113 - ACTIVE LIFESTYLE OF STUDANTS: AN EDUCATIONAL INTERVENTION

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INTRODUCTION

In recent years, studies in the area of public health have pointed lifestyle as one of the most important indicators of population health (SOUZA; DUARTE, 2005) and physical activity, an important component of lifestyle, has won attention for its contribution to quality of life and its important role in the prevention of diseases and pathologies.

The recognition that physical inactivity is a risk factor for various diseases has brought up the importance of including physical activity as a component of lifestyle (MATOS; DINIS , 2006). In the report the Healthy People 2010, physical activity is listed as one of the leading health indicators (UNITED STATE, DEPARTMENT OF HEALTH AND HUMAN SERVICES, USDHHS, 2000).

"Although the issue of causality is not completely settled, it seems that physical activity can influence health (healthy behaviors, by means of the possibility that it is associated to it to encourage the adoption of other behaviors taken as positive)" (MOTA; SALLIS, 2002, p. 48).

Another important discovery in the field of health demonstrates the relevance and need for research on the topic. According to the Centers for Disease Control and Prevention (CDC, 2006), the main health risk behaviors are often established during childhood and adolescence, and continue through adulthood.

The finding is consistent with the citation of various authors that programs of health promotion and prevention should begin in the childhood and adolescence (ALVES et al., 2000; KLEIN, 2004; LOPES et al., 2006)

Adolescence is a time of discovery, of the development of personal and interpersonal skills. However, it is also a time in which contradictory feelings, internal conflicts, insecurities and involvement in risk behaviors related to health follow one another.

The World Health Organization (WHO, 2007) lists six interrelated categories of behavior that are initiated during adolescence: tobacco use, alcohol and substance abuse , sedentary lifestyle , behaviors that result in injury and violence; inadequate hygiene and eating disease-causing practices; early sexual behavior , unwanted pregnancy and sexually transmitted diseases.

OBJECTIVES

Inherently to the two-dimensional aspect of physical activity that may relate to health positive (being active) or negatively (being sedentary), this study aims at implementing and evaluating general educational intervention in promoting an active lifestyle among adolescents in High School. And, more specifically: estimating the standard active lifestyle of students.

METHODOLOGY

It was, therefore, an experimental investigation conducted in two public schools in the city of Fortaleza (CE) among high school students, aged 14 to 19 in the period January to December 2006, who were divided into two groups - intervention group (IG) and control group (CG).

The adolescents underwent three evaluations at the beginning of the research, another soon after the intervention and the last one six months after the end of the intervention. In total 644 students participated in the study, who responded to a questionnaire “Student Lifestyle”.

In comparing data in the three stages of the research, the chi -square test was used. For data analysis the SPSS (Statistical Package for the Social Sciences) version 15.0 for Windows was used. To compose the pattern of Active Lifestyle (EVA), the sport played at school, sports practice outside of school and informal physical activities distributed in the following categories: inactive, somewhat active, active and very active were conjugated.

The opinion of the students about current and future physical activity was investigated. We sought to comply with the criteria and recommendations on health-related physical fitness, not the performance for the youth age group 14-19.

According to Sallis and Patrick (1994), all adolescents should perform physical activity of moderate to vigorous intensity daily or at least three or more times per week, for at least 20 minutes , combining the different forms of physical activity (leisure , games, physical education classes , transportation , both formal and informal physical activities).

Active lifestyle, in this study, comprises three items of the questionnaire on both formal and informal physical activities. Therefore, for the classification of the level of Active lifestyle, we adopted the consensus reached by the authors mentioned and the data derived from the answers to the questionnaire items (criteria of frequency, duration and intensity).

Students who reported physical activity from five to seven days a week, with each session lasting more than 45 minutes of moderate and vigorous intensity, were classified as “very active" .Those who reported exercising three to five days, for a period of twenty to forty- five minutes and / or an average (32.5 minutes) session with moderate and vigorous intensity, were classified as "active”. Those who reported practicing less than 20 minutes of physical activity per session, one to three days a week, were designated “lowly active". The remaining students were classified as “inactive”. For this approach, observe Table 01.

Table 01. Parameters used in this study to assess the level of formal and informal physical activity and determine Active Lifestyle (EVA).

Level	Intensity	Weekly Frequency	Daily Duration	Total Weekly Time
Very Active	Moderate Vigorous	5 to 7 days	> 45 min/session	> 225 to 315 min
Active	Vigorous Moderate	3 to 5 days	20-45 min/session Average 32.5 min/ session	> 60-225 min 97.5 to 162.5 min
Lowly Active	Vigorous Moderate	1 to 3 days	<20 min / session	20 to 60 min
Inactive Other students	Low			

RESULTS

The standard active lifestyle comprised sporting activities practiced at school, sports practiced outside school and informal physical activities.

PRETEST

Table 02 shows the frequency distribution of the variables investigated in relation to standard active lifestyle. In addition, we present the p - value of chi-square test, stratified by gender and for both groups: intervention and control.

In general, there was no significant difference for any of the variables related to active lifestyle when considering the total number of students in both groups (control and intervention). In the stratification by gender, the variables "level of informal physical activities" (p-value=0.025) and "standard active lifestyle" (p-value=0.023). In both cases only for the boys, were there indicative of significant differences between the observed and the expected values between groups and at 5 % significance.

We found that the boys in the control group were more active (63.2 %) than the boys in the intervention group (38.8%). There were no statistically significant differences among the girls.

We also observed that a high percentage of students from both the control group (CG–42.8 %) and students in the intervention group (IG -45.6 %), ranked as lowly active and inactive, according to the criterion adopted in this study, i.e., that they do not meet the recommendations on the level of physical activity to achieve health benefits.

As observed in this study, the proportion of young people insufficiently active in the Brazilian and international spheres has been high.

In Londrina (PR), about 45.9 % of boys and 64.5 % of girls were considered insufficiently active (GUEDES et al., 2001). Among the U.S. population, aged 12 and between 21, it was found that 50% of the students did not do regular vigorous physical activity (CDC, 2000).

In Hong Kong (China) in 2000, 18.3% of high school students were sedentary, 50.2 % and 31.5% were somewhat sufficiently active to achieve health benefits (HUI, 2004).

Table 02. Standard features of the Active Lifestyle between intervention and control groups, at follow-up (pre-test). Results stratified by gender.

Variable		Boys			Girls			Every		
		GI%	GC%	p-value%	GI%	GC%	p-value%	GI%	GC%	p-value%
Level of Sport School	Inactive	20,9	21,1		53,6	51,1		35,2	35,2	
	Lowly Active	49,3	43,9	**0,929**	33,9	40,4	**0,703**	43,2	41,9	**0,993**
	Active	25,4	29,8		12,5	8,5		19,2	20,0	
	Very Active	4,4	5,2		0,0	0,0		2,4	2,9	
Level of Sport outside the school	Inactive	10,4	5,3		28,6	25,5		18,4	14,3	
	Lowly Active	38,8	26,3	**0,142**	41,1	46,8	**0,771**	40,0	35,2	**0,407**
	Active	43,3	50,9		28,6	27,7		36,0	40,0	
	Very Active	7,5	17,5		1,7	0,0		5,6	10,5	
Level Activities physical informal	Inactive	1,5	5,3		16,1	14,9		8,0	9,5	
	Lowly Active	40,3	21,1	**0,025**	33,9	36,2	**0,995**	38,4	28,6	**0,180**
	Active	47,8	47,4		41,1	49,4		44,0	43,8	
	Very Active	10,4	26,2		8,9	8,5		9,6	18,1	
Standard Level EVA	Inactive	26,9	22,8		64,3	61,7		43,2	41,0	
	Lowly Active	3,0	0,0	**0,023**	1,8	4,3	**0,903**	2,4	1,8	**0,128**
	Active	31,3	14,0		19,6	19,1		26,4	16,2	
	Very Active	38,8	63,2		14,2	14,9		28,0	41,0	

Source: Data obtained from the field research.

POST TEST

In Table 03, we present the results of this phase. Regarding the level of sports at school, the sample showed evidence those students, in general, display significant differences (p-value < 0.001) between the control and intervention groups. Stratified by gender, the sample showed evidence of significant difference between boys (p= 0.007) and girls (p- value < 0.001).

Regarding the level of sports outside school, the sample showed evidence of significant differences (p- value=0.026) among students in general in control and intervention groups. Stratified by gender, the sample showed evidence of significant difference between boys (p- value = 0.021).

Concerning the level of informal physical activities, the sample showed evidence of significant differences (p-value=0.026) between the groups, considering the total number of students. Stratified by gender, the sample showed evidence of significant difference between boys (p= 0,023) and girls (p-value = 0.047).

As to the level of overall physical activity, the sample showed evidence of significant differences (p-value< 0.001) between the control and intervention groups for the total of students. Stratified by gender, the sample showed evidence of significant difference among girls (p-value < 0.001).

There was a complete change regarding the conclusions of the phase "diagnostic study" for this variable: there is indication of significant differences for males only.

Table 03.Comparing the characteristics of standard Active Lifestyle between intervention and control groups at the end of the monitoring period (post-test). Results stratified by gender.

Variable		Boys			Girls			Every		
		GI%	GC%	p-value%	GI%	GC%	p-value%	GI%	GC%	p-value%
Level of Sport School	Inactive	0,0	19,6		0,0	56,8		0,0	38,3	
	Lowly Active	53,7	45,7	**0,007**	77,7	40,9	**<0,001**	66,1	43,6	**<0,001**
	Active	40,7	28,3		22,6	2,3		31,2	14,9	
	Very Active	5,6	6,5		0,0	0,0		2,8	32,0	
Level of Sport outside the school	Inactive	9,3	2,2		28,3	27,3		18,3	13,8	
	Lowly Active	37,0	28,3	**0,021**	37,7	52,3	**0,255**	37,6	42,6	**0,026**
	Active	48,1	43,5		34,0	20,5		41,3	30,9	
	Very Active	5,6	6,5		0,0	0,0		2,8	12,8	
Level Activities physical	Inactive	5,6	4,3		3,8	18,2		4,6	12,8	
	Lowly Active	48,1	34,8	**0,023**	49,1	34,1	**0,047**	49,5	35,1	**0,002**
	Active	40,7	32,6		35,8	27,3		37,6	28,7	

informal	Very Active	5,6	28,3		11,3	20,5		8,3	23,4	
Standard	Inactive	11,1	19,6		28,3	70,5		19,3	46,8	
Level	Lowly Active	5,6	0,0	**0,084**	1,9	9,1	**<0,001**	3,7	4,3	**<0,001**
EVA	Active	35,2	19,6		35,8	11,4		35,8	14,9	
	Very Active	48,1	60,9		34,0	9,1		41,3	34,0	

Source: Data obtained from the field research

Re-test

As described in Table 04 on the standard EVA, all results were significant.

Regarding the level of sport at school, both in the general context (p - value < 0.001), as in the stratified one (boys: p - value = 0.028; girls, p - value = 0.023), data indicated the existence of significant differences between the groups. Similar results were observed in the post -intervention, that is, different from what was expected at each level in each group.

Regarding the level of sports outside school, there was evidence of significant differences between the groups in the sample, considering the total number of students (p - value < 0.001) and in the stratification of girls (p - value = 0.023). In the previous phase, the observed differences were seen in the general framework and in the comparison among boys.

Regarding the level of informal physical activities, no evidence of significant differences at 5 % at this stage was observed. In the post-test phase, we observed concentrations different from what was expected in the comparison between students in general and among boys.

Compared to the standard active lifestyle (EVA), all results were significant. The sample showed evidence of significant differences between groups in general (p - value < 0.001), and when stratified by gender, there were significant differences among boys (p - value = 0.006) and among girls (p - value = 0.002.) In the previous phase, only the comparison among boys was not significant at the 5% level.

Table 04. Comparison of the features of the Standard Active Lifestyle, between intervention and control groups at the end of the period without monitoring (re-test). Results stratified by gender.

Variable		**Boys**			**Girls**			**Every**		
		GI%	**GC%**	**p-value%**	**GI%**	**GC%**	**p-value%**	**GI%**	**GC%**	**p-value%**
Level of	Inactive	19,6	44,4		37,5	67,4		26,0	56,6	
Sport	Lowly Active	54,2	30,6	**0,028**	47,5	23,3	**0,023**	51,0	26,5	**<0,001**
School	Active	25,4	22,2		15,0	9,3		21,0	14,5	
	Very Active	3,4	2,8		0,0	0,0		2,0	2,4	
Level of	Inactive	6,8	16,7		7,5	55,8		7,0	39,8	
Sport	Lowly Active	30,5	19,4	**0,335**	62,5	27,9	**<0,001**	44,0	22,9	**<0,001**
outside	Active	47,5	44,4		30,0	16,3		40,0	28,9	
the school	Very Active	15,0	19,4		0,0	0,0		9,0	8,4	
Level	Inactive	5,1	11,1		7,5	20,9		6,0	15,7	
Activities	Lowly Active	30,5	36,1	**0,531**	52,5	37,2	**0,283**	39,0	37,3	**0,145**
physical	Active	45,8	41,7		35,0	34,9		41,0	38,6	
informal	Very Active	18,6	11,1		5,0	7,0		14,0	8,4	
Standard	Inactive	22,0	52,8		37,5	79,0		29,0	67,5	
Level	Lowly Active	1,7	5,6	**0,006**	2,5	0,0	**0,002**	2,0	2,4	**<0,001**
EVA	Active	20,3	5,6		40,0	14,0		28,0	9,6	
	Very Active	55,9	36,1		20,0	7,0		41,0	20,5	

Source: Data obtained from the field research

Previous intervention studies obtained similar results with increased physical activity (FELTON et al., 2005). However, the results showing a significant increase in the participation of girls, both in physical education classes and in sports and physical activities were rare. (BIDLLE et al., 2005; SCHNEIDER et al., 2007).

CONCLUSION

In standard active lifestyle (EVA), positive and significant changes occurred among students in the intervention group: during the pre-test, the number of boys in the control group was greater in "very active"; in the post-test, the number of students in general and girls in the intervention group (IG) was higher in the "active " and " very active", and in the final phase (re-test) students, in general, of the intervention group (IG) remained in the "very active" category.

We therefore conclude that the intervention was effective in promoting and maintaining the standard of active lifestyle, and in increasing the levels of physical activity for all students in the short and long term, especially among girls.

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ACTIVE LIFESTYLE OF STUDANTS: AN EDUCATIONAL INTERVENTION

ABSTRACT

In recent years, studies in the area of public health stress style and physical activity as essential components of lifestyle. Physical Activity has gained attention for its contribution to the quality of lifestyle and its relevant role in the prevention of diseases and pathologies. Therefore, this study aimed at implementing and evaluating an educational intervention to promote this active lifestyle with high school students. It was an experimental investigation with students between 14 and 19 years of age, in two public schools of Fortaleza (CE). Students were divided into three groups of intervention group and three groups in the control group. The questionnaire: Lifestyles of Students was used as a research tool, in which we applied the chi -square in the three stages of the assessment (pretest, post-test and re-test). We considered as statistically significant only those results with p-value less than or equal to 5% ($p \leq 0.05$). Analyses were performed using the SPSS 15.0 version for Windows. Pretest: the number of boys in the control group in the category "very active" was the largest.Post-test: the number of students in general and girls in the intervention group was higher in the "active" and "very active" categories; Re-test: students, in general, in the intervention group remained in the "very active" category. We conclude that the intervention was effective in promoting and maintaining an active lifestyle, i.e., to increase the levels of physical activity for all students in the short and long term, especially among girls.

KEY-WORDS: Active Lifestyle. Students.Intervention.

STYLE DE VIE ACTIF DESÉTUDIANTS: UNE INTERVENTION ÉDUCATIVE

RÉSUMÉ

Ces derniere annes, les études en santé publique indiquent le type de vie comme des importants, plus on indicateurs de santé de la population et l' activité physique, cet élément important, l'attention gagné sur d'importantes écoulement fils rôle a la prévention des maladies et pathologies. Verser la cellule ce travail pour obliger les implanter juin et evaluer intervetion éducatif for the promotion d' un style de vie actif avec les etudiants de l' enseignement moyen. S agit d`une de il investigation expérimentale avec des etudiants 14 et 19 ans de deux ecoles publiques Fortaleza (CE) ans. Elèves ont ete -les- trois divisions de groupes d' intervención groupe le contrôle et trois. Nous avons usés comme instrument de recherche le questionnaire: les styles de vie des elèves , cequel tones dans le utilisons chi - carré dans ces trois étapes de l' évaluation (pré- test, post-test et re - test); avons tones consideres comme des différence statistiquement les significatifs only celles valeur dune inférieure ou égale à 5% ($p \leq 0,05$). Les analyse ont été en realis utilisant le pogramme spss version spss 15.0 pour windows. Pré -test: il a le été , plus importants serveurs du nombre de groupe de contrôle de la catégorie "très actif". Post-test: le nombre d' élèves en général et des filles du groupe d' intervention etait dans les catégories définies en plus élévée " actif " et "très actif ". Re -test: les etudiants, en général du groupe d' intervention si mainteneurs de sont dans la cathégorie "très actif".Les concluons que nous l' intervention à effectivement promouvoir maintenu et non un style de vie actif, qui soit, dans l` aregmentation des niveaux d'activité physique pour tous les eleves, la cour et à longue terme, specialement entre les filles .

MOTS-CLÉS: Style de Vie Actif. Étudiants.Intervention.

VIDA ACTIVADE LOS ESTUDIANTES: UNA INTERVENCIÓN EDUCATIVO

RESUMEN

Enlos últimos años, losestudiosenel área de la perspectiva de lasalud pública el estilo de vida como uno de los indicadores más importantes de lasalud de lapoblación y laactividadfísica, un componente importante de esto, se ha ganadolaatención por sucontribuciónenlaprevención de enfermedades y patologías. Por lo tanto, este estudiotuvo como objetivo implementar y evaluar una intervención educativa enlapromoción de este estilo de vida activoconlosestudiantes de secundaria. Fue una investigación experimental conestudiantes de entre 14 y 19 años de edaden dos escuelas públicas de Fortaleza (CE). Los estudiantes se dividieronentres grupos de el grupo de intervención y tresenel grupo de control. Se utiliza como una herramienta de investigaciónelcuestionario: Estilos de vida de losalumnos, enlas que usamos el chi-cuadradoenlastres etapas de laevaluación (pre-test, post-test y re-test), consideran como estadísticamente significativo sóloaquelloscon valor de p menor o igual a 5% ($p \leq 0,05$). Los análisis se realizaron utilizando SPSS versión 15.0 para Windows. Pre-test: fueelmayor número de niñosenel grupo de controlenlacategoría de "muyactivo", Pós-teste: el número de estudiantesen general y lasniñasenel grupo de intervenciónfuemayorenel "activo" y "muyactiva"; Re-teste: losestudiantes, en general, el grupo de intervención se mantuvoenel "muyactivo". Llegamos a laconclusión de que laintervenciónfueefectivaenlapromoción y elmantenimiento de un estilo de vida activo, es decir, para aumentar los niveles de actividad física para todos losestudiantesenel corto y largo plazo, especialmente entre lasniñas.

PALABRAS CLAVE: Activo Estilo de Vida. Estudiantes. Intervención.

ESTILO DE VIDA ATIVO DOS ESTUDANTES: UMA INTERVENÇÃO EDUCATIVA

RESUMO

Nos últimos anos, os estudos na área da saúde pública apontam o estilo de vida como um dos mais importantes indicadores de saúde da população e a atividade física, importante componente deste, tem ganhado a atenção pela sua contribuição na prevenção de doenças e patologias. Portanto, este trabalho objetivou implementar e avaliar uma intervenção educativa na promoção desse estilo de vida ativo com estudantes do Ensino Médio. Tratou-se de uma investigação experimental com alunos entre 14 e 19 anos de idade de duas escolas públicas de Fortaleza (CE). Os alunos foram divididos em três turmas do grupo-intervenção e três do grupo-controle. Usamos como instrumento de pesquisa o questionário: Estilos de Vida dos Alunos, no qual utilizamos o teste do qui-quadrado nas três etapas de avaliação (pré-teste, pós-teste e re-teste); Consideramos como diferenças estatisticamente significativas apenas aquelas com valor p menor ou igual a 5% ($p \leq 0,05$). As análises foram realizadas utilizando o programa SPSS versão 15.0 para Windows. Pré-teste: foi maior o número de rapazes do grupo controle na categoria “muito ativo”; Pós-teste: o número de alunos em geral e de garotas do grupo intervenção foi maior nas categorias “ativo” e “muito ativo”; Re-teste: os alunos, em geral, do grupo intervenção mantiveram-se na categoria “muito ativo”. Concluímos que a intervenção foi efetiva em promover e manter um estilo de vida ativo, ou seja, no acréscimo dos níveis de atividade física para todos os alunos a curto e longo prazo, especialmente entre as garotas.

PALAVRAS-CHAVES: Estilo de Vida ativo. Estudantes. Intervenção