The Role of Music-based teaching on Rudimentary Kinesthetic Activities among Third Grade Female Primary Students

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Abstract: The aim of this survey is to evaluate the effectiveness of music-based teaching regarding educating rudimentary skills on improvement of these skills in third grade female primary students.

Materials and methods. The population includes third grade female primary students of Harsin, Kermanshah where they were 304 persons, 30 of them were chosen according to available sampling and based on randomized method, they were put in treatment (N=15) and control (N=15) groups. The survey method is semi-quasi and compatible with control group. The treatment group was given the independent variable which was compatible with music-based teaching method and control group saw the educations rudimentary skills based in a classic way. Survey tool is Lincoln-Ozertski kinesthetic test. At the descriptive level, data were analyzed using Mean and SD and at inferential level, they were analyzed using independent T. the results showed that along with music-teaching based skills, those of static balance, dynamic balance, coordination, speed, accuracy and strength were also influenced (P<.05 and P<.001). According to the results of this survey, one can conclude that performing rudimentary acts with music as the essential and basic section of children' daily schedule, they can be provided with more fruitful results.

Introduction

Kinesthetic skills include specific motion elements and factors such as personal performance or features are not included. After growth and purification of these patterns, the child can achieve and do more complicated sport movements as well as daily activities (Molanorowzi and et al, 6: 1390). The kinesthetic growth investigators such as Hi Wood and M. Gachel (1387) believe that high kinesthetic capabilities and performing complicated sport skills in a fluent and attractive way which are very practical in sports, needs conceptive-kinesthetic abilities during childhood. The important point regarding rudimentary sills to mention is that manipulating different confinement s can affect useful motion and kinesthetic growth. We are going to accentuate this issue that if changing a kind of confinement can turn into change the interaction of the confinements, the kinesthetic behavior may also change and according to surveys by Hi Wood and M. Ghachel, we can manipulate others' kinesthetic behavior via manipulating and make them more proper regarding growth and therefore, music can be used as an incentive factor and since confinements like tiredness and anxiety are affected, it can be regarded as an incentive to change the kinesthetic skills.

In recent years, due to importance of kinesthetic skills, rudimentary skills growths are seen as basic skills to achieve higher level ones. Therefore, variety of surveys are done on the effective factors on rudimentary skills wherein factors like gender and age, posture

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and enrichment of kinesthetic experiences are taken for granted. The survey results by Porski and et al (2004), Sanders (2000 and 2002) and Smith & Cafi (2006) show the rudimentary kinesthetic skills such as hopping, sliding, throwing and catching are necessary for sport skills like basketball and foot ball (quoted by Farsi and et al, 31: 1390) and in another investigation, Peterson and et al (1999) figured out that being best and preferred to others in rudimentary kinesthetic skills is a big deal for them to take part in games, sport and other physical activities. But the problem is that in order to promote these skills where one side of the coin is music, a little bit is done. Due to this background and according to Galaho surveys and test (1990) to promote quality level of sport skills and among the factors affecting rudimentary skills, presenting proper educational curriculums can be counted as the most important factors and among which, music can be one of those suitable curriculums because based on Aydin and et al (2005), production and reception of music is one of the interesting human brain's activity (quoted by Mirzamani and Hodawand Khani, 24: 1387) and variety of music and harmonic acts can be used for learning objectives (Zademohammadi, 1389). Because according to Rafee (1383), "because of possessing two elements of rhythm and motion it has a noticeable importance and it can prolong attention and concentration".

The reason that music affects kinesthetic learning and promotes the quality of sport curriculums, different signs and points are concerned neurotic webs in brain processing music, act completely individually independent from other neurotic parts of brain) and according to Malayeri (1384), "neurological observations show that function of music is different from other cognitive domains and they are controlled by specific neurotic webs. Based on these observations, prior to posses cultural aspect and dimension, it is such a biological phenomenon", indicating this claim that music can affect sports and kinesthetic performance and studies of Goldshtrom, Korman and Bendavid (2011) also confirms this cognitive function and flexibility of mind during performing music is correlated to sports and kinesthetic movements. To show another relation between music and sports, quotations by Michalowski and Kozima (2007) and Dehghani and et al (1391) are noteworthy, believing that rhythm, specially being used as music or games as well as a part of teaching human beings and diverse cultures, is taken for granted as a very important issue and at the time of mixing movements and games, music and lyrics and harmonic songs increases its effectiveness when working with children.

Also, due to this point confirmed in quotations by Martin (1998) and Levinowitz (1982), childhood is a vita era for child's musical system development and it so correlated to environment and the capability of performing harmonic and rhythmic develop gradually from 4 to 7 and children will be able response different simple acoustic incentives (quoted by Dehghani and et al, 57:1391) that this can be a witness for the claim of existing relation between and sports and a thinkable issue to be surveyed in this study and future studies as well.

Possibly music can play roles in four dimensions to promote sport function that include decrease of tiredness reception, increase of motivation level, promotion of motion correspondence or synchronization and relaxation as well, confirming this Crust (2004) and informs music affecting feature in kinesthetic movements such as improvement of temperament, excitement control, decrease of pressure reception, progress of output, improvement of learning skills, production of spiritual manners and circulating (quoted by Taheri and et al, 182: 1391). In addition, to affirm the relation between music and sports it is said by Pallatou, Karadimou and Geredimos (2005) that besides getting mixed music and harmonic movements such as gymnastics can make balance between having the curriculum desirable and children training and Masal

(2011) believes rhythm is an innate thing and is a tool of exploration and due to the joyful and rhythmic dimension of movements and harmonic games and putting these acts in the same boat with music, children learn majority of these educational concepts and terms in an implicit way, meanwhile they learn the movements (Dehghani and et al, 58:1391), pointing that in most of recent surveys, the effectiveness of kinesthetic movements and rhythmic sports as well on memory and learning. Albeit, it should be noted that according to the survey results by Sutoo and Akiyama (2003) and Fishman and et al (2001, quoted by Mirzamani and Hodawandkhani, 24:1387) showing the mechanisms affecting music conception have been studied for long ages and in spite of dominance and importance of music among human culture, humane knowledge on music is basically in its infancy era and it can be a basic problem being searched by this survey because music and its role in learning is not taken for granted a lot.

And in another view point, thanks to role of physical activity in as one of the multidimensional factors in child growth, movement development , training sports talents and the positive role of music on learning for instance, this matter has attracted the author's attention as one to be investigated and thereby, the primary problem in this survey is the scientific analysis of it and the author uses a three-stage plan as one to organize and evaluate P.E(physical education) curriculum in such a way that teaching steps and choosing any of the stages activities are correlated with each other and it includes stages of being prepared (stage 1), transcribing educational objective or the main stage (stage 2) and inertia (stage 3) that this is designed based on general pattern of educating physical education and sports (Sultani and Salehipour, 52:1390). Although, general education of physical education had used music an important factor to be accompanied with learning rudimentary acts, hoping that aforementioned method is used as an educational one to reform and grow students' rudimentary acts. Though, one should point to this important issue that in previous studies, the effect of music on learners' psychological and physiological status was stated more and there has been no research on the effect of teaching kinesthetic acts using music and it turned into a matter to survey this issue practically.

Survey kind and method

According to the kind of survey, the researcher has quasi-experimental method to test hypotheses. This survey aims to investigate the effect of periodic physical activity compound with music on development of rudimentary sport movements on primary third students. To do this survey, 30 students in third grade of primary school were chosen. The interfered group took part in exercises for 8 weeks of doing 2 sessions a week, each session pertaining 40-45 minutes of exercising compound with music. During this time, the control group was carrying out schools to-do curriculum and they were detached from doing effective and regular exercising compound with music. The chosen program for survey contained a 40-45 time of exercising compound with music and at the beginning and end of the each time if exercising; generally 8 minutes were assigned to warm up and cooling off the body. Before starting the test, the subjects were provided with 10 songs and they were asked to choose three of which based on their desires. It is worth noting that the rhythm and volume of sons were identical. Therefore, in Terry's view point, tempo as the most important factor was under control of the investigator. And also according to Terry's view point, motivational music is regarded as on with tempo higher than 120. Therefore, the chosen songs were Techno and had the tempo more than 120 (tempos for the three aforementioned songs were 128, 128 and 320, respectively. The type of songs included Mp3 with the quality of 192 kbit/sec). The form of BMRI was assigned for each song. The favorite songs were carried using portable computers (Toshiba Satellite L25 S 11 92) and

they were broadcasted with a specific kind of software (Media Player Classic MPC. HC. 13.1359.0). 4 speakers were installed in four corners (Micro Lab Subwoofer System Mode 560) in order to achieve certainty of providing the subjects with the same volume of sound. The population includes all female students studying in third grade primary school level in city of Harsin, Kermanshah in school year of 1392-93. According to the statistics from the Education Office in Harsin, there were 304 students studying in third grade of primary school besides 8 public and 1 private school. The available sampling was used in this survey. Lincoln- Oseretsky Motor Development Scale known as Lincoln- Oseretsky scale was used to asses conceptual-motor abilities. The reformed type of this scale consists of 6 subscales and 36 subtest, analyzing conceptual-motor capabilities of children ranging from 5.5 to 14.5 years old. This series include: 1. Dynamic general coordination, 2. Static general coordination, 3. Dynamic manual coordination, 4. Simultaneous on purpose asymmetric movements, 5.The speed of movement, 6. Simultaneous conceptive asymmetric movements. Wong (2004) analyzes 4.5 to 14.5 year- old children. The whole test contains 8 subtests, i.e. 46 individual items providing a wide outline of kinesthetic skills with proper quality, constituting miniature and large kinesthetic skills. The subscales are from 0 to 3. The reliability coefficient for all ages is .97 (Lancioni & O' Reilly, 1998). Yukselen and et al (2008) announce the reliability as .87. This scale is standardized in Iran and its Persian version is used in different surveys (Qasemi Kagrizsangi and et al, 1391). In order to show the characteristics of the study samples regarding descriptive statistics, central indicator and diffusion (percent, mean, median, SD and drawing frequency table) is used to categorize the subjects from different features view point as well as describing the population and "T" distribution frequency is used to compare the differences between pretest and posttest in both groups. All official calculations related to each hypothesis got performed using SPSS software.

Findings

H1. Music-based teaching has affected dynamic balance skill of third grade primary school female students. As it is seen in table 1, the balance mean has increased in posttest in comparison to pretest but according to the gained P in table, this increment in treatment group is meaningful (p=.003) whereas in control group it is not meaningful.

Table 1. Comparing the mean between both treatment and control groups pretest and posttest results regarding dynamic balance

Group's indicator and T test stage		Mean and SD	Mean and SD regarding pretest and posttest differences	Scale of freedom	Amount of T	Amount of P
Treatment	Pretest	5.3 ±2.3	2.5 ±2.15	14	3.64	.003
	Posttest	7.8 ±1.02				
Control	Pretest	5.12 ±2.1	.7±2.30	14	1.68	.126
	Posttest	5.82 ±2.41				

In addition to treatment group pretest and posttest differences regarding Mean, control group's pretest and posttest respecting Mean are also counted. As it is seen in Table 2, there is a significant difference of "P=.27" between both groups' and therefore, zero hypothesis is rejected. That is, it can be said that

music-based teaching effect on dynamic balance skill growth of third grade female primary school students is confirmed.

Table 2, Mean differences regarding pretest and posttest scores of dynamic balance between both treatment and control groups

Group's indicator and T test stage		Mean and SD	Mean and SD regarding pretest and posttest differences	Scale of freedom	Amount of T	Amount of P
Treatment	Pretest	2.5 ±2.15	1.8 ±2.25	28	2.83	.027
	Posttest					
Control	Pretest	.7 ±2.30				
	Posttest					

Investigating H 2. Music-based teaching is effective on dynamic balance of primary school third grade female students. As it can be seen from Table 3, dynamic balance Mean increment in posttest in comparison to pretest is obvious. Besides, according to the achieved P from Table, this increment in both groups of treatment and control with the amounts of "p=.001 and p=.012, respectively are significant.

Table 3. Comparing the Mean of pretest and posttest dynamic balance scores in both treatment and control groups

Group's indicator and T test stage		Mean and SD	Mean and SD regarding pretest and posttest differences	Scale of freedom	Amount of T	Amount of P
Treatment	Pretest	13.33 ±3.1	10.8 4±4.28	14	14	.001
	Posttest	24.17 ±5.43				
Control	Pretest	14.26 ±3.9	2.13 ±4.06	14	3.16	.012
	Posttest	16.39 ±4.27				

Both treatment and control groups were analyzed regarding pretest and posttest differences. As it can be inferred from Table 4, there is a significant P amount in both groups (.001) and therefore zero

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hypothesis is rejected. That is, one can say that music-based teaching has increased dynamic balance of female primary school students in their third grade.

Table 4. Both treatment and control pretest and posttest dynamic balance score Mean differences

Group's indicator and T test stage		Mean and SD	Mean and SD regarding pretest and posttest differences	Scale of freedom	Amount of T	Amount of P
Treatment	Pretest	4.28	8.71 ±4.13	28	7.8	.001
	Posttest	21.13 10.84				
Control	Pretest	4.06				
	Posttest	2.113				

Investigating H3. Music-based teaching affects coordination skill of third grade primary school students. As it is seen from Table 5, coordination score Mean has increase in posttest in comparison to pretest. Besides, due to achieved P, this increment in both groups is significantly possible, accepting "P=.001".

Table 5. Comparing the Mean of pretest and posttest scores regarding both treatment and control groups

Group's indicator and T test stage		Mean and SD	Mean and SD regarding pretest and posttest differences	Scale of freedom	Amount of T	Amount of P
Treatment	Pretest	11.98 ±5.29	10.9 ±6.15	28	4.68	.003
	Posttest					
Control	Pretest	1.89 ±6.82				
	Posttest					

Since there has been a significant increment regarding both groups, no one can merely count on the above table data. Therefore, both groups pretest and posttest Mean differences were analyzed. As it is

seen in Table 6, there is a significant difference (p=.003) regarding both groups and therefore the zero hypothesis is rejected. That is, we can say that music-based teaching increases third grade female primary school students' coordination.

Table 6. Pretest and posttest Mean differences regarding accuracy skill in both groups

Group's indicator and T test stage		Mean and SD	Mean and SD regarding pretest and posttest differences	Scale of freedom	Amount of T	Amount of P
Treatment	Pretest	11.98 ±5.29	10.9 ±6.15	28	4.68	.003
	Posttest					
Control	Pretest	1.89 ±6.82				
	Posttest					

Investigating H5. Music-based teaching affects third grade primary school female students regarding accuracy skill. As it is seen from Table 7, the Mean of accuracy score in posttest group comparing the pretest one is higher in control group rather than treatment group. In addition, considering the achieved P, this increment is significant in treatment group (P=.003) and the decrease in control group is not significant (P=.152) and mental factors and some others are considered respecting this decrease.

Table 7. Investigating motion accuracy in pretest and posttest in both groups

Group's indicator and T test stage		Mean and SD	Mean and SD regarding pretest and posttest differences	Scale of freedom	Amount of T	Amount of P
Treatment	Pretest	5.3 ±2.31	4.89 ±2.96	14	3.82	.003
	Posttest	10.19 ±4.14				
Control	Pretest	6.1 ±2.62	-.84 ±2.65	14	-1.36	.152
	Posttest	5.26 ±2.85				

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Both treatment and control groups pretest and posttest mean differences were compared. As it is seen from Table 8, there is a significant difference respecting both groups Mean (P=.003) and therefore, zero hypothesis is rejected. That is, we can say that music-based teaching increases female students' accuracy in primary school's third grade.

Table 8. Pretest and posttest Mean score of accuracy differences in both groups

Group's indicator and T test stage		Mean and SD	Mean and SD regarding pretest and posttest differences	Scale of freedom	Amount of T	Amount of P
Treatment	Pretest	4.89 ±2.96	5.73 ±2.71	28	3.58	.003
	Posttest					
Control	Pretest	-.84 ±2.65				
	Posttest					

Investigating H 5. Music- based teaching affects the motion speed of primary school female students in third grade. As it is seen from Table 9, the speed Mean has had increment in treatment group posttest in comparison to pretest. Besides, according to the achieved p, this increment in treatment group is significant (P=.001) whereas it is not significant in control group (P=.134).

Table 9. Investigating the mean of motion (movement) speed in both groups pretest and posttest

Group's indicator and T test stage		Mean and SD	Mean and SD regarding pretest and posttest differences	Scale of freedom	Amount of T	Amount of P
Treatment	Pretest	9.54 ±6.08	13.80 ±7.41	14	8.14	.001
	Posttest	10.34 ±23.14				
Control	Pretest	6.23 ±10.19	3.81±6.83	14	1.69	.134
	Posttest	14 ±7.51				

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Considering this fact that motion speed is significant in treatment group and not in control's one; to whether or not to accept the hypothesis is not feasible only based on above-mentioned data. Thereby, the pretest and posttest Mean differences in both control and treatment groups were compared. Since it is seen from Table 10, there is a significant difference respecting both groups' Mean (P=.002) and therefore zero hypothesis is rejected. That is, it could be said that music-based teaching has increased third grade primary schools female students.

Group's indicator and T test stage		Mean and SD	Mean and SD regarding pretest and posttest differences	Scale of freedom	Amount of T	Amount of P
Treatment	Pretest	13.80 ±7.41	9.9 9±7.14	28	3.91	.002
	Posttest					
Control	Pretest	3.81 ±6.83				
	Posttest					

Table 10. Speed pretest and posttest Mean difference in both groups

Investigating H6. Music-based teaching has been effective on Power skill of third grade primary female students. As it is seen from Table 11, the Mean of Power skill has been increasing in posttest in comparison to pretest in both groups. In addition, according to the achieved P, this increment is significant in treatment group (P=.001) whereas it is not significant in control group (P=.292).

Table 11. Investigating the Mean of Power in pretest and posttest in both groups

Group's indicator and T test stage		Mean and SD	Mean and SD regarding pretest and posttest differences	Scale of freedom	Amount of T	Amount of P
Treatment	Pretest	2.2 ±1.42	1.9 ±1.20	14	4.86	.001
	Posttest	4.1 ±1.31				
Control	Pretest	2.32 ±1.25	.45 ±1.47	14	.72	.292

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	Posttest	2.77 ±1.6				

In addition to this, pretest and posttest Mean differences in both groups were compared. As it can be seen from Table 12, there is a significant difference respecting both groups' Mean (P=.012) and therefore, the zero hypothesis is rejected. That is, it can be said that music-based teaching has a significant effect on third grade primary school female students.

Table 12. Pretest and posttest Mean differences in both groups

Group's indicator and T test stage		Mean and SD	Mean and SD regarding pretest and posttest differences	Scale of freedom	Amount of T	Amount of P
Treatment	Pretest	1.9 ±1.20	1.45 ±1.40	28	3.28	.012
	Posttest					
Control	Pretest	.45 ±1.27				
	Posttest					

Discussion and Conclusion

H1. The results of this survey showed that music-based teaching has affected the growth of dynamic skill of female students in third grade primary school and these results are in correspondence with the survey results of similar works by Torabi (1391), Khorand (1392) and Karageorghis (2009) showed that music effects on physical fitness in teenager boys and rhythmic and relaxation exercises rhythmic exercises with deep tranquilizing effects, decreases stress and with more relaxation, one can be more successful in doing better movements and also this fact can be mentioned that music might have physical indicators on people. To clarify the results of this hypothesis one can say that rhythmic music can get children released from negative temptations temporarily and via making positive excitements, helps child's balance and has him adopted with new situation and environment. Indeed, harmonized rhythm suitable for activity is regarded as the important factors of success.

H2. The survey results showed that music-based teaching affects the static balance of third grade primary school female students and these results are in accordance with the studies by Qasemi Kahrizsangi (1391) and Souri (1392) that showed via designing rhythmic exercises, the conceptive-kinesthetic skills of children can be improved and even if in a little more severe way, exercise compound with music might affect the indicator of pressure conception. To

clarify the results of this survey, it can be stated that along with performing the exercises compound with music, the student's duty to perform the exercise from simple to complicated forms are effective on motivating and improving the attention and this improves students' static balance.

H3. The results of the survey showed that music-based teaching affects the growth of coordination skill among female students of third grade of primary school and the results of this survey is along with the studies by Rostami (1392) and Barzegar (1391) and Claris & Kabri (2002) who showed that music as a motivational factor can be effective in retrieving the frequency of skills during exercising and music increases the function of metabolic system and rhythmic exercises along with making movement in body dimensions can make neuromuscular correspondence and also they are in accordance with making balance and stability among conceptive skills. To clarify the results of this hypothesis one may say that music causes the change of persons' excitement level and after decrease of pressure and having a suitable mental status, the performance increases and therefore with decrease of tiredness sensation meanwhile the exercise is being done compound with music , it prevents person to think simultaneously to the tiring feeling and this improves the coordination skill during doing exercises that is why music can cause correspondence and excitement.

H4. The results of this hypothesis showed that music-based teaching affects the movement accuracy of third grade female students of primary school. the results of this survey is in accordance with studies by Asefi (1390) and Ismaeelzade (1389) showing the music speed can affects sports and kinesthetic movements and taking part in chosen rhythmic movements effects on increasing individuals speed capability. To clarify the results of this survey, it can be announces that indeed, using motivational factors might improve the quality of exercising and this result makes a close and interactive relation between music and accuracy skill improvement.

H5. The results of this hypothesis showed that music-based teaching affects the movement accuracy of third grade female students of primary school and the results of this survey is in accordance with studies by Khorand (1388) , Torabi (1388) and Kaphingst (2010) showing rhythmic exercises increase the relaxation and deepens it that this speed of movement and also listening to music during the exercises used by improving pressure conception and anaerobic stamina increases the efficacy of the metabolic system. To clarify this, one can state that any extrinsic motivation increasing the excitement during doing exercises also causes the speed of movement.

H6. The results of this hypothesis showed that -based teaching affects the movement accuracy of third grade female students of primary school and it is in accordance with the studies by Torabi (1388), Khoran (1386) and Crust (2006) showing that performing music doing exercises leads to the sufficient state of motivation and the increment of power and stamina in sport competitions as well and motivational music increases the endurance and bear. To show the results of this survey, it is noted that music causes different patterns of physical skills and thereby, reaching basic skills are improved and better educational environments can be made and the athletes stamina also prolongs

References

Azeri, Yahiya; Qahreman Tabrizi, Kouroush (1390). The effect of music on heart pulse and the pressure conception level of male students majoring in Physical education (P.E). Environmental-Sports science; spring; volume 8; pp 39-53.

Barzegar, Hammed; Souri, Rahman; Akbarnezhad, Ali (1391). Analyzing the effectmetabolic responses in progressive growth stages among non-athlete men.

Sports Physiology, volume 16, pp 25-40, winter.

Crust L. Clough PJ. (2006). "The influence of rhythm and personality in the Endurance response to motivational asynchronous music". Journal sport science, Feb, 24(2); PP: 95-187.

Dehghani, Mustafa; Karimi, Narges; Taghi Pour Jawan, Abasali; Hassan Taj Jelowdar, Fahime; Zeydabadi, Fatima (1391). The effectiveness of kinesthetic-rhythmic (harmonized) games on the amount of preschool children with psychoneurotic difficulty in learning performance functions. Learning difficulties magazine, autumn, 2nd period, volume 1, pp 53-77.

Farsi, Alireza; Abdoli, Behrooz; Faal, Narges; Kawiani, Maryam (1390). Investigating the macro kinesthetic skills among preschool children with or without kinesthetic experiences. Kinesthetic-Sport growth and learning, fall& winter, volume 8, pp 29-43.

Galaho, David and et al; Athmun, John C; (1390). Conception of kinesthetic growth in different stages of life, Translated by Hemayat Talab , Rasoul; Mowahedi, Ahmadreza; Faris, Alireza; Fouladian, Jawad; Tehran, Elam wa Harekat Publication.

Goldshtrom Y, Korman D, Goldshtrom I, Bendavid J . (2011). The effect of rhythmic exercises on cognition and behaviour of maltreated children: a pilot study. J Bodyw Mov Ther. 2011 Jul;15(3):326-34.

Hi Wood, Kathline; M. Gajel Nancy (1387). Long life Kinesthetic growth and development, Translated by Sheikh, Mahmoud, Shabani Moghadam, Keywan and Shahbazi, Mehdi, Tehran, Awaye Zohor publication.

Ismaeelzade, Maryam (1389). The effects of rhythmic movements on balance and coordination of children with growth coordination disorder; M.A degree, Isfahan; Islamic Azad University, Khorasgan branch.

Khoran, Hadi (1386). The effects of music on improving delicate clap-clap kinesthetic skills among 9-11 year old children with difficulty in Islamshahr. M.A thesis; Environmental Science Principles; kinesthetic behavior, Ts of music on ehran University.

Khorand, Mohammad Taghi (1392).The effect of performing neuromuscular exercises as well as the skeletal- rhythmic ones on deepening relaxation (recorded by skin electric circulation SCL signals) among Iranian judo athletes. Kinesthetic-Sport growth and learning; summer; volume 12; pp 5-21.

Kaphingst, Amy (2010). THE EFFECTS OF MUSIC TEMPO VS. PERCUSSION VS. BEAT FREQUENCY ON EXERCISE INTENSITY. College of Science and Allied Health Master of Science in Clinical Exercise Physiology. UNIVERSITY OF WISCONSIN-LA CROSSE.

Karageorghis Costas I., Denis A. Mouzourides, David-Lee Priest, Tariq A. Sasso, Daley J. Morrish, and Carolyn L. Walley.(2009). "Psychophysical and Ergogenic Effects of Synchronous Music During Treadmill Walking". Journal of Sport & Exercise Psychology, 31, PP:18-36.

Lancioni, G. E. and O'Reilly, M. F. (1998). "A review of research on physical exercise with people with severe and profound developmental disabilities" . Research in developmental disabilities. 19(6), PP:477-492.

Mola nowrozi, Keywan; Khalaji, Hassan;Sheikh, Mahmoud; Akbari, Hakime (1390). The effect of elected kinesthetic program on manipulating 4-6 year-old children's skills, physical education journal; kinesthetic- sports learning growth; winter and summer, volume 7,pp 5-22.

Malayeri, Saeed; Jaafari, Zahra; Ashayeri, Hassan (1384). The brain's specification for music conception. The journal of

neurology science novelties, volume 11, pp 659-689.

Mirzamani, Seyed Mahmoud; Hodawand Khani, Fateme (1387). The effect of music and rhythmic movements on female students with learning difficulty. Tawanbakhshi Journal, 9th period, volume 1, issue 33, pp 23-28.

Masal Kenya S .(2011). Rhythmic actives and initiatives for adult. Facilitators .Teachers and kids, Published inconjuction with funding.

Michalowski, M. P & Kozima, H. (2007). Methodological issues in facilitating rhythmic play with. 16 IEEE international conference on Ronot & Human Interactive Communication.

Pollatou, E., Karadimou, K. & Gerodimos, V. (2005). Gender differences in musical aptitude, rhythmic ability and motor performance in preschool children. Early Child Development and Care, 175(4), 361–369.

Qasemi Kahrizsangi, Gholamali; Salehi, Hamid; heydari, Leyla (1391). The effect of a program of rhythmic movements on conceptual-kinesthetic abilities of teachable children with difficulty learning. Kinesthetic- Sport growth and learning. Spring and Summer , volume 9, pp 75-92.

Rafee, Talaat (1383). Rhythmic and harmonic movements, Tehran, Danzhe publish.

Rostami, Robabzade; Nazemzadegan, Gholam Hussein; Jabari, Soosan (1392). The motivational music effect on the order of kinesthetic skills in elected skills of wrestling. Kinesthetic-sport growth and learning, winter, volume 11, pp 77-93.

Sultani, Hussein; Salehipour, Mohammad Amin (1390). The Guide of Teaching Physical Education (P.E) and School Games. Tehran, Warzesh publication, Bamdad Book.

Souri, Rahman; Barzegar, Hammed; Akbarnezhad Ali (1392). Investigating the effect of different rhythms on cardiopulmonary responses among healthy young males in progressive kinesthetic activities. Environmental and Sport Science, spring, volume 16, pp 109-123.

Sutoo, D & Akiyama, K.(2003). Regulation of brain function by exercise. Neurobiol Dis, 13(1): 1-14.

Torabi, Farnaz; Ranjbar, Kia; Souri, Zahra (1392). The effects of music on performing physical fitness factors among male teenagers. Kinesthetic- sport growth and learning, spring; volume 11, pp 39-53.

Taheri, Naeeme; Shojaee, Maasoume; Koushan, Mohsen; Seyed Ahmadi, Mohammad; Keywanloo, Fahime; Jalali, Shahin (1391). The effect of music on temperament and the accuracy of Basket ball players during throwing the ball. The clinical science magazine of Sabzewar, issue 19, volume 2, summer, pp 181-189.

Wong, B. Y. (2004). "Learning about learning disabilities" (3ed.). San Diego, California, USA: Elsevier academic press.

Zade Mohammadi, Ali (1389). Music therapy (introduction, techniques and functions). Tehran, Qatre publication.