4 - EDUCATION CHANGES IN THE PREVENTION OF FALLS IN ELDERLY PEOPLE: TECHNIQUE IVALDO BERTAZZO

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1.AGING AND THE INCIDENCE OF FALLS

The increasing elderly population comes to fruition. It is believed that the year 2050 the elderly will be one fifth of the world. (Papaléo Netto, 2001).

In this sense, it increments, too, programs, research and projects targeted to this segment, whose concern is with the quality of life and independence of the subject that gets old.

Aging is characterized by: a reduction in the mechanism of homeostasis of the body, decline of the functions of various organs, reduced muscle mass and bone mass and other factors

Alves Júnior (2006) posits that one of the problems that could radically change the active life of the elderly is the incidence of falls, because they leave as a direct consequence of the decreased quality of life. The social cost is huge and becomes large when the elderly has decreased autonomy and independence, or the need for institutionalization. (Reigewirtz: 2000 apud Alves Júnior, 2006, p.20).

Bertazzo (1998) argues that modern society suffers from numbness of the limbs, as if the gestures were connected on autopilot, devoid of autonomy and feel. This fact affects coordination, psychomotor and proprioceptive stimuli of the elderly and as a result, there is a high rate of falls that may undermine the autonomy and independence. Thus, this research focused on quantity, aims to investigate whether the Education Movement, created by Bertazzo technique can reduce the number of falls among the elderly.

The instrument for obtaining data from the study protocol was the balance tests, a performance-oriented mobility assetment of gait and balance "(POMA), in an adapted version authored by Shumway-Cook and Woollacott (1995).

2. THE METHOD OF MOVEMENT` EDUCATION

Method of Movement Education, created by Ivaldo Bertazzo in the 70's, is composed of three lines that interact in their technique: Indian dance; chains muscle and joint pain, muscle coordination.

The first line, the Indian dance, has great complexity of rhythmic structures precisely executed. Tensions act alternating movements, seeking stability, and the body has intermittent struggle against gravity, in constant opposition to restoring the balance (Bertazzo, p.18, 2004).

Bertazzo (2004) states, which in turn, the muscle chains, which constitute the second line of the method, to comprise three approaches, which are presented by Struyf (1995), author of Muscular Chains technique. The first is the reading of the types of individuals seeking to individualize the choice of techniques according to the specific need of the patient. The latter is in a dialogue to define a psychophysiological field, outlining the strengths and weaknesses for an appropriate strategy and approach to acting corporal. And the third is the use of body awareness in a harmonious way to preserve its mechanics.

Bezériers and Piret (1992), authors of the third line of the method's Education Movement, which is defined in practice re-educator who is the ideal motor coordination, which allows the recovery of the fundamental. Anatomy and physiology of motion unite into a gap between the body structure and gesture that is done. This fact is seen as the main reason for small or large deformities that prevent the body comfort. Every gesture is loaded with the psyche, but through coordination can then restructure the individual according to the movement. The body works as a whole.

So Bertazzo says it is the exchange of these three languages, self-consciousness, experimentation and integration possibilities of organic body in space, are diluted in the method's Education Movement, which leads to "reach for your phone presentification body" (Bertazzo , 2004, p. 13).

3. METHODOLOGICAL TRAJECTORY

3.1 The research protocol based on POMA

This was a case study, based on a quantitative study, by applying the test 'Performance-oriented mobility assetment of gait and balance' (POMA), in an adapted version authored by Shumway-Cook and Woollacott (1995).

The objective of the protocol is to discover POMA risk factors of falls in older people and it is composed of two parts, as described in Table 1 to evaluate balance (A) which corresponds to the motion (B).

The first range of tests to evaluate balance consists of thirteen stations, which consider the stability of the subject in different static positions and movements with their eyes open and closed. As the level of execution is assigned values that will characterize the subject's performance in relation to that physical valence.

The final score is characterized in Normal, the highest degree: Adaptive median and Abnormal would be the lowest grade.

The second test evaluates the march and has nine sites, all focusing on the balance and are subdivided into two levels of values: Normal (2) and Abnormal (1). The full description of POMA version Brazil.

TABLE1: ASSESSMENT OF THE PERFORMANCE-ORIENTED MOBILITY THROUGH THE PROTOCOL OF POMA 1995.

Name:	1-N		2-Mn		3-E		4-T		5-M	
Test:	1°	2°	1°	2°	1°	2°	1°	2°	1°	2°
Static Balance										
1-Equilibrium sitting	3	3	3	3	3	3	3	3	3	3
2-Rising from a chair	3	3	3	3	2	3	3	3	3	3
3-Foot Balance in immediate	1	3	3	3	3	3	3	3	3	3
4- Balance standing	3	3	3	3	3	3	2	3	3	3
5-Balance with eyes closed	1	3	3	3	3	3	1	3	2	3
6-Balance while turning	1	3	3	3	2	3	1	3	2	3
7-"Nudge test"	1	3	3	3	3	3	2	3	3	3
8-Turn the neck	3	3	3	3	3	3	2	3	3	3
9-Balancing with one foot	1	3	1	3	2	3	2	3	3	3
10- Extension of column	1	3	3	3	3	3	2	3	3	3
11-Reaching up	1	3	1	3	1	3	3	3	1	3
12-Bend forward	1	3	3	3	3	3	3	3	3	3
13-Sitting	1	3	2	3	3	3	3	3	1	3
Total:	**21**	**39**	**34**	**39**	**34**	**39**	**30**	**39**	**33**	**39**
Balance at March										
14-Initiation of the March	2	2	2	2	2	2	2	2	2	2
15- Height of step	1	2	1	2	1	2	1	2	2	2
16- Step length	1	2	1	2	2	2	2	2	2	2
17- Step symmetry	1	2	1	1	2	2	2	2	2	2
18- Continuity of step	1	2	1	2	2	2	2	2	2	2
19- Deviation from the midline	2	2	1	2	2	2	1	1	2	2
20-Stability of the trunk	1	2	1	2	1	2	2	2	2	2
21- Support during the	2	2	1	2	1	2	1	2	2	2
22- Turning during walking	1	2	2	2	2	2	2	2	2	2
Total:	**12**	**18**	**11**	**17**	**15**	**18**	**15**	**18**	**18**	**18**
Grand Total:	**33**	**57**	**45**	**56**	**49**	**57**	**45**	**57**	**51**	**57**

Fonte: (SHUMWAY-COOK; WOOLLACOTT,1995).

- Shumway-Cook A,Woolacott MH. Control of posture and balance.In: Shumway-Cook A, Woolacot MH. Motor Control Theory and Practical Applications.Maryland: Willians & Wilkins;1995.

Nota: The adjusted statistically, through the protocol of POMA.

3.2 Subject

The study included five female subjects, aged 48 (forty-eight years) and 80 (eighty years) years of the program UNAT UniFOA, voluntarily, and that before his execution, signed the consent form.

3.3 Instrument

The group was subjected to the method of Education Movement in the space of the Integrated Center of Physiotherapy UniFOA. A frequency of two hours per week during 7 (seven) weeks, which amounted to a workload of 14 hours. The exercises, massage and brushing were performed daily at home, because the study proposal, and improve the knowledge of the body and therefore the balance was to promote autonomy.

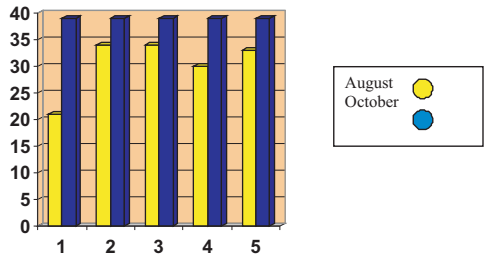
3.3.1 Application of the Method

In these meetings we focused on use of exercise, massage and brushing for being easy to apply and, essentially, for having, by the study subjects, good reception. The theoretical explanations for the method of Education composed of the Movement, too, encounters.

4 RESULTS AND DISCUSSION

The first battery of tests to evaluate balance, consisting of 13 (thirteen) stations, whose maximum range is 39 points, all subjects reached the summit after being subjected to the method of Education Movement. The subject first came out in the original scale with 20 (twenty) points, the subject 2 and subject 3 with 34 (thirty four), the guy with 4 (30) and subject 5 with 33 (thirty-three), as shown in Figure 1.

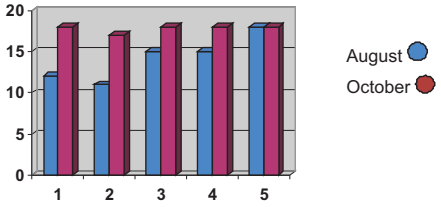
CHART 1: ASSESSMENT OF BALANCE



In the second set of tests that assesses the progress made at nine stations, whose maximum value is 18 (eighteen) points, all subjects reached this amount with the exception of subject 2 who had 17 (seventeen) points, due to the fact of having achieved minimum test 17 (seventeen), which corresponds to the symmetry of the step.

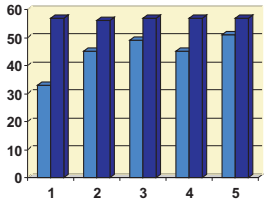
Although there have been no postural assessment, it was found through the report that the subject has undergone a second bone Orthoradiographic, where he was diagnosed with lower limb difference. A fact that explains the low test result. In the initial scale the subject possessed a 12 (twelve) points, the subject 2 with 11 (eleven), subjects 3 and 4 with 15 (fifteen), and subject 5 with 18 (eighteen).

CHART 2: ASSESSING THE BALANCE IN MARCH.



The total score was composed of 57 (fifty seven) points and almost all the subjects reached this value, except for subject 2 which reached 56 (fifty-six) points.

CHART 3: SCORE TOTAL.



Accordingly, it appears that the method contributes to reducing incidence of falls in older adults.

5. CONCLUSION

This study showed that the Method of Movement Education, technique Ivaldo Bertazzo acts as minimizing the incidence of falls in older people and to promote benefits for a better quality of life.

We emphasize the results obtained in the survey, which showed, within the sample studied, which after seven weeks of systematic activity was a 22% increase in total score test POMA where four subjects reached the maximum, and stayed down for a one point.

So is the suggestion to extend this study, checking for the hypothesis that the Method of Movement Education can act in different age groups as prevention of future falls, reducing the process of aging and decline in quality of life.

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ABSTRACT

Human aging leads to declines in organ function, reducing the health and quality of life. One of the serious problems that can lead the elderly to disability, poor quality of life and even early death is the rate of falls. Among other factors, such falls occur due to losses that seniors have in their motor coordination and its psychomotor and proprioceptive stimuli. It lies in the method of 'Education Movement "Ivaldo Bertazzo of a set of tools that can act to significantly reduce the incidence of falls in older adults. Thus, the present work through a case study in UNAT / UniFOA, aims to analyze quantitatively the Education Movement is able to improve balance and hence reduce the incidence of falls. The instrument for obtaining quantitative data of the research was the testing protocol of balance "Performance-oriented mobility assetment of gait and balance" (POMA), in an adapted version authored by Shumway-Cook and Woollacott (1995). The results point to the evidence of the effectiveness of the method in the prevention of falls among the elderly.

KEYWORDS: Aging; Fall; Education movement.

CHANGEMENTS DANS L'ÉDUCATION DE LA PRÉVENTION DES CHUTES CHEZ LES PERSONNES ÂGÉES: IVALDO BERTAZZO TECHNIQUE

RÉSUMÉ

L'homme le vieillissement conduit à la baisse de la fonction des organes, ce qui réduit la santé et la qualité de vie. L'un des problèmes graves qui peuvent conduire les personnes âgées à l'invalidité, la mauvaise qualité de la vie et même la mort précoce est l'incidence des chutes. Parmi d'autres facteurs, comme des chutes se produisent en raison des pertes que les aînés ont à leur coordination motrice et de ses psychomoteur et stimuli proprioceptifs. Il réside dans la méthode de «Mouvement pour

l'éducation" Ivaldo Bertazzo d'un ensemble d'outils qui peuvent agir pour réduire de façon significative l'incidence des chutes chez les personnes âgées. Ainsi, le présent ouvrage par une étude de cas dans UNAT / UniFOA, vise à analyser quantitativement le mouvement de l'éducation est en mesure d'améliorer l'équilibre et donc de réduire l'incidence des chutes. L'instrument pour obtenir des données quantitatives de la recherche a été le protocole de test de l'équilibre "assetment mobilité axée sur la performance de la marche et d'équilibre» (POMA), dans une version adaptée par l'auteur de Shumway-Cook et Woollacott (1995). Les résultats montrent à l'évidence de l'efficacité de la méthode dans la prévention des chutes chez les personnes âgées.

MOTS-CLÉS: Vieillissement; L'automne; Le mouvement de l'éducation.

CAMBIOS EN LA EDUCACIÓN EN LA PREVENCIÓN DE CAÍDAS EN LAS PERSONAS MAYORES: IVALDO BERTAZZO TÉCNICA

RESUMEN

Envejecimiento humano conduce a la disminución de la función del órgano, lo que reduce la salud y la calidad de vida. Uno de los problemas graves que pueden llevar a los ancianos a la discapacidad, la mala calidad de vida e incluso muerte prematura es la incidencia de caídas. Entre otros factores, como las caídas ocurren debido a las pérdidas que las personas mayores tienen en su coordinación motora y su psicomotricidad y estímulos propioceptivos. Se encuentra en el método del Movimiento para la Educación "Ivaldo Bertazzo de un conjunto de herramientas que pueden actuar para reducir significativamente la incidencia de caídas en adultos mayores. Por lo tanto, el presente trabajo a través de un estudio de caso en TANU / UniFOA, tiene como objetivo analizar cuantitativamente el movimiento de la educación es capaz de mejorar el equilibrio y por lo tanto, reducir la incidencia de caídas. El instrumento para la obtención de datos cuantitativos de la investigación fue el protocolo de prueba de equilibrio "assetment movilidad rendimiento orientada a la marcha y el equilibrio" (POMA), en una versión adaptada por el autor de Shumway-Cook y Woollacott (1995). Los resultados apuntan a la evidencia de la efectividad del método en la prevención de caídas entre los ancianos.

PALABRAS CLAVE: Envejecimiento; Otoño, El movimiento Educación.

A EDUCAÇÃO DO MOVIMENTO NA PREVENÇÃO DE QUEDAS DE IDOSOS: TÉCNICA DE IVALDO BERTAZZO

RESUMO

O envelhecimento humano provoca declínios nas funções orgânicas, reduzindo a saúde e a qualidade de vida. Um dos graves problemas que podem levar o idoso à incapacidade, à baixa qualidade de vida e até à morte precoce é a incidência de quedas. Entre outros fatores, tais quedas ocorrem em virtude de perdas que os idosos apresentam na sua coordenação motora e nos seus estímulos psicomotores e proprioceptivos. Encontra-se no método de "Educação do Movimento" de Ivaldo Bertazzo um conjunto de instrumentos que podem atuar de forma significativa na redução da incidência de quedas em idosos. Assim, o presente trabalho realizado através de um estudo de caso na UNATI/UniFOA, visa analisar de forma quantitativa se a Educação do Movimento é capaz de melhorar o equilíbrio e, conseqüentemente, reduzir a incidência de quedas. O instrumento de obtenção dos dados quantitativos da pesquisa foi o protocolo de testes de equilíbrio “Performance-oriented mobility assetment of gait and balance” (POMA), em uma versão adaptada de autoria de Shumway-Cook e Woollacott (1995). Os resultados apontam para a comprovação da eficácia da aplicação do método na prevenção de queda de idosos.

PALAVRAS-CHAVE: Envelhecimento; Queda; Educação do movimento.