KATARZYNA SYGIT

Zwyczaje żywieniowe dzieci ze środowiska wiejskiego

Dietary habits in children from rural environments

Streszczenie

Cel. Celem badań reprezentatywnych było zdiagnozowanie zachowań żywieniowych dzieci wiejskich oraz określenie zależności tych zachowań od szeregu zmiennych opisowych.

Metody. Badania dotyczyły dzieci wiejskich i ich rodziców z wylosowanych do badań 7 powiatów województwa zachodniopomorskiego. Ostatecznie objęto analizowaną grupę 1351 dzieci do 14. roku życia wraz z ich rodzicami (1351).

Wyniki. Jak wynika z analizy materiału badawczego, przed wyjściem do szkoły śniadanie jada 83,12% badanych dzieci, a 16,88% nie spożyło w ogóle śniadania. Drugie śniadanie do szkoły dostaje od rodziców 73,53% badanych. Okazuje się, że jeden do dwóch posiłków dziennie spożywa aż 118 dzieci (tj. 2,46%), natomiast najliczniejszą grupę (42,97%) stanowią dzieci zjadające 4 posiłki dziennie. Codziennie słodycze spożywa 34,94% dzieci, a nigdy – 2,08%. Codziennie mleko spożywa tylko 32,19% (tj. 1547) osób; warzywa i owoce – tylko 56,35% badanych; okazyjnie i nigdy – 3,47%. Według 23,99% rodziców, dzieci odżywiają się bardzo dobrze, natomiast według 57,99% – dobrze. Stwierdzono również, iż zwyczaje żywieniowe dzieci zależą od takich zmiennych opisowych, jak: płeć, wykształcenie rodziców, rodzaj gospodarstwa domowego, sytuacja mieszkaniowa rodziny.

Wnioski. Istnieje znaczna przewaga zachowań antyzdrowotnych nad zachowaniami prozdrowotnymi. Stwierdzono również istotne zależności zachowań żywieniowych badanych dzieci od ich płci, wykształcenia rodziców i sytuacji bytowej panującej w rodzinie badanych.

Słowa kluczowe: zwyczaje żywieniowe, dziecko, środowisko wiejskie, zachowania zdrowotne.

Summary

Aim. This representative study aimed at diagnosing the dietary habits of children living in rural environments and at determining the relationships of these behaviours with a range of descriptive variables.

Methods. The study was carried out among children and their parents living in 7 rural counties within the Western Pomeranian Voivodeship. The final analysis included 1,351 children under the age of 14, along with their parents (1,351).

Results. The research has pointed that 83.12% of the children consume breakfast before heading for school, with 16.88% not eating breakfast at all. Parents provide their children with a packed lunch or snack in 73.53% of cases. One or two meals daily are eaten by 118 of the children (2.46%); however, the largest group of children (42.97%) eat four meals per day. Over a third (34.94%) eat sweets on a daily basis, with only 2.08% never eating them. Only 32.19% drink milk every day (i.e.1547 people), with daily consumption of fruit and vegetables at only 56.35% of the subjects, and 3.47% never eating them. In the parents' view, 23.99% believe their children have a very good diet, while 57.99% think that their children's diet is good. It was also found that dietary habits depend on such descriptive variables as gender, parental educational levels, type of household or the household's living conditions.

Conclusions. There is a considerable predominance of anti-health over health-promoting behaviours. There is also a significant relationship between the children's health behaviours and their gender, their parents' educational levels and their family standard of living.

Key words: dietary habits, child, rural environment, health behaviours.

Department of Health Behaviour, Faculty of Natural Sciences, University of Szczecin

INTRODUCTION

With our children's appropriate psychological and physical development in mind, their lifestyle, including good dietary habits, which are of vital importance during the period of growth and adulthood [1], should be monitored, especially in rural environments.

The inappropriate diets of young people, as described in the professional literature [2-5] are of particular concern. Their general health is also not very good, and along with their low awareness of dietary issues [3] form a significant rationale for undertaking comprehensive research studies.

While these problems are reflected in the literature with regard to urban environments [6, 7], the health behaviours of children and adolescents in rural environments have not been studied in detail. As a result, representative studies were undertaken in rural settings with the aim of diagnosing children's dietary behaviours and determining the dependence of these behaviours on descriptive variables such as gender, parental educational levels and the living standards of the children's families.

MATERIALS AND METHODS

The subjects were children and their parents living in rural environments. The study also included research into the situation of the rural households from which the subjects originated.

Original questionnaires were used for the study, with the following statistical tests used for analysis of the results: Chi-square, Cramer's V, Spearman's rho.

The research was representative, and included children and their parents living in rural environments over 7 counties selected at random from within the Western Pomeranian Voivodeship, and in which field research laboratories were set up. The final study encompassed information collected from 1,351 children aged under 14.

The study also included their parents, with information from the 1,351 mothers of the children in the study.

RESULTS

1. The social situation of the rural families to whom the children aged under 14 belonged

Two-parent households accounted for 84.79% of the children in the study, with single-parent families making up 9.9%. The majority of the subjects came from non-farming households (49.5%).

The household living conditions could be classified as very good in 8.16% of the subjects, good in 68.08% and bad in 16.42%.

According to 3.7% of the subjects, the household had enough to live on without having to save. However, as many as 34% stated that "we live frugally and have problems making larger purchases" with 13.19% admitting "we have enough money to buy the cheapest food, but there's not enough for clothes".

The average income per person per month was 200 PLN (according to 43.74%), with 17.17% living on 201-299 PLN, 300 to 399 PLN 13.98%, and only 4.68% living on more than 600 PLN per person per month.

The sources of income in these households is striking: only 10.26% earned an income from agriculture, while the largest group, 74.09%, earned from 'other sources'.

Subjective evaluation

On the day of the survey, 83.12% of the children had breakfast before leaving for school, while 16.88%, i.e. 737 people did not.

Parents provided their children with a packed lunch in 73.53% of cases; however, 10.67%, i.e. 513 children, did not take lunch to school with them.

The results of the survey showed that as many as 118 children (2.46%) eat only one or two meals daily, with 19.73% having three meals. However, the largest group (42.97%) have 4 meals per day.

As many as 55.6% snack in between meals, with 36% sometimes doing so and 312 not eating any additional food. A problem with hunger was not explicitly stated; 5.58% said that they often felt hungry, but 60.68% stated that this never happened.

A worrying fact is that 34.94% eat sweets on a daily basis, 45.42% do so several times a week, with only 2.08% never doing so.

Only 32.19% (i.e. 1,547 people) drink milk daily, with 45.21% doing so several days a week, and as many as 270, i.e. 6.99% never drinking milk.

The children ate fruit and vegetables relatively infrequently; only 53.35% eat them every day, 35.79% several times a week and hardly ever or never 3.47% i.e. 118 people.

Objective evaluation (parents)

According to the research, 23.99% of the parents have stated that their children have a very good diet, while 57.99% evaluate their children's diet as good.

As many as 47.32% have stated that their children eat 4 meals daily, with 32.44% claiming 5 meals daily. 80.05% also stating that they provide their children with a packed lunch.

Selected factors in the health behaviours of children from rural environments.

- 62.18% of the subjects get a packed lunch for school, while 10.44% do not, 21.17% get one sometimes and 6.22% rarely get one. As for breakfast, 66.21% of the girls and 57.31% of the boys always eat it (Table 1). The remaining statistically significant relationships are shown in Tables 2 and 3.
- 2.44% of the subjects have one or two meals per day, 23.83% have 3 meals, 43.89% four meals and 29.83% five or more meals per day. Statistically significant differences appeared with regard to the children's genders e.g. 25.75% of the girls and 21.59% of the boys have 3 meals per day, while 25% of the girls and 35.5% of the boys have 5 or more meals daily (Table 4). Table 5 shows the relationship between eating habits and parental educational levels.
- 30.35% of the children drink milk daily, 46.63% several times a week,10.21% several times a month, 6.51% oc-

TABLE 1. Consumption of breakfast and parents' educational levels.

Did you have breakfast before leaving for school today?			
Educational level of people completing questionnaire	Yes	No	Total
Primary	289 81.87%	64 18.13%	353
Secondary	305 83.11%	62 16.89%	367
Vocational Secondary	452 82.94%	93 17.06%	545
Higher	59 80.82%	14 19.18%	73
Total	1105	233	1338
Pearson's Chi^2	0.40	Df = 3	P = 0.94038
Cramer's V	0.02		

TABLE 2. Consumption of packed lunch and type of household.

Do you take a packed lunch to school?					
Type of household	Yes	No	Sometimes	Hardly ever	Total
Agricultural	100 56.50%	11 6.21%	52 29.38%	14 7.91%	177
Productive agricultural	17 54.84%	6 19.35%	7 22.58%	1 3.23%	31
Non agricultural	453 64.26%	75 10.64%	133 18.87%	44 6.24%	705
Other	267 61.38%	49 11.26%	94 21.61%	25 5.75%	435
Total	837	141	286	84	1348
Pearson's Chi^2	16.27	Df = 9	P = 0.06140		
Cramer's V	0.06				

TABLE 3. Consumption of packed lunch and subjects' living conditions.

Do you take a packed lunch to school?					
The household living conditions are	Yes	No	Sometimes	Hardly ever	Total
Very good	66	9	11	1	87
	75.86%	10.34%	12.64%	1.15%	
Good	603	98	202	54	957
	63.01%	10.24%	21.11%	5.64%	
Poor	157	28	59	25	269
	58.36%	10.41%	21.93%	9.29%	
Very poor	12	6	13	3	34
	35.29%	17.65%	38.24%	8.82%	
Total	838	141	285	83	1347
Pearson's Chi^2	25.41	Df=9	P=.000255		
Cramer's V	0.08				

TABLE 4. Number of meals per day and gender of subjects.

How many meals per day do you usually have?					
Sex	1 + 2	3	4	>5	Total
Female	19 2.59%	189 25.75%	342 46.59%	184 25.07%	734
Male	13 2.11%	133 21.59%	251 40.75%	219 35.55%	616
Total	32	322	593	403	1350
Pearson's Chi^2	17.69	Df=3	P=0.00051		
Cramer's V	0.11				

TABLE 5. Number of meals per day and parents' educational levels.

How many meals per day do you usually have?					
Educational level of people completing questionnaire	1 + 2	3	4	>5	Total
Primary	16 4.53%	76 21.53%	138 39.09%	123 34.84%	353
Secondary	7 1.91%	100 27.25%	158 43.05%	102 27.79%	367
Vocational Secondary	9 1.65%	131 24.04%	253 46.42%	152 27.89%	545
Higher	1 1.35%	13 17.57%	36 48.65%	24 32.43%	74
Total	33	320	585	401	1339
Pearson's Chi^2	19.63	Df = 9	P = 0.02037		
Cramer's V	0.07				

TABLE 6. Consumption of milk and subjects' gender.

You drink milk						
Sex	Daily	Several times a week	Several times a month	Occasionally	Never	Total
F	194 26.43%	367 50.00%	73 9.95%	58 7.90%	42 5.72%	734
M	216 35.06%	262 42.53%	65 10.55%	30 4.87%	43 6.98%	616
Total	410	629	138	88	85	1350
Pearson's Chi^2	17.92	Df=4	P=0.00128			
Cramer's V	0.12					

casionally, and 6.29% never. A significant dependence between milk drinking and the gender of the children is shown in Table 6; however, no such relationship was found with the parents' educational levels. A significant relationship was that of the household's financial situation, as shown in Table 7.

TABLE 7. Consumption of milk and household's financial situation.

You drink milk						
Does your household	Daily	Several times a week	Several times a month	Occasionally	Never	Total
Have enough money for everything without the need to save up	12 27.91%	23 53.49%	3 6.98%	0 0.00%	5 11.63%	43
Live modestly but with enough to live on	107 34.97%	144 47.06%	20 6.54%	18 5.88%	17 5.56%	306
Live modestly but have problems making larger purchases	149 31.97%	212 45.49%	54 11.59%	29 6.22%	22 4.72%	466
Have enough money for the cheapest food and clothes	55 28.80%	89 46.60%	18 9.42%	14 7.33%	15 7.85%	191
Have enough money for the cheapest food but not for clothes	62 28.18%	105 47.73%	23 10.45%	16 7.27%	14 6.36%	220
Not have enough money for the cheapest food or clothes	25 20.16%	56 45.16%	20 16.13%	11 8.87%	12 9.68%	124
Total	410	629	138	88	85	1350
Pearson's Chi^2	29.31	Df=20	P = 0.08191			
Cramer's V	0.07					

DISCUSSION

According to Woynarowska [8], research on health behaviours is currently considered an important way of measuring the general population's state of health, and a basis for planning the introduction of health education and health promotion programmes. Health behaviours and lifestyle are the main factors influencing human health [9-12].

People's dietary habits leave a great deal to be desired, and there is a wide range of abnormalities to be found in the diets of children [12].

Despite the assertion that the majority have four meals a day, 19.73% eat three meals a day and 2.46% eat only one or two meals daily. Przysławski [13] has reached a similar conclusion. This abnormal frequency of taking meals is the basis for many of the inappropriate dietary habits shown by young people. This study showed that as many as 16.88% of children do not eat breakfast before leaving for school.

Ten-day analyses of the subjects' diets show that while children often consume sweets (34.94% daily), they do not place the same emphasis on drinking milk (32,19% drinking it daily) or eating fruit and vegetables (35.79% only eat them several times a week). This research concurs with the research of Woynarowska [14], in which only 40% of young people drink milk once per day, which would indicate that a sizeable proportion of the population will be at risk of developing osteoporosis in the future. Meanwhile sweet foods are consumed in excess (34.94% of the subjects eat them nearly every day), and according to Woynarowska [14], 48% eat chocolates and sweets on a daily basis, and 33% eat cakes and pastries, while Witkowski [15] demonstrated that around 30% eat sweet foods.

Only 73.53% of the subjects take any kind of packed lunch to school with them. This situation is made worse by the fact that schools do not provide a mid-morning snack, which has been noted in other studies [15-18].

According to Woynarowska [14], 18% do not have breakfast every day, and 21% have nothing at school, which undoubtedly has a negative effect on overall wellbeing and concentration levels at school. Szponar has noted that the problem of nutrition has not been satisfactorily addressed in schools [17].

A significant problem is the discrepancy between the children and their parents' answers to the same questions about their health behaviours, as shown in a previous study by Witkowski [15].

The parents show a marked tendency to show themselves in a good light, while their children in many cases evaluate them differently.

This problem concerns, among others, the frequency of meals, with parents stating that 47.3% of the children have four meals a day, but only 42.97% of the children confirming this.

This phenomenon demands a detailed psychological and sociological analysis. Further differences between parents and their children revealed themselves in their evaluation of their diets.

Witkowski [15] has researched attitudes to diets. The majority of the parents in the study assess their children's diets as very good; however, the children assess their own diets (including a high consumption of sweets and low amounts of fruit and vegetables) as good or satisfactory.

The results of these studies may prove highly significant in terms of taking preventive and educational action.

When devising a strategy for taking action aimed at children and young people of school age in rural environments, it is vital that the concept of health is understood, along with factors determining it, including the environment. By giving our children knowledge about their health and providing them with the appropriate attitudes and skills, we can enable them to live a healthy lifestyle, and improve their overall health and quality of life.

CONCLUSIONS

As a result of the research on: the social and living conditions of the families of the subjects (children aged under 14 in rural environments) along with their health behaviours (evaluated by the subjects and also by their parents), the following can be stated:

1. There is a worryingly significant predominance of anti-health over health-promoting behaviours in terms of inappropriate diet (significant consumption of sweets, low consumption of milk, unsatisfactory consumption of fruit and vegetables, serious reservations with regard to the number of meals per day).
2. Differences in the evaluation of health behaviours as assessed by the subjects and their parents (the parents gave higher evaluations for their children's dietary habits).
3. There was a statistically significant dependence of the subjects' dietary behaviours on their age, gender, their parents' educational levels and their social and living conditions. It was shown that:
   - Consumption of breakfast depended on the educational levels of the subjects' parents
   - Consumption of a packed lunch depended on the type of household
   - However, the number of meals depended on the gender of the subjects and their parents' educational levels
   - The consumption of milk depended on the subjects' gender and their household's financial situation.

REFERENCES

1. Chalcarz W. Zadania i cele żywienia w promocji zdrowia w szkole. Lider. 1997;12,18.
2. Curry SJ, Kristal AR, Bowen DJ. An application of the stage of change model of behaviour change to dietary fat reduction. Health Educ Res. 1992;7:97-105.
3. Dooris M. Rethinking health promotion. A global approach. Health Promot Int. 1999;14(2):189-91.
4. Friedrich M. Prozdrowotna edukacja żywieniowa jako czynnik wpływający na zmiany nawyków żywieniowych. Żyw Czł Metab. 1997;24(3): 179-92.
5. Hurrelman K, Leppin A, Nordlohne E. Promoting health in schools: the German example. Health Promot Int. 1995;10(2):121-31.
6. Boutilier M, Mason R, Rootman J. Community action and reflective practice in health. Health Promot Int. 1997;12,69-78.
7. Demel M. O własne drogi w wychowaniu zdrowotnym. Kult Fiz. 1990; 44:7-8,22-5.
8. Oblacińska A, Wrocławska M, Woynarowska B. Częstość występowania nadwagi i otyłości w populacji w wieku szkolnym w Polsce oraz opieka zdrowotna nad uczniami z tymi zaburzeniami. Pediatr Pol. 1997;3,241-5.
9. Rasmussen V, Rivett D. The European Network of Health Promoting Schools – an alliance of health, education and democracy. Health Education and Democracy. Health Educ. 2000;2, 61-7.
10. Kowalska J, Czechowski M. Zdrowie w świadomości uczniów wybranych szkół podstawowych a wykształcenie ich rodziców. In: Kropińska I, editor. Zdrowie człowieka w jego egzystencji. Elbląg: Wydaw. Uczelni Elbląskiej Wyższej Szkoły Humanistycznej; 2000. p. 389-97.
11. Sygit M. Wychowanie zdrowotne i postawy wobec własnego zdrowia. In: Kulik TB, Wrońska I, editor. Zdrowie w medycynie i naukach społecznych. Stalowa Wola: Oficyna Wydaw. Fundacji Uniwersyteckiej w Stalowej Woli; 2000. p. 67-76.
12. Sygit M, Sygit K. Wychowanie zdrowotne. Wyd. US; 2008.
13. Przysławski J, Duda G. Spośród żywienia młodzieży szkolnej – badania porównawcze – lata 80-te vs. 90-te. Probl Hig. 2000;69,42-48.
14. Woynarowska B. Zdrowie młodzieży szkolnej w Polsce i innych krajach. Warszawa: Inst. Matki i Dziecka; 1996.
15. Witkowski J. Zachowania zdrowotne dzieci i ich rodziców [dissertation]. Bydgoszcz; 1994.
16. Grzybowski A, Trafalska E, Paradowska-Stankiewicz I. Zachowania żywieniowe młodzieży. Probl Hig. 2000;69,13-21.
17. Szponar L, Stoś K. Poziom wiadomości dzieci ze szkół podstawowych zamieszkałych na wsi i w mieście o zasadach prawidłowego żywienia. Med Ogól. 1995;1:152-4.
18. Szponar L, Pachocka L, Turlejka H. Problematyka żywienia i żywności w programach szkoły podstawowej. Lider. 1991;9:13-4.

Informacje o Autorze
Dr n. med. Katarzyna Sygit – adiunkt, Zakład Wychowania Zdrowotnego, Wydział Nauk Przyrodniczych Uniwersytet Szczeciński.

Adres do korespondencji
Uniwersytet Szczeciński
Wydział Nauk Przyrodniczych
Zakład Wychowania Zdrowotnego
Al. Piastów 40 B, bl. 6
71-065 Szczecin, tel. (91) 4442756
e-mail: msygit@univ.szczecin.pl