



THE IMPACT OF INTEGRATION USING THE COLLABORATIVE APPROACH IN THE GAME OF BASKETBALL ON THE DEVELOPMENT OF SOCIAL INTERACTION FOR CHILDREN WITH SIMPLE MENTAL DISABILITIES WITH THEIR NORMAL PEERS

Sifi Belkacem, Zabchi Noredine,

Benzidane Houcine, Sebbane Mohamed

Physical Education and Sports Institute, University Mostaganem, Algérie

Abstract:

This study aims at determining the effect of the integration of children with simple mental disabilities with their normal peers in the game of basketball in the development of their social interaction. For this purpose, the experimental approach was used through the application of a cooperative educational programme in basketball. The latter consists of 11 units through which two groups of 5 children of simple mental disability-belonging to the mentally disabled children care centre of the district of Mostaganem (Algérie) were integrated with a group of 5 other normal children whose age ranged between 9 and 12. We used the gauge of social interaction for the mentally disabled, Goodnough's drawing test to measure intelligence, and Alfred Binet's age measurement test. After data analysis, we found out that the integration of children with simple mental disability with their normal peers in basketball has a positive effect on the social integration of the formers (children with simple mental disability). In addition to that, we found that the integrated cooperative approach as a means of integration in basketball contributed to a fast development of social interacting for the mentally disabled children

Keywords: integration, cooperative approach, social interaction, mental disability, basketball

Introduction

Estimations of the International Health Organization of the year 2012 reveal an average of mentally disabled individuals within any society ranging between 1 and 3%, and that there are about 7.2 million mentally disabled individuals according to the report of the United Nations Population's Fund for the year of 2011 (Ibrahim, 2014). As for Algeria there are 130 thousand mentally disabled individuals according to the Office for National Statistics in Algeria for the year 2015. These numbers call for offering social services to mentally disabled individuals in the different spheres; be it educational, social, psychological and so on, as international calls and directives appeared recently demanding a change in the treatment of mentally disabled individuals considering their isolation in schools and special centres as a wrong practice while suggesting their integration with their normal peers in ordinary school (Azab, 2002).

Consequently many experiments appeared in developed countries such as USA where mentally disabled individuals were integrated with their normal peers in ordinary classes, for some time. Also in Britain where school is compulsory for mentally disabled individuals since the age of five until sixteen, and these children pursue their studies in ordinary schools as long as these schools are able to fulfil their needs with the learning facilities that go with the nature and level of their disability. As for Arab countries, Jordan was the first to the implementation of integration and likewise KSA (Al-Matar, 2002).

The first appearance of integration in Algeria goes back in date to 1982 then 1996, as Algeria showed the will to integrate mentally disabled children and adolescents in ordinary schools starting from the launch of fundamental education (Boukhelif, 2015). Therefore, the world became readier to bear responsibility of this category which is an undividable part of the society.

Physical education is characterized by flexibility in syllabuses and easiness in adjustment of activities, and it is considered as the most appropriate school programme for successful integration of individuals with mental disability who have the ability to learn (Al-Matar, 2002). Participation in physical activities contributes to the improvement of their health and fitness. In addition to that studies have shown the importance of participation in physical activities for the development of some psychological aspects for children; such as reaching the competence (Shaw, 1982), in addition to some social aspects like establishing friendship (Jansma & French, 1994), though the level of the movement skills of most children with mental retardation is considerably lower than the one of their normal peers at the same age (Holland, 1987).

Many studies supported this perception, as (Salen, 1998), points that children with disability who participate in integration activities in ordinary schools acquire academic and functional skills faster than they do in isolated spaces, in addition to improvement of behavior, self-esteem, motivation to learn, in addition to the increase of overlapping with peers (Azab, 2002)

Moreover, studies about integration in physical education are few and very limited (Vogler, DePaepe, & Martinek, 1990) as compared to studies about educational integration, and most of them might be based on comparison of pupils' behaviours and teachers in integration environments versus the other educational environments (Al-Matar, 2002).

Through reviewing scientific references that deal with teaching children, it was found out that normal children at the age phase 9 to 12 tend to learn life skills and learn ethical standards and values and get ready for holding responsibility, as they are characterized by respect of others and tending to offer help. Moreover, they show positive attitudes towards supporting and collaborating with handicapped individuals. Also through teaching physical education and sport as a subject in a mentally handicapped children care centre and through our participation in some entertainment programmes in which mentally handicapped children were grouped with their normal peers we remarked an acceptance from each of the two to collaborate and interfere with each other. We also remarked insistence of the disabled ones to imitate their normal peers and their attachment to them; this was confirmed by educators and psychological assistants who accompanied them. In the light of this we tended to determine the effect of integrating children with simple mental disability with their normal peers in the activity of basketball on the development of social integration for the category of mentally disabled individuals.

Based on what has been stated previously, researchers wondered about the effect of children with simple mental disability with their normal peers in the activity of basketball on the development of social integration for the category of mentally disabled individuals.

2. Methodology

2.1 Research methodology

We used the experimental method with pre and post design and two experimental groups, one integrated and the second non-integrated.

2.1 Research Community and sample

The researcher randomly chose 15 children with simple mental disability with a ranging age between 9 and 12, as a sample, all of them are pupils at the centre of mentally disabled children in the city of Mostaganem (Algéria), in addition to 10 normal children who are pupils at a middle school in the same city.

2.2 Research tools

Goodnough's test of intelligence

Goodnough's drawing test is considered as one of the tools of measurement of mental capacity, and it can be classified among the personality measurement tools as one of the projective tests. This test aims at measuring the mental capacity of children ranging in age from 3 to 15, and knowing their character traits:

$$\text{Intelligence rate} = \frac{\text{Mental age}}{\text{Chronological age}} \times 100$$

Application of the test takes from 10 to 15 minutes, the tester is given this lapse to draw a leg on a paper with one pen and for correction and interpretation as well (Shousha, 2009).

2.3 Social interaction scale for children with mental disabilities

This scale has been established on the basis of a set of standards for social interaction suggested by many researchers; it measures the level of social interaction of children with simple mental disability with their normal peers ranging in age from 9 to 12. This scale consists of 50 expressions, 28 of them are positive and 22 negative, these expressions are to be answered by the specialist (appears, always, frequently, sometimes, rarely, doesn't appear), the tested kid can obtain a degree ranging from 50 to 200, while high degrees are interpreted as high degrees of social interaction and vice versa.

2.4 The scientific coefficient of the scale

The exploratory study was conducted in order to make sure of the scientific coefficients of the social interaction scale during the period from 05/03/2014 to 14/03/2014 through making an exploratory experiment on a sample consisting of 5 children among those having simple mental disability, and the results were as shown in table 1 down:

Table 1: Measurement and re-measurement results of the exploratory experimental group of children with simple mental disabilities (9-12 years)

Number	Sex	Age in years	Pre test	Post test	Pearson coefficient (R)
01	female	12	105	102	0.97
02	Male	10	146	144	
03	female	9	120	123	
04	Male	11	151	163	
05	female	12	170	167	
Arithmetic mean			138.4	139.8	
Standard deviation			25.83	27.41	

A. Reliability coefficient

Reliability coefficient was calculated through the application and reapplication of the scale after 10 days on the same exploratory sample - which consists of 5 children with simple mental disability-in a random way. And through calculating Pearson coefficient of correlation (0.97 R =) we found out the stability coefficient as R= 0.97 and this approaches 1 and proves hereby the stability of the scale.

B. Self-honesty coefficient

The researcher calculated the coefficient of self-honesty of the scale, it was found equal to the square root of the coefficient of stability. Honesty was found 0.98, being close to one (+1) showing the sincerity of the scale.

2.5 The suggested educational programmes

Going back to the previous studies and scientific references, considering opinions of experts and specialists in basketball and disabled individual sports, and with consideration of the characteristics of the study sample, we did our best to make the content of the educational programme adequate with the characteristics, abilities and wants of the children who represent the research sample (mentally disabled and the normal children).

This programme consists of a set of little and anticipatory games for teaching basketball skills. These games were selected for their adequacy with the mental age of the research sample (mentally disabled children), to realize complete collaboration among participating children.

The programme relies also on pair and group training within an adequate lapse of time. It was also meant to have an adequate space, being empty of obstacles with respect of the gradation of difficulty, from easy to difficult.

The tools used with the members of the sample were also adequate, considering security factor, while ensuring support from helping agents in an adequate number and making sure each of them accomplishes his/her task within the planned frame.

2.6 The principal experiment

The pre-measurements of the social interaction scale were done.

The principle experiment was executed (application of the educational programmers), the programmers consisted of 11 units to be covered throughout a period of 11 weeks, on a basis of 2 sessions a week i.e. the programmer gets covered within 22 sessions while each session lasts 45 minutes. The post measurements of the social interaction scale were done.

3. Results

3.1 Presentation of the pre-test results on the social interaction scale for the control and experimental samples

Table 2: Homogeneity of the control and experimental samples in the pre-test results using Student Test (t), children with simple mental disability

Test / Sample	Experimental sample		Control sample		Calculated T	Tabular T	Significance degree	Freedom degree	Significance of differences
	X1	Y1	X2	Y2					
Pre test	117	35.37	105.2	35.36	0.58	2.77	0.05	08	Statistically non significant

On the basis of the pre-test on the social interaction scale we conclude that the control and experimental samples are homogenous.

3.2 Presentation of pre and post test results on the social interaction scale for the control sample

Table 3: Results of the pre and post-tests using Student Test T for the control sample of children with simple mental disability

Test Sample	Pre test		Post test		Size of the sample	Calculated T	Tabular T	Degree of freedom	Level of significance	Significance of differences
	X1	Y1	X2	Y2						
Control Sample	116.8	34.68	117.2	35.37	0.5	0.66	2.77	04	0.05	Statistically non significant

On the basis of the pre and post-tests of the control sample we conclude that there are no statistically significant differences.

3.3 Presentation of the results of the pre and post tests on the social interactive scale for the experimental sample

Table 4: Results of the pre and post tests using the Student Test T for the experimental sample of the children with simple mental disability

Test Sample	Pre test		Post test		Size of the sample	Calculated T	Tabular T	Degree of freedom	Level of significance	Significance of differences
	X1	Y1	X2	Y2						
Experimental sample	105.2	35.36	147.4	12.93	0.5	3.64	2.77	04	0.05	Statistically non significant

We note the existence of statistically significant differences between the pre and post tests on the social interaction scale in favour of the post test for the experimental sample.

3.4 Presentation of the results of the post test for the control and experimental samples on the social interaction scale

Table 5: Results of the post tests using Student Test T for the control and experimental samples of children with simple mental disability

The test The sample	Post test		Size of the sample	Calculated T	Tabular T	Degree of freedom	Level of significance	Significance of the differences
	Arithmetic average	Standard deviation						
Control sample	116.8	34.68	10	3.73	2.77	08	0.05	Significance
Experimental sample	147.4	12.93						

We note the existence of statistically significant differences in the social interaction results between the control and experimental samples, in favor of the experimental one.

4. Discussion

Table 4 confirms the existence of a positive effect on the level of social interaction of children with simple mental disability, this effect is due to the integration of these children with their normal peers in the activity of basketball during a limited period, and this is confirmed by the theories of socialization, and especially the theory of social learning, according to which socialization is an educational pattern that helps the individual to act social roles, and that social development, in the light of the same theory, happens in the same way learning other skills happens.

Advocates of this theory give a considerable importance to reinforcement in the social learning process such as Dolard and Miler, as they indicate that the individual's behaviour gets supported or changes according to the kind of reinforcement that targets it, while Bandora and Walter, and though their agreement on the principle of reinforcement, they point out that reinforcement alone is not sufficient for explaining learning or some behaviours that appear suddenly in the child. The concept of the model of learning through observation relies on an assumption stating that Man is a social being that gets affected by others' trends, their feelings, actions and behaviours; this assumption implies a considerable educational importance, considering teaching in its main concept as a social process (Haroosh, 2005).

And this agrees with the studies of (Shousha, 2009), which confirm that integration of mentally disabled children with their normal peers in sport activities has

a positive and efficient effect on the psychological and social aspects of mentally disabled children, and so does the study of (Siperstein, 2002), which notes the existence of a remarkable improvement in the social values and sport skills for players of the special Olympiad (The unified sport).

According to table N°5, there are statistically significant differences in the post tests in favour of the experimental sample (The integrated sample) as we noted a positive change in the scale of social interaction, while no change was noted in the result of the post test on the social interaction scale for the control sample (isolated) (table N°3). This proves that the positive change that characterized the integrated category is due to the period of integration in the activity of basketball during the period of the application of the suggested programmers and not to the programmers alone or other reasons, and it is the period during which the group of children with mental disability practice basketball activity with their normal peers aged between 9 and 12.

This result has been confirmed by many studies such as the one of (Al-Husseini, Al-Adli, & Tawfiq Abdel Fattah, 2015), which proved that the unified sport contributes to the increase of sport practice opportunities for disabled individuals with their normal peers through their participation in various sport programmers, as it helps in the integration process of disabled individuals in the society .

And that agrees also with the results of the study of (Shousha, 2009) and (Siperstein, 2002), (Nebras, 2004), as the results of these studies show that physical education programmers that integrate mentally disabled individuals with their normal peers have a significantly positive effect on motor performance and general adaptation, in addition to the considerable contribution of social games programmes in the development of social interaction for children in general and especially girls.

Thus we can say that integration of children with simple mental disability in the integrated activity of basketball with their normal peers has a positive effect on the development of their social interaction, and this improvement can increase by lengthening the period of integration, and this is confirmed by many previous studies, such as Odom et al, 2002, Gulnarick, 2001, Holahan et al, 2000, that were mentioned by (Frazeur, Elizabeth K, Lois, & Gen, 2004). All these studies showed that children with simple mental disability can gain a considerable advance in their growth in general within the integrated environment as compared to the isolated (special) one.

According the (Odom, et al., 2004) anglo saxon review 'Litterature', there are more social interactions for children with simple mental disability in the integrated environment as compared to the special one, though this level of interaction remains

less for normal children (Rose & Doumont, 2007). (Deirdre, Martin, & Peter, 2009) confirm that excessive physical education and sport with various activities is regarded as the adequate environment for pedagogical and educational adjustments in order to find out solutions for the realization of integration. According to (Qiab & Amy, 2012), physical education and sport are regarded as adequate social activities for positive social interactions among children, and they are also regarded as the subject in which the participant can realize results and compare it with others'. Nevertheless, (Marcellini, 2003) has an opposed perception to the previously stated one, as he sees that physical education and sport provide a vast social space that might lead to social isolation (Tant, 2014).

5. Conclusion

According to the research conducted by the researcher and in the light of the obtained results and after having analysed it statistically, the following conclusions were drawn:

- Integration of normal children with those having simple mental disability in the activity of basketball at an early age (9-12 years) has a positive effect on the development of the level of social interaction for the members of the experimental sample (The category of those with simple mental disability).
- Using the collaborative method as a tool for integration throughout the integrated activity of basketball contributed in the development of the social interaction for members of the experimental sample (The category of those with simple mental disability).
- There are statistically significant differences between the results of the pre and post-tests of the level of social interaction for children with simple mental disability (Those with learning ability) in favour of the post test.
- There are statistically significant differences in the results of pre and post-tests of the level social interaction between the control and experimental samples in favour of the experimental one.

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