

Brief scientific article

THE IMPORTANCE OF PLAY IN REAL AIKIDO FOR PRESCHOOL CHILDREN

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Abstract: A research was conducted on a sample of 20 participants. The participants included preschool children, 4-6 years of age, and absolute beginners in real aikido. The aim of the research was to determine the effects of play in the process of teaching techniques for the yellow belt testing in real aikido. One group of participants did not play specific games in the course of the main part of training sessions over the period of three months, while the other group of participants played those games within the main part of the training sessions over the same period of time. The research subject is the programmed training process where the specific games, as an experimental factor, play an important role in the process of teaching techniques within the testing program for children between 4 and 6 years of age. The quality of techniques' realization as a result of the training circumstances was assessed by the expert grading. The grades 5 to 10 were given by the three-member jury, all masters of real aikido. Statistical analysis showed that there are significant differences in terms of quality of techniques' realization between the group that played the specific games in the course of the main part of the training sessions and the group that did not play the games to the advantage of

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the former vs. the latter. In view of all the above mentioned, it can be firmly stated that the specific games have significant and positive role in teaching real aikido techniques in case of children, 4-6 years of age, and that they should be a part of the training process.

Keywords: *play, children, real aikido, preschool age*

INTRODUCTION

Preschool age is a very significant period in the development of children and there is social responsibility to dedicate major attention to this age group. Hypokinesia, obesity, hypertension, postural defects and other types of defects are increasingly found among preschool age children. Human life in contemporary, urban conditions is static and remote from nature. Children at this age also participate in such lifestyle, and they particularly feel the consequences of insufficient movement and decreasingly exercised physical activities. Every child feels the need to move and they should be enabled to satisfy the need through various physical activities. These days, children spend more and more time in front of computer, they move less and less, which primarily leads to spinal deformity (Ivanović, 2013). It has been noticed long ago that physical activity impacts individual's health, that certain physical exercise has beneficial effect on the quality of life. Present day's lifestyle can be described as sedentary, because a majority of population is physically inactive. Insufficient level of active movement is labelled as hypokinesia, which is the main cause of what is known as hypokinetic diseases. It is precisely the physical inactivity that, combined with other unfavourable factors of modern life (such as stress, malnutrition, etc.), may lead to many ailments. A physically active person has longer average life span and lower disease rate than a physically inactive (sedentary) person, as well as lower risk from sudden death (Ostojić, 2006). In order to prevent hypokinetic diseases, one should find an adequate physical activity for themselves. Heavy and overly exhausting activities are increasingly avoided, as well as those not adjusted to an individual and their personal needs, and whose exercise does not help them feel good. Even though almost everyone is familiar with the risks brought about by lack of movement, the source of physical inactivity lies in the absence of habit to exercise regularly. Precisely these habits are acquired at the earliest age, childhood. Sport and physical activity develop self-consciousness and decrease anxiety and stress. A child learns how to win, but also to accept defeat, adopt fair play in the game as well as in life, make friends... From educational aspect, it is essential to constantly direct children toward realizing their moral development at all times, not only during play or exercise (Ivanović, 2014). A program implemented through sport also develops various skills in children. Preschool children are increasingly

affected by the contemporary, sedentary lifestyle spending many hours a day sitting. In line with the above, it is required to engage them in terms of physical activity. Even though almost is aware of the dangers resulting from inactivity, the source of physical inactivity lies in the absence of habit to exercise regularly. Precisely these habits are acquired at the earliest age, childhood. Familiarity with the development characteristics of the children engaged in the activity represents a significant element in the planning, programming and realization of recreational activities of early school age children, in order to allow the physical activity to have a positive impact on organ systems and organism as a whole. A major part of today's population of early school age children is not physically active, so it is essential to come up with recreational activities that children have not been engaged in before in order to trigger their interest. It has been long known that play leads to the intellectual, moral and physical development of a child. An important characteristic of play is that it is its own purpose. A child socializes through play, learns to respect others and follow rules. Play enables a child to become more constructive, active, liberated from fear of consequences, increasingly engaged and involved. By implementation of specific games during the main part of the training session, far better results can be achieved in terms of quality of realization of learnt techniques than in the case when the games are not included in the main part of the training session.

One of the activities that is very interesting for preschool children and that is exercised by a great number of children both in Serbia and globally is the martial art - real aikido. The basic setup of real aikido is to efficiently overpower an attacker without causing them any physical injury. It is a defensive, extraordinarily flexible defense technique system, whose basic characteristics include: integration into opponent's attack, continuous performance of technique and full final control over the attacker (Milosavljević & Vračarević, 2011). By such training, the founder of real aikido wanted to master the techniques that will be applicable in real-life situations. "This martial art has found great application among recreational population" (Milosavljević et al., 2013, pg. 31). In view of this research, it is very important to note that one of the most significant directions of real aikido's actions is work with the youngest generations, conducted through a special program titled „Gain Mastership Skills through Play“. The program is adapted to psychophysical abilities of children aged 5 to 12 (Vračarević, 2007). The mentioned program was slightly modified lately so that the 4-year old children can also easily participate. "In real aikido, or to be precise, in the aforementioned program „Gain Mastership Skills through Play“, games are an extremely important part of the process of training. Above all, they develop basic motor and functional abilities crucial for real aikido, but they also fortify social relations between group members" (Matavulj et al., 2014a, pg. 20). In order to better understand the essence of real aikido, it is of key importance to keep in mind the insistence on striking techniques as an almost inevitable part of the majority of combinations of individual techniques aiming at defense against

the various types of attacks. Incorporating the striking techniques into real aikido aimed at simpler realization of lever techniques. „Practice has shown that it is not easy to carry out a lever in real aikido, especially on the joints in which movements are carried out by engaging larger and stronger muscle groups“ (Milosavljević et al., 2014a, pg. 11). By rendering the attacker temporarily powerless due to the acute pain produced by the strike, it is quite certain that the lever technique will be more easily carried out. Such approach, among other things, has earned real aikido the new status, equal to other martial arts, even the ones it derived from, and set it apart from many of them particularly owing to the mentioned principle. „The main feature and attribute of this art in regards to aikido are the existence of strikes which in the majority of cases are inflicted upon the attacker’s vital areas prior to the realization of the lever technique“ (Milosavljević et al., 2014b, pg. 59).

The aim of the research is to determine the effects of play in the process of teaching techniques for children’s yellow belt testing in real aikido.

The research subject is the programmed training process where the specific games, as an experimental factor, play an important role in the process of teaching techniques within the testing program for children between 4 and 6 years of age.

METHOD

For this research, the experimental factor was a specially programmed training process whose priority was the implementation of the specific games in the course of the main part of the training sessions, whereas such games were also the means by which the participants practiced the learnt movement structure, at the same time enjoying the pleasant feeling and relaxed atmosphere at the training session.

Participants Sample

Participants included preschool boys, 4-6 years of age, who are absolute beginners in real aikido. They were divided in two groups of ten participants each. During the three-month period in which they were taught the techniques for children’s yellow belt testing, one group played the specific games generally used in real aikido, while the other group did not play the specific games within the main part of the training sessions where the mentioned techniques were taught. After three months, the quality of the taught techniques’ realization was assessed.

Observed variable

The observed variable in this research includes the techniques for children’s yellow belt testing in real aikido. The children’s testing program contains seven very complex combinations of individual techniques.

Defense against a grab by the hair

The attacker is in left posture. They then make a forward lunge, switching to right posture, trying to grab the defender's hair from the above. After the attacker performs the hair grabbing, the defender make the pressure on the attacker's hand by their hands at the same time pushing it towards their head by placing onto the attacker's hand palm first the right and then, on the top of it, the left hand. Then the defender bends slightly forward until the lever effect is achieved in the attacker's wrist. Following this, the defender draws their left leg back and thus puts the attacker into the lying position on their stomach. By carrying out a lever on the attacker's wrist, the defender reaches the kneeling position in order to put the attacker's elbow into the fixed position and creates a support for increasing the intensity of the lever realized on the wrist.

Defense against a one-hand grab by a collar from behind

The attacker is in left posture. They then make a forward lunge, switching to right posture, trying to grab the defender by a collar from behind using their right hand. The defender is in the parallel position at the moment of the grab and they pull their left leg diagonally in order to reach the angle of 90 degrees against the opponent. While pulling their leg backwards, the defender lowers their trunk and passes under the right arm of the attacker. Simultaneously, the defender strikes the attacker's stomach by the top of the left open hand, and by their right hand, the defender grabs the top of the attacker's right hand and removes it from their body pushing it towards the attacker's head. This is followed by the defender's forward lunge and static turn, while they are using their left hand to grab the attacker's slightly bent right elbow joint putting the attacker off balance and pulling the attacker down into the lying position on their stomach. Then, the defender carries out a lever on the attacker's wrist in order to achieve the final control.

Defense against a side grab from behind

The attacker is in left posture. They then make a forward lunge, switching to right posture, and with their right hand perform the side grab of the defender's lumbar part from behind. The defender grabs the opponent at the moment of attack standing in the parallel position and using their right hand to grab the opponent's top of the right hand. Performing the static turn to the left, the defender at the same time strikes the side of the attacker's head by their left arm elbow. Then, the defender makes the static turn to the right simultaneously raising the opponent's right arm by their own right arm. Upon completing the mentioned movement, the defender makes the movement - a forward lunge, turn, static turn, at the same time holding the opponent's right elbow by their left hand. By the mentioned movement, the defender pulls the attacker down into the lying position on their stomach. Then, the defender carries out a lever on the attacker's wrist in order to achieve the final control.

Defense against a both-hands grab by both hands from the front

The attacker is in left posture. They then make a forward lunge, switching to right posture, and with their both hands grab the defender's wrists. The defender is in the left posture, and, after the attacker's grab, they raise their left hand forward to the shoulder's height, simultaneously placing the right hand onto their hip, which is immediately followed by their right hand grab of their own clothes. In parallel, the defender's left leg makes a diagonal movement. The defender then makes a lunge turn in order to free themselves from the opponent's grab on their right arm. At the same time, the left hand lowers to the left knee height destabilizing the static opponent. Then, the defender grabs the opponent's right hand wrist by their own right hand placing at the same time their left hand onto the outstretched elbow of the opponent's right arm making the movement – a lunge turn, static turn. After the mentioned movement the opponent is lying on his stomach. Then, the defender carries out a lever on the attacker's wrist in order to achieve the final control.

Defense against a hand grab „handshaking“

The attacker is in left posture. They then make a forward lunge, switching to right posture, and with their right hand grab the right hand of the defender in such manner that palms of the opponent and the defender are pressed against each other. The defender is in the left posture and after the attacker's grab, makes a forward lunge by his right leg in order to pass under the attacker's right arm simultaneously pushing the attacker's right arm to the side and pulling it upwards. In parallel, the defender grabs the attacker's right hand wrist by their left hand and performs the movement, static turn, in order to end up next to the attacker. After the mentioned movement, the defender pulls the attacker's right hand fingers towards themselves and upwards at the same time pushing the wrist away and down thus putting the attacker into the lying position on the stomach. Then, the defender carries out a lever on the attacker's wrist in order to achieve the final control.

Defense against a right-hand grab by the right hand

The attacker is in left posture. They then make a forward lunge, switching to right posture, and with their left hand grab the defender's right hand. The defender is in right posture and after the attacker's grab makes a forward lunge by their left leg at the same time pulling their right hand towards their right hip and placing their right hand to the interior side of the opponent's right lower arm. The previously described movement is only a part of the movement step, turn, small turn, followed by the defender's positioning of their left hand onto the extended right elbow of the attacker and concluding the complete mentioned movement by pulling the opponent's right hand towards his right leg thus destabilizing the opponent and leading them into the lying position on the stomach. Then, the defender carries out a lever on the attacker's wrist in order to achieve the final control.

Defense against a chest-grab

The attacker is in left posture. They then make a forward lunge, switching to right posture, and with their right hand try to push the defender's chest. The defender is in the left posture and, at the moment of the contact, they grab the attacker's right upper arm with their left hand, makes a reverse lunge by their left leg pulling the attacker's right arm towards themselves and pressing the right hand palm onto the attacker's right cheek and chin so as to turn the attacker's head to their left side. Then, the defender grabs attacker's right hand from the top with their right hand and carries out the twisting lever without using the left hand which is placed onto the extended attacker's right arm elbow. This is followed by the movement step, turn, static turn, destabilizing the opponent and leading them into the lying position on the stomach. Then, the defender carries out a lever on the attacker's wrist in order to achieve the final control.

Specific games

In this paper, specific games represent an experimental factor applied to a group of participants. These games affect not only the specific motor and basic skills, but also stimulate children's feistiness, self-confidence, resourcefulness, and enable them to get used to winning and losing. It should be underlined that these games make children cheerful, which is regularly noticed during training sessions. It is important to stress that many of the specific games were implemented as an experimental factor within the main part of the training sessions for one group of participants over the period of three months, which is the duration of the program for teaching techniques for children's yellow belt. In addition, it should be noted that the specific games used in this research are composed of the movement structures used in real aikido. As the aim of this paper is not a detailed technical description and listing of all specific games used in the research, but determining of their effects, we will mention and describe a few of them as follows:

Semi-circular grab

The rules of this game make it resemble children's game "tag". One exerciser is tasked with chasing other exercisers, whereas the only movement to be made by all exercisers is "step, turn, small turn".

Pushing

Two exercisers stand opposite each other in left posture at a distance sufficient to reach each other's extended arm elbow. Both exercisers keep one hand on their hip, while their other arm is on their partner's chest trying to destabilize them. During this game, exercisers must not move, but rather stay in place.

Rolling Race

Exercisers try to reach the finish line as fast as possible, moving only by rolling forward. Exercisers are at a safe distance from each other.

Procedure for Data Gathering and Technical Assessment

Each exerciser in each of the groups realized all seven combinations of techniques included in the yellow belt testing program and was assessed by the jury. The testing program was realised by each exerciser individually (the other partner acted as the „attacker“), whereby the jury was observing only one exerciser at a time, i.e. their attention was not dispersed, which would be the case if more than one exerciser were realizing techniques and the jury was tasked with the simultaneous observation and assessment of a number of participants. Prior to commencing the realization of the testing program, all participants were made aware that after the realization of each of the seven combinations of techniques included in the yellow belt testing program they have to demonstrate the final control over the attacker. „In real aikido, the control over the attacker is most often performed by carrying out the lever technique in order to control the attacker by controlled acute pain“ (Matavulj et al., 2014b, pg. 40).

The data were gathered by the observation technique, whereby the jury performed the expert assessment. The jury was composed of three members holding the minimal rank “Black Belt – 1st Dan” in real aikido who were assessing the quality of realization of the given technical elements by grades 5 to 10 based on the defined criteria precisely defined in Table 1.

Table 1. *Grading criteria*

| | | |
|----------|---------|--|
| Grade 10 | (ten) | Excellent harmonization and synchronization |
| Grade 9 | (nine) | Excellent realization, optimal rhythm |
| Grade 8 | (eight) | Very good realization with one of the components being defective |
| Grade 7 | (seven) | Good realization of technique, minor mistakes, basic structure of the technique not affected |
| Grade 6 | (six) | Basic structure is slightly affected, larger number of mistakes, basic principles not significantly affected |
| Grade 5 | (five) | Poor realization, major deficiencies |

In terms of visual expert assessment of the quality of techniques' realization, the jury graded each candidate with a single grade after the realization of all techniques which are a part of the children's yellow belt testing program.

RESULTS

Statistical data analysis showed the existence of a statistically significant difference between the observed groups in terms of quality of the techniques' realization. Better results in terms of quality of the techniques' realization were achieved by the group which played the specific games in the main part of the training sessions.

Table 2. *Results of statistical analysis*

T-test for Independent Samples. Note: Variables were treated as independent samples

| | AVG - Group SAIG | AVG - Group BEZIG | t-value | df | p | Valid N Group 1 | Valid N Group 2 | Std. Dev Group 1 | Std. Dev Group 2 | F-ratio - Variances | p var. |
|-------------------|------------------------|-------------------------|---------|-------|------|--------------------|--------------------|---------------------|---------------------|------------------------|--------|
| SAIG vs. BEZIG | 8.30 | 6.70 | 2.28 | 18.00 | 0.03 | 10 | 10 | 1.70 | 1.42 | 1.44 | 0.59 |

Table 2 clearly indicates that the Student's t-test shows statistically significant difference of $p=0.03$ between the groups to the advantage of the group that played games as a part of the three-month training process.

DISCUSSION

The positive impact of the specific games in the process of teaching preschool children the real aikido techniques has been unequivocally determined by this research. The motivating effect in case of 4-6 years' old children achieved by playing games was noted in some other researches as well. The research results point to the importance of all situational aspects of acquiring motor skills which are boosting intrinsic motivation (Mladenović, 2010), and this is particularly important if the age of the participants is taken into account (Popović, Mladenović, 2012). Relaxed atmosphere as a definite result of specific games undoubtedly helps children in the process of learning new movement structures. Motivation and pedagogical approach of the coach that includes the games in addition to the techniques, positively affects the personality development and motor skills, despite the fact that in practice there is a deep-rooted opinion that „strict atmosphere“ is conducive to discipline and efficiency of the training (Mladenović et al., 2015). Implications of the results of this research should be also understood in the context of development perspective and motivation for pursuing sport at older age. Some researches indicate that children at the early adolescent age start to show lack of motivation for sport (Mladenović, Marjanović, 2011). If one of the pedagogical and psychological objectives of the coach's work includes the perspective of the life-long physical activities and keeping the motivation for sport, it is obvious that including the elements of play

into the training sessions at an early age can have only positive benefits. Specific games used in this research not only create relaxed atmosphere in the training sessions, but their content assists the complete process of teaching real aikido techniques, as they are composed of movement structures used in real aikido. In addition to the mentioned benefits, the most obvious example of the effects of specific games on the process of teaching real aikido techniques is the quality of techniques' realization, as the participants who played specific games as a part of the training process achieved significantly better results. Due to the all above mentioned, the results of this research clearly show the positive effects of play on the training process of preschool children.

CONCLUSION

Due to sedentary lifestyle, preschool children are increasingly exposed to the modern age ailments. It has been noticed long ago that physical activity impacts children's health. Even though a part of the children's population of this age regularly trains a chosen sport, a large part of the mentioned population is physically inactive, so it is essential to come up with recreational activities that children have not been engaged in before in order to trigger their interest. A child socializes through play, learns to respect others and follow rules. Following rules also contributes to overcoming egocentricity, as the rules valid for all apply to each individual and vice versa. One of the possible recreational activities that can be implemented in work with the preschool children is real aikido. However, the quality of learnt techniques which are part of this martial art will be by far better if the specific games are included into the main part of the training sessions. This hypothesis has been confirmed by this very research conducted over a three-month period. The quality of techniques' realization was incomparably higher in case of the group that played specific games in the course of the main part of the training sessions. In addition to the mentioned benefit resulting from the implementation of specific games in the main part of the real aikido training sessions, positive effects of such activities in the main part of the training session are reflected in more positive atmosphere at the training sessions. Every child that was a member of the group whose training sessions included games, responded very positively to the question „whether the training was interesting“. On the other hand, children that belonged to the group whose main part of the training did not include games often commented that they were “bored“. For all the above mentioned reasons, including games into the training process of children, age 4-6, can be perceived as a multidimensional benefit.

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