

The effect of practicing traditional dances on selected psychological variables in high school students in Ethiopia

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Abstract. The purpose of the present investigation was to evaluate the effect of practicing Tigray Regional State Traditional Dances on selected psychological variables, i.e. anxiety and self-esteem, in a sample of one 100 adolescent boys and girls (age 15 – 17 years) who volunteered. The subjects were divided into two groups i.e., the experimental group (n=80) and the control group (n=20). Furthermore, the experimental group was divided into four subgroups (n= 4X20). Each experimental subgroup was practicing for 16 weeks one of the four Traditional Dances of Awris, Hura, Kuda and Shediva. On the contrary, the participants in the control group were counseled to follow their usual daily routine activity. Additionally, all participants were tested on selected criterion measures on anxiety and self-esteem prior to and after the investigation period which lasted for 16-weeks. All data were statistically examined using ANOVA for each one of the studied variables separately. Whenever 'F' ratio of adjusted post-test was found to be significant the Scheffe's test was used to determine the paired mean differences. The level of significance was set at $p<0.05$. Following the 16-weeks traditional dance practicing, significant positive changes were observed on anxiety and self-esteem variables in the four experimental groups compared with the control group. It can be, therefore, concluded, that Tigray traditional dance practicing can notably improve the psychological wellbeing of high school students.

Keywords. Anxiety, self-esteem, traditional dance, wellbeing.

Introduction

Ethiopia is a widely diverse country with over eighty unique, rich ethnic, cultural, custom and linguistic groups. Each ethnic group has its own traditional rhythm and dance style in order to preserve and perpetuate certain ideas, religious beliefs, historical events, ancient stories and thoughts. Due to its old history, one that dates back to 3000 years, Ethiopia's folk dance is a symbol of their mosaic culture (Ethiopian-folk-dance, 2018). Dancing is, indeed, an integrated part of life for Ethiopian's. Consequently, they enjoy dancing in their social and spiritual function.

Ethiopia has many ethnic groups and languages, along with a large diversity of music and dance kinds. Although most of them are indigenous, it is believed that Wolaytigna (Southern Nations, Nationalities, and Peoples' Region could be the origin music and dance of Africa, whereas music and dance of Amharic (Amhara region), Afan Oromo (Oromia region), Tigirigna (Tigray region),

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Gurageagna (Southern Nations, Nationalities, and Peoples' Region), Afarigna (Afar region), Sidamigna (Southern Nations, Nationalities, and Peoples' Region), Gambela (Gambela region), etc. are not yet well known to the other world. Additionally, all of the above areas have their own dances and rhythms and even each kind of their music has its own divisions (Teffer, 2006).

Tigray is one of the nine regions of Ethiopia which has enriched cultural background. The traditional dances of Tigray region are characterized by two-beat drum rhymes. According to the distinctive drum rhymes, participants dance in a circle like in the Japanese Bon Dance. These dances have also different variety of steps, such as delicate neck motion, rhythmical shoulder movement, jumping steps and so on (Horwitz, 1997).

Several studies have proved that traditional dance can significantly increase the psychological well-being variables of students (Mavrovouniotis et al., 2010). However, there is little epidemiological data on the effect of traditional dance practicing on psychological wellbeing in Ethiopian adolescences. Therefore, the purpose of the present study was to investigate the effect of practicing traditional dances of Tigray regional state i.e., Awris, Hura, Kuda and Shediva, on selected psychological variables, namely, anxiety and self-esteem. Hopefully, the implication of such study will enrich the information about the relation of traditional dances with psychological variables. Furthermore, it may assist and urge psychologists, health care experts, coaches, athletes and individuals to incorporate traditional dance practicing in their strategies in physical exercise programs aiming at improving psychological wellbeing.

Methods

Subjects

For the purpose of the present study, the total of 100 healthy boys and girls (age 15 – 17 years) volunteered. They were randomly selected out of a

total of 207 students from grade nine and ten of Mekelle University community school using the scientific sample determination technique, namely the Thompson's (2012) formula: $n = \frac{1}{\frac{1}{n_0} + \frac{1}{N}}$ Where: n is sample size; n_0 is before considering the sample; N is total population; Confidence level was 95%; Precision level was $\pm 7\%$; Maximum variability was 0.5.

Ethical considerations

Specific ethical guide lines were adhered to while conducted the research. Before conducted the study, ethical clearance was obtained from the ethical committee Ayder Referral Hospital of Mekelle University.

Another important ethical consideration was that, professionals must respect the right and dignity as well as the attitude, beliefs and opinions of the participants. During the intervention it was kept in mind that the participants have the right to withdraw from the study at any time. This was made clear to them during the briefing session of the study as well as in the consent and assent form that they and their parents or guardians signed. The participants and their parents or guardians were assured of their anonymity and that confidentiality was maintained at all times.

Furthermore, the health, dance professionals and the researcher must avoid harm to the participants at all times. During each session the participants was undergo through warming up and cool down procedure to prevent physical injury.

Lastly, the intervention with each participant was carried out in sensitive manner and no pressure was placed on them to do anything with which they did not feel comfortable.

A warm and friendly environment was created and the researcher was act in the best interest of each participants.

Study design

A randomized controlled parallel trial was used for this study as it was considered as the most

appropriate (Haakstad et al., 2016) for the purpose of the present study. All the 100 participants were randomly categorized into four experimental and one control groups. Each group consisted of twenty participants (n=20). The experimental group was practicing the four traditional dances of Tigray regional state (Awris, Hura, Kuda and Shadiva) for a period of 16-weeks, excluding the period utilized for pre-test and post-test. The control group was not participating in any of the traditional dance training program given to the experimental groups during the experimental period. Namely, they were counseled to follow their usual daily routine activity such as actively participated in the school teaching-learning activities, helping their families at home and so on.

Data collection tools

To collect data, first permission was taken from the respective sources that were from administrators, parent/guardian, students and experts. All the necessary information about the study was explained to the participants in advance. All the participants were orient to fill full the psychological questions (Anxiety: Generalized anxiety disorder 7-item (gad-7) scale (Spitzer, 2006) and self-esteem: Rosenberg Self-Esteem Scale (Rosenberg, 1965)). Having this necessary data was collected in both the pre and post-tests using the same procedure and the higher scores indicate highest self-esteem and vise-versa in Anxiety.

Table 1
Variables and Criterion Measures.

Sr.No	Variables	Tests used
1	Anxiety	Generalized anxiety disorder 7-item (gad-7) scale (Spitzer, 2006)
	Self- esteem	Rosenberg Self-Esteem Scale (Rosenberg, 1965)

Table 2
Training protocol.

Number of weeks and intensity			Types of Traditional dances of Tigray region	Duration (min)	Repetition (n)	Rest (sn)	Frequency per week			
1st to 4th Weeks Phase I	5th to 10th Weeks Phase II	11th and 16th Weeks Phase III								
60% THR	70% THR	80% THR	Awris	5:58 min 5:85 min 6:13 min	6	30 sec	3 (Three days)			
			Hura	6:13 min 6:30 min 6:37 min						
			Kuda	6:10 min 6:66 min 7 :12 min						
			Shediva	4:29 min 5:45 min 4:67 min	4	30 sec				
									7	30 sec

Statistical Analyses

Under the guidance of a statistician, the SPSS (version 25 for Windows) statistical package was utilized for all statistical analyses and the statistical significance was set at $p < 0.05$. Descriptive statistics, mean and standard deviation were found in order to get the basic idea of the data distribution. The significance of adjusted post-test mean differences between the experimental and control group for each variable ANOVA (Analysis of variance) test was utilized. Whenever the 'F' ratio was found to be significant, Scheffe's test was used to determine which of the paired means differed significantly.

Results

The following 3 & 4 Tables illustrate the statistical results as an effect of Traditional dances of Tigray regional state on Anxiety and Self-esteem among all participants.

The results presented in Table 3 indicate that, the Traditional dance treatment groups had shown significant improvement in psychological variables

namely Anxiety and Self-esteem when compared with the control group as well as with the base line data after they underwent the sixteen weeks Traditional dance practicing program.

Moreover, Table 4 revealed that, significant differences were observed among all groups in the Anxiety criterion. However, there were no significant difference observed in Self-esteem except among Kuda, Shediva, Awris and Hura and control group.

Discussion

Traditional dancing is an excellent form of exercise because besides the fact that it improves the general physical fitness (Hui et al., 2009), it is also an important contributing factor to an overall sense of happiness and wellbeing (Cynthia et al., 2010). For instance, examining the impact of a traditional Greek dance program on seven year old schoolchildren (Jordanidou, 2012) and elderly (Zilidou et al., 2015), with regard to psychosocial variables, found significant improvement in their self-esteem and

Table 3

Analysis of variance for the pre -test and post- test data on Anxiety and Self-esteem score of Awris, Hura, Kuda, Shediva and Control Groups.

Variables	Tests		Awris Dance	Hura Dance	Kuda Dance	Shediva Dance	Control Group	SoV	SoS	df	MS	F
Anxiety	PrT	Mean	14.15	13.60	15.00	14.50	15.20	B	33.440	4	8.360	1.212
		SD	3.28	3.33	2.42	2.23	1.32	W	655.550	95	6.901	
	PoT	Mean	8.25	9.30	12.45	8.90	15.50	B	742.860	4	185.715	78.865*
		SD	1.44	1.71	1.39	1.88	1.10	W	223.700	95	2.355	
	APT	Mean	8.298	9.424	12.379	8.899	15.401	B	686.139	4	171.535	76.459*
								W	210.887	94	2.243	
Self- esteem	PT	Mean	24.55	22.90	23.30	23.25	23.44	B	32.740	4	8.185	0.762
		SD	2.70	4.49	2.86	2.69	3.26	W	1019.900	95	10.736	
	PST	Mean	34.10	34.05	33.90	33.95	32.27	B	1197.660	4	299.415	45.580*
		SD	2.61	2.48	2.67	2.50	4.28	W	624.050	95	6.569	
	APT	Mean	34.045	34.077	33.907	33.959	2.362	B	1191.740	4	297.935	45.058*
								W	621.554	94	6.612	

PrT: Pretest; PoT: Posttest; APT: Adjusted Posttest; SoV: Source of Variation; B: Between samples; W: Within samples;

SoS: Sum of Squares; MS: Mean Squares.

$F_{(4, 95; 4, 94)} = 2.46$; * Significant at $p < 0.05$ level of confidence.

Table 4

Scheffe's test for differences of the adjusted post-test paired means of Anxiety and Self-esteem.

Variables	Adjusted Post-test Mean					Mean Differences	Confidence Interval
	Awris Dance	Hura Dance	Kuda Dance	Shediva Dance	Control Group		
Anxiety	8.298	9.424				1.126*	0.47
	8.298		12.379			4.081*	
	8.298			8.899		0.601*	
		9.424	12.379			2.955*	
			12.379		15.401	3.022*	
				8.899	15.401	6.502*	
		8.298			15.401	7.103*	
			9.424		15.401	5.977*	
				12.379	8.899	3.480*	
			9.424		8.899	0.525*	
Self- esteem	34.045	34.077				0.032	0.81
	34.045		33.907			0.138	
	34.045			33.959		0.086	
		34.077	33.907			0.170	
			33.907		25.362	8.545*	
				33.959	25.362	8.597*	
		34.045			25.362	8.683*	
			34.077		25.362	8.715*	
				33.907	33.959	0.052	
			34.077		33.959	0.118	

* Significant at p<0.05 level

mental health, respectively. A similar study (Maraz et al., 2015) showed that a dancing program increased self-esteem and reduced anxiety high school and college students. In line with the above investigations, Olvera (2008) suggested that, a cultural dance program was used in order to prevent anxiety and improve other psychological variables of wellbeing. In addition, Brennan (2012), demonstrated positive associations between traditional dance practicing and psychosocial Well-being.

As anticipated, the present findings also indicate that, the 16-weeks Traditional dance practicing program significantly improved the psychological variables, namely, Anxiety and Self-esteem of high school Ethiopian students. These results complement the above named previous reports demonstrating positive associations between traditional dance

practicing and the general psychological wellbeing improvement.

Moreover, dancing facilitates the release of endorphins through to the combined effect of physical activity and music on the state of mind (Parker, 2015; Whitman, 2017). It is well known that endorphins are released when the body is forced to exert itself at a certain level, as it happens in the case of the 'runner's high' (Schwarz, 1992). As dancing is a quite similar activity, this very same boost in mood can be achieved through its practicing with the intensity of 60-80% THR. Truly, the physical exertion which is achieved through dancing facilitates the joined release of endorphins and adrenaline which in turn create a dramatic 'dancer's high' (Parker, 2015). As an aerobic exercise, traditional dance brings well known benefits in improving psychological well-being (Taylor, 1995), increase

self-esteem (Murcia et al., 2010), reduce anxiety (Leste, 1990) and it also elevate mood and increase social contact in a healthy adolescent females (Blackman et al., 1988; Estivill, 1995). Therefore, Tigray traditional dances played using all forms and combinations of stamping, jumping, skipping, shaking, turning and twisting is an evident to achieve the psychological well-being of high school students

Conclusion

Within the limitations of the present study, it was concluded that, the Traditional dance practicing groups had shown significant improvement in the studied psychological variables namely Anxiety and Self-esteem when compared with the control group as well as the base line information after they underwent 16-weeks of Tigray Traditional dance practicing.

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