic Burnout and Positive and Negative Training Emotions in Students with Learning Disabilities. *Journal of Learning Disabilities, 3*(10), 79-99.

Pintrich, P.R. (2004). A conceptual framework for assessing motivation and self-regulating learning in college students. *Educational Psychology Review, 16*(4), 385-407.

Rouhani, A., & Aboutalebi, F. (2011). Investigating the Effectiveness of Mood Induction styles in Increasing the Happiness of the Staff. *Seasonal Journal of Modern Industrial/Organizational Psychology, 2*(6).

Seligman, E.P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist, 55*(1), 5-14. doi: 10.1037/0003-066X.55.1.5

ShabaniBahar, Gh., Erfani, N., & Hekmati, Z. (2013). The Relationship Between Motivation in sport and Career Success rate among employees at General Organization of Education in Kermanshah Province. *Practical Studies in Sport Management, 2*(3 (serial 7)), 11-22.

Wubbels, Theo, Brekelmans, Mieke, & Hooymayers, Herman. (1991). Interpersonal teacher behavior in the classroom.

Table 4. Multiple Comparisons, Dependent Variable: post sport, Tuky HSD

(I) method	(J) method	Mean Difference (I.J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Movie	Gift	-0.65	4.891	0.999	-13.50	12.20
	Joke	-7.20	4.891	0.459	-20.05	5.65
	None	6.10	4.891	0.599	-6.75	10.95
Gift	Gift	-65	4.891	0.999	-12.20	13.50
	Joke	-6.55	4.891	0.541	-19.40	6.30
	None	6.75	4.891	0.516	-6.10	19.60
Joke	Gift	7.20	4.891	0.459	-5.65	20.05
	Joke	6.55	4.891	0.541	-6.30	19.40
	None	13.30*	4.891	0.040	.45	26.15
None	Gift	-6.10	4.891	0.599	-18.95	6.75
	Joke	-6.75	4.891	0.516	-19.60	6.10
	None	-13.30*	4.891	0.040	-26.15	0.45

* Based on observed means.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.298[a]	0.089	0.053	15.466

a. Predictors: (Constant), joke, gift, film

ANOVA [b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	17740137	3	591.379	2.472	0.068[a]
	Residual	18178.250	76	239.188		
	Total	19952.387	79			

a. Predictors: (Constant), joke, gift, film

b. Dependent Variable: post sport

Coefficients [a]

Model	Unstandardized Coefficients		standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	96.750	3.458		27.977	0.000
Film	6.100	4.891	-167	1.247	0.216
Gift	6.750	4.891	-185	1.380	0.172
joke	13.300	4.891	0.365	2.719	0.008

a. Dependent Variable: post sport

Table 5. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.266[a]	.071	.059	25.321

a. Predictors: (Constant), post sport

ANOVA [b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3815.605	1	3815.605	5.951	0.017[a]
	Residual	50009.945	78	641.153		
	Total	53825.550	79			

a. Predictors: (Constant), post sport

b. Dependent Variable: post edu

Coefficients [a]

Model	Unstandardized Coefficients		standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	79.907	18.730		4.266	0.000
Post sport	0.437	0.179	0.266	2.439	0.017

a. Dependent Variable: post edu