65 - INFLUENCE OF THE PROJECT OF GYMNASTIC IN THE CLASSROOM ON THE FOCUS AND POSTURAL DISCOMFORT OF STUDENTS OF THE SCHOOL OF BASIC EDUCATION EDUCAR-SE, IN SANTA CRUZ DO SUL – RS, BRAZIL.

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INTRODUCTION

The school environment is of great importance for student learning, given that it is where the students spend at least four hours a day, and it can be extended for even more hours. Therefore, beyond the scope of teaching, the school must have in mind the need to improve and strengthen this proposal. The ergonomic posture of the student in the classroom, reducing the pressure on the spine, as well as the attention and focus, which is of great importance for students learning, must be observed to obtain a better performance in class.

It is known that the teaching/learning process in school is becoming more and more intense. The scientific and technological advances of society develop rapidly, requiring from young people the increase of their knowledge. For this reason students devote most of their time to studies and consequently reduce the time dedicated to physical activities, therefore harming their health. The studies conducted by Andropova (1982), Kalinine (1990), Kalinine and Goller (2002) found that at the end of the school day the mental performance of the students decrease due to the curricular activities in previous lessons. Given this, it becomes evident the need to seek for ways to provide a better mental work to students during class. One way to solve this problem can be by performing Labor Gymnastics in school, something that is widely approved in companies and industries in the studies of Pulcinelli (1994), Lima (1998), Konrath (1999) and Prado (1999).

The Project Gymnastics in the Classroom in the Educar-se School serves mainly to recover the capacity of mental work of the students and consists of physical exercises and dynamics done during the classes alternating days throughout the month with duration of approximately 10 minutes and a frequency of two times a week always on the third period of class. The classes are very diverse but keeping the goal of strengthening the muscles of the upper limbs and spine aiming the improvement of posture, as well as group dynamics to work relaxation, concentration, balance, coordination and team work.

The researches on the application of Labor Gymnastics in the schools in Russia have shown that physical exercises, practiced by students to rest during class, increased the execution speed of cognitive activities (Ivanov, 1961), increase the amount of information assimilated and the negative influence of excessive nervous-emotional stress (Nifontova, 1981). The capacities for arithmetic and logical activities increase in a greater degree (Putivilhiski, 1972). The studies of Fomin (1964), Kalinine (1990), also showed that the correct application of Labor Gymnastics in school can not only recover but also increase the mental work capacity of the students.

Thus, it is clear that the Labor Gymnastic can relieve the mental fatigue of students and consequently benefit their mental health. But despite the great importance of this issue to the school reality, in the Brazilian literature it is mentioned one paper about the influence of Labor Gymnastics in the teaching/learning process of students in the Brazilian basic education schools, the work of Kalinine and Göller (2002), in a basic education school of Ijuí - RS. Many studies about the use of Labor Gymnastics done in Brazil by Kolling, 1982; Pereira, 1987; Pegado, 1990; Pulcinelli, 1994; Galante et al, 1998; Konrath, 1999; Prado, 1999 , were done only about the Labor Gymnastics in companies.

Therefore this study aims to verify the influence of the Project of Gymnastics in the Classroom over the focus and postural discomfort of students of the 7th and 8th grades of the Basic Education School Educar-se, in Santa Cruz do Sul – RS, Brazil.

METHODOLOGIC PROCEDURES

Subjects of the Study

The study sample consists of 52 students of the 7th and 8th grades of the Basic Education School Educar-se, participating in the Project Gymnastics in the Classroom. The teenagers are between 13 and 15 years old.

Instruments

Gymnastics in the classroom is an active pause and consists of physical exercises and dynamics done during the classes alternating days throughout the month, with duration of approximately 10 minutes and a frequency of two times a week always on the third period of class that according to Kalinine(1990), Kalinine et. al. (1996), it is the time when students start to get tired. The classes were diversified but keeping the goal of strengthening the muscles of the upper limbs and spine aiming the improvement of posture, as well as group dynamics to work relaxation, concentration, balance, coordination and team work.

For data collection it was used a numerical grid cited by (1991). This instrument measures the level of concentration and consists in checking as many numbers as possible in a period of time of 5 minutes beginning in the number 00. The map of postural discomfort was used (Junior, 2005), to evaluate parts of the body with any discomfort during the classes.

Besides the tools used above a questionnaire with closed questions to subjectively assess fatigue, attention and focus during class was used.

RESULTS AND DISCUSSION

It is outlined in this chapter the results of the Project of gymnastics in the classroom in the period of three months and also the discussions with some authors.

Table 1 shows the results obtained with the numerical grid test where it was found that the 7th grade students had a considerable increase in the average of numbers checked of 00 to 99, it was of 30.92 in the pre-test and raised to 35.81 in the post-test, an increase of 15.81%. The 8th grade students had an increase in the average that was of 29.08 in the pre-test and raised to 35.56 in the post-test, an increase of 22.28 %. In the general average there was an increase of 19.04% in the focus.

Table 1: Results of focus:

	Pre-assessment Average	Post-assessment Average	Difference after 3 months
7th grade	30,92	35.81	4.89
8th grade	29.08	35.56	6.48
Overall	30	35.68	5.68

As for fatigue during the class hours, table 2, the subjects assessed were less tired during class hours, the students who did not feel tired increased 7.68%, a little tired 13.5%; while for students who felt a medium tiredness there was a reduction of 17.31% and the ones who felt very tired reduced 3.87%.

Table 2: tiredness during class hours

Do you feel tired during the classes?					
	Pre-test	%	Post-test	%	Difference (%)
None	2	3.85	6	11.53	7.68
Very little	20	38.44	27	51.94	13.50
Medium	25	48.08	16	30.77	-17.31
A lot	5	9.63	3	5.76	-3.87

Table 3, focus in class, the students showed a good outcome proving to be more focused in class. The answer was rarely maintained and the ones who never felt focused in class reduced 1.92%. The students who sometimes felt focused reduced 11.54% and the ones who felt focused frequently or always increased 7.07% and 5.76% respectively.

Table 3: focus in class

Do I feel focused in class?					
	Pre-test	%	Post-test	%	Difference (%)
Never	1	1.92	0	0	-1.92
Rarely	2	3.85	2	3.85	00.00
Sometimes	16	30.77	10	19.23	-11.54
Usually	21	40.38	25	48.08	7.7
Always	12	23.08	15	28.84	-5.76

In Table 4, the subjects showed themselves more attentive and focused in class, the response rarely showed no alteration, but the students who declared being sometimes attentive reduced 7.69%. The students who frequently felt attentive increased 1.92% and the ones who were always attentive increased 5.77%.

Table 4: attention focused in class

My attention is focused in class?					
	Pre-test	%	Post-test	%	Difference (%)
Never	0	0	0	0	00.00
Rarely	2	3.85	2	3.85	00.00
Sometimes	18	34.61	14	26.92	-7.69
Usually	25	48.08	26	50	1.92
Always	7	13.46	10	19.23	5.77

The results described above, the objective test, numerical grid as well as the subjective test, questionnaire, presented a good evolution concerning the focus and attention of students in the 7th and 8th grades, confirming their finding on the study of KALININE and GÖLLER (2002), where the program of Labor Gymnastics in the school investigated the effectiveness of the concentration of students 5th, 6th, 7th and 8th grades of a Basic Education School in the city of Ijuí, Rio Grande do Sul, Brazil. They concluded that the gymnastics raised in average 17% the productivity of mental work of the students.

Table 5: postural discomfort measured in the pre and post-test

Body parts	Pre-test	%	Post-test	%	Difference (%)
Head	5	9.61	3	5.76	- 3.85
Neck	11	21.15	11	21.15	Same
Shoulder	6	11.53	6	11.53	Same
Upper back	15	28.84	6	11.53	-17.31
Lower back	9	17.3	9	17.3	Same
Elbows	2	3.85	2	3.85	Same
Hip	7	13.46	0	0	-13.46
Thigh	5	9.63	4	7.69	-1.94
Knee	7	13.46	7	13.46	Same
Ankle	8	15.38	5	9.63	- 5.75

The Post-test of the Map of postural discomfort showed there was a considerable reduction of the discomfort over the upper back of 17.31% and hip of 13.46%. In other areas, the discomfort had a little reduction like, in the head of 3.85%, thigh of 1.94 and ankle of 5.75%. In the areas of neck, shoulders, lower back, elbows and knee it had no alteration.

The results verified meet the ones obtained in a similar study of Labor Gymnastic implemented in the Superintendent of Urban Cleaning (Superintendência de Limpeza Urbana (SLU)) in Belo Horizonte by the FUMEC University, College of Health Sciences (Faculdade Ciências da Saúde), through the courses of Physical Education and Physiotherapy. Comparing the results in two questionnaires pre and post-test after three months of implementing the labor gymnastics there was a reduction in the number of musculoskeletal complaints especially in the areas of the cervical spine (12.5%), lumbar spine (14%) and right upper limb (19%). The thoracic spine (4%), lower limbs (4%) and right wrist/hand (7%) also presented a reduction of complaints, but in a smaller percentage probably due to use of these body areas during the labor activities.

CONCLUSION

From the results obtained in the pre and post assessments of the present study, it is possible to conclude that the Project of gymnastics in the classroom in the Educar-se School, done during three months, considerably increased the focus and attention of the students through the effects over the posture and the postural discomfort. Facing the facts given, it was perceived how influential an innovative proposal can be, besides increasing the teaching-learning process, it can be considered as a support for a better education.

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INFLUENCE OF THE PROJECT OF GYMNASTIC IN THE CLASSROOM ON THE FOCUS AND POSTURAL DISCOMFORT OF STUDENTS OF THE SCHOOL OF BASIC EDUCATION EDUCAR-SE, IN SANTA CRUZ DO SUL – RS, BRAZIL.

ABSTRACT

Private schools increasingly try to intensify the teaching/learning process, making the school environment essential for students learning especially if they feel comfortable on their chairs and desks. The goal of this research was to investigate the influence of the Project of Gymnastics in the Classroom on the focus and postural discomfort. The project involved 52 students of 7th and 8th grades of the School of Basic Education Educar-se, in Santa Cruz do Sul – RS, and occurred during three months. To investigate the focus of the students it was used the numerical grid test and subjectively by applying a questionnaire. The discomfort during classes was measured through the map of postural discomfort. The results of the survey showed that the project provided an average increase of 22.28 % in the focus of student of the 8th grade. Similarly, for the students of the 7th grade the increase was of 15.81 %. The data provides an overall average increase of focus of 19.04%. In postural discomfort there was a significant decrease in discomfort of the upper back and hip. In contrast, in other areas such as head, thigh and ankle there was a small decrease and in the areas of the neck, shoulder, lower back (lumbar), elbows and knees remained unchanged. Based on these data it is possible to conclude that the project of gymnastics in the classroom, of the Educar-se School can increase considerably the focus and attention of the students in class, through the minimization of the postural discomfort.

KEYWORDS: Gymnastic, Focus, Postural Discomfort.

L'ÍNFLUENCE DU PROJET DE LA GYMNASTIQUE EN SALLE DE CLASSE SUR LA CONCENTRATION ET L'INCONFORT POSTURAUX DES ÉLÉVES DE L'ÉCOLE D'ÉDUCATION DE BASE EDUCAR-SE, SANTA CRUZ DO SUL-RS, BRÉSIL.

Les écoles privées cherchent à rendre plus intense le processus d'enseignement/ d'apprentissage, en faisant que le milieu scolaire soit primordial pour l'apprentissage des élèves, surtout s'ils se sentent à l'aise dans leur environnement éducationnel. L'objectif de cet étude était de rechercher l'influence du Projet de la Gymnastique en salle de classe sur la concentration et l'inconfort posturaux. Le projet a reuni 52 élèves de 7ième et 8ième années de l'Ècole d'Education de base Educar-se à Santa Cruz do Sul - RS, et a eu lieu pendant une période de trois mois. Pour étudier la concentration des élèves, nous avons utilisé le test de la grille numérique et subjectivement par l'application d'un questionaire. Mais le malaise postural pendant les cours a été mésuré grâce aux schemas relationnés aux malaises posturales. Les résultats du sondage ont montré que le projet a fourni une augmentation moyenne de 22,8% dans la concentration des élèves de 8ième année. D'une manière

quasi-similaire, pour les étudiants de 7 ième année l'augmentation moyenne a été de 15,81% .Les donnés fournissent une augmentation globale moyenne de la concentration de 19,04%. Dans l'inconfort posturaux il y a eu une diminution significative de l'inconfort sur la colonne supérieure et de la hanche. En revanche, d'autres régions comme la tête, la cuisse et la cheville il y a eu une petite diminution et dans les régions du cou, les épaules et le bas du dos (lombaires), les coudes et le genou sont restés inchangés. Basé sur ces donnés nous concluons que le projet gymnastique em salle de classe, de l'École Educar-se peut considérablement augmenter la concentration et l'attention des éléves en salle de classe, principalement en réduisant l'inconfort posturaux.

MOTS-CLÉS: gymnastique, concentration, l'inconfort posturaux.

INFLUENCIA DEL PROYECTO DE GIMNASIA EN SALA DE CLASE SOBRE LA CONCENTRACIÓN E INCÓMODO POSTURAL DE LOS ESTUDIANTES DE LA ESCUELA DE EDUCACIÓN BÁSICA "EDUCAR-SE", DE SANTA CRUZ DEL SUR - RS, BRASIL.

RESUMEN

Las escuelas privadas buscan cada vez más intensificar el proceso de enseñanza / aprendizaje, haciendo con que el ambiente escolar sea esencial para el aprendizaje de los estudiantes, especialmente si ellos se sienten confortables en suyos ambientes de estudios. El objetivo de esta investigación fue investigar la influencia de la gimnasia en sala de clase sobre la concentración e incómodo postural. En el proyecto participaron 52 estudiantes del séptimo y octavo grados de la Escuela de Educación Básica Educar-se en Santa Cruz del Sur - RS, Brasil, y há ocurrido durante tres meses. Para la investigación de la concentración de los estudiantes, se utilizó el test de la reja numérica y de forma subjetiva mediante la aplicación de un cuestionario. Ya el incómodo en las clases se midió a través del mapa de incomodidad postural. Los resultados de la investigación mostraron que el proyecto proporcionó un incremento medio del 22,28% en la concentración de los estudiantes del octavo grado. De forma casi similar para los estudiantes del séptimo grado el aumento promedio fue del 15,81%. Los datos ofrecen un promedio general en el aumento de la concentración de 19,04%. En la incomodidad postural hubo una disminución considerable de los incómodos de la columna superior y cadera. Por el contrario, en otras regiones como la cabeza, muslo y tobillo hubo pequeña disminución y en las regiones del cuello, hombros, parte inferior de la columna lumbar, codos y las rodillas se mantuvo sin cambios. Basándose en estos datos, podemos concluir que el proyecto de gimnasia en sala de clase, de la escuela Educar-se, puede aumentar significativamente la concentración y la atención de los estudiantes en sala de clase, principalmente, a través de la minimización del incómodo postural.

PALABRAS CLAVE: gimnasia, concentración, incómodo postural.

INFLUÊNCIA DO PROJETO GINÁSTICA EM SALA DE AULA SOBRE A CONCENTRAÇÃO E DESCONFORTO POSTURAL DOS ALUNOS DA ESCOLA DE EDUCAÇÃO BÁSICA EDUCAR-SE, DE SANTA CRUZ DO SUL – RS, BRASIL.

RESUMO:

As escolas particulares procuram intensificar cada vez mais o processo ensino/aprendizagem, fazendo com que o ambiente escolar seja primordial para o aprendizado dos alunos, principalmente se eles se sentirem confortáveis em seus ambientes de estudo. O objetivo desta pesquisa foi verificar a influência do Projeto Ginástica em Sala de Aula sobre a concentração e desconforto postural. O projeto envolveu 52 alunos de 7ª e 8ª séries da Escola de Educação Básica Educar-se, de Santa Cruz do Sul – RS, e ocorreu durante três meses. Para a investigação da concentração dos estudantes, utilizou-se o teste da grade numérica e de forma subjetiva com a aplicação de um questionário. Já o desconforto durante as aulas foi mensurado através do mapa de desconforto postural. Os resultados da pesquisa mostraram que o projeto proporcionou aumento médio de 22,28 % na concentração dos alunos da 8ª série. De forma quase similar, para os alunos da 7ª série o aumento médio foi de 15,81 %. Os dados oferecem uma média geral no aumento da concentração de 19,04%. No desconforto postural houve uma diminuição considerável no desconforto sobre a coluna superior e quadril. Em contrapartida, em outras regiões como cabeça, coxa e tornozelo houve pequena diminuição e nas regiões de pescoço, ombros, parte inferior da coluna (lombar), cotovelos e joelho manteve-se sem alteração. Com base nestes dados, podemos concluir que o projeto de ginástica em sala de aula, da Escola Educar-se, pode aumentar de forma considerável a concentração e atenção dos alunos em sala de aula, principalmente, através da minimização do desconforto postural.

PALAVRAS CHAVES: Ginástica, concentração, desconforto postural.