131 - RELEVANCE OF SWIMMING FOR AUTISM IN IMPROVING THE QUALITY OF LIFE

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INTRODUCTION

When you hear the word "autism " soon comes to mind the image of a child isolated in their own world , contained in an impenetrable bubble, who plays in an unusual way, balance the body from side to side, oblivious to everything and everyone . Is usually associated with someone other than us, who lives outside the society and has a very limited life, where nothing makes sense (SILVA, 2012).

Autism is a global child development disorder that is manifested before three years old and lasts throughout life (GREENSPAN, 2010).

According to (Massaud, 2001), the physical properties of water (density, hydrostatic pressure,viscosity, etc.) will influence on human behavior, both physiological and psychological aspects.

To (Lepore, 1999), we can achieve the following effects obtained with therapeutic water exercises, considering the various types of disabilities, such as:decrease of spasms and muscle relaxation;relief of muscle and joint pain; Maintaining or increasing range of articulate motion; Strengthening and increasing local muscular endurance; circulatory improvement in skin elasticity ; improvement on static and dynamic balance; Relaxation on support organ (spine) and improved posture improvement of spatial-temporal orientation.

Aquatic activities or learning how to swim is also a learning process of socialization. Hence the need of the person with disabilities and / or syndrome learn how to climb step by step, firstly relating person-object and then person-person, and finally, the person interacting with the group, (CAMPION 2000).

The effect on humor improvement and motivation in people with disabilities and/or syndrome is highly significant through swimming, plus the ability to discharge the psychic tensions through the relaxation power of water and meet the needs of motion.

Studies on overall quality of life (OQL) suggest that these indicators help to establish conditions that would improve the lives of persons with Autism Spectrum Disorder (ASD). For a long time dominated the concept that quality of life is the intangible essence of things, something that cannot be measured.

Recently the overall quality of life (OQL) has been the subject of many studies in relation to neurotic individuals and with syndromes. Despite not yet having a methodological tool to measure the quality of life for typical or atypical individuals, one can realize that it is always taken into account in studies of population health, which comes to justify research and the need for further research in this area.

Our working hypothesis is that if the water's gravity is almost zero allowing the child to perform movements that could not hold in the soil, either by single presentation of stimulation deemed relevant to a person, either by repeated action deemed irrelevant stimuli, and performing unusual movements or postures that help to structure the body image. The practice of swimming for this public in particular, comes to help in social, affective and psychomotor development with wide acceptance by providing a natural proprioception and stimulating your sensory system, helping the individual with Autistic Spectrum Disorders (ASD) with common work situations - problems in their daily lives , such as spatial location of the body, its position, orientation, force exerted by muscles and the position of each body part in relation to the others.

(Burckhardt et al ESCOBAR , 1985). Reference that swimming can benefit children with disabilities regarding the appropriateness of the sharp tone, releasing the potential of movement restricted by tight muscles and/or tonicity, allowing learning activities required for functional movements through voluntary and salutary global activities.

The objective of this study is to evaluate the relevance of swimming and its benefits to the overall quality of life (OQL) for children with Autistic Spectrum Disorder (ASD).

The training aimed at children and teenagers should focus on interests related to each age group's physiological development, respecting the peculiarities inherent in each phase. According to(WEINECK, 1991).

MATERIALS AND METHODS

- Study Design

This research was a quantitative study (Gunther, 2006). Using part of the research data from the Data Base. (thelevelsofFunctionalDevelopment - Emotional (Fedl). (Greenspan 1997).

- Sample

The sample was divided into two groups, Patient Group (PG) which was composed of 14 children all practitioners of swimming lessons. The control group (CG) consisted of 12 children without participation in swimming classes, subjects matched to the patient group (PG), in relation to the syndrome, gender, age and activity.

- Data Gathering

The swimming program was started with the basic principles of conventional swimming for children, however, the adjustments and supports were essential to meet sensory needs of children with Autism Spectrum Disorder (ASD).

In this period was used as monitoring parameters, and comparisons of case histories filming every 3 months through the Data Base.

- Gathering of Samples

Samples were collected at intervals of 3 months for a total of 8 samples collected, but were not reported in this study the first 5.

- Research Tools

After the recruitment of students, the evaluations conductions of pre and post-tests that occurred from January 2009 to December 2012, where data of Overall General Life (OQL) were collected through an interview with comparisons of Data Base.

- Data Base (FEDL) e (NDRC)

Through the questionnaire divided into six domains, which are functional, emotional and communication capabilities (Greenspan 1997). The Domain I- Domain of self-regulation and attention is the ability to get contact through images and sounds and interest in the world. The Domain II - Field of engagement and relationship in which the other courts or want to be courted, engages in emotions. The Domain III - Domain affection and both-way communication for emerging applications and future and past interactions. The Domain IV - Domain referring to troubleshooting for affective interactions, to resolve shared social problems. Domain V -Responsible domain for creating and developing symbols represented by emotional themes and ideas. Last Domain VI - Domain referring to logical and abstract thinking ability. It has the ability to prepare and reflect on actions, aware of time and space. When the score was reported, there was a response category for maximum functionality related to each item.

- Inclusion Criteria: Children diagnosed with Autism, with frequency (≥ a 2) weekly classes have other therapeutic accompainiment and not using any medicine.

- Exclusion Criteria: Children that don't match with the items above and/or which parents don't have direct involvement with the cause.

RESULTS

The results were obtained through analysis of the data of pre-and post-tests values and analysis of each individual and the final analysis was taken the group as one. After all the testing and following the same protocol in all comparisons, paired in relation to the syndrome of gender, age and activity. There are significant changes in percent changes in the instruments presented, showing the average Overall Quality of Life (OQL) pre and post-tests, one can observe a statistically significant difference in the segments evaluated ($p \leq 0.05$).

According to Table 1, both groups were composed of 84.6% male and 15.4% female.

Table I – Sample Characteristics

	Patient Group	**Control Group**
Variable	n= 14	n=12
Pathology (%)	100%	100%
Gender (%)		
Male	84,6	84,6
Female	15,4	15,4
Average	2,0	0,65
DP	7,0	2,0

Figure 1 shows the average of the Overall Quality of Life and 3 assessed domains: Physical, Social and Functional Domain. One can observe a statistically significant difference when compared to the Group 1 (Patients) and Group 2 (control) in all segments evaluated ($p < 0.04$).

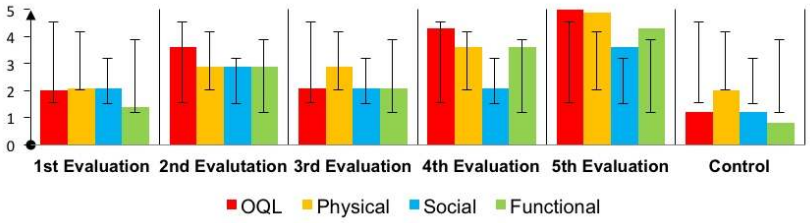
- (OQL) Overall Quality of Life: The average follow-up of this in the assessments of Group 1 (Patients) was: 1st In Review: 1.50 (SD ± 0.50), trial 2: 6.85 (SD ± 0.82), review 3: 5.50 (SD ± 0.50), 4th review: 8.50 (SD ± 1.12), 5th review: 9.75 (SD ± 0.83) and group 2 (control) to average was 4.46 (SD ± 0.59).

- Social Domain: The average follow-up of this in the assessments of Group 1 (Patients) was: 1st In Review: 3.25 (SD ± 0.43), trial 2: 2.75 (SD ± 0.43), 3rd review: 1.50 (SD ± 0.50), 4th review: 3.00 (SD ± 0.71), 5th review: 3.50 (SD ± 0.50), with average variation of 3.50 (SD ± 0.5), and in Group 2 (control) the average was 4.52 (SD ± 0.47).

- Physical Domain: The average follow-up of this in the assessments of Group 1 (Patients) was: 1st In Review: 4.75 (SD ± 0.43), trial 2: 6.65 (SD ± 0.43), 3rd review: 5.50 (SD ± 0.50), 4th review: 8.50 (SD ± 1.12), 5th review: 9.75 (SD ± 0.83), with average variation of 7.00 (SD ± 0.40) in Group 2 (control) the average was 4.21 (SD ± 0.40).

- Functional Domain: The average follow-up of this in the assessments of Group 1 (Patients) was: 1st In Review: 3.25 (SD ± 1.81), 2nd Review: 2.40 (SD ± 0.53), 3rd review: 2.71 (SD ± 1.71), 4th review: 3.14 (SD ± 1.53), 5th review: 8.75 (SD ± 1.83), with average variation of 7.00 (SD ± 0.40) in Group 2 (control) the average was 4.08 (SD ± 0.77).

Figure 1 - Assessment of the Overall Quality of Life: The graph shows all the results in the tests applied (Fedl, NDRC and history).



Student's t test for paired samples ($p \leq 0.04$). The level of significance was set at ($p \leq 0.05$) compared to the patient group and control group, the average standard deviation (SD ± 1.58), overall average group (MG ± 2.50).

DISCUSSION

In this study, the practice of swimming was used to analyze the possible benefits in functional and emotional development of children with ASD. As in the liquid medium, the perceptions of balance, body orientation, limb motion in relation to the trunk are differentiated, this means the motor activities target the cognitive, affective, emotional and social development, being mentioned as an excellent mean of motor implementation, promoting the overall development of the individual with limitations.

Taking into account that the concept of quality of life is subjective and completely personal that can only be defined by

each individual and tends to change over each one's life.

The results for levels of functional and emotional development, in improving the overall quality of life, we observed a statistically significant difference when comparing the results of the graphs.

As the graphs show, it appears analyzed segments in relation to all the aspects in that there have been considerable advances in quality of life and their functional and emotional overtones in 5 reviews.

It is also observed that in the 3rd review of the functional and emotional domains had a little instability with no major breakthroughs, however between the 4th and 5th review has been improved significantly in average.

Is justified by the fact that Disorder Autism Spectrum children tend to a decrease in functionality and quality of life for various reasons, the functionality is directly associated with the activities of daily living (ADLs) and the independence of the individual, and possible to verify the functional decline even in students who had positive developments in functional and emotional development, this decrease period was characterized by children's vacation period, who consequently took a break in their daily therapies.

The first symptoms are immediately obvious when it shows the difficulties in carrying out everyday activities or even dissatisfaction in practice that both soothes and regulates their duties, such as swimming.

Thus there can be significant delays in the same evolutionary process that have not yet perceived solids in this study, this hypothesis can not be ruled out, the lack of regulation that is the first skill to be developed in the autistic features may make it unable to conduct or progress in their activities of daily living (ADLs), therefore reflecting the practice of swimming, thus delaying the entire evolutionary process of the adapted program.

There is sufficient statistical evidence to claim that evolution is positive in all aspects evaluated, taking into consideration that all the statistical analysis was performed individually, however calculations of group and with the support of other activities such as speech therapist, educational psychologist , neurological diagnosis and occupational therapist.

CONCLUSION

Through the results of this study can conclude that the involvement of individuals with Autistic Spectrum Disorders with swimming brings several benefits. Bepart of themotor, cognitive partof the affective or the socialization process. Getting clear the importance of this practice in improving the overall quality of life of these individuals.

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RELEVANCE OF SWIMMING FOR AUTISM IN IMPROVING THE QUALITY OF LIFE

ABSTRACT

Autism is a pervasive developmental disorder defined by the presence of abnormal development and / or compromised in all three areas of social interaction, communication and restricted and repetitive behavior. Manifests itself before the age of three. The practice of swimming has provided means for stimulating the development of sensory and psychomotor phase in which they are children diagnosed with (TEA), reflecting directly on the general quality of life of these individuals. Objective: To evaluate the relevance of the practice of swimming and its benefits for improving the quality of life of autistic. Material and Method: The study population consisted of 26 children of 3-8 years old, all were diagnosed with the disorder , with 14 practitioners of swimming lessons (Patient Group) with a frequency of twice a week during the period of (30 months) and 12 children did not practice (control group) . This period were used as parameters for monitoring, filming, comparisons of anamnesis and functional - emotional every 3 months through Data Base testing. Conclusion : It was found that the practice of swimming for this audience in particular , has contributed to , affective and psychomotor social development , with strong acceptance , with the aim of improving the overall quality of life of individuals with the disorder involved in the study , giving support resolutions of the common problem situations in their daily lives

KEY-WORDS: Swimming, autism, quality of life

PERTINENCE DENATATIONPOURAUTISTIQUEDANS L'AMÉLIORATION DELA QUALITÉ DE VIE

RESUME

L'autisme est un ranstorno envahissant du développement définie par la présence d'un développement anormal et / ou ayant une déficience dans les trois domaines de l'interaction sociale , la communication et restreint et un comportement répétitif . se manifeste avant l'âge de trois ans. Natation fournit un moyen de stimuler le développement psychomoteur et sensoriel dans lequel les enfants sont diagnostiqués pour la plupart , ce qui reflète directement la qualité de vie globale de ces enfants . Objectif: évaluer la pertinence de la pratique de la natation et ses avantages pour l'amélioration de la qualité de vie des autistes . Materiel et methode : La population étudiée était composée de 26 enfants âgés de 3-8 ans , tous ont été diagnostiqués

avec la maladie , avec 14 pratiquants de leçons de natation (groupe des patients) avec une fréquence de deux fois par semaine pendant la période de (30 mois) et 12 enfants ne pratiquent pas (groupe de contrôle) . Cette période ont été utilisés en tant que paramètres pour le suivi , le tournage, les comparaisons de l'anamnèse et fonctionnelle et émotionnelle tous les 3 mois par des tests de base de données . Conclusion : Il a été constaté que la pratique de la natation pour ce public en particulier , a contribué, affectif et psychomoteur développement social , avec une forte acceptation , dans le but d'améliorer la qualité de vie globale des personnes atteintes de la maladie participé à l'étude , donnant soutenir des résolutions des situations problématiques communes dans leur vie quotidienne .

MOTS-CLÉS: Natation, l'autisme, qualité de vie.

RELEVANCIA DE LANATACIÓNPARAEL AUTISMOEN LA MEJORA DELACALIDAD DE VIDA

RESUMEN

El autismo esun trastorno delgeneralizado del desarrollodefinidopor la presencia deanormal y/ oproblemasen las tres áreasdedesarrollo de la interacciónsocial, la comunicacióny restringidosycomportamiento repetitivo. Se manifiestaantes de laedad de tres años. Natacióproporciona un mediopara estimular el desarrollosensorial ypsicomotrizenniños con diagnóstico deautismo, lo que se refleja directamente enla calidad de vidade estos niños.Objetivo: Evaluar la pertinencia de la práctica de la natación y sus beneficios para mejorar la calidad de vida de los autistas. Material y método : La población de estudio consistió de 26 niños de 3-8 años, todos fueron diagnosticados con la enfermedad, con 14 profesionales de las clases de natación (grupo de pacientes) con una frecuencia de dos veces por semana durante el período de (±30 meses) y 12 niños no practican (grupo control). Este período se utilizaron como parámetros para el control, la filmación, las comparaciones de la anamnesis y funcional - emocionales cada 3 meses a través de pruebas Base de Datos. Conclusión: Se encontró que la práctica de la natación para este público en particular, ha contribuido a que, afectivo y psicomotor desarrollo social, con una gran aceptación, con el objetivo de mejorar la calidad de vida en general de las personas con el trastorno implicado en el estudio, dando resoluciones de apoyo de las situaciones problemáticas comunes en sus vidas diarias.

PALABRAS CLAVE: Natación, el autismo, la calidad de vida.

RELEVÂNCIA DA NATAÇÃO PARA AUTISTAS NA MELHORIA DA QUALIDADE DE VIDA

RESUMO

O autismo é um transtorno invasivo do desenvolvimento definido pela presença anormal e / ou problemas em todas as três áreas de desenvolvimento de interação social, comunicação e comportamento restrito e repetitivo. Ela se manifesta antes da idade de três. A natação fornece meios para estimular o desenvolvimento psicomotor e sensorial em crianças diagnosticadas com autismo, o que reflete diretamente na qualidade de vida destas crianças. Objetivo: Avaliar a relevância da prática da natação e seus benefícios para qualidade de vida dos autistas.Material e Metodos: A população do estudo foi composta por 26 crianças com de idade de três a oito anos, todas diagnosticadas com Transtorno do Espectro Autista (TEA) sendo 14 praticantes das aulas de natação (Grupo Paciente), com frequência de duas vezes por semana durante o período de (± 30 meses) e 12 não praticantes (Grupo Controle). Neste período foram utilizados como parâmetros de monitoramento, filmagens e comparações das anamnese e testes funcionais-emocionais a cada 3 meses através de Data Base.Conclusão: verificou-se que a prática da natação para este público em especial, vem contribuido no desenvolvimento social, afetivo e psicomotor, com forte aceitação, com a perspectiva da melhoria da qualidade de vida geral dos individuo com Transtornos de Espectro Autista envolvidos com o estudo, dando suporte para resoluções das situações-problema comuns no seu cotidiano.

PALAVRAS-CHAVE: Natação, autismo, qualidade de vida.