102 - EFFECTS OF THE MULTIPROFESSIONAL PROGRAM ON THE PSYCHOLOGICAL ASPECTS AND QUALITY OF LIFE IN OBESE ADOLESCENTS

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INTRODUCTION

The obesity has been presented as one of the main public health problems. It is prevalent in all groups of the populations and has attained more and more young people (WHO, 2002). That condition has been affecting the quality of life (BURNS, TIJHUIS and SEIDELL, 2001; FRIEDLANDER et al 2003; SWALLEN et al, 2005) as weel as the longevity (FONTAINE et al, 2003). It has been considered that in the last 30 years in the United States, the rate of obesity prevalence among adolescents from 12 to 17 years increased 39% and in children from 6 to 11 years it increased 54% (BOUCHARD, 2000).

The European countries that reached the greater rates of overweight and the obesity among the adolescents are Ireland with a prevalence of 27,3% between the girls and Spain, with a prevalence of 31,7% among the boys (WHO, 2007). Similar data were found in Brazil, which also presented an expressive increase in the number of cases of that disease between children and adolescents (ABRANTES; LAMOUNIER; COLOSIMO, 2003; WANG, MONTEIRO, POPIKIN, 2002).

The adolescence is caracterized chronologically as the period between 10 and 19 years (WHO, 1986). It is a phase in that several and important transformations that will probably accompany the individual for the whole life happen. Its by itself a replete phase of conflicts and confusions that turns the adolescent an extremely vulnerable individual (AYRES and FRANÇA JR,1996).

In the adolesce the overweight tends to becoming more serious, once obese children and adolescents usually present low self-esteem in relation to their pairs non obese. That can affect the performance in school and the relationships leading to long term psychological consequences (OZMEN et al., 2007; FRANKLIN et al., 2006). Studies point that adults with excess of weight that already presented the problem from the adolescence, usually possess lower incomes and greater degrees of social exclusion (WHO, 2007).

Besides, many are the current transformations of the new experiences and peculiar social pressures on that phase. In that way, obese adolescents usually present countless problems related to the self-esteem and solemnity-image, which, it favors the development of depressive pictures and of social isolation (FERREIRA, 2007; FERRIANI, 2005). With that, obese subjects tend to suffer a devastating impact in quality of life (QL) (FONTAINE AND BAROFSKY, 2001; BURNS, TIJHUIS and SEIDELL, 2001; FRIEDLANDER et al 2003; SWALLEN et al, 2005).

In that sense, interventions that focus on the promotion of the improvement of psychological aspects and of QL should be considered as a way to reduce the current and future problems of the obesity on physiologic aspects, mainly in the adolescence. Thus, the objective of that study was to evaluate the effects of the Multiprofessional Program of Treatment of the Obesity (MPTO) on the psychological aspects and the QL in adolescents.

METHODOLOGY

Participated in the study 32 obese adolescents distributed in two groups. The group intervention (GI), was composed by 16 adolescents, that participated in the multiprofessional intervention program during 16 weeks (MPTO) in the first semester of 2008. The Control Group (CG) was composed by 16 adolescents that would enter in MPTO in the second semester of 2008.

The MPTO is based on the behavioral change. To reach such objective the MPTO was structured in a way to offer professionals attendance by Physical education professional, Psychologist and Nutritionist. The sessions of physical activities happened three times a week and included resistance exercises and stretching in the beginning of the sessions, and in the main phase of the sessions the aerobics prevailed. In relation to the nutritional suport the sessions presented specific themes about quantitative and qualitative aspects of the diet that should be modified. The sessions happened weekly with the objective of promoting an alimentary reeducation in the subject of the research. The psychological intervention was weekly accomplished with orientations in small groups. The sessions tried to give the necessary support to overcame the difficulties of changes in the alimentary behavior and of physical activity by the adolescents.

For classification of the nutritional state, the criteria used was Cole et al. (2000) that classifies the subjects in agreement with the sex, age and Body Mass Index (BMI). For the calculation of BMI, weight and height were checked following the established criteria for WHO (1995). A scale with precision of 0,1 kg was used for gauging of the weight and a stadiometer of 0,1cm of precision for measure of the height.

The evaluation of the psychological well-being was made through Physical Self-Description Questionnaire (PSDQ) proposed by Marsh (1999). The questionnaire is composed by 70 subjects which are divided in 11 scales that are related to the strength, body fat, endurance, sporting competence, motor coordination, status of health, appearance, flexibility; general physical solemnity-concept, self-esteem. The classification of the questionnaire was made in agreement with the scores obtained by the individual in the answers of the subjects regarding each scale of the instrument. Scores Inferior to 1,5 were classified as "Low", between 1,5 and 3,0, were classified as "Average", between 3,0 and 4,5 were had like "Good"e above 4,5 as "Great."

It was still used Pediatric Quality of Life Inventory Version 4.0 (PedsQL 4.0), instrument developed by Varni, Seid and Kurtin (2001) with the purpose of measuring the adolescents' quality of life. The questionnaire is composed by 23 questions, divided in 4 scales: Health and Habitual Activities, Feelings for himself, Feelings for the other people and School Relationship. The punctuation varies among 0 (zero) and 100 (a hundred) points, that reflect the worst and the best general state of health, respectively.

The study was approved by the Committee of Ethics in research of UEM, as the record nº 068/08. The free and informed term of consent was signed by the parents or responsible of all the subjects, after they have received detailed information about the research.

The data were analysed by means of the SPSS software (14.0 version). The descriptive statistics with measures of distribuition was used, besides the application of the test of Student with significance level of ($p < 0,05$).

RESULTS

Of the 16 adolescents in the IG, 7 were male and 9 female, with average age of 13,44 (±1,75) years old. In CG, 8 were male and 8 were female, with average age 11, 75 (±1,48) years old. An average BMI of 30,21 (±5,54) kg/m² was observed in the IG after 16 weeks of treatment and in the CG an average of 30,39 (±4,50) kg/m² was found.

The evaluation of the adolescents physical solemnity-perception presented good general results, on both groups (IG as well CG), as demonstrates the table 1. The IG presented better punctuations in the scales Status of Health, following by the Self-esteem and Physical Activity. While in CG were the scales Self-Esteem, Health and Coordination that obtained the best results. The scales Body Fat, Endurance/Fitness, and General Physical Self-Concept were the ones that presented smaller punctuations. That can be consisted in both groups, in the intervention and in the control.

The comparison of the adolescents physical solemnity-perception in the two groups, demonstrated significant differences among the scales Health, Physical Activity and Body Fat, all for $p < 0,05$.

Table 1. Comparison of the physical solemnity-perception of the groups control and intervention

Scales	Intervention Group Score	Intervention Group Classification	Control Group Score	Control Group Classification	*p*
Health	5,47(ÿ0,45)	Great	4,30(ÿ1,10)	Good	0,01
Coordination	3,58(ÿ1,16)	Good	4,29(ÿ1,14)	Good	*ns*
Physical Activity	4,78(ÿ0,82)	Great	3,85(ÿ1,40)	Good	0,02
Body fat	2,29(ÿ1,21)	To regulate	1,47(ÿ1,94)	Bad	0,01
Endurance/Fitness	3,48(ÿ1,51)	Good	3,39(ÿ1,27)	Good	*ns*
General Physical Self-Concept	2,91(ÿ1,19)	To regulate	3,31(ÿ1,28)	Good	*ns*
Appearance	3,71(ÿ1,14)	Good	3,85(ÿ0,93)	Good	*ns*
Strenght	4,03(ÿ1,06)	Good	4,16(ÿ1,24)	Good	*ns*
Flexibility	3,16(ÿ1,22)	Good	3,70(ÿ1,31)	Good	*ns*
Sport Competence	2,38(ÿ0,93)	To regulate	2,9(ÿ1,24)	To regulate	*ns*
Self-Esteem	4,86 (ÿ1,07)	Great	4,34 (ÿ0,80)	Good	*ns*

Table 2 presents the results of the two groups, and the p-value of the comparison between them on the QL. The scales feelings about themselves and relationships with other people had the worst results for both the IG and for the CG. While the scale and health activities received the highest scores in the intervention group followed from the school. Among the CG these scales also had the best scores, with the ratio obtained by the school more than the Health and activities.

Table 2. Comparison of Quality of Life of obese adolescents participating and not participating in the PTMO

.	Intervention Group (n=16)	Control Group (n=16)	
Scales	***Score***	***Score***	***P***
Health and habitual activities	77,7(ÿ11)	67,19(ÿ16,5)	*0,02*
Feelings as for himself	73,13(ÿ14,93)	63,75(ÿ17,46)	*Ns*
Relationship with other people	75,9(ÿ14,63)	66,56(ÿ19,12)	*Ns*
Relationship in the school	77,19(ÿ14,72)	68,44(ÿ18,23)	*0,02*

In a visual comparison of the punctuations of QV among the groups, it was observed that IG presented greater punctuations in all the scales of the instrument, that their pairs of CG. The statistical comparison for time presented significant differences among the groups in the scales Health and Habitual Activities and School Relationships.

In spite of not being classified as a psychiatric upset, the obesity usually appears associated the some psychological alterations as the depression, anxiety and alimentary upset. That is due to the fact that obese people usually possess low self-esteem, deviations of corporal solemnity-image and low tolerance to frustrations, favoring the development of depressive pictures and of social isolation (Ferreira et al, 2007; Ferriani et al, 2005; Shin and Shin, 2007; Huang et al, 2007; Tiggemann, 2005; Ozmen, 2007).

The adolescents of IG presented a physical solemnity-concept and a solemnity-perception of the appearance classified as regulating and good, respectively, while the adolescents of CG presented scores that classified them with good solemnity perception in both scales. In relation to the self-esteem, both groups presented high scores, classified as great or good.

Our work demonstrated that as much the participants of CG as of IG, they presented a good solemnity-perception in relation to the sporting practice. The same happened in other aspects related to the sporting performance as motive coordination, it forces and flexibility.

However, that tendency was not observed in the solemnity-perception of the aerobic aptitude. Such perception, classified as regulating in both groups can be explained due the smallest conditions cardiorespiratory found in obese populations (NARDO JR, 2004).

Those discoveries differ than it is usually found in the literature, that have been appearing for an inferiority feeling, dissatisfaction and affectionate lacks (FERRIANI, 2005; RODRIGUES, 2006), of obese adolescents, harming besides to the solemnity-image concept and those individuals' physical appearance (FERRIANI, 2005, OZMEN, 2007).

A study (SHIN and SHIN, 2007) accomplished with Chinese adolescents in spite of having used a methodology different from the accomplished in our study, it verified low self-esteem levels in the subject of the research. The competence perception in sporting games has also been presenting unfavorable results for that population. Although our study has not specifically evaluated that dimension, the results presented above demonstrate a good perception to motive coordination and to motive performance, contradicting Franklin's et al discoveries (FRANKLIN et al, 2006).

That disagreement in the discoveries suggests that the scales of obese adolescents' solemnity-perception, it is a subject that has been presenting contradictory results, having larger investigation needed in that area. Because among the adolescents involved in our study there was no significant difference among most of the scales, contradicting the expectation, once one of the groups had already gone by intervention.

Another impact observed in obese individuals is related to QL that has been a lot investigated. That is due to the fact that the obesity despite being harnessed to several morbidities as hypertension, cardiovascular diseases, neoplasias, seems to be associated to worsen levels of QL (SCHWIMMER, BURWINKLE and VARNI, 2003).

The results revealed a considerable difference of the levels of QL between the individuals of IG and CG. And the

scores presented by very close healthy IG to the of healthy children (ISMAIL et al, 2006).

In what refers to the adolescents belonging to CG IG, these demonstrated very close values to the results found by Schwimmer, Burwinkle and Varni (2003), in study accomplished with children and obese adolescents from 8 to 18 years. And the values that more approximated of the scales regarding the feelings and in the relationship with other people.

The indexes of QL found by Ismail et al (2008), in children thalassemia bearers, had very close punctuation scores to the presented by the adolescents of CG of our study.

CONCLUSIONS

The comparisons with other studies revealed the potential of MPTO on QL and their participants' solemnity physical description. In that way, programs with focus multiprofessional seem to be an important strategy for obese adolescents. Future studies that involve a larger number of adolescents and accomplish longer attendances and controlled can explain those subjects better.

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EFFECTS OF THE MULTIPROFISSIONAL PROGRAM ON THE PSYCHOLOGICAL ASPECTS AND QUALITY OF LIFE IN OBESE ADOLESCENTS

ABSTRACT

The aim of this study was to evaluate the effects of the Multiprofessional Program Treatment of Obesity (MPTO) on the psychological aspects and quality of life (QoL) in adolescents. Participated in the study 32 adolescents, divided in Intervention Group (IG), that participated by 16 weeks of MPTO and Control Group (CG) that were entering in MPTO. The instruments used were the PedsQL 4.0 and PSDQ respectively to evaluate QoL and physical self-description. The values proposed by Cole et al

were used as reference to characterize the obesity in the groups. The Student t test was applied in order to compare the goups IG and CG. The results of the study revealed an BMI average of 30,21 (±5,54) kg/m² in IG and 30,39 (±4,50) kg/m² in CG. The comparison of the adolescents' physical self-description in the two groups, demonstrated significant differences among the scales Status of Health, Habitual Physical Activity and Body Fat, all for p<0,05. In relation to QoL, the statistical comparison presented significant differences among the groups in the scales Health and Habitual Activities and School Relationships. The comparisons with other studies revealed the potential of MPTO on QoL and their participants physical self-description, it is a clear way to indicate the MPTO as a important strategy for the obese adolescents treatment.

Key-words: Quality of life; physical self-description; adolescence.

EFFETS DU PROGRAMA MULTIPROFISSIONAL SUR LES ASPECTS PSYCHOLOGIQUES ET QUALITÉ DE LA VIE DANS LES ADOLESCENTS OBÈSES

RESUMMÉ

L'objectif de l'étude était évaluer les effets du Programme de Tratamento Multiprofissional de l'obésité (PTMO) sur les aspects psychologiques et de qualité de la vie (QV) dans les adolescents. Ils ont participé à l'étude 32 adolescents divisés dans Grupo Intervenção (GI), ces sont allés par 16 semaines de PTMO et Contrôles de groupe (GC) cela entrait dans PTMO. Les instruments ont été utilisés respectivement PedsQL 4.0 et PSDQ pour évaluer QV et Solemnity-Description physique. Les valeurs proposées pour Cole et al. (2000) ils ont été utilisés comme référence pour caractériser l'obésité dans les groupes. L'épreuve a été appliquée t d'Étudiant pour comparer le groupes intervention et controle. Les résultats de l'étude ont révélé un IMC 30,21(±5,54) kg/m² dans GI et 30,39 (±4,50) kg/m² dans GC. La comparaison de la solennité description physique des adolescents dans les deux groupes, différences considérables démontrées parmi le Statut des balances de Santé, Activité Physique Habituelle et la grassa corporal, tout pour p < 0,05. Par rapport à QV, la comparaison statistique pour son temps a présenté des différences considérables parmi les groupes dans la Santé des balances et Activités Habituelles et Rapports d'École. Les comparaisons avec les autres études ont révélé la possibilité de PMTO sur QV et la solennité description physique de leurs participants, en paraissant ceci pour être une stratégie importante pour le traitement des adolescents obèses.

Lês monts clés: Qualité de la vie; solennité. description physique; adolescence.

EFECTOS DEL PROGRAMA MULTIPROFISSIONALE BAJO LOS ASPECTOS PSICOLÓGICOS Y CALIDAD DE VIDA EN ADOLESCENTES OBESOS

RESUMEN

El objetivo del estudio fue valorar los efectos del Programa de Tratamiento Multiprofisionale de la obesidad (PTMO) sobre los aspectos psicológicos y de la calidad de vida (CV) en adolescentes. Participarón en el estudio un número de 32 adolescentes, divididos en Grupo de Intervención (GI), com duración de 16 semanas de controles de PTMO y grupo controle (GC) que estaban empezando en PTMO. Los instrumientos eran PedsQL 4.0 y PSDQ para valorar la CV y el auto descripción física respectivamente. Los valores propuestos por Cole et al. (2000) fueron usados como referencia para caracterizar la obesidad en los grupos. La prueba fue aplicada el test t de Student para comparar los grupos intervención y controle. Los resultados del estudio mostrarón 30,21 de IMC mediano (±5,54) kg/m ² en GI y 30,39 kg de (± 4,50)kg/m² en GC. La comparación del auto-descripción física en los dos grupos de los adolescentes demostraron importantes diferencias entre el estado de balanzas de la salud, la actividad física habitual y el cabo grasa, para todo p<0,05. En relación con CV, la comparación estadística por su vez, mostrarón que la salud, las actividades habituales y las relaciones de la escuela tuvierón diferencias importantes entre los grupos en las balanzas. Las comparaciones con otros estudios revelaron que el potencial de PMTO sobre CV y la auto-descripción física de sus participantes fuerón una estrategia importante para el trato de los adolescentes obesos.

Palabras-llave: calidad de vida; auto-descripción física; adolescencia

EFEITOS DO PROGRAMA MULTIPROFISSIONAL SOBRE OS ASPECTOS PSICOLÓGICOS E QUALIDADE DE VIDA EM ADOLESCENTES OBESOS

RESUMO

O objetivo do estudo foi avaliar os efeitos do Programa de Tratamento Multiprofissional da obesidade (PTMO) sobre os aspectos psicológicos e de qualidade de vida (QV) em adolescentes. Participaram do estudo 32 adolescentes, divididos em Grupo Intervenção (GI), que passaram por 16 semanas de PTMO e Grupo Controle (GC), que estavam ingressando no PTMO. Foram utilizados os instrumentos PedsQL 4.0 e PSDQ para avaliar a QV e Auto-descrição física respectivamente. Os valores propostos por Cole et al. foram utilizados como referência para caracterizar a obesidade nos grupos. Foi aplicado o teste t de *Student* a fim de comparar os grupos intervenção e controle. Os resultados do estudo revelaram um IMC médio de 30,21(±5,54) kg/m² no GI e 30,39 (±4,50) kg/m² no GC. A comparação da auto-descrição física dos adolescentes nos dois grupos, demonstrou diferenças significativas entre as escalas Status de Saúde, Atividade Física Habitual e Gordura Corporal, todas para p<0,05. Em relação à QV, a comparação estatística apresentou diferenças significativas entre os grupos nas escalas Saúde e Atividades Habituais e Relacionamentos Escolares. As comparações com outros estudos revelou o potencial do PMTO sobre a QV e auto-descrição física de seus participantes, demonstrando ser uma importante estratégia para o tratamento de adolescentes obesos.

Palavras-chave: Qualidade de vida; auto descrição física; adolescência.