EFFECT OF AWRIS TRADITIONAL DANCES ON HEALTH RELATED PHYSICAL FITNESS TRAITS AMONG HIGH SCHOOL STUDENTS IN ETHIOPIA

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ABSTRACT

The purpose of this study was to evaluate the effect of Awris traditional dance Tigray regional state on health related physical fitness traits among high school students. To achieve the purpose of this study, 40 high school students were selected randomly. And their age ranged between 15 and 17 years. The selected participants were categorized into experimental and control group with twenty (n=20) subjects in each. The experimental group performed traditional dances for a period of 16 weeks three days per week whereas participants in the control group were informed to follow their usual daily activity. All participants were tested on selected criterion measures on muscular strength, flexibility, cardiovascular endurance and body composition prior to and after the 16 weeks of the training period. The data pertaining to the variables in this study were statistically examined by using SPSS statistical software version 25. Descriptive statistics such as mean and standard deviation were found in order to get the basic idea of the data distribution. Independent t- test was employed for finding whether there was any statistically significant pre-test to post-test mean differences in their respective variables of each group. Level of significant was set at 0.05. Following the 16-weeks traditional dance training, significant change was observed on muscular strength and cardiovascular endurance, but there was no significant improvement in flexibility and body composition as compare the experimental groups with the control group. Therefore it can be concluded that Awris traditional dance training program can improve the muscular strength and cardiovascular endurance of high school students.

Key words: *Awris,* ***P****hysical Fitness and Traditional Dance*

INTRODUCTION:

The health related physical fitness of high school students tends to constantly decline around the world due to inactive life style. Therefore, it is important to improve their physical fitness level during high school period. Tigray traditional dance played using all forms and combinations of stamping, jumping, skipping, shaking, turning and twisting may be one of the approachable systems to achieve the target of fitness level of high school students.The human body can be strengthened by physical activity and can also be impaired by physical inactivity (L. Almond, 2010). Therefore, as an aerobic exercise, Traditional dance brings well known benefits in improving the health related components of physical fitness. Dance as a form of exercise is suitable for all ages as it seems to have a particular beneficial effect on physical health (Lykesas et al., 2017). Dance helps participants develop physical fitness and thus shares many of the health benefits of other sporting events (Nhamo & Magonde, 2013). Folk dance training can significantly improve the physical fitness level of per-Scholl children (Biber et al., 2016). Furthermore Chinese Traditional dance training can improve flexibility, cardiorespiratory endurance, and muscle strength of college level students (Nordin et al., 2009) and (Moyi Li et al., 2015). Dance can increase people's physical fitness, strength and abilities, often more effectively than other forms of exercise, increase people's motivation to participate in physical activity and maintain that participation, because they see dance as fun, expressive, non-competitive and sociable (Facts, 2011).

Dance is a popular recreational activity for people and can contribute to the physical health and wellness of an individual (Gardner, S. et al., 2008). As there is growing concern over the effects of the sedentary lifestyle on the health of young people (Biddle et al., 2004), physical activity via behavior such as dancing should be encouraged. However, it is seldom used as an intervention to increase physical activity even among studies advocating culturally-specific interventions (M. Farr et al., 1997). As a result, empirical data about a culturally-specific dance intervention to generate health benefits and reduce health disparities common in sedentary African American women is paramount (Murrock, C. J., & Gary, 2010).

Traditional dance is one of the most common types of aerobic exercise practices in the world. Presently, dance is a popular activity, performed by small groups of all ages. Music with slow or fast rhythm tempos helps to control and pace the movement of selected body segments, allowing for an overall body workout. As with other forms of aerobic exercise, dance performed within a target heart rate of between 60% to 80% of the maximal heart rate (MHR) has demonstrated cardiovascular and metabolic benefits such as increased maximal oxygen consumption (VO_2max), improved aerobic endurance capacity, decreased percent fat and increased energy production via the mitochondrial respiration system (ACSM, 1998). On the base of above mentioned research reports, researchers are pursuit on the consequence of Traditional dances of Tigray regional state on health related physical fitness traits.

Tigray regional state has different Traditional dances. Each Traditional dances has a very unique step and rhythm with a unique form of movement (Martin, 2018) and (Teffera, 2006). By considering the above facts researchers objective of this study is to investigate the effect of Awris Traditional dances of Tigray regional state on health related physical fitness traits among high school students Tigray region.

METHODOLOGY:

The purpose of this study was to evaluate the effect of Traditional dances of Tigray regional state on health related physical fitness traits namely muscular strength, flexibility, cardiovascular endurance and body composition among high school students. To achieve the purpose of this study, 100 grades nine and ten students were selected randomly. The age of the subjects ranged between 15 and 17 years. The selected subjects were divided into experimental group and control group with twenty subjects in each (n=20). The experimental group performed Traditional dances for a period of 16 weeks three days per week whereas participants in the control group were informed to maintain their original activity habit. The criterion measure of muscular strength was measured by sit-up, flexibility by shoulder flexibility test, cardiovascular endurance

by 1000m for boys and 800m for girls and body composition by BMI prior to and after the 16 weeks of the traditional dance training period. The data pertaining to the variables in this study were statistically examined by using SPSS statistical software version 25. Descriptive statistics such as mean and standard deviation were found in order to get the basic idea of the data distribution. Independent t- test was employed for finding whether there was any statistically significant pre-test to post-test mean differences in their respective variables of each group. Level of significant was set at 0.05

RESULTS:

The following table illustrates the statistical results as an effect of Awris traditional dances of Tigray regional state on muscular strength, flexibility, cardiovascular endurance and body composition among high school students.

Table 1: Computation of t-test between pre and post- test means of muscular strength, flexibility, cardiovascular endurance and body composition of experimental and control groups.

Variables	Test	Experimental		Control		t-value
		Mean	SD	Mean	SD	
Muscular strength	Pre-test	16.00	4.75	13.55	3.87	1.789
	Post-test	19.10	4.53	13.70	4.09	3.956*
Flexibility	Pre-test	35.10	10.03	28.35	14.27	1.731
	Post-test	31.05	9.26	28.05	14.42	0.783
Cardiovascular endurance	Pre-test	2.83	18.92	2.78	35.21	0.541
	Post-test	2.37	33.68	2.67	34.41	2.865*
Body Composition	Pre-test	18.33	2.78	18.61	2.92	0.316
	Post-test	17.29	2.59	18.51	2.82	1.422

* F (0.05) (1, 38) = 2.02 *Significant at 0.05 level of confidence.

It is evident from table 1 that, the traditional dance treatment groups had shown significant improvement in muscular strength and cardiovascular endurance whereas no significant change

were observed in flexibility and body composition when compared with a control group after underwent sixteen weeks traditional dance training program.

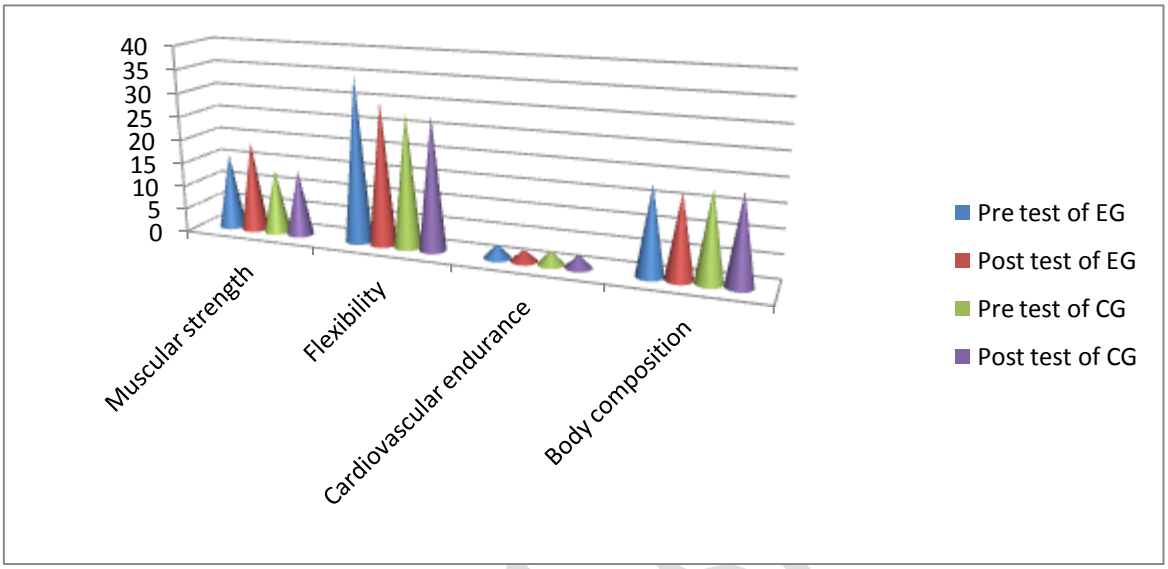

Figure 1: mean score difference of pre post- test of experimental group and pre post- test of control group

DISCUSSION:

Today the health problems that were common a century ago do not exist. They are replaced by conditions associated with hypokinetic diseases such as high blood pressure, obesity, coronary heart disease and so on (ACSM, 2004). So to prevent such conditions and have healthy life style fitness is a key factor. To achieve this healthy life style, humans perform variety of activity such as morning or evening walk, performing gym activities, swimming clubs, martial arts, recreational clubs and so on, and as a result one has to spend lots of money. Out of infinite options, traditional dance is also an approachable system to achieve the target of fitness M. Tensay et al., (2015). The present research finding also proved that, the sixteen weeks Traditional dance training program significantly improve the health related physical fitness traits namely muscular strength and cardiovascular endurance of high school students. However no significant difference was observed in flexibility and body composition.

The above result was in agreement with the following studies conducted by (S. Kim, H. Park, B. Min et al., 2018) proved that Korean traditional dance program improved the health related fitness of Korean elderly female. (Biber, 2016) proved that, folk dance training significantly improved children‟s physical fitness development. As Vordos Z et al., (2017) proved that, traditional Greek dance significantly improve muscular strength and lower limb endurance. More ever Belle et al., (1983) reveal that, aerobic dance without dietary control, does not alter body composition in sedentary middle aged women. The Go Dance Research Project (Elsa Urmston, Dr Angel Chater, 2012) commissioned by a consortium of dance organization examine the impact of 12 weeks dance course training and consequently found a positive impact on the healthy lives of boys and girls. Other results from this study indicate that, participating in a dance project during school time can inspire positive behavior and change in terms of physical activity levels.

CONCLUSION:

It was concluded from the results of the study that, the Traditional dance treatment groups had shown significant improvement in health related physical fitness traits namely muscular strength and cardiovascular endurance whereas no significant change were observed in flexibility and body composition when compared with a control group after underwent sixteen weeks traditional dance training program.

Conflict of interest statement

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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