



World News of Natural Sciences

An International Scientific Journal

WNOFNS 23 (2019) 56-68

EISSN 2543-5426

Dance-based body-movement as kinesthetic therapy to reduce the impact of Prolonged Periods Classroom Settings Algerian Primary School

Mohammed Zerf

Institute of Physical Education and Sport, University of Mostaganem, 27000 Mostaganem, Algeria

E-mail address: biomeca.zerf@outlook.com

ABSTRACT

In recent years, dance-based body-movement regulated video games have been harnessed in school-based physical health activities. Such programs are used in European primary schools to help schoolchildren to be of better health. In the Greece Primary School curriculum, use of these video games cover aspects of physical, emotional, social, and mental functioning and well-being. Herein, the correlation between movement and emotion is evident. This study was to investigate the significance of Play Dance and its impact on the primary school education in Algeria. In it, a four-week educational intervention in the field of dance was applied during school recess (morning and afternoon). The daily physical activity was administered in the form of imitating dance moves, basing on the Freeze Game (Just Dance Kids 2014) modal and accounted for 10 minutes of the recess time. The sample consisted of 45 male students of the 4th class, of primary slimani school residence of Naama, a municipality of Mecheria. Pre- and post-testing of the invested program was based on the INDARES program. Data analysis was performed by way of descriptive statistic indices, Paired Samples Correlations, and Paired Samples Test. The results showed differences between the start and end of the educational intervention. It is, hence, recommended as it engenders considerable physiological and motor improvements that correlate with the children's overall health.

Keywords: Play dance, health-related quality of life, Algerian primary school

1. INTRODUCTION

Research has found that using dance movements as a form of therapy activates several brain functions at once: kinaesthetic, rational, musical, and emotional. This type of movement

requires mental, physical, and emotional strength to work simultaneously (Verghese *et al.*, 2003).

Admitted by experts through the healthy development of self-image, body appreciation, self-esteem, and self-control (Karff, 1969; Joyce, 1980; Hanna, 1988; Adshead *et al.*, 1998; Stinson, 1998). Acknowledgements to its outcomes definite as an exceptional body's movement activity feelings, emotions with satisfactory motor skills (Sanderson, 2001). Look at essential keys for the development of behavioural self-control (Hanna, 1988; Stinson, 1998), communicate ideas and the interpretation of sensory figuratively to body movement forms (Dimondstein, 1971). Regarding that dance is more uplifting and enjoyable than other types of exercise, where many countries included it as a particular component of the physical education curriculum in primary school. Appreciated by dance as "the psychotherapeutic use of movement as a process, which furthers the emotional, social, cognitive, and physical integration of the individual, such as a universal approach to developing body movement, expressiveness, and creativity (Stinson, 1988; Bergmann, 1995; Miller, 2007; House, Éireann, Foster and Cliath, 2009).

Known by Medical research, sports medicine and training, through Dance-based body-movement controlled video games, customary by Exergaming that were adjusted for employment as model-based physical activity health promotion programs for all ages and social categories. Support as knowledge of social-cultural patrimony movement art of nation expression (Bergmann, 1995; Gilbert, 2015). Livelihood in the case of this study as an excellent model based school-physical exercise that can align the body, reorganise the central nervous system, develop focus and concentration, enhance social skills, and release stress (Gilbert, 2015). Revealed by several data as positive disciplines classrooms in the benefits of dance school-based physical activity health promotion programs (Dimondstein, 1974; Best, 1985; Mac Donald, 1991; Davis, 1995; Gilbert *et al.*, 2006; Swindlehurst and Chapman, 2008; Gilbert, 2015). Suggesting the professionals in this topic to quantified their research through the Creative Dance (Lobo and Winsler, 2006; Lykesas and Zachopoulou, 2006; Quin, Frazer, and Redding, 2007; Tyrovola, 2012; Savrami, 2012; Bungay and Vella-Burrows, 2013; Tsompanaki, 2014).

From this evidences, this study was carried out to explore the impact of play Dance on school setting admitted in Algerian educational sectors as sedentary immobile time. Indexed in similarities as a risk factor of obesity allied with the decline of physical/psychological health and social well-being (Zhao and Badler, 2001; Mooney, 2006; Lykesas *et al.*, 2018). Support by this study via the integration of play-dance as based school physical activity. Affirmed by the Laban Theory of Movement Analysis (Laban, 1975) as indispensable activities for primary school setting of physical education (Tyrovola, 1989; Kraus *et al.*, 1991; Lachapelle, Murray, and Neim, 2003; Koutsouba, 2004; Pedagogical Institute, 2011). Topic rehearsal in developed country at deference educational sectors, primary, middle school, secondary school, and universities (Barmpousi, 2004; Gkousdova and Koutsouba, 2006; Lai Keun and Hunt, 2006; Tyrovola and Koutsouba, 2007).

Support in the case of Primary School as a form of activity-based physical movement (Stinson, 1988; Lykesas *et al.*, 2009, 2014). Confirmed by Bergmann (1995), as an easy method to teach at elementary schools (Bergmann, 1995). Candidates by Ireland as based school curriculum (Irish National Teachers' Organization, 2009), applied at schools in the United States (Baltimore County Public Schools, 2012), Taiwan (Wu *et al.*, 2012), and Greece (Savrami, 2012; Tsompanaki, 2014). Advances through their practical tendencies, according to

(Ward, 1974; Sherborne, 1990; Stinson, 1998; Swindlehurst and Chapman, 2008). Report by Davis (1995) through motor skills, cooperation, leadership, and a supportive environment. Advocate by Best (2005) thus physical, mental, and emotional advantages. Confirm by Mac Donald (1991) via social development. Estimated by Finally, Lykesas and Zachopoulou (2006) through motivation for the increased contribution of primary school scholars' developmental movement (Hackney, 2003; Bloom, 2006; Gilbert *et al.*, 2006; Billingham, 2009; Shusterman, 2012; Gilbert, 2015). In particularity upper/lower body, right/left side, head/tail, cross-lateral, breathing, tactile, core-distal/spine, vestibular movements (Hackney, 2003; Gilbert, 2015). Specified by Laban's theory of Human Movement Analysis above eight movement fundamentals (Guest, 1977; Groff, 1995; Hackney, 2003; Billingham, 2009; Theocharidou, 2017). Accounted by Rudolf Laban's through fifteen dance concepts (Body: parts, shapes, relationships, balance; Space: place, size, level, direction, pathway, focus; Time: speed, rhythm, duration; Force/Dynamics: energy, weight, flow).

However, success in our educational system lies in reducing time spent on physical education to increase academic performance. Issued by the World Health Organization (WHO) via the consequences of inactive practices (WHOQOL Group, 1998). Reported by Dalkey and Rourke (1973) via the well-being and happiness, shown by Pavot and Dienar (1991) through feeling of life satisfaction, economic, social, psychological, medical (Yfantopoulos, 2001, 2007; Petraki and Koutsouba, 2013; Theocharidou, 2017; Venetsianou and Koutsouba, 2017; Lykesas *et al.*, 2018) and individual perceptions, according to (Ikonomou *et al.*, 2001; Cummins, 2005).

Sited as charges daily active lifestyle to improve physical, psychological, and people wellbeing (Chodzko-Zajko, 2005), established by similarities as aims of benefits "Health-Related Quality of Life" (Chen *et al.*, 2005). Recorded by (Mooney, 2006) through the requirement of physical and psychological health and social well-being. Suggested by Kaplan and Bush (1982), as challenges physical volumes for a healthy mental status, affirmed by (Theodoropoulou *et al.*, 2012; Ware *et al.*, 1998; Vidalis *et al.*, 2002; Kidscreen Group Europe, 2006) in the interests of children involving in 30 minutes of moderate-intensity physical activity at least 5 days per week.

2. MATERIALS AND METHODS

The study follows the experimental method, using the program and pre-test and post-test results of the corresponding sample. To conduct tests, we included a warm-up at lasting 10 minutes. After that, we explain to schoolchildren the ideal execution of the motor tests (including one trial run) and reports their results within the record-keeping sheet. For motivation aspects, we explain to our nominees the advantages of physical fitness in relationships with health and their well-being.

2. 1. Subjects

The sample consisted of 45 male scholars' 4'-class primary slimani school residence of Naama municipality of Mecheria., aged 10 to 11 years old and sex male. After the adored with their teachers and administration, we have applied our intervention, which was programmed the month of May school years 2017–2018.

2. 2. Intervention

For this purpose, a four-week educational intervention in the field of dance was implied during school recess (morning and afternoon). Accounted as 10 minutes physical daily activity administers in the form imitating dance moves, basing on Freeze Game (Just Dance Kids, 2014) modal (4 weeks × 20 MN per schooling day). The sample consisted of 45 male scholars' 4'-class, primary slimani school residence of Naama, municipality of Mecheria. Test before and after the invested program was based on battery INDARES. The program utilises based on Freeze Game (Just Dance Kids, 2014). Report by (Hannah Brewer, Mary Renck Jalongo, 2018) as one great way to introduce children to imitating dance moves by following the video. Indicate by Gilbert (2015) within the body movement, space, time, and dynamics/force. Executed in the case of this study as a complementary program to enhance (Mosston and Ashworth, 2008; Derri and Pacht, 2007; Lykesas *et al.*, 2010, 2014) teachers creativity under the instructions of Laban Theory of Movement Analysis (Lykesas, 2002; Koutsouba, 2005; Pedagogical Institute, 2006; Lykesas and Koutsouba, 2008).

2. 3. Measurement Instrument

Our approach is related to studies (Kidscreen Group Europe, 2006; Ravens- Siebereretal, 1998; Tountas and Tsiantis, 2005; Ottova *et al.*, 2012; Olweus, 2013; Theocharidou, 2017).

The participants underwent self-testing of physical fitness as a part of school-based physical education. Based on Project INDARES (International Database for Research and Educational Support) as System developed in cooperation with the Centre for Kinanthropology Research at Faculty of Physical Culture of Palacký University in Olomouc.

The research included four motor tests:

- a) Push-ups – tested muscle strength and endurance of the upper body and upper limbs.
- b) Modified curl-ups – tested muscle strength in the area of the abdomen and torso.
- c) V-sit and reach – tested joint mobility in the area of the lower back and hamstrings.
- d) Shoulder stretch – tested joint mobility of the upper arm, especially in the shoulder joints.

2. 4. Statistical Analysis

The statistical data were analyzed with the use of descriptive statistical indices (mean values and standard deviations) and Paired Samples Correlations, and Paired Samples Test at p values set at 0.05 (Thomas *et al.*, 2003).

3. RESULTS

Our sample consisted of 45 male scholars' 4'-class primary slimani school residence of Naama municipality of Mecheria.

Our results **Table 1** confirmed that dance recess provides physical, psychological, and social benefits. Admitted in this study as messing strategy adopted by the majority of developing countries during physical education classes or outdoors sports practices, especially in our primary schools, because of its positive collegiate opportunities looks to their followers. Revealed in the present study by the significance of paired sample test strongly correlate with

lower body content and muscle power, as well as cardiovascular health fitness improvements in the benefits of post-test.

Table 1. Shows the pre-test and post-test measurements

| N = 45 | | Mean | S.D. |
|------------------|-----------|-------|------|
| BMI | Pre-test | 21.39 | 1.76 |
| | Post-test | 19.43 | 1.88 |
| Push-ups | Pre-test | 8.85 | 2.22 |
| | Post-test | 10.92 | 2.27 |
| Curl-ups | Pre-test | 29.43 | 2.01 |
| | Post-test | 31.65 | 1.63 |
| V-sit and reach | Pre-test | 3.23 | 0.62 |
| | Post-test | 5.46 | 0.66 |
| Shoulder stretch | Pre-test | 14.76 | 0.85 |
| | Post-test | 11.74 | 0.82 |

Table 2. Shows the Paired Samples Test pre-test Vs post-test measurements

| | | Mean | S.D. | T | DF | P≤0.05 |
|------------------|----------------------|-------|------|-------|----|--------|
| BMI | Pre-test & Post-test | 1.96 | 0.81 | 8.44 | 44 | 0.000 |
| Push-ups | Pre-test & Post-test | -2.06 | 0.72 | -7.31 | 44 | 0.000 |
| Curl-ups | Pre-test & Post-test | -2.22 | 1.95 | -7.63 | 44 | 0.000 |
| V-sit and reach | Pre-test & Post-test | -2.25 | 0.88 | -8.48 | 44 | 0.000 |
| Shoulder stretch | Pre-test & Post-test | 3.03 | 0.91 | 6.65 | 44 | 0.000 |

Shows via the correlation set in **Table 3:** Interpret in this study as the potential exchange between sample performance before and after dance program that decreases body max index and increases, strength, coordination, agility, balance, endurance and timing.

Table 3. Shows the Paired Samples Correlations

| N = 45 | | Correlation | P≤0.05 |
|------------------|----------------------|-------------|--------|
| BMI | Pre-test & Post-test | 0.98 | 0.000 |
| Push-ups | Pre-test & Post-test | 0.91 | 0.000 |
| Curl-ups | Pre-test & Post-test | 0.45 | 0.003 |
| V-sit and reach | Pre-test & Post-test | 0.96 | 0.000 |
| Shoulder stretch | Pre-test & Post-test | 0.95 | 0.000 |

4. DISCUSSION

From the above, our findings confirmed that play dance Based-School is a psychotherapeutic movement of sedentary time support by dance as beneficial practice to enhance child, emotional, and motor functions of the body. Admitted by the results of the battery test in the benefits of post-test. Established by Quin, Frazer, and Redding (2007) due to the facts that dance is harmonious with emotional benefits. Explained by Karff's findings (1969) in play Dance and their correlation between movement and emotion. Reports by Joyce (1980) and Gilbert (2015) as guidance particles to highlight the emotional and cognitive challenges. Shown by Zachariadou, Douka, and Alexandris (2012) and Zisi *et al.*, (2014) as helpful Health-Related Quality of Life intervention in elderly children engaging into Greek traditional dance programs. Accounts through this study as confirmed Based-School Health-Related Quality of Life. Confirmed by Lai Keun and Hunt (2006) through Dance stimulates as fundamentally bodily/kinesthetic intelligence that must be fulfilled during first-graders primary school tutoring program. Reached by Lobo and Winsler (2006) and Lykesas, Tsapakidou, and Tsopmanaki (2014) through the design and organisation investigated within Dance program that their aims at primary school students to improve basic kinaesthetic skills, overall motor behaviour, social skills, reduction of aggressive behaviour, integration of children in society (Sanderson, 1988). Supplementary to emotions developments including the improvements in motor skills, according to Koutsouba (2000, 2007) and Tyrovola (2012).

From the above, our investigation confirmed the procedure adopted by the United States and New Zealand, which made dance as physical education curricula. Approved in this study as a complementary program for stimulating children daily lifestyle, including physical health and activate fitness routine daily life. Exposed in this study by the significance of Paired Samples Correlations, and Paired Samples Test (**Tables 2 and 3**). Allowed based on the efficacy of video games that consolidate exercise and body movement as play part of the game, which could promote physical activity by making it more engaging. Reported in this study as an intervention that encourages interactive mental and physical exercise resulted in healthier cognitive performance reports by investigations regarding exergaming benefits about mental and aerobic activity related to cognitive growth.

Our outcomes via this study are to emphasise our teachers to integrate the active video games that stimulate greater physical activity during gameplay by challenging players' body

movement to cooperate with the games that have the potential to promote physical activity, improve balance, and function in a certain status. Considered through this study as beneficial additional dance programs for 20 minutes daily, school-based activity reserving to children health-related to fitness and well-being.

Support by the validity of INDARES battery test (International Database for Research and Educational Support) in the knowledge of well-known intensifications, regarding physical qualities, speed, balance, muscle mass, heart rate, oxygen consumption, and energy expenditure. Suggest our institutional policy health or education to encourage children to perform a necessary level of physical fitness and to add or maintain physical activity in their lifestyle. From this logic, we agree the used of our approach to imply this physical component in physical education Algerian primary curricula classrooms as well as benefits children daily active lifestyle.

5. CONCLUSIONS

Our outcomes confirmed that Dance is "the psychotherapeutic use of movement as a process which furthers the emotional, social, cognitive, and physical integration of the individual. Demonstrated by our approach as effective method that increases time physical activities without restricting the time of physical education lessons or academic daily sections. Requiring our health care and educational system to adopt this approach to secure the demands of our children grow under the impact of Prolonged Periods Classroom Settings support by Algerian studies as sedentary time consequence of further health risk. Affirmed by the present as habits easy practice for our primary teachers to implement those strategies to intensify learners' performance and encourages them to achieve prosperous motor, cognitive, and social learning (Derri and Pachta, 2007). Indicted in similarities as fundamentally bodily/kinesthetic intelligence that must be fulfilled during first-graders primary school tutoring program.

Acknowledgement

According to the study outcomes, it is evident that play Dance as a supplementary program has a beneficial influence on the primary school students mainly through health, physical performance and well-being. Pointed through this study as guidance for Algerian primary teachers to implement those policies to intensify learners' performance and help them to achieve prosperous motor, cognitive, and social learning.

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