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The Effect of Dance over Depression

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A B S T R A C T

Dance and movement therapy are consisted of music, easy exercises and sensorial stimulus and provide drugless treatment for the depression on low rates. In this study, it has been aimed to examine the effect of dance over the depression. A total of 120 healthy male and female conservatory students ranged from 20 and 24 ages volunteered to participate in this study. They were divided randomly into 1 of 2 groups: dance training group (DTG; N=60) and control group (CG; N=60). A dance training program was applied to the subjects three days a week (Tuesday, Thursday, and Saturday) during 12 weeks. The subjects in the control group did not participate in the training and participated only in the pre and post test measurements. Beck Depression Scale was used for the pre and post test measurements of subjects. 12 weeks of dance training has been found to be effective on the depression levels of the subjects participating in the research as the training group ($p<0.05$). The depression level of males and females before training has meaningfully decreased after 12 weeks of dance training ($p<0.05$). When the depression levels of the subjects participated in research as the control group were separately evaluated for males and females, no meaningful change has been found in the depression levels during 12 weeks ($p>0.05$). In conclusion, it has been seen that dance affects the depression levels of university students positively and decreases their depression levels.

Key words: *depression, exercise, dances*

Introduction

Depression is an irresistible state of mind distorting our perceptions and feelings. The effect of depression appears in the way of slowing down in movements due to energy decline. Daily works are either neglected or spent more effort and time on. The person often wants to be alone and avoid social relations. A decrease is seen in sexual desire and interest[11]. Depression is determined by a lot of symptoms that contain unhappiness, feelings of valueless, irritability, changes in sleep and desire to eat, not to enjoy from fun activities, and psychomotor retardation[1]. Depression is twice more prevalent in females than males and the risk of a recurrence can be as high as 50–90%[18,21].

Failure at the school or work, loss of a loved person and illness are among the factors that cause depression most. Desperateness and sorrow are two basic characteristics of depression. The person is lost in thoughts of worthlessness and incompetence, has crying fits and thinks of suicide[3]. The depression symptoms for the young may be usually seen as opposing, negativeness, uneasiness, inadaptability, behavior-attitude, alienation from society, failure in school success, alienation from family, carelessness in clothing, sensitivity to being rejected, inclining to narcotic drugs[5].

In one of their studies, Weller and Weller[26] point out that depressive episodes can last for months and cause failure in school performance, weakness in family and peer relations and even the suicide in case of not diagnosing depression early and not applying effective treatments. Maag and Forness[15] report that the basic problem areas related to depression are the lack of social competence and self-control, cognitive decay or absence, and learned helplessness. Stark[24] has pointed that the death of one of the parents and their divorcing are among the basic life events related to depression and domestic hostility and conflict are the most common factors related to development of depression.

Dance and rhythmic movement have been used to develop expression and different emotions for centuries. Dance movement therapy has been used as a form of art rehabilitation in the Western world since the early 1950s[7,17].

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Dance has many dimensions. In terms of physical meaning, »Dance makes us show the energy inside us«[2]. While body language training is only providing the individual with the opportunity of speaking with his own subconscious, this provided superiority puts the feature of being an effective communication vehicle on it[13]. In dance training, as a physical development; there is a balanced harmony between body, arms and legs. Strong and lively movements are included in dynamism full of energy and a decreasing calmness. Learning motor power skills and managing arms and legs enable to control slowly the movements out of daily life[10].

Dance movement therapy combines with music, low exercise, and sensory stimulation that could provide a non-drug cure of mild depression. In a study, it is informed that dance movement therapy assists healing from the psychophysical and psychosocial effects of physical trauma and diseases such as cancer, heart disease, neurological impairments.

Dancers tend to emphasize the personal interpretation of the movement in modern dance, acceptance the body's natural response to gravity and support for dancer to improvise; briefly, it frees dancers from the constraints and formalities of ballet[8].

As well as people, who dance and do exercises, have less alcohol consumption, anxiety, depression, anger, phobies and stress; a decrease is also seen in these people's hostile feelings[25].

Schnitt & Schnitt[23] indicate that dance may significantly change an individual's mood and stimulate strong feeling states. Classes in dance have been indicated to improve a »sense of psychological well-being«, decreasing anxiety and depression, enhancing the subjects' self-perceptions of creativity, motivation, relaxation, health, intelligence, confidence, and energy. Besides, the students taking dance classes not only felt better about themselves than a similar group who took an academic course, they also felt better about themselves than students who participated in active sports.

Dance, as an art form and formal education a way that can serve as a bridge to psychological health in child and adolescent, cognitive development and emotional growth which in connection with the academic performance of students. Through dance, movement is transformed into a purposeful phrase of action that encompasses physicality, emotion and cognition. Therefore, in this study, it has been aimed to examine the effect of dance over the depression.

Materials and Methods

Experimental approach to the problem

Dance and movement therapy subjectively and objectively help the developments which support the medical aims and make the joy and pleasure come into being by themselves; increase the communication providing an escape way for physical tension, anxiety, anger, depression; determine the personality borders; strengthen and reconstitute the body shape[20]. Dance and movement therapy are consisted of music, easy exercises and sensorial stimulus and provide drugless treatment for the depression on low rates[7,17].

Therefore, this investigation involved sectional design to evaluate the effect of dance training over the depression. A total of 120 healthy male and female conservatory students volunteered to participate in this study. Beck Depression Scale, which was developed by Beck and et al.[5] was used for subjects.

Subjects

A total of 120 healthy male and female conservatory students ranged from 20 and 24 ages volunteered to participate in this study after having explained all risks to them before the investigation. They were divided randomly into 1 of 2 groups: dance training group (DTG; N=60) was as male (N=30) and female (N=30). Control group (CG; N=60) was as male (N=30) and female (N=30).

Following randomization, the 2 groups did not differ significantly ($p>0.05$) in any of the dependent variable. All subjects were experienced in performing various dance activities (i.e., rumba, classic dance) through their regular academic program. Specifically, their weekly volume of regular physical activity ranged from 8 to 10 hours. A dance training program was applied to the subjects three days a week (Tuesday, Thursday, and Saturday) during 12 weeks. The subjects in the control group did not participate in the training and participated only in the pre and post test measurements and continued as normal their regular academic program.

Prior to data collection, all participants signed university approved consent from. After receiving a detailed explanation of the study's benefits and risks, all subjects signed an informed consent document that was approved by the local ethics committee. None of the subjects reported any medical or orthopedic problems that would compromise his participation and performance in the study.

Procedures

In order to evaluate the effect of dance training over the depression, we applied a depression scale developed by Beck et al.[5] was used.

All of the subjects were informed about the depression scale prior to data collection. Testing was conducted before and after 12 weeks of dance training. Subjects abstained from physical activity not related to the study during the testing period. Furthermore, during the testing periods and throughout the 12 weeks of dance training subjects were instructed to maintain normal dietary habits. The correlation coefficient of the validity and reliability of the Beck Depression Scale was found by Hisli[12] consecutively 0.73 and 0.81. Also, it was compatible Turkish version and English version of the Beck Depression Scale[12]. In Beck depression scale, it is accepted that the subjects taking score between 0–9 have normal depression, the ones taking score between 10–15 have low

TABLE 1
OVERVIEW DANCE TRAINING PROGRAM

	1–3 weeks	4–6 weeks	7–9 weeks	10–12 weeks
Tuesday	10 min. warm up 90 min. dance exercise (rumba) 10 min. cooling	10 min. warm up 90 min. dance exercise (rumba) 10 min. cooling	10 min. warm up 90 min. dance exercise (rumba) 10 min. cooling	10 min. warm up 90 min. dance exercise (vals) 10 min. cooling
Thursday	10 min. warm up 90 min. dance exercise (rumba) 10 min. cooling	10 min. warm up 90 min. dance exercise (vals) 10 min. cooling	10 min. warm up 90 min. dance exercise (rumba) 10 min. cooling	10 min. warm up 90 min. dance exercise (rumba) 10 min. cooling
Saturday	10 min. warm up 90 min. dance exercise (vals) 10 min. cooling	10 min. warm up 90 min. dance exercise (vals) 10 min. cooling	10 min. warm up 90 min. dance exercise (vals) 10 min. cooling	10 min. warm up 90 min. dance exercise (vals) 10 min. cooling
Warm up – Free aerobic run – Neck exercises – Shoulder and arm rotation – Waist and hip rotation – Leg exercise – Flexibility exercise	Rumba – Basic step – Basic step with music – Basic step with couple – Flat promenade – Flat promenade with music and couple – Hauling – Hauling with music and couple – Hammerlock – Hammerlock with music and couple – Open surprise – Open surprise with music and couple	Vals – Square chart with right foot – Step exercise with music – Step exercise with couple – Square chart with left foot – Step exercise with music – Step exercise with couple – Right rotation – Step exercise with music – Left rotation – Step exercise with music	Cooling – Flexibility exercise – Stretching exercise	

depression, the ones taking score between 16–23 have medium level depression, the ones taking 24 and over are depressive. So in this study, whereas the subjects in dance group had a low depression level with 15.72 score before practice, the depression scores of these subjects after practice turned to the normal level by decreasing to 13.90. As for the control group, the depression level went on at a low level for 12 weeks (Table 2).

The methodology employed during the dance training is summarized in the following Table 1.

Dance activations included Rumba and Vals. Rumba activations included basic step with music, basic step with couple, flat promenade, flat promenade with music and couple, hauling, hauling with music and couple, hammerlock, hammerlock with music and couple, open surprise, open surprise with music and couple. Vals activations included square chart with right foot, step exercise with music, step exercise with couple, square chart with left foot, step exercise with music, step exercise with couple, right rotation, step exercise with music, left rotation, step exercise with music.

Statistical Analysis

The SPSS statistical program (version 13.0) was used for data analysis. Standard statistical methods were used for the calculation of means and SD. The Kolmogorov-Smirnov test was used to determine if dependent variable were normally distributed. The Levene test was used to determine if there was homogeneity of variance. Paired t-tests were used to determine significant differences over time for each dependent variable. Unpaired t-tests were used to compare the dance training and control groups. For all analyses, the criterion for significance was set at an alpha level of $p<0.05$.

Results

In this study, it has been aimed to examine the effect of dance over the depression. Results of research according to this aim are going as follows.

12 weeks of dance training has been found to be effective on the depression levels of the subjects participating

TABLE 2
COMPARISON OF THE PRETEST AND POSTTEST RELATIVE DEPRESSION LEVELS WITH RESPECT TO DANCE TRAINING GROUP AND CONTROL GROUPS

		$\overline{X}$	SD	SE $\overline{X}$	t	sig.
Dance training group (N=60)	pre-test	15.72	7.004	0.904	5.627	0.000*
	post-test	13.90	5.568	0.719		
Control group (N=60)	pre-test	16.53	5.922	0.764	0.764	0.448
	post-test	17.48	7.740	0.999		
Dance training group (N=60)	pre-test	15.72	7.004	0.904	0.690	0.492
Control group (N=60)		16.53	5.922	0.764		
Dance training group (N=60)	post-test	13.90	5.568	0.719	2.911	0.004*
Control group (N=60)		17.48	7.740	0.999		

*p<0.05

in the research as the training group (p<0.05) (Table 2). In the research, the depression level before training has decreased in a meaningful degree after 12 weeks of dance training (p<0.05) (Table 2). No difference has been found in the depression levels of the subjects participating in the research as the control group during 12 weeks (p> 0.05). As shown in Table 2, the dance training and control groups did not differ significantly (p>0.05) in any of the depression levels in pretest. However, the 2 groups did differ significantly (p<0.05) in posttest of depression levels.

12 weeks of dance training has been found to be effective on the depression levels of male and female subjects (p<0.05) (Table 3). In the research, the depression level of males and females before training has meaningfully decreased after 12 weeks of dance training (p<0.05) (Table 3). When the depression levels of the subjects participated in research as the control group were separately evaluated for males and females, no meaningful change has been found in the depression levels during 12 weeks (p>0.05).

Discussion

In this study carried out with the aim of examining the effect of dance training over the depression, dance has been found to have positive effects over the depression levels at the end of 12 weeks of dance training of the subjects participated in the research as the training group (p<0.05) (Table 2). 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[28]. 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[6]. It has been proved that people doing exercises regularly have much better ideational skills and are faced with depression and anxiety less[25].

Leste and Rust[14] examined that the effects of dance on anxiety in 114 college students. Subjects participated in modern dance classes during three months and anxiety levels significantly lowered of subjects. Besides the participants in the control groups (a physical education group, a music group, and a neutral mathematics group) did not show similar decreases in anxiety as measured by the Spielberger State-Trait Anxiety Inventory. It has been observed that studies support this study.

TABLE 3
COMPARISON OF THE PRETEST AND POSTTEST RELATIVE DEPRESSION LEVELS OF MALE AND FEMALE SUBJECTS IN DANCE TRAINING GROUP AND CONTROL GROUPS

			$\overline{X}$	SD	SE $\overline{X}$	t	sig.
Dance training group	Women (N=30)	pre-test	17.70	7.671	1.400	6.205	0.000*
		post-test	15.03	6.217	1.135		
	Men (N=30)	pre-test	13.73	5.729	1.046	2.220	0.034*
		post-test	12.77	4.666	0.852		
Control group	Women (N=30)	pre-test	16.87	5.450	0.995	0.106	0.916
		post-test	17.07	8.948	1.634		
	Men (N=30)	pre-test	16.20	6.435	1.175	1.035	0.309
		post-test	17.90	6.440	1.176		

*p<0.05

In many of research it has been reported that movement and dance have been shown to have positive effects on self-concept, psychological well-being, lower levels of anxiety and internal locus of control[9,14,22,23]. Moreover, Benzer et al.[6] recommend that moderate levels of activity and movement are indeed positively as regards with higher levels of perceived wellness.

In this study, 12 weeks of dance training has been found to be effective over the depression levels of male and female subjects ($p<0.05$) (Table 3). In a research, it has been pointed out that depression is common two times more among the females in comparison with males and its repetition risk rate can be % 50–90[13,16]. In a study carried out by Kostić et al.[19], 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.

West et al.[27], in research investigated effects of hatha yoga and African dance on perceived stress, affect. Their studies were participated sixty-nine healthy college. African dance group (n=21), Hatha yoga group (n=18) and a biology lecture as a control group (n=30). Before and after each condition participants completed the Perceived Stres Scale (PSS), the Positive and Negative Affect Schedule, and obtained a saliva sample for cortisol. They found that Both African dance and Hatha yoga reduced perceived stress and negative affect. Cortisol increased in African dance and decreased in Hatha yoga. As a result; these interventions produce similar positive psychological effects, the effects may be very different on physiological stress processes. It has been observed that studies support this study.

In one of the Bacmand's researches[4] consisting of 664 male athletes and 500 control groups; the symptoms of anxiety and depression that athletes showed in the activity environment due to various psychological factors were examined and several results were obtained. According to another research conducted, people, who don't care about negative things around and have succeeded to catch the happiness, have been found to live longer in comparison to the unhappy and stressful people[29]. In a study carried out by Kostić et al.[19] 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.

Consequently, it has been seen that dance affects the depression levels of university students positively and decreases their depression levels.

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REFERENCES

1. American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders (4th ed.) (American Psychiatric Association, Washington, DC, 1994). — 2. ANDREWS T, Magic behaviour techniques (New Age Yayýnlarý, Ýstanbul, 2002). — 3.ATKINSON RL, HILGASD E, ATKINSON RC, Introduction to psychology (Social publications press, Istanbul, 1995) — 4. BACMAND H, J Sportmed, 24 (8) (2003) 609. — 5.BECK AT, WARD CH, MENDOLSON M, MOCK J, ERBAUGH J, Archives of General Psychiarty, 4 (1979) 561. — 6. BENZER J, ADAMS TB, WHISTLER LS, American Journal of Health Studies, 15(3) (1999) 130. — 7. BERROL C, Brain injury, 4 (3) (1990) 257. — 8. BIBBELL-HOPE S, Ars in Psychotherapy, 27(1) (2000) 51. — 9. BROOKS SCHMITZ N, Young talent research project: An analysis of the effect of arts-in-education programming on motivation, academic performance, and personal development of inner city youth involved in the young talent program (ArtsConnection, New York, 1990). — 10. BROWN YD, Y pere Soç Psychology, 60 (1991) 555. — 11. HIRSCHFELD RMA, Y Clin Psychiatry, Supp. 1, 14, 27, 30. (1999). — 12. HISLI N, Journal of Psychology 6(22) (1988) 118. — 13. JAMES J, Body Language,Creating Good Image (Alfa Printing-Publishing, Ýstanbul, 1999). — 14. LESTE A & RUST J, Perceptual and Motor skills, 58 (1984) 767. — 15. MAAĞ JW, FORNESS SR, Focus on Exceptional Children, 24 (1991) 11. — 16. MAZO JH, Prime Movers (2nd ed.) (Princeton Book Company, Hightstown, NJ, 2000). — 17. PALO BENGTSSON, EKMAN SL, Scholarly Inquiry for Nursing Practice, 11(2) (1997) 101. — 18. PRESKORN SH, Outpatient management of depression; A Guide for the practioner (2nd ed) (Professional cominications, Caddo, UK, 1999). — 19. KOSTIĆ R, JOCIĆ D, UZUNOVIĆ S, Series Physical Education, 1(6) (2003) 15. — 20. SEIDE MP, American Journal of Dance therapy, 9 (1986) 83. — 21. SIGN NA, CLEMENTS KM, FIATORONE MA, Journals of Gerontology. Series A Biological Sciences and Medical Sciences, 52(1) (1997) M27. — 22. SCHNITT JM, SCHNITT D, DEL A'UNE W, Psychological issues in a dancer's career. In: RYAN AJ (Ed) Dance medicine (Precept Press, Chicago, 1987). — 23. SCHNITT JM, SCHNITT D, Psychological aspects of dance. In: CLARKSON PS, SKRINAR M (Eds) Science of dance training (Human Kinetics Books, Champaign, IL, 1988). — 24. STARK K, Childhood Depression Scholl-Based Intervention (The Guildford Press, New York, 1990). — 25 VILHIALMSOON R, THORLINDSOON T, The Sociological Quarterly, 33 (1991) 637. — 26. WELLER EB, WELLER RA, Psychiatric Anuals, 15 (1985) 368. — 27. WEST J, OTTE C, GEHER K, JOHNSON J, MOHR DC, Annals of Behavioral Medicine, 28(2) (2004) 114. — 28. YONG-KYU K, CHAE-MOON S, International Journal Of Neuroscience, 115 (2006) 1711. — 29. ZIMMERMAN YD, FULTON M, Psychological Reports, 48 (1981) 911.

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UTJECAJ PLESA NA DEPRESIJU

S A Ž E T A K

Ples i terapija pokretom sastoje se od glazbe, jednostavnih vježbi i senzornih stimulansa te nude terapiju bez lijekova za depresiju nižeg stupnja. U ovom istraživanju cilj je bio ispitati utjecaj plesa na depresiju. Sveukupno 120 zdravih muških i ženskih studenata konzervatorija, u dobi između 20 i 24 godina, dobrovoljno je sudjelovalo u ovom ispitivanju. Slučajnim odabirom, podijeljeni su u jednu od dvije grupe: grupa plesnih vježbi (DTG; N=60) i kontrolna grupa (CG; N=60). Program plesnih vježbi primjenjen je na ispitanike tri puta tjedno (utorak, četvrtak i subota), tijekom 12 tjedana. Ispitanici iz kontrolne grupe nisu prisustvovali vježbama, nego isključivo mjerenjima prije i poslije ispitivanja. Beckova skala depresije koristila se za mjerenja prije i poslije ispitivanja. Dvanaestotjedne plesne vježbe pokazale su utjecaj na stupanj depresije ispitanika koji su sudjelovali u grupi plesnih vježbi ($p<0,05$). Stupanj depresije muškaraca i žena prije vježbi značajno se smanjio nakon 12 tjedana plesnih vježbi ($p<0,05$). Stupanj depresije ispitanika koji su sudjelovali u kontrolnoj grupi, a ispitan je odvojeno za muškarce i žene, nije se značajno promjenio tijekom 12 tjedana ($p>0,05$). Zaključno, uviđeno je da ples pozitivno utječe na stupanj depresije studenata te ga smanjuje.