The Effect of Happy Gymnastics Program on 3-6Years Old Children's Balance in Haian Foreign Language Kindergarten

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Abstract

Balance ability is one of the most basic motor skills, representing the basic physical quality of human beings, it plays a very important role in our future study, work, and life. The content of happy gymnastics includes strength, speed, flexibility, sensitivity, endurance and other aspects of training, which is more in line with children's psychological and physical development. The objectives of this research are: compare the effect of balance training on balance in children aged 3-6 years old between the experimental group using the Happy Gymnastics Program and the control group using the Traditional Gymnastics Program. Research sample: 60 students from primary class (3-4 years old), secondary class (4-5 years old) and senior class (5-6 years old) of Haian Foreign Language Kindergarten were selected as the experimental group and the control group respectively. The experimental class carried out the 12-week happy gymnastics intervention experiment. Before and after the intervention, the United States foot scan balance tester instrument system was used to conduct eye-opening test of both feet, closed-eye test of both feet, eye-opening test of one foot and closed-eye test of one foot.

Results: 1. After the experimental intervention of happy gymnastics, the static balance ability of children in the experimental class with opening or closed eyes respectively reached the most significant level ($p<0.01$), a normal significant level ($p<0.05$) and a small significant level ($p<0.1$), while there was no statistical significance in the control class ($p>0.1$).

2. After the experimental intervention of happy gymnastics, the children's static eye opening and closed eyes balance ability of one foot in the experimental class was more significantly improved than that of both feet, while there was no statistical significance in the control class ($p>0.1$).

Conclude the basic movements of happy gymnastics: crawling, running, jumping tumbling exercises, balance exercises, and physical exercises have obvious effects on children's balance ability.

Keywords: Happy gymnastics; Children; Balance

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Introduction

Balance ability plays a very important role in our future study, work, and life. The age of 3-6 is the most important period for balance. Balance ability is the basis of children's motor learning and motor development. Balance ability is the foundation of children's motor learning and development as well as an important physical quality, and it is an indispensable motor skill in life. If children's physical balance ability is not well developed through exercise in their childhood, it will affect their relatively complex motor skills in daily sports in the future, such as daily running, jumping, etc. The mastery of throwing and other movements is greatly affected, and more seriously, it may increase the probability of children being injured in daily sports classes or extracurricular activities.

The main content of happy gymnastics includes the basic training of running, jumping, climbing, etc., The swing, bumps and other movements in happy gymnastics are conducive to promoting the balance ability of children, and some basic movements in happy gymnastics such as tumbling, rotating, and mass body play a very important role in children's self-control, flexibility, and coordination. It is very different from traditional gymnastics and competitive gymnastics and children's gymnastics, Happy gymnastics pays more attention to the physical and psychological development of children and children's physiological and psychological characteristics, and promotes the healthy physical and psychological development of children. Scholars have done more studies on balance ability, but less on static balance ability, and even less on children. They point out the importance of static balance ability, and analyze and study the factors of static balance ability. More theory than practice.

Therefore, researchers would like to develop a happy gymnastics balance ability development course for 3-6 year old children is developed, which provides certain methods and means for preschool teachers to develop children's balance ability.

Research Methodology

1. Draw up a plan of the Happy Gymnastics Balance Ability Curriculum for 3-6 Years Old Children.

2. Empirical research is conducted on the developed curriculum scheme of balance ability for children aged 3-6.

3. Sort out and improve the developed curriculum plan for the balance ability of 3-6 years old children.

Research Scope

1. Population and Sample Group

The experimental subjects were selected as the experimental group and the control group, respectively, 10 students from two primary classes (3-4 years old) of Haian Foreign Language Kindergarten, 10 students from two secondary classes (4-5 years old), and 10 students from two senior classes (5-6 years old) each served as the experimental group and the control group.

2. Research significance

The significance is the current research on balance ability is relatively small in the early childhood stage, and mostly focuses on 7-15 years old young people, adults, and seniors over 60 years old. However, there is little research on whether it has a positive effect on the balance

ability of young children. Therefore, this study takes happy gymnastics as a training mean to develop balance movement development courses for 3-6 years old children to explore whether it can improve children's balance ability and enrich training methods for preschool children to improve their balance ability.

3. Study variable

In this experiment, the dependent variable is the developmental level of children's balance ability at the age of 3-6, and the independent variable is the balance ability course for children at the age of 3-6. The experimental group was taught according to the pre-designed curriculum plan of 3-6 years old children's balance ability, while the control group was taught according to the routine kindergarten teaching syllabus.

4. Scope of Duration Time

From September 2023 to December 2023, two times a week, 30 minutes for primary classes, 40 minutes for secondary classes, and 40 minutes for senior classes. The experiment lasted for 12 weeks (3 months), with a total of 24 lessons. All the children in the experimental group did movement exercise in the room with the guidance or help of the teacher.

5. Scope of Place

Haian Foreign Language Kindergarten, Jiangsu Province

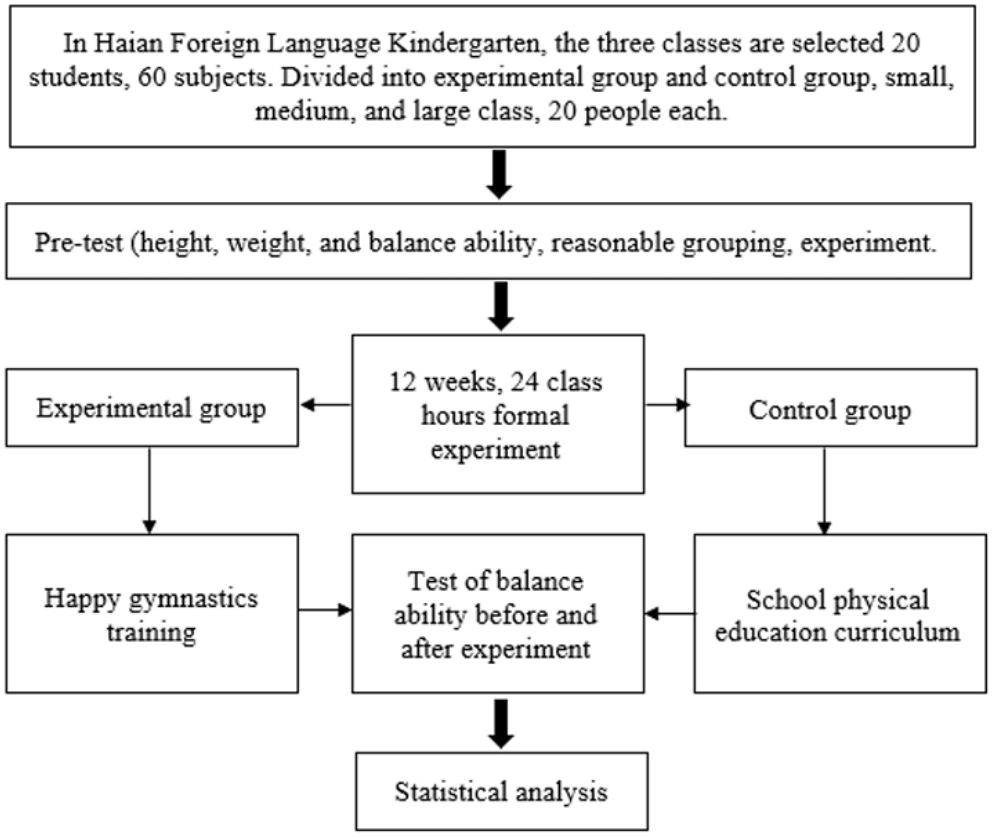

Figure 1: Show conceptual framework

The experimental process will be divided into three stages: the first stage (1-2 weeks) is the stage of Happy Gymnastics Balance Training Adaptation Learning, which focuses on stimulating children's enthusiasm and interest in participating in the course and conducting adaptive learning for Happy Gymnastics crawling practice; The second stage (3-8 weeks) is the stage of improving the balance training of Happy Gymnastics, mainly focusing on basic movement skills, balance, and rolling exercises; The third stage (9-12 weeks) is the Happy Gymnastics Balance Training and Physical Fitness Enhancement Stage, which combines the basic movement skills of the second stage to gradually increase the difficulty of the movements, with a focus on comprehensively improving the balance ability of the experimental class children.

Table 1 Experimental Content Schedule

1-2 weeks	Practice category	Names of Happy Gymnastics Movement
3-4 weeks	Crawling Practice Series	Penguin walking (kneeling posture)
		Squat forward with split legs (duck step)
		Kangaroo crawling (crawling forward with both hands, one leg up, and the other leg kicking the ground)
5-6 weeks	Running and Jumping Practice Series	Frog Jumping
7-8 weeks	Balance Exercise Series	Hand support wooden legs, cross left and right
		Lateral walking of balance beam
9-10 weeks	Rolling Practice Series	Donkey roll (roll the body sideways and flip 180 degrees)
		Hedgehog Shake (Half Rolling)
11-12 weeks	Physical Exercise Series	Back bounce slope sit ups
		Kneeling and alternating hand support

Data Collection

The American foot scan balance test system was used before, during and after the exercise intervention, and the subjects were tested with closed-eyes or eye-opening and standing on one foot or two feet. The system passed the test of human body. The movement trajectory of the center of gravity per unit time, the change of the center of gravity envelope area, and the maximum displacement difference are three items to evaluate the static balance ability of the human body.

Test items: Children's feet, left foot and right foot stand on one leg for 3 seconds with the static balance instrument in the state of opening eyes, and the left foot and right foot stand on one leg for 3 seconds in the state of closed eyes, respectively. During the test, each child subject was tested under the guidance of the teacher in accordance with the prescribed sequence of opening and then closing eyes, with the left foot followed by the right foot first. A marker bar is erected in front of the center of the instrument, and the subjects are required to stand upright in the center of the test board with their hands akimbo and eyes at the marker bar, with both legs and one leg.

Test indicators: (1) unit time center of gravity movement trajectory mm. (2) Envelope area mm^2. (3)The maximum displacement difference mm (according to the difference between the left and right directions of the X axis and the front and back directions of the Y axis in the shaking of the body's center of gravity)

Research Results

Table 2 Analysis of the results of the balance ability pretest, the experiment between the experimental group and the control group (N=60)

Pre-test	Experimental Group		Control Group		t	p
	$\bar{x}$	SD	$\bar{x}$	SD		
1.Open eyes Two feet stand X-axis	9.567	7.686	10.733	5.258	-0.686	0.495
2.Open eyes Two feet stand Y-axis	8.7	6.634	11.3	5.7	-1.628	0.109
3.Open eyes Two feet stand moving trajectory	72.6	23.984	76.3	18.938	-0.663	0.51
4.Open eyes Two feet stand envelope area	2.172	1.702	2.67	0.833	-1.438	0.156
5.Open eyes One foot stand X-axis	25.567	20.716	31.6	18.507	-1.19	0.239
6.Open eyes One foot stand Y-axis	21.533	12.235	23.167	10.841	-0.547	0.586
7.Open eyes One foot stand moving trajectory	114.33	30.947	125.8	30.061	-1.456	0.151
8.Open eyes One foot stand envelope area	4.06	2.972	4.884	4.018	-0.903	0.37
9.Close eyes Two feet stand X-axis	7.733	4.127	8.167	4.111	-0.407	0.685
10.Close eyes Two feet stand Y-axis	5.967	3.347	7.4	5.321	-1.249	0.217
11.Close eyes Two feet stand moving trajectory	67.3	15.847	68.467	15.598	-0.287	0.775
12.Close eyes Two feet stand envelope area	4.633	2.008	5.502	2.927	-1.341	0.185
13.Close eyes One foot stand X-axis	23.2	15.797	29.833	12.75	-1.79	0.079
14.Close eyes One foot stand Y-axis	25.2	13.116	30.433	11.717	-1.63	0.109

15.Close eyes One foot stand moving trajectory	128.37	51.049	129.433	18.595	-0.108	0.915
16.Close eyes One foot stand envelope area	14.132	7.65	16.763	7.352	-1.359	0.18

Notes：***P＜0.01, **P＜0.05, *P<0.1 means there is a significant difference

1: There was no significant difference in balance ability between the experimental group and the control group before the experiment.

Table 3 Analysis of the results of the balance ability mid test experiment between the experimental group and the control group (N=60)

Mid-test	**Experimental Group**		**Control Group**		**t**	**p**
	$\bar{x}$	**SD**	$\bar{x}$	**SD**		
1.Open eyes Two feet stand X-axis	7.567	4.591	11.067	5.632	-2.638	0.011**
2.Open eyes Two feet stand Y-axis	4.667	2.006	11.267	5.558	-6.051	0.000***
3.Open eyes Two feet stand moving trajectory	73.7	23.679	78.433	21.449	-5.954	0.000***
4.Open eyes Two feet stand envelope area	2.163	1.962	3.017	1.093	-3.434	0.001***
5.Open eyes One foot stand X-axis	70.8	23.634	78.5	21.214	-6.284	0.000***
6.Open eyes One foot stand Y-axis	1.94	1.772	2.646	0.849	-2.815	0.007***
7.Open eyes One foot stand moving trajectory	19.9	17.588	30.5	17.334	-3.019	0.004***
8.Open eyes One foot stand envelope area	16.9	9.953	22.133	10.332	-2.666	0.010***
9.Close eyes Two feet stand X-axis	111.867	31.637	122.933	30.081	-4.741	0.000***
10.Close eyes Two feet stand Y-axis	3.857	2.941	5.041	4.681	-1.173	0.246
11.Close eyes Two feet stand moving trajectory	6.733	4.675	7.8	3.96	-0.954	0.344
12.Close eyes Two feet stand envelope area	4.9	3.273	7.3	5.402	-2.081	0.042**
13.Close eyes One foot stand X-axis	65.033	17.42	68.033	15.153	-0.711	0.480
14.Close eyes One foot stand Y-axis	4.138	1.973	5.349	2.938	-1.874	0.066*
15.Close eyes One foot stand moving trajectory	20.367	13.743	29.533	12.902	-2.664	0.010***
16.Close eyes One foot stand envelope area	22.767	13.642	29.4	11.233	-2.056	0.044**

Notes：***P＜0.01, **P＜0.05, *P<0.1 means there is a significant difference

2: At the middle stage of the experiment, there were significant differences between the experimental group and the control group in seven of the eight indicators of eye balance ability, there were significant differences in 5 of the 8 indicators of balance ability with closed eyes, there were significant differences in 6 of the 8 indicators of balance ability of two feet and there were significant differences in 6 of the 8 indicators of the balance ability of one foot.

Table 4 Analysis of the results of the balance ability post-test the experiment between the experimental group and the control group

Post-test	Experimental Group		Control Group		t	p
	$\bar{x}$	SD	$\bar{x}$	SD		
1.Open eyes Two feet stand X-axis	6.333	3.708	10.567	5.191	-3.635	0.001***
2.Open eyes Two feet stand Y-axis	5.633	2.593	11.1	5.548	-4.889	0.000***
3.Open eyes Two feet stand moving trajectory	70.8	23.634	78.5	21.214	-6.284	0.000***
4.Open eyes Two feet stand envelope area	1.94	1.772	2.646	0.849	-2.815	0.007***
5.Open eyes One foot stand X-axis	19.9	17.588	30.5	17.334	-3.019	0.004***
6.Open eyes One foot stand Y-axis	16.9	9.953	22.133	10.332	-2.666	0.010***
7.Open eyes One foot stand moving trajectory	111.867	31.637	122.933	30.081	-4.741	0.000***
8.Open eyes One foot stand envelope area	3.857	2.941	5.041	4.681	-1.173	0.246
9.Close eyes Two feet stand X-axis	6.733	4.675	7.8	3.96	-0.954	0.344
10.Close eyes Two feet stand Y-axis	4.9	3.273	7.3	5.402	-2.081	0.042**
11.Close eyes Two feet stand moving trajectory	65.033	17.42	68.033	15.153	-0.711	0.480
12.Close eyes Two feet stand envelope area	4.138	1.973	5.349	2.938	-1.874	0.066*
13.Close eyes One foot stand X-axis	20.367	13.743	29.533	12.902	-2.664	0.010***
14.Close eyes One foot stand Y-axis	22.767	13.642	29.4	11.233	-2.056	0.044**
15.Close eyes One foot stand moving trajectory	125	48.733	127.467	19.192	-0.258	0.797
16.Close eyes One foot stand envelope area	13.41	7.062	16.471	7.158	-1.667	0.101

Notes：***P＜0.01, **P＜0.05, *P<0.1 means there is a significant difference

3: At the end of the experiment, there were significant differences between the experimental group and the control group in seven of the eight indicators of eye-opening balance ability, there were significant differences in only three of the eight indicators of balance ability with closed eyes, there were significant differences in five of the eight measures of balance on two feet, four were significant differences in eight indicators of one foot. It showed that the balance ability of the control group was also improved at the late stage of the experiment, especially the balance ability of the eyes closed and the balance ability of one foot.

Table 5 Analysis of the results of one foot，open eyes the balance ability test pre-, mid- and post the experiment in the experimental group

Variable	Time		Mean	Comparison	p
1.Open eyes One foot stand X-axis	Pre-test	E_E1	25.567±20.716	E_E1- E_E2	0.038**
	Mid-test	E_E2	21.5±16.452	E_E2- E_E3	0.026**
	Post-test	E_E3	19.9±17.588	E_E3- E_E1	0.002***
2.Open eyes One foot stand Y-axis	Pre-test	F_E1	21.533±12.235	F_E1- F_E2	0.119
	Mid-test	F_E2	18.533±9.024	F_E2- F_E3	0.018**
	Post-test	F_E3	16.9±9.953	F_E3- F_E1	0.015**
3.Open eyes One foot stand moving trajectory	Pre-test	G_E1	114.333±30.947	G_E1- G_E2	0.354
	Mid-test	G_E2	115.167±30.563	G_E2- G_E3	0.007***
	Post-test	G_E3	111.867±31.637	G_E3- G_E1	0.001***
4.Open eyes One foot stand envelope area	Pre-test	H_E1	4.06±2.972	H_E1- H_E2	0.482
	Mid-test	H_E2	4.121±3.106	H_E2- H_E3	0.001***
	Post-test	H_E3	3.857±2.941	H_E3- H_E1	0.001***

Notes：***P＜0.01, **P＜0.05, *P<0.1 means there is a significant difference

Table 6 Analysis of the results of One foot，close eyes the balance ability test pre-, mid- and post- the experiment in the experimental group

Variable	Time		Mean	Comparison	p
1.Open eyes One foot stand X-axis	Pre-test	E_E1	23.2±15.797	E_E1- E_E2	0.007***
	Mid-test	E_E2	21.833±15.783	E_E2- E_E3	0.033**
	Post-test	E_E3	20.367±13.743	E_E3- E_E1	0.001***
2.Open eyes One foot stand Y-axis	Pre-test	F_E1	25.2±13.116	F_E1- F_E2	0.067
	Mid-test	F_E2	24.3±14.032	F_E2- F_E3	0.063
	Post-test	F_E3	22.767±13.642	F_E3- F_E1	0.001***
3.Open eyes One foot stand moving trajectory	Pre-test	G_E1	128.367±51.049	G_E1- G_E2	0.011**
	Mid-test	G_E2	126.533±50.891	G_E2- G_E3	0.221
	Post-test	G_E3	125±48.733	G_E3- G_E1	0.001***
4.Open eyes One foot stand envelope area	Pre-test	H_E1	14.132±7.65	H_E1- H_E2	0.095
	Mid-test	H_E2	13.944±7.73	H_E2- H_E3	0.019**
	Post-test	H_E3	13.41±7.062	H_E3- H_E1	0.002***

Notes：***P＜0.01, **P＜0.05, *P<0.1 means there is a significant difference

4: The balance ability of one foot in the experimental group was significantly different before and after the experiment, 8 balance ability indicators were very significantly before and after the experiment. In the middle and late period were significantly than the before and middle stage of experiment in the middle and late stage 6 balance ability indicators was very significantly, but in the before and middle there were only 2 indicators.

Table 7 Analysis of the results of two feet，open eyes the balance ability test pre-, mid- and post- the experiment in the experimental group

Variable	Time		Mean	Comparison	p
1.Open eyes One foot stand X-axis	Pre-test	E_E1	9.567±7.686	A_E1- A_E2	0.042**
	Mid-test	E_E2	7.567±4.591	A_E2- A_E3	0.004***
	Post-test	E_E3	6.333±3.708	A_E3- A_E1	0.003***
2.Open eyes One foot stand Y-axis	Pre-test	F_E1	8.7±6.634	B_E1- B_E2	0.001***
	Mid-test	F_E2	4.667±2.006	B_E2- B_E3	0.022**
	Post-test	F_E3	5.633±2.593	B_E3- B_E1	0.004***
3.Open eyes One foot stand moving trajectory	Pre-test	G_E1	72.6±23.984	C_E1- C_E2	0.071
	Mid-test	G_E2	73.7±23.679	C_E2- C_E3	0.001***
	Post-test	G_E3	70.8±23.634	C_E3- C_E1	0.001***
4.Open eyes One foot stand envelope area	Pre-test	H_E1	2.172±1.702	D_E1- D_E2	0.941
	Mid-test	H_E2	2.163±1.962	D_E2- D_E3	0.038**
	Post-test	H_E3	1.94±1.772	D_E3- D_E1	0.001***

Notes：***P＜0.01, **P＜0.05, *P<0.1 means there is a significant difference

Table 8 Analysis of the results of two feet，close eyes the balance ability test pre-, mid- and post- the experiment in the experimental group

Variable	Time		Mean	Comparison	p
1.Open eyes One foot stand X-axis	Pre-test	E_E1	7.733±4.127	A_E1- A_E2	0.839
	Mid-test	E_E2	7.667±3.781	A_E2- A_E3	0.123
	Post-test	E_E3	6.733±4.675	A_E3- A_E1	0.028**
2.Open eyes One foot stand Y-axis	Pre-test	F_E1	5.967±3.347	B_E1- B_E2	0.169
	Mid-test	F_E2	5.633±3	B_E2- B_E3	0.114
	Post-test	F_E3	4.9±3.273	B_E3- B_E1	0.054
3.Open eyes One foot stand moving trajectory	Pre-test	G_E1	67.3±15.847	C_E1- C_E2	0.051
	Mid-test	G_E2	66.433±16.06	C_E2- C_E3	0.139
	Post-test	G_E3	65.033±17.42	C_E3- C_E1	0.189
4.Open eyes One foot stand envelope area	Pre-test	H_E1	4.633±2.008	D_E1- D_E2	0.051
	Mid-test	H_E2	4.532±2.007	D_E2- D_E3	0.001***
	Post-test	H_E3	4.138±1.973	D_E3- D_E1	0.000***

Notes：***P＜0.01, **P＜0.05, *P<0.1 means there is a significant difference

5: In the middle period of the experiment, only 2 of the 8 indexes of the balance ability of two feet had significant differences, and in the late period of the experiment, there were 5 indexes of significant differences, in which the balance ability of the eye-opening was more significantly improved than that of the closed eyes.

Discussion

1. The Happy Gymnastics course can be used as a method to train the balance skills of 3-6-year-old children. The Happy Gymnastics course can be combined with traditional physical education classes, and the teaching ratio can be reasonably arranged to make preschool physical education more rational and scientific. This finding supported the idea of Sun Mengmeng. (2018).

2. While training in the Happy Gymnastics program, it is important to take into account various factors such as the physical and psychological development levels, gender, age, and individual differences of the children. This finding supported the idea of Jiang Guiping, et al. (2016).

3. By analyzing, the significant improvement in closed-eye single-leg ability is gained through the practice of *hedgehog shake* in the course. In Happy Gymnastics, roll-type exercises are body movements that involve rolling around the coronal axis. During this process, the visual system of the human body is almost not involved in any movement activities after the feet leave the ground. At this point, children primarily rely on their body's proprioceptive and vestibular systems to effectively complete this rolling movement. In tumbling exercises without visual involvement, the nervous system can promote the ability of mutual coordination between proprioception and vestibular perception. The improvement in static closed-eye balance for preschoolers is particularly noticeable. This finding supported the idea of Wang Jiali, et al. (2016).

4. The significant difference in single-leg closed-eye balance ability between the control group and the experimental group may be due to the growth of the children with their age. Research has shown that children's balance ability improves as they get old. Moreover, daily activities at the kindergarten also help improve balance ability, but the improvement is slower and less noticeable. Single-leg balance ability improves more noticeably than double-leg balance ability. This finding supported the idea of Jiang Guiping, et al. (2016).

5. Physical exercise has a significant effect on improving proprioception and lower limb muscle strength and core strength, with less reliance on visual input during movement. Multi-dimensional lower limb exercises in the teaching process are closely related, which can enhance the visual and vestibular abilities of young children, enhance the memory of muscles for the same action in different positions, improve the efficiency of the nervous system in controlling movements and spatial positioning of the body, raise the level of lower limb strength, and improve the core strength, body control, and posture stability of young children through crawling and rolling actions. This finding supported the idea of Simge Yılmaz and Berna Sicim-Sevim. (2020) *The Examination of the Differences in the Motor Proficiency Skills of Children Practicing Gymnastics vs. non-Sportive Children* Early Child Development and Care.

6. The vestibular organs of children aged 3-6 are still in the development stage, and during gymnastics training, they will perform movements such as moving, sideways walking on a balance beam, and “kangaroo jumps”, which constantly stimulate the vestibular organs of

the body, making the vestibular organs' adaptability constantly improve. In the end, the stability of the vestibular system slowly increases, thus enhancing the balance ability of children in single-leg state. This finding supported the idea of Ma Junjie. (2001).
Therefore, it is necessary to actively promote and implement the "Happy Gymnastics" program into schools, introduce it into the classroom, promote the popularization of preschool "Happy Gymnastics" education, and enrich the physical activities in kindergartens.

7. There have been studies showing that due to the delayed development of infants, the usual experimental period usually lasts 3 months; Preschoolers have weaker learning adaptability; And the first two weeks is the adaptation learning stage for the balance training of happy gymnastics, with the focus on stimulating the children's enthusiasm and interest in the course, and conducting an adaptive learning of the happy gymnastics crawling practice. Therefore, there was not a significant improvement in balance ability. This finding supported the idea of this finding supported the idea of Ma Junjie. (2001)

8. By/through Happy Gymnastics intervention, the improvement in balance ability was more noticeable in the later stages. The reason for this may be that the third stage of the study, which focused on the balance training of cheerful gymnastics, had a significant impact on the improvement of the children's balance ability. The basic motor skills learned in the second stage were combined with increasingly difficult movements, with the emphasis on comprehensively improving the children's balance ability in the experimental group.

9. Preschools and parents should pay more attention to the development of children's static balance. They should consciously strengthen children's static balance training in school and in daily life.

Recommendation

1. In the experimental study of balance ability, it is recommended to do the balance ability tests of open eyes, closed eyes, one foot, and both feet, respectively, because in the short term, the balance ability of both feet may not change much, only through one foot and closed eyes can the balance ability be shown.

2. The rolling and jumping movements in happy gymnastics have a very obvious promoting effect on the improvement of children's balance ability, and scholars can do separate intervention studies in the future.

3. Considering that usually a prescribed curriculum is arranged at the public kindergarten, it is impossible to arrange more other activities outside the kindergarten. In view of the above factors, this study only conducted an empirical study on a private kindergarten, hoping for further research in the future.

4. The balance ability of 3-6-year-old children may improve with age. This study only tested 3-6-years-old children, so it is impossible to comprehensively observe the changes in the control group and the experimental group of children of all ages and the differences between men and women. It is hoped that follow-up researchers can test the full age of children.

5. Kindergartens can increase the content of happy gymnastics in daily activities to improve children's balance ability and enrich daily activities in kindergartens.

Research prospect

When teachers organize children to carry out physical activities, they can take the development sequence of each plate in the "physical development pyramid model of 3-6-year-old children" as the basis for happy gymnastics exercises for children of different ages. In the teaching process, when evaluating children's mastery of basic motor skills, the gross movement test scale or different age movements can be used the former focuses on the evaluation of the effect of phased practice, while the latter is more suitable for the evaluation of the process of practice. In addition, a satisfaction survey can also be added at the end to refine the course.

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