EXAMINING PROBLEM SOLVING SKILLS OF THE STUDENTS PRACTISING DANCE FOR 12 WEEKS IN TERMS OF GENDER VARIABLE

AKANDERE Mehibe[1] BAŞTUĞ Gülsüm[1], DEMİR Hayri [2], TAŞGIN Özden[3]
[1]Selcuk University, School of Physical Education and Sport, Konya, TURKEY
[2]Selçuk University, Institute of Health Sciences, TURKEY
[3]Karamanoğlu Mehmet Bey University, School of Physical Education and Sport, Karaman, TURKEY

Abstract

It is thought that emotional responses to themselves, their environments and life in daily life of individuals overcoming problems and finding effective solutions will be positive, too. This study has been carried out with the aim of examining problem solving skills depending of 12-week dance practice of university students. The study group of the research is consisted of 50 students practicing modern dance for 12 weeks in Dilek Sabancı State Conservatory, Selçuk University in 2009.In order to determine problem solving skills of the subjects in research sample, "problem solving scale" called Form-A (PSI-A) , originally named "Problem Solving Inventory" and developed by P.P. Heppner and C.H. Petersen (1982) was used. The received data were analyzed in SPSS software package by using frequency distribution, One Sample Kolmogorow-Smirnov test and t test.In conclusion, it has been found that the problem solving skills of the subjects participated in research differed at the beginning and at the end of dance practice.

Key Words: Dance, Problem Solving Skill, Student.

Introduction

Solving problem is the process of individual's understanding and solving the gap between his target and the obstacles he faces while progressing to the target (A. Bingham, 2000). While P.P. Heppner and C.J. Krouskopf (1987) describe solving problem as the cognitive and effective behavioral processes for the harmony of complicated internal and external wishes and desires, Bingham describes it as a process requiring a series of effort to abolish the difficulties for reaching a specific target. Solving problem helps to become optimistic about overcoming negative life conditions, to have a high self-efficacy, to improve recovery skill in negative conditions (B. Benard, 2004; M. Steinhardt and C. Dolbier, 2008).The strategies that people produce for the same problem in different times may differ. This differentiation may result from the idea of person's having dynamic development and so experience (A. Mathews and C. Macleod, 1994).It is now well-known that positive emotional state helps cognitive flexibility and makes creative problem-solving easy in many situations (The American Heritage Dictionary, Second College Edition, 1983).One of the most important points of creative and flexible thinking is to produce alternative strategies and solutions especially in failure. It shows that positive emotional state makes different ways for the solution of the problem easy while revealing that negative emotional state prevents flexible thinking skill (A.M. Isen, 1987). Doing exercise isn't only a physical activity but also a process of becoming social and adapting to the society. Exercise is one of the mechanisms of self-control (S. Bauman, 1994). Even if dance is basically an art branch, a dancer is also an athlete because of the performance needed for its accomplishment (H. Lindberg, 1992). Dance is a physical activity in which aesthetic and artistic features are in the foreground (F. Hugel et al. 1999) and an art form that is completely based on dancer's physical movement and his expression success (S.S. Fitt, 1996). How effective sports activities ,especially constant ones are over education-teaching, individual's social development, the skills of solving problem, overcoming stress and personal adaptation of the student doing sports and the students not doing sports under the same environment and conditions, also the difference between academic success levels highly draw attention (Ü. Türkçapar, 2009).

In the light of this information, the aim of the research is to examine problem-solving skills of university students practicing dance for 12 weeks in terms of gender variable.

Method. The study group of the research is consisted of 50 students practicing modern dance for 12 weeks in Dilek Sabancı State Conservatory, Selçuk University in 2009.In order to determine problem solving skills of the subjects in research sample, "problem solving scale" called Form-A (PSI-A), originally named "Problem Solving Inventory" and developed by P.P. Heppner and C.H. Petersen (1982) was used. The scale by P.P. Heppner and C.H. Peterson (1982) was developed in order to determine both the dimensions of problem-solving method and how person see himself about the problem-solving competence taking problem-solving stages such as general tendency, description of the problem, alternative-production, deciding and evaluation into consideration. The scale includes 35 items, .9, 22 and 29th items are excluded in scoring. Scoring is done over 32 items. 1, 2, 3, 4, 11, 13, 14, 15, 17, 21, 25, 26, 30 and 34 items are the ones scored inversely. The score ranj that may be taken from the inventory is between 32 and 192, Cronbach alpha reliability coefficient was found 82. According to the factor analysis results by N. Şahin et al. (1993),

the inventory is consisted 6 sub-dimensions as Hasty Approach, (13, 14, 15, 17, 21, 25, 26, 30 and 32. items),Thinking Approach(18, 20, 31, 33 and 35. items), Reserved Approach (1, 2, 3 and 4.items),evaluative Approach(6, 7 and 8. items),self-confident approach (5, 11, 23, 24, 27, 28 and 34. items) and planned approach (10, 12, 16 and 19. items).The height of total score received from the scale shows that individual perceives himself inadequate about problem-solving skills.

Statistical analysis. In the analiyses of data, arithmetic averages and Standard deviations were abstracted, One Sample Kolmogorow-Smirnov test was used to see whether data show normality distribution or not, t test was used in dependent and independent groups. The error level was taken 0.05 in the study.

ResultAs seen in Table 1,significant differences were found between problem-solving skills and sub-dimensions Thinking Approach, Reserved Approach ,Evaluative Approach, Self-confident approach , Planned approach pre-test and post-test values of the female subjects participated in the research ($p<0.05$). No significant difference was found between Hasty Approach pre-test and post-test values being a sub-dimension of problem-solving skill ($p>0.05$). It has been determined that problem-solving skills of female subjects increased at the end of dance exercise.As seen in Table 2,significant differences were found between problem-solving skills and sub-dimensions Thinking Approach, Reserved Approach ,Evaluative Approach, Self-confident approach , Planned approach pre-test and post-test values of the male subjects participated in the research ($p<0.05$). No significant difference was found between Hasty Approach pre-test and post-test values being a sub-dimension of problem-solving skill ($p>0.05$).It has been determined that problem-solving skills' rates of male subjects increased at the end of dance exercise.As seen in table 3, no significant difference was found between problem-solving skills and gender variable of male and female subjects in the research ($p>0.05$).When male subjects' problem-solving skill averages are examined, it is seen that they are higher that females' problem-solving skill values.

Discussion and conclusion

In this study carried out with the aim of examining problem-solving skills of university students practicing dance for 12 weeks in terms of gender variable;

Significant differences were found between problem-solving skills and sub-dimensions Thinking Approach, Reserved Approach, Evaluative Approach, Self-confident approach, planned approach pre-test and post-test values of the female subjects participated in the research. No significant difference was found between Hasty Approach sub-dimension pre-test and post-test values. It has been determined that problem-solving skills of female subjects increased at the end of dance exercise (table 1). In the study carried out about problem-solving skills of university students, while no significant difference was found between problem-solving skills and variables such as monthly income levels, social environments and activities that they do mostly in their spare times; significant difference was found between gender and class levels (Ü. Türkçapar,2009)

In a research, the adults suffering depression at a low degree were given dance and movement therapy during 12 weeks and the effect over these people's psychological health and relaxation was examined. In the end, dance-movement therapy has been found to have positive effect over the psychological development of the young suffering depression at a low degree. The researches carried out in recent years have shown that dance and movement therapy help the treatment of physical trauma, cancer, nervous breakdowns, chronic pain, heart disease and post-surgical pain. It has been proved that people doing exercises regularly have much better ideational skills and are faced with depression and anxiety less.Significant difference was found between problem-solving skills and sub-dimensions Thinking Approach, Reserved Approach, Evaluative Approach, Self-confident approach, planned approach pre-test and post-test values of the male subjects participated in the research. No significant difference was found between Hasty Approach pre-test and post-test values being a sub-dimension of problem-solving skill. It has been determined that problem-solving skills' rates of male subjects increased at the end of dance exercise (table 2). It is known that males have anxiety of finding a job and economical concerns more in our society. The reason why problem-solving skill values of males are higher than females' may be future anxiety. In the study done by Brems and Johnson and conveyed by Ferah (2000), it was seen that males were better in solving problem. It is expressed that males are generally affected more than females by psychological problems, disasters or separation situations and are weaker for the risk factors such as poverty and parents' psychopathology (B. Benard, 1996, S. Luthar, 1999). In a study by Gasper and Clore, two groups of subject were used and the subjects who were in negative emotional situation cared about data more and used the data to revise and change their knowledge instead of being directed by basic rules. It was reported that the subjects in positive emotional situation would try unusual experiences, combine the data with new ways and produce more hypothesis to find the answer (K. Gasper and G.L. Clore, 2002).According to the result of a study where Murray and his friends compared the subjects in positive and neutral emotional

situations, The subjects in positive emotional situation gave more true answers in several thinking measurements and were more flexible since they made more creative associations (N. Murray et al. 1990).No significant difference was found between problem-solving skills and gender variable of male and female subjects in the research .When male subjects' problem-solving skill averages are examined, it is seen that they are higher that females' problem-solving skill values (Table 3). Individuals in negative and positive emotional situations were examined, it was determined that individuals in positive emotional situation would try unusual approaches, combine data with new ways and produce more hypothesis to find answer (A.D. Farrel et al. 2001). In a study carried out in 15 countries from European Community and where 16230 participants aged 15 and over were evaluated through self declaration, it was found that exercise affected mental health positively and this effect was related to the period of sports (K. Abu-Omar et al. 2004). In a study carried out by K. Radmila et al.(2003) with the aim of determining the success of efforts and skills in showing dance figures, they have pointed out that effort skill in showing dance figures and folk dances are effective on success and this prevents anxiety and depression (K. Radmila et al. 2003). The findings of this research show similarity with the study.

In conclusion, whereas no significant difference was found between problem-solving skills and gender variable of the subjects in the research, it has been determined that dance affects problem-solving skill levels of male and female university students. The problem-solving skill values of males have been determined to be higher than females' .It is thought that dance being an activity preventing negative emotions in individual increases problem-solving skill and positive thinking.

Tables

Table 1: Examining problem-solving skills sub-dimensions of female subjects in the research.

variables	n	avarage	S.Dev.	T	p
hastiness pre-test	24	26.25	6.415	-.141	.889
hastiness post-test	24	26.33	5.313		
thinking pre-test	24	6.75	2.132	-7.230	.000*
thinking post-test	24	10.92	3.694		
reserved pre-test	24	12.58	4.754	3.797	.001
reserved post-test	24	10.71	3.701		
evaluative pre-test	24	9.17	2.944	7.071	.000*
evaluative post-test	24	7.67	2.777		
self-confident pre-test	24	7.92	3.243	-9.696	.000*
self-confident post-test	24	13.29	4.777		
planned pre-test	24	7.83	2.599	.000	1.000
planned post-test	24	7.83	2.929		
problem-solving pre-test	24	70.88	15.126	-6.065	.000*
problem –solving post-test	24	77.38	18.009		

Table 2: Examining problem-solving skills sub-dimensions of male subjects in the research.

variables	n	avarage	S. Dev.	T	p
hastiness pre-test	26	25.88	7.185	.501	.621
hastiness post-test	26	25.58	6.326		
thinking pre-test	26	7.96	3.388	-8.034	.000*
thinking post-test	26	12.42	4.734		
reserved pre-test	26	12.38	4.148	5.670	.000*
reserved post-test	26	10.15	4.342		
evaluative pre-test	26	10.35	3.989	7.071	.000*
evaluative post-test	26	8.35	3.949		
self-confident pre-test	26	7.85	3.003	-10.894	.000*
self-confident post-test	26	14.08	4.707		
planned pre-test	26	8.73	2.308	-2.483	.020
planned post-test	26	9.65	3.417		
problem-solving pre-test	26	73.08	15.707	-6.467	.000*
problem –solving post-test	26	80.31	19.760		

Table 3: Examining problem-solving skills of the subjects in the research in terms of gender variable.

variables	gender	n	Average	St.Dev.	t	P
problem-solving pre-test	female	24	70.88	15.126	-.505	.460
	male	26	73.08	15.707		
problem – solving post-test	female	24	77.38	18.009	-.547	.370
	male	26	80.31	19.760	-.549	

References

ABU-OMAR, K., RÜTTEN, A., ROBINE, J. M., 2004, *Self-rated health and physical activity in the European Union.* Soz Praventivmed, 49:235-242.

AMERICAN HERITAGE DICTIONARY, 1983, *Second College Edition. Boston*: Houghton Mifflin Company.**BAUMANN, S., 1994,** *Praxis der Sport psychologie.*

BENARD, B., 2004, *Resiliency: What We Have Learned*. San Francisco: West Ed. Publishers.

BINGHAM, A., 2000, *Gender differences in advanced mathematical* problem solving. Journal of Experimental Child Psychology, 75, 3.

FARREL, A.D., MEYER A.L., WHITE K.S., 2001, *Evaluating RIPP: A school based prevention program for reducing violence among urban adolescents*. Journal of Clinical Child Psychology, 30(4), 451–463.

FITT, S. S., 1996, The *Science of Motion in Support of the Art of Dance, Dance kinesiology*, Section I. 2nd ed. Schirmer Books, New York: Prentice Hall International.

GASPER, K., CLORE, G. L., 2002, Attending *to the big Picture: Mood and global vs. Local processing of visual information*, Psychological science, 13,34-40

HEPPNER, P.P., PETERSEN, C.H., 1982, *The development and implications of a personal problem solving inventory*. Journal of Counseling Psychology, 29, 66-75.

HEPPNER, P. P., KRAUSKOPF, C. J., 1987, *The Integration of Personal Problem Solving Processes Within Counseling*. The Counseling Psychologist, 15, 371-447.

HUGEL, F., CADOPI, M., KOHLER, F., PERRIN, P. H., 1999, *Postural control of ballet dancers: A specific use of visual input for artistic purposes*, Int J Sports Med 20: 86-92.

LINDBERG, H., ROOS, H., GÄRDSELL, P., 1992, *The Prevalence of Coxartrosis in Former Soccer Players*. Acta Orthop Scand, 64: 165–167

LUTHAR, S., 1999, *Poverty and Children's Adjustment*. New-Bury Park, CA: Sage.

MATHEWS, A., MACLEOD, C., 1994, *Cognitive Approaches to Emotion and Emotional Disorders*, Journal article C.; Annual Review of Psychology, 45, 26-50.

ISEN, A. M., 1987, *Positive effect, cognitive processes and social behavior* , Advances in Experimental Social, 20, 203-253.

MURRAY, N., SUJAN, H., HIRT, E.R., SUJAN, M., 1990, *The influence of mood on categorization: A cognitive flexibility*, Journal of Personality and Social Psychology, 59,411-425.

RADMILA, K., DRAGON, J., SLAVOLJUP, O., 2003, *Relation of Co native Characteristics and Success of Performing Dance Structures* : Facta Universitatis, Series Physical Education., 1(6) , 15-23.

STEINHARDT, M., DOLBIER, C., 2008, *Evaluation of a resilience intervention to enhance coping strategies and protective factors and decrease symptomatology*. Journal of American College Health, 56(4), 445-453.

ŞAHIN, N., ŞAHIN, N., HEPPNER, P.P. 1993, *Psychometric proporties of the Problem Solving Inventory in a group of Turkish university students.* Cognitive Therapy and Research, 17 (4), 379-396.

TÜRKÇAPAR, Ü., 2009, *Problem-solving skills of Physical education and sports academy students in terms of different variables.* Journal of Ahi Evran University Kırşehir Education faculty, 10, 1, 129-139