



NURSING DIAGNOSES IN OVERWEIGHT ADOLESCENTS

DIAGNÓSTICOS DE ENFERMAGEM EM ADOLESCENTES COM EXCESSO DE PESO

DIAGNÓSTICOS DE ENFERMERÍA EN ADOLESCENTES CON SOBREPESO

Raphaela Santos do Nascimento Rodrigues¹, Ana Márcia Tenório de Souza Cavalcanti², Telma Marques da Silva³

This study aimed to identify nursing diagnoses in overweight adolescents from public schools, according to the International Classification for Nursing Practice. A population-based cross-sectional study that investigated the socio-demographic, behavioural and psychological characteristics of adolescents aged from 10 to 14 years. 11 nursing diagnoses were identified: "Risk of overweight", "Risk of impaired adolescent development", "Risk of insecurity in parental role performance", "Risk of the family impaired ability to manage diet regime", "Risk of impaired ability to manage diet regime", "Risk of lack of knowledge of dietary regime", "Risk of excess food intake", "Risk of negative self-image", "Risk of low self-esteem", "Risk of impaired social well-being" and "Impaired exercise pattern". These diagnoses reflect the multifactorial nature of obesity, highlighting the need for interdisciplinary and intersectoral articulation of nursing interventions for prevention and control of overweight.

Descriptors: Obesity; Overweight; Adolescent; Nursing Diagnosis.

Objetivou-se identificar diagnósticos de enfermagem em adolescentes de escolas públicas com excesso de peso, segundo a Classificação Internacional das Práticas de Enfermagem. Estudo transversal de base populacional que investigou aspectos sócio-demográficos, comportamentais e psicológicos de adolescentes de 10 a 14 anos. Foram estabelecidos 11 diagnósticos de enfermagem: "Risco para Obesidade"; "Risco de desenvolvimento do adolescente comprometido"; "Risco de insegurança no desempenho do Papel Parental"; "Risco para Capacidade da família para gerir o regime dietético comprometida"; "Risco para Capacidade para gerir o regime dietético comprometida"; "Risco para Déficit de conhecimento sobre o regime dietético"; "Risco de ingestão de alimentos excessiva"; "Auto-imagem negativa"; "Risco para auto-estima baixa"; "Risco de bem-estar social comprometido"; "Padrão de exercício comprometido". Os mesmos refletem o carácter multifatorial da obesidade, ressaltando-se a necessidade de articulação interdisciplinar e intersectorial da enfermagem nas intervenções de prevenção e controle do excesso de peso.

Descritores: Obesidade; Sobrepeso; Adolescente; Diagnósticos de Enfermagem.

El objetivo fue identificar los diagnósticos de enfermería en adolescentes de escuelas públicas con exceso de peso, de acuerdo con la Clasificación Internacional de la Práctica de Enfermería. Estudio transversal de población, investigó socio-demográficos, conductuales y psicológicos de adolescentes de 10 a 14 años. Se establecieron 11 diagnósticos de enfermería: "Riesgo para la Obesidad", "Riesgos de desarrollo adolescente comprometida", "Riesgo de inseguridad en el rendimiento papel de los padres", "Riesgo para la capacidad de la familia para gestionar el régimen dietético comprometido", "Riesgo de capacidad para gestionar el régimen dietético comprometido", "Riesgo de Déficit de conocimientos sobre la dieta", "Riesgo de ingesta excesiva de alimentos", "Imagen negativa de sí", "Riesgo para la autoestima", "Riesgo Bienestar comprometida", "Estándar ejercicio comprometido". Reflejo de la naturaleza multifactorial de la obesidad, destacando la necesidad de interdisciplinaria e intersectorial de prevención y control de sobrepeso.

Descriptor: Obesidad; Sobrepeso; Adolescente; Diagnóstico de Enfermería.

¹ Master in Nursing from the Graduate Nursing Program from the Federal University of Pernambuco. Brazil. E-mail: raphaela67@hotmail.com

² PhD in Child and Adolescent Health. Professor of the Graduate Nursing Program from the Federal University of Pernambuco. Brazil. E-mail: anapopita@gmail.com

³ PhD in Nursing. Professor of the Graduate Nursing Program from the Federal University of Pernambuco. Brazil. E-mail: telmarques@yahoo.com.br

Corresponding author: Raphaela Santos do Nascimento Rodrigues.

Full Address: Rua Costa Gomes, 160/1503 - Madalena - CEP: 50710-510 - Recife/PE - Brazil.

INTRODUCTION

Obesity is considered the non-communicable morbidity with higher prevalence increase throughout the world since the 90's, appearing in epidemic proportions and becoming one of the major public health problems of modern society⁽¹⁾.

This situation is the result of changes in lifestyle habits determined by urbanization, which has transformed the life and health profile of population, including the adoption of unhealthy eating habits and reduced physical activities in daily routine⁽¹⁻²⁾.

This increase is particularly worrying among children and adolescents, since the presence of obesity at this age is a risk factor for the persistence of obesity into adulthood⁽²⁾. A systematic review of the literature confirms that the probability of overweight persistence into adulthood is moderate for adolescents who are overweight and obese⁽³⁾.

Obesity in adolescence may lead to increased blood pressure, dyslipidemia, diabetes, besides psychological, emotional and relationship disorders, and also greater morbidity and mortality in adulthood, especially for the development of cardiovascular diseases⁽²⁻³⁾.

The World Health Organization determines that effective measures for obesity control should include preventive and health promotion approaches in childhood and adolescence in order to avoid its aggravation or persistence into adulthood⁽¹⁾.

Therefore, the nursing diagnoses (ND) represent an important nursing tool that allows knowing the reality by identifying health risks/needs of the individual, enabling planning care interventions focused on the individual, family and/or community and at all levels of health care – primary, secondary or tertiary⁽⁴⁾.

Thus, this study aimed to identify the nursing diagnoses in overweight adolescents according to the International Classification for Nursing Practice (ICNP).

METHODS

This is a quantitative cross-sectional study carried out using the database of a population-based study that subsidized a doctoral thesis⁽⁵⁾, consisting of anthropometric, socio-demographic, behavioral and psychosocial characteristics of students, which was funded by the National Council for Scientific and Technological Development (CNPq) under No. 414146/2006-5 Edict 02/2006.

The database population included students aged from 10 to 14 years, of both sexes, from 6th to 9th grade in public and private schools in the city of Recife, Pernambuco, Brazil, from October to December 2007.

The sample size (n) was calculated based on the formula $[n = z^2 \cdot p \cdot (1-p) / d^2]$, where "z" represents the desired reliability level (95%), "p" the estimated prevalence of overweight (19.5%)⁽⁶⁾ and "d" the acceptable margin of error (3%).

The selection process was the multi-stage sampling type, whose sampling units were school (1st cluster), shift (2nd cluster), class (3rd cluster) and student (4th cluster). The sampling "n" was adjusted by the effect of the study design, by using a sample correction factor of 2.1, totaling a minimum of 1,403 students. And to correct eventual losses or refusals, 1,507 students participated in the database, including students from public and private schools.

The research sample originator of the database was obtained from the selection of clusters and students by using a random number table, observing the minimum of 40 sample units per school.

29 public and 11 private schools were selected through stratified random sampling, taking into account the proportion of public and private schools in the city of Recife, resulting in 1,507 students, with 1,074 from public schools and 433 from private schools.

We excluded those students who, despite being registered, were not regularly attending teaching activities; those with physical disability that interfered with anthropometric assessment; those who needed special diet due to health problems; or those whose families adopted a special diet, culturally different from the one adopted in this geographic region.

The study sample consisted of all students from the 29 public schools in Recife participating in the study, which led to the abovementioned database, resulting in a total of 1,074 adolescents. We chose to study this population segment for considering that in Brazil the increasing prevalence of obesity is proportionally higher among low-income families and that lifestyle and behavioral factors may be presented differently in distinct socio-economic levels⁽⁷⁾. Therefore, we chose to work with the economically underprivileged population, which is mostly composed of public schools users in the city of Recife.

Overweight was defined when BMI (Body Mass Index) – weight in kilograms divided by height in meters squared – was between the 85th and 95th percentile, and obesity when BMI was at or above the 95th percentile according to Cole classification system⁽⁸⁾. The overweight individuals were grouped to obese people, being classified as overweight, considered a dependent variable.

The independent variables refer to socio-demographic (age, gender, presence of siblings, number of siblings, birth order position, parents education), behavioral (previous dieting, eating without hunger, eating until you feel abdominal discomfort, alcohol consumption, preference at mealtimes, replacing meals with snacking, frequency of practice in physical

education at school, frequency of sports outside of school hours), and psychosocial aspects (parents' body weight perception, body image satisfaction).

Data collection for the database construction was carried out through interviews by a team of health professionals that was trained and qualified to apply a questionnaire and verify anthropometric measures, under the supervision of a project researcher. About 20% of the questionnaires were retested by supervisors in order to assess data consistency and reproducibility of information.

For weight measurement we used an electronic digital scale, Plenna-MEA-03140, with a capacity of 150kg and 100g precision. The students were weighed barefoot, without objects in hands or pockets and without head adornments. Height was verified with Stanley millimeter-tape measure, with 1mm precision and 0.5cm accuracy. The tape was posted on the wall and students were placed upright, barefoot, with their arms alongside the body, with ankles, back and head touching the wall, and looking forward.

Each individual had their measurements taken in duplicate, being eliminated when the inter-observers measurement error was greater than 100g for weight and 0.5cm for height. The resulting value of the measurements was their mean.

Later, we calculated the prevalence of overweight and the epidemiologic profile description of this group. For analysis of qualitative variables we calculated the percentage frequency and built the frequency distribution. To assess the factors statistically associated with overweight we calculated the prevalence ratio and its confidence interval. For the age of adolescents we also calculated the mean and standard deviation.

From the identification of the factors statistically associated with overweight, we conducted a search among the nursing diagnoses available in the International Classification for Nursing Practice (ICNP)

Version 2⁽⁹⁾ and that were related to the associated factors.

Using a database that was not meant to identify nursing diagnoses could lead to limitations in the nursing diagnoses accuracy, since it was not built based on nursing consultations. However, data present sufficient clinical evidence for the identification of nursing diagnoses. Nevertheless, we considered more appropriate to add the judgment risk to diagnosis, except when was not required more than one clinical evidence to their establishment.

The research that led to the database was submitted to and approved by the Research Ethics Committee of the Centre for Health Sciences, Federal University of Pernambuco (CAAE – 0203.0.172.000-06).

RESULTS

The prevalence of overweight found in the sample was of 18.6% (n=200). The characterization of socio-demographic variables of overweight adolescents revealed that the average age was 11.5 years, mostly female (58.5%), with siblings (92.5%), most of these had one or two siblings (64.9%), were firstborn (41.2%), had both parents with elementary education (56.2% of fathers and 60.9% of mothers). Of these, only the fact of being firstborn presented association with overweight when compared to those born as fourth child or later (95% CI, PR= 1.15 to 3.07).

Table 1 - - Distribution of adolescents aged from 10 to 14 years in public schools, according to body weight and socio-demographic and behavioral aspects. Recife, PE, Brazil, 2007

Variables	With overweight	Without overweight	RP	CI 95%(RP)
Age (years)				
10	55 (27.5%)	196 (22.4%)	1.66	0.99 – 2.77
11	52 (26.0%)	235 (26.9%)	1.37	0.82 – 2.30
12	48 (24.0%)	177 (20.3%)	1.61	0.96 – 2.72
13	29 (14.5%)	161 (18.4%)	1.15	0.66 – 2.03
14	16 (8.0%)	105 (12.0%)	1.00	-
Total	200 (100%)	874 (100%)	-	-
Mean ± Standard deviation	11.5 ± 1.2	11.7 ± 1.3	-	-
Gender				
Male	83 (41.5%)	384 (43.9%)	1.00	-
Female	117 (58.5%)	490 (56.1%)	1.08	0.84 – 1.40
Total	200 (100%)	874 (100%)	-	-
Presence of siblings				
Yes	185 (92.5%)	836 (95.7%)	1.00	-
No	15 (7.5%)	38 (4.3%)	1.56	1.00 – 2.44
Total	200 (100%)	874 (100%)	-	-
Number of siblings				
1	55 (29.7%)	225 (26.9%)	1.42	0.95 – 2.10
2	65 (35.2%)	254 (30.5%)	1.46	1.00 – 2.15
3	32 (17.3%)	152 (18.1%)	1.26	0.80 – 1.96
4 or more	33 (17.8%)	205 (24.5%)	1.00	-
Total	185 (100%)	833 (100%)	-	-
Birth order position				
1 st	75 (41.2%)	263 (31.9%)	1.88	1.15 – 3.07
2 nd	58 (31.9%)	297 (36.1%)	1.38	0.84 – 2.29
3 rd	32 (17.6%)	137 (16.6%)	1.60	0.93 – 2.77
4 th or later	17 (9.3%)	127 (15.4%)	1,00	-
Total	182 (100%)	824 (100%)	-	-
Father's education				
Illiterate	6 (5.3%)	18 (3.7%)	1.00	-
Elementary	64 (56.2%)	312 (64.9%)	0.68	0.33 – 1.41
High school	33 (28.9%)	134 (27.9%)	0.79	0.37 – 1.69
Higher	11(9.6%)	17 (3.5%)	1.57	0.68 – 3.61
Total	114 (100%)	481 (100%)	-	-
Mother's education				
Illiterate	8 (5.3%)	28 (4.4%)	1.00	-
Elementary	92 (60.9%)	419 (65.5%)	0.81	0.43 – 1.53
High school	44 (29.1%)	172 (26.9%)	0.92	0.47 – 1.78
Higher	7 (4.7%)	21 (3.2%)	1.13	0.46 – 2.73
Total	151 (100%)	640 (100%)	-	-

Regarding the behavioral and psychological aspects, Table 2 shows that most overweight adolescents reported never having dieted (62.8%), not having the habit of eating when not hungry (74.5%), not eating until you feel abdominal discomfort (70.5%), not drinking alcohol (94.5%), preferring meals with company (61.5%) and not replacing meals with snacking (82%). Most students did not practice physical education or did it less than three times per week

(11.8% and 86.6%, respectively), i.e., only 1.6% of overweight students admitted attend physical education classes at least 3 times per week, and 56.0% did not practice sports outside of school. Among the behavioral variables, the only one that presented association with overweight was previous dieting when compared with adolescents who had never dieted (95% CI, PR= 2.92 to 4.62).

Table 2 - Distribution of adolescents aged from 10 to 14 years in public schools, according to body weight and behavioral aspects. Recife, PE, Brazil, 2007

Variables	With overweight	Without overweight	RP	CI 95%(RP)
Previous dieting				
Yes	74 (37.2%)	74 (8.5%)	3.68	2.92 – 4.62
No	125(62.8%)	794 (91.5%)	1.00	-
Total	199 (100%)	868 (100%)	-	-
Eating without hunger				
Never	149 (74.5%)	650 (74.4%)	1.00	-
Once a month	9 (4.5%)	47 (5.4%)	0.86	0.47 – 1.60
Once a week	20 (10.0%)	88 (10.0%)	0.99	0.65 – 1.51
Everyday	22 (11.0%)	89 (10.2%)	1.06	0.71 – 1.59
Total	200 (100%)	874 (100%)	-	-
Eating until you feel abdominal discomfort				
Never	141 (70.5%)	600 (68.7%)	1.00	-
Once a month	11 (5.5%)	51 (5.8%)	0.93	0.53 – 1.63
Once a week	23 (11.5%)	109 (12.5%)	0.92	0.61 – 1.37
Everyday	25 (12.5%)	114 (13.0%)	0.95	0.64 – 1.39
Total	200 (100%)	874 (100%)	-	-
Alcohol consumption				
Yes	11 (5.5%)	56 (6.4%)	1.00	-
No	189 (94.5%)	818 (93.6%)	1.14	0.66 – 1.99
Total	200 (100%)	874 (100%)	-	-
Preference at mealtimes				
With company	123 (61.5%)	525 (60.2%)	1.57	0.77 – 3.21
Alone	70 (35.0%)	297 (34.0%)	1.58	0.76 – 3.27
Indifferent	7 (3.5%)	51 (5.8%)	1.00	-
Total	200 (100%)	873 (100%)	-	-
Replacing meals with snacking				
Yes	36 (18.0%)	169 (19.4%)	0.93	0.67 – 1.29
No	164 (82.0%)	704 (80.6%)	1.00	-
Total	200 (100%)	873 (100%)	-	-
Weekly frequency of physical activity in school				
Three times	2 (1.6%)	34 (5.3%)	1.00	-
Less than three times	110 (86.6%)	496 (77.3%)	3.27	0.84 – 12.70
Does not practice	15 (11.8%)	112 (17.4%)	2.13	0.51 – 8.87
Total	127 (100%)	642 (100%)	-	-
Weekly frequency of sports activity outside school				
Three times	70 (35.0%)	328 (37.5%)	1.00	-
Less than three times	18 (9.0%)	67 (7.7%)	1.20	0.76 – 1.91
Does not practice	112 (56.0%)	479 (54.8%)	1.08	0.82 – 1.41
Total	200 (100%)	874 (100%)	-	-

Regarding the psychological aspects investigated and described in Table 3, we identified that most overweight adolescents understood their parents weight as normal (47.2% for fathers and 46.0% for mothers) and most were dissatisfied with their body image (69.5%). Of these aspects, understanding the parents

as fat and body dissatisfaction were associated with overweight, compared with adolescents who understood their parents with normal weight and were dissatisfied with their body image, respectively (95% CI, RP= 1.18 to 2.06 and 3.28 to 5.68).

Table 3 - Distribution of adolescents aged from 10 to 14 years in public schools, according to body weight and psychological aspects. Recife, PE, Brazil, 2007

Variables	With overweight	Without overweight	RP	CI 95%(RP)
Body image satisfaction				
Satisfied	61 (30.5%)	642 (73.5%)	1.00	-
Dissatisfied	139 (69.5%)	232 (26.5%)	4.32	3.28 – 5.68
Total	200 (100%)	874 (100%)	-	-
Father's perception				
Fat	67 (34.4%)	191 (23.1%)	1.56	1.18 – 2.06
Thin	36 (18.4%)	175 (21.1%)	1.03	0.72 – 1.46
Normal	92 (47.2%)	462 (55.8%)	1.00	-
Total	195 (100%)	828 (100%)	-	-
Mother's perception				
Fat	72 (36.0%)	264 (30.3%)	1.31	0.99 – 1.73
Thin	36 (18.0%)	136 (15.6%)	1.28	0.91 – 1.81
Normal	92 (46.0%)	470 (54.1%)	1.00	-
Total	200 (100%)	870 (100%)	-	-

Based on data obtained in the construction of the epidemiological profile and factors that presented statistically association with overweight, we identified twelve nursing diagnoses in the ICNP Version 2⁽⁹⁾, as described in Figure 1.

The weekly frequency of physical activity presented no statistical association with overweight in this study. However, given the significant number of adolescents who reported

performing physical activity less than three times per week (98.4%), and considering the importance of physical activity in the prevention and treatment of overweight^(2, 10), we chose to include this data in search of diagnoses.

Factors associated with overweight	Nursing Diagnoses (NDs) – ICNP 2	Concepts
Overweight	ND 1. Overweight	Condition of high body weight and body mass usually of more than 10-20 percent over ideal weight.
	ND 2. Risk of impaired adolescent development	No concept.
Firstborn	ND 3. Risk of insecurity in parental role performance.	No concept.
Understanding the parents as fat	ND 4. Risk of the family impaired ability to manage diet regime.	No concept.
Previous dieting	ND 5. Impaired ability to manage diet regime.	No concept.
	ND 6. Lack of knowledge of dietary regime.	No concept.
	ND 7. Risk of excess food intake.	No concept.
Body image dissatisfaction	ND 8. Negative self-image.	Conception or mental image one has of oneself.
	ND 9. (Risk of) low self-esteem.	Opinion of oneself and view on own worth and capabilities, verbalization of beliefs about oneself, trust in oneself, verbalization of self-acceptance and self-limitation, challenging negative images of oneself, acceptance of praise, encouragement as well as constructive criticism.
	ND 10. Risk of impaired social well-being.	Mental image of feeling good, of balance, contentment, kindness or joy and comfort, usually demonstrated by ease with oneself and openness to others or satisfaction with independence.
Physical activity less than three times per week	ND 11. Impaired exercise pattern.	No concept.

Figure 1 – Nursing Diagnoses (ICNP 2) related to factors associated with overweight in adolescents from public schools in the city of Recife-PE, 2007.

Of the 11 NDs identified, only two referred to biological aspects (ND 1, ND 2), two were related to adolescents' parents (ND 3, ND 4), three were

associated with dietary issues (ND 5, ND 6, ND 7), three with psychological and social aspects (ND 8, ND 9, ND 10), and one with physical activity (ND 11).

DISCUSSION

The ND Risk of overweight had a vague concept, without specific definition regarding what would be considered "ideal weight", thus hindering its practical application. According to the classification used in this study to define overweight, the prevalence found was lower than the national average of 23.2%, taking into consideration the state capitals and the Federal District⁽¹¹⁾.

The studies on the prevalence of overweight and obesity in adolescence found in the literature approach different age groups and different geographical regions, making it difficult to compare the results. However, they show that this prevalence is lower in the Northeast Region of Brazil when compared to the Southeast, due to its lower level of economic development⁽¹²⁻¹³⁾. However, when considering the proportional increase in overweight prevalence, the lower economic classes have a more significant increase when compared to the higher economic classes^(7,13).

We did not find a definition for the ND Risk of impaired adolescent development. Its inclusion was attributed to the possible consequences of overweight that may put at risk the physical and psychological development of adolescents, with health problems such as hypertension, diabetes mellitus type II, metabolic, respiratory and musculoskeletal complications and low self-esteem⁽²⁾.

The Risk of insecurity in parental role performance was related to firstborn. We noted the importance of support and health guidance in preparation for the parental role performance, in order to build knowledge and clarify doubts that may bring greater security for the development of this role.

Parents may present higher expectations and demands upon the firstborn child, which associated with inexperience and insecurity may result in excessive food offering⁽¹⁴⁾. Parents who evaluate themselves more competent in parental role performance tend to have a warmer, sensitive and responsive interaction with their children and promote more situations that stimulate development⁽¹⁵⁾.

Another ND related to parents of overweight adolescents was the Risk of the family impaired ability to manage diet regime, originated from the perception of the parents' body as fat. Although this variable refers only to the students perception, we cannot conclude if it corresponded to reality, once we did not collect parents data for BMI classification, the correlation between overweight parents and their children is relevant, with greater chances of being overweight when at least one parent is obese. This may be related both to heredity, as to sharing an environment that promotes the adoption of life habits prone to obesity^(7,15).

The incidence of overweight in parents may reveal that the family has food and lifestyle habits that contribute to the incidence or persistence of overweight in adolescents. Family-focused preventive actions should be encouraged and should represent the center of attention for the development of effective actions aimed at reducing overweight^(7,16).

The welcoming and respect to the families story is a strategy to ease the relationship between the family and professionals, in an attempt of not making the intervention a threat to the family group identity, but rather allow the involvement and participation of families

in the change process. The actions must not be reduced to take care of changing eating habits, for it represents a dynamic and reconstructive process of a new family lifestyle⁽¹⁶⁾.

A previous diet provides evidence that there is Risk of impaired ability to manage diet regime, Risk of lack of knowledge of dietary regime and Risk of excess food intake. Dieting or have dieted to lose weight or presenting restrictive eating behaviors have a direct association with overweight⁽⁷⁾. Adolescents who have this behavior limit their food intake, skip meals, feel very hungry and have little control over their food, thus they may become more susceptible to overweight, being necessary to promote food reeducation in order to promote the adoption of healthy eating habits in a continuous and sustained way^(7,10).

Dissatisfaction with body image may be related to a Negative self-image, to the Risk of low self-esteem and the Risk of impaired social well-being. Self-perception and satisfaction with body image are important factors in adolescent's self-acceptance. Body image dissatisfaction can be a predictive sign of depressive situations, psychosomatic and eating disorders that can lead to overweight⁽¹⁷⁾.

Obesity may be related to psychological factors, demanding a systematic investigation to subsidize care practices. Although there are no indicators of greater incidence of emotional problems among obese adolescents, it is worth mentioning that adolescence is an important transitional stage in which usually there is no psychological problem so evidently installed. However, its signals are present and may emerge in later stages of development, so that the psychological attention during this life cycle period consists in prevention practice to the aggravation of emotional problems⁽¹⁸⁾.

It is also worth mentioning the influence of the media and society, spreading and stimulating dietary weight-loss practices in order to achieve the aesthetic

standard of an ideal body. The cultural industry is articulated in different areas, such as goods-producing companies, appliances and equipment industries and financial sectors, in order to perpetuate the aesthetic paradigms that may contribute to disturb the body perception of adolescents⁽¹⁷⁾.

The Impaired exercise pattern was related to physical activity in schools with frequency lower than three times a week. The regular practice of physical activity and reduction of sedentary lifestyle are seen as powerful promoters of health and well-being for adolescents⁽¹⁹⁻²⁰⁾.

A systematic review of the literature on physical activity interventions in Latin America highlights the advantages for physically active adolescents and recommends the implementation of physical education classes in schools, pointing them as strong strategy to increase physical activity among children and adolescents. Among the immediate benefits that physical activity brings is the improvement in health-related physical fitness, like cardiorespiratory fitness, muscular strength and flexibility⁽²⁰⁾.

According to the National Educational Bases and Guidelines Law No. 9394/96, the school should be a place for information dissemination aiming to promote a healthier life for children and adolescents, emphasizing the importance of physical activity, which is mandatory, stimulating the interest of students in activities, sports and physical exercises.

The nursing diagnoses found in this study reflect the multifactorial nature of overweight and point to the need for health interventions that go beyond nutritional aspects and physical activity, also including social and psychological issues, with the involvement of the adolescents' families.

Therefore, it is essential to search for interdisciplinary and intersectoral partnerships that can contribute to the planning and implementation of health interventions on individual, family and community level,

which provide and facilitate the adoption of healthier

lifestyles that will lead to improvements in quality of life.

FINAL CONSIDERATIONS

Overweight may be associated with other health and/or comorbidities risks that presented no association or that were not approached in this study, thus it is necessary to assess each case individually when planning nursing interventions for this population. And it is also necessary to develop more studies related to this issue.

The use of ICNP Version 2 allowed a quick search of the NDs, even though some of them still do not have concepts or have low specificity, which can lead to confusion when defining diagnoses. These are difficulties that can affect the use of NDs in the routine work of nurses, with damages to the implementation of the systematization of nursing care and the scientific method.

Some NDs were not exclusively associated to the individuals and their biological condition, but were also related to the family system. In some cases these diagnostic could be present even before the development of overweight in adolescents, contributing to its incidence or persistence, and in other cases it would arise as a consequence of overweight.

REFERENCES

1. World Health Organization. Obesity: Preventing and Managing the Global Epidemic. Report of a WHO Consultation. Geneva; 2008. (WHO Technical Report Series no. 894.)
2. Dilley KJ, Martin LA, Sullivan C, Seshadri R, Binns HJ. Pediatric Practice Research Group. Identification of overweight status is associated with higher rates of screening for comorbidities of overweight in pediatric primary care practice. *Pediatrics*. 2007; 119(1):e148-55.
3. Singh AS, Mulder C, Twisk JWR, Van Mechelen W, Chinapaw MJM. Tracking of childhood overweight into

The results indicate the need to consider the multifactorial nature of obesity when planning these actions, and nursing should be articulated in an interdisciplinary and intersectoral way, in order to cover all the factors involved in the problem of overweight.

We also recommend bringing nurses and other health professionals closer to schools, which can and should become important allies in the development of educational and health activities and physical activity practices.

The results of this study provide supports to nursing and other health areas for action planning for early prevention and control of obesity and its consequences.

This work may also guide the development of new researches and the validation of nursing diagnoses related to obesity and their defining characteristics, and new epidemiological studies on obesity among adolescents, contributing to the increase of new knowledge in different areas of health.

adulthood: a systematic review of the literature. *Obes Rev*. 2008. 9(5):474-88.

4. Conselho Federal de Enfermagem (BR). Resolução COFEN 358/2009. Dispõe sobre a Sistematização da Assistência de Enfermagem e a implementação do Processo de Enfermagem em ambientes, públicos ou privados, em que ocorre o cuidado profissional de Enfermagem, e dá outras providências. Brasília; 2007.

5. Cavalcanti, AM. Transtornos do comportamento alimentar em escolares da cidade do Recife - PE [tese]. Recife(PE): Saúde da Criança e do Adolescente, Centro de Ciências da Saúde, Universidade Federal de Pernambuco, 2010.

6. Campos LA, Leite AJM, Almeida PC. Prevalência de sobrepeso e obesidade em adolescentes escolares do município de Fortaleza, Brasil. *Rev Bras Saúde Matern infantil*. 2007; 7(1):183-90.
7. Cardoso LO, Engstrom EM, Leite IC, Castro IR. Fatores socioeconômicos, demográficos, ambientais e comportamentais associados ao excesso de peso em adolescentes. *Rev Bras Epidemiol*. 2009; 12(3):378-403.
8. Cole TJ, Bellizzi MC, Flegal KM, Dietz WH. Establishing a standard definition for child overweight and obesity worldwide: international survey. *BMJ*. 2000; 320(1):1240.
9. Conselho Internacional de Enfermagem. CIPE@Versão 2.0. Classificação Internacional para a Prática de Enfermagem. Lisboa: Conselho Internacional de Enfermeiros; 2010. [citado 15 nov 2011] Disponível em:
<http://www.ordemenfermeiros.pt/browserCIPE/BrowserCIPE.aspx>
10. Waters E, Silva-Sanigorski A, Hall BJ, Brown T, Campbell KJ, Gao Y, et al. Interventions for preventing obesity in children. *Cochrane Database of Systematic Reviews*. Cochrane Heart Group, n. 9, CD001871, 2012.
11. Ministério do planejamento, orçamento e gestão. (BR) Instituto Brasileiro de Geografia e Estatística. (IBGE) PENSE 2009 - Avaliação do estado nutricional dos escolares do 9º ano do ensino fundamental. [citado 2011 nov 20]. Disponível em:
http://www.ibge.gov.br/home/presidencia/noticias/noticia_visualiza.php?id_noticia=1698&id_pagina=1
12. Coutinho JG, Gentil PC, Toral N. A desnutrição e obesidade no Brasil: o enfrentamento com base na agenda única da nutrição. *Cad Saúde Pública*. 2008; 24(2):332-40.
13. Batista FM, Souza AI, Miglioli TC, Santos MC. Anemia e obesidade: um paradoxo da transição nutricional brasileira. *Cad Saúde Pública*. 2008; 24(2):247-57.
14. Araújo MF, Bezerra EP, Araújo TM, Chaves ES. Obesidade infantil: uma reflexão sobre dinâmica familiar numa visão etnográfica. *Rev Rene*. 2006; 7(1):103-8.
15. Sampaio ITA. Práticas educativas parentais, gênero e ordem de nascimento dos filhos: atualização. *Rev Bras Crescimento Desenvolv Hum*. 2007; 17(2):144-52.
16. Tassara V, Norton RC, Marques WE. Importância do contexto sociofamiliar na abordagem de crianças obesas. *Rev Paul Pediatr*. 2010. 28(3):309-14.
17. Cavalcanti AC, Albuquerque AMC. Mídia, comportamento alimentar e obesidade na infância e na adolescência: uma revisão. *Rev Brás Nutr Clín*. 2008. 23(3):199-203.
18. Cardoso LA, Carvalho AM. Avaliação psicológica de crianças acompanhadas em programa de atenção multiprofissional à obesidade. *Interface - Comunic, Saúde, Educ*. 2007; 11(22):297-312.
19. Ortega FB, Ruiz JR, Castillo MJ, Sjostrom M. Physical fitness in childhood and adolescence: a powerful marker of health. *Int J Obes*. 2008; 32(1):1-11.
20. Hoehner CM, Soares J, Parra Perez D, Ribeiro IC, Joshi CE, Pratt M, et al. Physical Activity Interventions in Latin America: A Systematic Review. *Am J Prev Med*. 2008; 34(3):224-33.

Received: Sep. 26th 2012

Accepted: Oct. 31th 2012