

Effect of Participation in Aerobic Dancing Classes on Psychological Well-Being of Male Students

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Abstract

Background: In the recent decades, the positive psychology considered as an ability of human being which are provided appropriate studies in well-being and happiness domains. In this way, the purpose of current research was to identify the effect of aerobic dancing on psychological well-being of non-athletic male students.

Materials and Methods: The research method was of a quasi-experimental nature in the form of a time-series design using experimental and control groups. 40 non-athlete students (21.6 ± 1.82 years old) from General physical Education 1 course in Birjand University were randomly selected and assign to two groups. The Ryff's scales of psychological well-being were used to analyze the psychological well-being parameters in the pre-test and post-test of training. The training protocol was including 12 weeks, and 3 seasons (60 minutes) per week that each subject in experimental group received 15 minutes warm-up, 30 minute aerobic training and 15 minutes cool-down and relaxation training.

Results: The results of repeated measure analysis of variance indicated significant differences in psychological well-being and its subdivisions in the 3 phases of tests in the experimental group ($p < 0.01$). Moreover, the results of t-test showed the positive influence of 12 weeks aerobic training on psychological well-being of the student boys (first post-test, $p < 0.001$; second post-test, $p < 0.001$), and well-being scores of aerobic group was higher than control group.

Conclusion: The result of the present research emphasizes the factors affecting on psychological well-being as well as its ways to promote of well-being. Implications of these findings are discussed among exercise psychologists.

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Introduction

Researchers in the recent decades have been attention to the role of dancing in relation to well-being and mental health [1, 2]. Dance is a unique form of movement in which includes aesthetic movement that is related to perceived well-being, hence, different kinds of dance (i. e., aerobic dancing) can be one of the main purposes in physical education [3, 4]. Hui et al. has shown the positive effects of aerobic dancing (low impact) on physiological and mental well-being among older adults [5]. Also, Schiffer et al. showed that there was a positive relationship between physical and psychological well-being in the result of three months aerobic dance and fitness programs [2]. Putman defined aerobic dancing as a kind of physical activity with low impact, moderate time and with special music [6, 7] that to motivate among participants [8]. The concept of well-being and related factors are one of the most important subjects in positive psychology [9], which within it prominent psychologists (i.e., Ryff and Keyes) emphasis in essential attention to human positive aspects and the concept of well-being in mental health definition [10, 11]. Ryff had defined well-being on the basis of desirable life and actualization of human's ability, and has mentioned that this viewpoint includes the same criteria and

complementary positive psychological health [12]. Ryff and Keyes mentioned that this multidimensional approach to positive psychological health provides important perspective in our perceived of well-being [12, 13]. Also, has been shown that well-being factors refer to growth and optimal psychological functioning [14] which change in each factor is related to other factors [15]. Generally, there has been difference viewings concerning to well-being as well as it widely has been studied and conceptualized in different ways [12, 14-20] which includes hedonia and eudaimonia perspectives. Previous studies used hedonic well-being factors (positive and negative affect and life satisfaction) in the area of physical activity and exercise [16, 17], which there were weaknesses in evaluating of well-being as well as some of those had correlational nature.

Reinboth and Duda, according to self-determination theory views, showed that participate in sport environments with doing sport tasks be effects on well-being [16]. Eudaimonic perspectives imply in which life flourishes means the actualization of human potentials [18]. Huta and Ryan point of view, eudaimonia produced more well-being usefulnesses at long-term follow-up (more than three month), in contrast hedonia produced

more well-being usefulnesses at short-term follow-up [19]. However, it can be useful to explore the relationships between physical activity, especially dancing, and psychological well-being. According to the overlaps between psychological and educational well-being, research in this area is well documented, especially during the long-term and with quasi-experimental nature design.

Materials and Methods

The research method was of a quasi-experimental nature in the form of a time-series design using some groups (experimental and control group). The research society includes 356 male students who enrolled in physical education course [1] in the second semester on 2009-2010 in Birjand University. Two hundred forty one subjects purposefully and according to demographic questionnaire selected for integration of society. Afterwards, 40 subjects (ages Mean \pm SD: 21.6 \pm 1.82 years) randomly from the almost homogenized current society aligned into the experimental (aerobic dancing) and control groups (each group include 20 male students).

The research instruments include two questionnaires:

-Demographic questionnaire: This instrument used for homogenizing society which includes age, sport background, physical and mental problems, and their knowledge about aerobic dancing.

-Psychological Well-being: The Ryff (1989) scales of psychological well-being (RSPWB) was used, which has six subscales including autonomy, environmental mastery, personal growth, positive relation with others, purpose in life, and self-acceptance. Each factor is compared with 14 questions based on a six-value-range from strongly disagree to strongly agree. The confirmatory factor analysis of the RSPWB model had been approved in the previous research by Shokri et al. in Iranian students [21]. The results of the Alpha coefficient in the current research for the RSPWB approved that

including: autonomy 0.76, environmental mastery 0.68, personal growth 0.81, positive relation with others 0.60, purpose in life 0.75, and self-acceptance 0.82 [22]. In this research, researchers had been tried to using by aerobic training during the three month for measuring changes in psychological well-being of non-athlete male students. Moreover, with considering control group, the effects of aerobic dancing on psychological well-being and its subscales were considered among students. Students filled the RSPWB to consider of psychological well-being change during the three phrases which includes pre test (the first session), post test one (after three months) and post test two to evaluate the role of exercising stability. Exercising program used in this research was taken from Irene standard exercising program [22], and the researcher scheduled it up to the existing conditions. The training protocol was including 12 weeks, and 3 sessions (60 minutes: 15 min warm up, 30 min hip-hop dancing, and 15 min cool down and relaxation+ hip-hop music) per week. While the experiment group participated in three month exercising, there was no organized training for control group. The SPSS-18 was used for statistical analysis.

Results

In the first place, the results of Kolmogorov Smirnov of psychological well-being scores showed that scores in three phrases were normal. Table 1, present the indices of mean, mean differences and *p*-value in pre-test, post-test one and two phrases in aerobic dancing group. Afterwards, the results of *t*-test did not showed significantly difference between groups in pre-test phrase. The results of repeated measure analysis of variance showed that there were significant differences in aerobics dancing group on psychological well-being and its subscales in pre-test and post-test one and two phrases ($F=178.501$, $p<0.01$).

Table 1. The results of posthoc test (LSD) in aerobic dancing group in three phrases

Variables	Phrases		Mean		Mean differences	<i>p</i> -Value
Positive relations with others	Pre-test	Post-test one	3.589	3.870	-0.282	0.001
	Pre-test	Post-test two	3.589	3.821	-0.233	0.001
	Post-test one	Post-test two	3.870	3.821	0.049	0.012
	Pre-test	Post-test one	3.6	3.923	-0.322	0.001
	Pre-test	Post-test two	3.6	3.856	-0.256	0.001
Environmental mastery	Post-test one	Post-test two	3.923	3.856	0.068	0.007
	Pre-test	Post-test one	3.66	3.945	-0.286	0.001
	Pre-test	Post-test two	3.66	3.896	-0.236	0.001
	Post-test one	Post-test two	3.945	3.896	0.049	0.009
	Pre-test	Post-test one	3.582	3.877	-0.295	0.001
Personal growth	Pre-test	Post-test two	3.582	3.838	-0.256	0.001
	Post-test one	Post-test two	3.77	3.838	0.039	0.004
	Pre-test	Post-test one	3.817	4.039	-0.180	0.001
Purpose in life	Pre-test	Post-test two	3.817	3.997	-0.222	0.001
	Post-test one	Post-test two	4.039	3.997	0.042	0.144
	Pre-test	Post-test one	3.602	3.906	-0.304	0.001
Self-acceptance	Pre-test	Post-test two	3.602	3.863	-0.261	0.001
	Post-test one	Post-test two	3.906	3.863	0.043	0.081
	Pre-test	Post-test one	3.642	3.927	-0.180	0.001
Psychological Well-being	Pre-test	Post-test two	3.642	3.878	-0.222	0.001
	Post-test one	Post-test two	3.927	3.878	0.042	0.001

The results of post hoc test (LSD) had been shown that there were significant differences between pre-test and post-test one, pre-test and post-test two on psychological well-being and its subscales in aerobic dancing group ($p < 0.001$). The results of LSD did not showed significant difference between post-test one and two in purpose in life and self-acceptance subscales. The results of *t*-test showed that there were significant differences between experimental and control groups in post-test one and two, control group had as score means as aerobic dancing group. Moreover, the results of repeated measure analysis of variance did not show significant difference between phrases in control group.

Discussion

The purpose of the present research was to evaluate differences in psychological well-being in male students after three months of aerobic dancing. The results showed that there were positive effects on psychotically well-being due to aerobic dance training. Although there were positive effects on general well-being, there were not significant differences from post-test one to two in purpose in life and self-acceptance subscales. However, the results of current research were in line with Schiffer et al. and Hui et al. who showed aerobic dancing had a positive affect psychological well-being [2-5]. Also, these results in terms of positive effects aerobic dancing on psychological factors were in line with Burgess et al; Caruso and Gill; Plummer and Koh results [4, 23-25]. According to the scores during post-test one to two, the present results highlighted the positive role of aerobic dancing classes environmental and its climate on positive effects of psychological well-being. Also it seems that aerobic dancing class's climate can affect maintaining and enhancing well-being. The implications of research can quiet noticeable and discussable among exercise psychologist. The findings are in line with Schiffer et al. in terms of the effects of aerobic dancing at twice a week after exercise (non-exercise phrase) on psychological well-being as well as in comparison to control group in non-exercise phrase [2]. Hence, it seems that aerobic dance can have a positive affect promotion of well-being in long-terms, which also there were differences in scales that should be evaluate in future studies. In other words, Caruso and Gill mentioned that aerobic dance is a kind of physical activity which is without competition and stressful due to that. Therefore, the results of the present research can interpret in terms of the nature of exercise classes which there exists no competition climate in this classes. Also, age and gender of subjects might be one of the other effectiveness factors on the positive effects of psychological well-being, which were one of the research limitations. Moreover, Ryff and Singer had been shown that there were overlaps between psychological well-being subscales which change in each one is related to

other [15]. So that changes in each factor can affect other factors. These changes in terms of positive relation with other factor, according to Maani et al. interpretations, relationships with some specific people can affect on feeling of loneliness [26], which I have shown in my previous research that prevention of feeling of loneliness is related to well-being-enhancing [27]. Finally, the relation with other due to three months exercise as well as relationship with other students in exercising environments can have significant effects on general well-being of male students. In order to reduce in positive relation with other, autonomy, environmental mastery and personal growth factors during non-exercise phrase, it seems that aerobic dancing classes' climate had effects on these factors during the exercise. Hence, the results of current research highlighted the important role of participation in aerobic dancing classes' climate on psychological well-being factors. Generally, according to Ryff point of view, basic and general changes in psychological well-being can be related to changes in people lifestyle in the result of taking new experiences due to aerobic dancing, which was related to enjoy and hope as well as according to relation with other and might be effectiveness on creating the lovely living. In another interpretation, the results of current research is in line with Huta and Ryan point of view who noted eudemonia perspective or psychological well-being is a result of long-terms activities (more that three month). Moreover, during non-exercise phrase and insignificant effect of purpose life factor, Frankle had mentioned that meaningful life is related to do interesting activities [28], and it seems that aerobic dancing was one of the interesting activities that students would prefer to participate in that. This result is noticeable because when student did not have participated in aerobic dancing classes, the results of scores revealed that aerobic dancing classes had benefit effects on purpose in life during three months. To date, according to the present results and positive psychology literature can interpret that student's well-being is related to their lifestyle and experiences that might affect their views, thinking and attitude in living them in terms of wellness. The results of current research emphasized the necessities of more pay attention to psychological well-being of students and the ways to enhance that.

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Authors' Contributions

All authors had equal role in design, work, statistical analysis and manuscript writing.

Conflict of Interest

The authors declare no conflict of interest.

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