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Influence of nursing care in promoting healthy school lunch boxes

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Abstract

The present investigative work had the objective of describing the influence of nursing care in promoting healthy lunch boxes for schoolchildren. The methodology used was quantitative, comparative, positivist paradigm, non-experimental design, with direct observation and checklist instrument, applied to 125 school lunch boxes, in four educational establishments. The results showed that, initially, the lunch boxes included construction foods (62%), sweets, empanadas (58%), packaged drinks (52%), fruits-vegetables (36%). After the educational intervention provided by nursing professionals and a nutritionist, to parents and/or representatives, 85% of school lunch boxes included building-energy foods, fruits-vegetables, water, natural soft drinks, that is, a percentage greater than 25% of the found prior to the educational intervention, while less than 10% of these lunch boxes had cakes, puddings, empanadas, foods with high trans fats, salt, sugar, a percentage five times lower than that found prior to the educational intervention. In conclusion, the hypothesis was verified that nursing care applied through educational counseling promoted parental awareness of the need to prepare healthy lunch boxes.

Keywords: *Food, school lunch boxes, healthy, nursing care, educational intervention.*

Introduction

The school lunch box, according to what is expressed in the theoretical literature, refers to an intermediate diet that can cover about 10% to 15% of the calorie needs required by the child, for the strengthening of their biopsychosocial performance, during their stay in the educational establishment, suggesting the National Center for Food and Nutrition of Peru, that includes a piece of fruit, a drink prepared by the representative and a healthy food supplement.(1)

Likewise, one of the publications of the World Health Organization highlights the need for educational establishments to be able to promote healthy eating in parents, children and the educational community in general, because it is one of the mechanisms of protection against cardiovascular and metabolic diseases, such as high blood pressure. diabetes and other chronic conditions, which together kill nearly 8 million people annually. Therefore, it is essential to raise awareness among the population, from childhood, of the importance of maintaining a balanced diet, free from eating harmful foods, in order to strengthen the quality of life.(2)

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This premise is of great relevance in Latin America, because the Pan American Health Organization has expressed its concern due to the high rates of chronic malnutrition that affects two-thirds of children (66%) of low-income children in Guatemala, versus 17% of children belonging to middle- or high-income families. as well as 42% of children in Honduras versus 8% of those living with higher-income families, where in addition to these two countries, in Haiti, Mexico, Nicaragua, Peru and Panama, the rate of chronic child malnutrition in the rural sector exceeds 50% of those children living in rural areas.(3)

On the other hand, the Pan American Health Organization has referred to nursing care as the autonomous, collaborative, person-centered care provided by professionals in this discipline, in favor of the health of all individuals, whether or not they belong to priority groups, in order to improve the quality of life of the population. where school-age children are also found, as a sector of higher priority for the provision of health services.(4)

In fact, the nursing professional must be continuously prepared to provide comprehensive care to the school-age child, where he or she must apply the educational role, to advise parents, representatives, directors and teachers of schools, the need to monitor and ensure that the child population attending schools has a balanced diet. where the healthy lunch box acquires great importance for the entire educational community, where children, because they belong to one of the priority groups, require the greatest attention from the nursing service.(5)

In this regard, a research carried out in Peru points out the importance of nursing professionals being able to identify the factors of the biopsychosocial environment, through the fulfillment of school health programs, where the lifestyles of the family acquire great relevance for the development of nursing plans, a component in which, The healthy diet of children and the improvement of their habits, through the promotion of awareness of the healthy school backpack, are one of the main challenges faced by nurses.(6)

A similar premise is expressed in another article published in the Revista Gaúcha de Enfermería, which highlights the importance of nursing care and the work of these professionals, in the promotion of healthy eating, as part of the school health program, where the paradigm must be changed, to move from the recuperative to the preventive. Therefore, the promotion of healthy lifestyles in the educational community must generate habits for a healthy diet that is associated with healthy learning in the school-age child population.(7)

In another research, the main results were a level of inadequate knowledge of 67% of the mothers, in what is inherent to the foods that a healthy school lunch box should contain, also finding that most of these lunch boxes contained packaged foods and beverages, such as snacks, chips and processed juices, that is, unhealthy foods that are associated with child malnutrition. observing the research problem that can generate chronic malnutrition, overweight or obesity in children as a consequence.(8)

Thus, for example, in a study carried out in Peru, it was possible to know a low prevalence of healthy lunch boxes, where 5.4% of schoolchildren kept healthy food in their lunch box, with Arequipa, Moquegua and Tacna, being the most prevalent, with 13%, 9.4% and 9.3%, respectively, which are still very limited, to fight against child malnutrition.(9)

Regarding the above quotes, the ENSANUT survey carried out by the Ministry of Public Health, indicated that in Ecuador, 30% of school children are overweight or obese, while 25% of infants suffer from chronic malnutrition, especially in rural areas, where the percentage of malnutrition exceeds 40% and malnutrition remains between 25% and

30%. while 42% of indigenous children live with chronic malnutrition compared to 25% of the national average.(10)(3)

In view of this, it should be noted that one of the main purposes that nursing professionals must achieve, through their educational actions, is to promote the promotion of healthy eating, for the benefit of the prevention of child malnutrition in Riobamba, where advising the educational community to include healthy foods in the school lunch box, Given the intake of foods that are harmful to children's health by schoolchildren in schools, it is an imperative need at the present time.(11)

In addition, the results of a study carried out in a school in Guayaquil showed that at least 50% of parents who prepared their child's lunch box the day before do not place healthy foods in the school lunch box, with a higher prevalence of the inclusion of packaged beverages and processed foods, some of them with high salt and/or sugar content.(12)

Faced with this, the question arises whether the nurse is prepared to respond to the school-age child population, which expects comprehensive and holistic nursing care, which takes into account the pandimensionality of growth and development, that is, of the physical, intellectual, psychosocial, psychosexual, spiritual and moral development of the child, preferably in the natural environment where the child spends most of his time. that is, in the school and family environment, with the lunch box with unhealthy content, being one of the main problems that is generating as a consequence, the contribution to the increase in the phenomenon of malnutrition and that its association with limitations in nursing care must be found, especially due to the paralysis of school health during the years 2020 and 2021, because of the pandemic.(13)

With these assertions, the importance of the development of this research is demonstrated, because the advice that nursing professionals offer to parents and other members of the educational community, can strengthen awareness, so that the school lunch box includes healthy foods that contribute to the well-being of children, because, Nutritious meals low in saturated fats favor the growth and development of school children, where the constant control of the meals that the child eats at school is another factor that can contribute to the reduction of malnutrition and chronic child malnutrition. (14)

These statements were evident in the findings issued in a research carried out in Trujillo, Peru, where it was learned that through an educational program planned by nursing professionals working in the district of La Esperanza, for the benefit of the parents of the children who are educated in the schools of the sector in question, The content of healthy foods in school lunch boxes was increased by more than 25% of representatives, for the benefit of the health of these infants.(15)

In the same way, another research carried out in this South American country showed that 54% of parents did not have solid knowledge on how to prepare a healthy lunch box, due to the little information provided by the nursing professionals, responsible for implementing the school health program in their school communities, therefore, nursing advice can have direct implications to guide the legal representatives. To include healthy foods in your children's lunch boxes.(16)

To give greater solidity to the results of the background, it was exposed that the practical implications of nursing care were for the benefit of the healthy diet of school children, as evidenced in the findings of a reference published in a Cuban journal, which indicated that after the educational intervention, 80% of children brought healthy lunch boxes to school. that is, there was effectiveness in nursing counseling and the inclusion of healthy foods in school lunch boxes at Laurita Vicuña School.(17)

For this reason, the main beneficiaries of the efficient application of nursing care on the importance of bringing lunch boxes with healthy food to the schools under study, are the children who study in this educational institution, as well as their parents, who aspire that their children can maintain a balance in their growth and development. product of eating

healthily. This, in addition, favors the nursing professionals themselves and the health district in question, who will improve their performance and their institutional image, respectively.

Based on the background described, the general objective of this research work is to describe the influence of nursing care on the promotion of healthy lunch boxes for school-age children, establishing as specific purposes, establishing the type of food that children carry in the school lunch box, identifying nursing care oriented to the educational role in the school health program, in addition to establishing the connection between both variables.

Methodology

According to the study addressed in reference to "food in school lunchboxes and nursing care" and according to its objectives, this research has a quantitative, comparative and positivist paradigm approach, because its findings will be manifested in a concrete way, in the form of comparisons, to issue the findings, in relation to the evolution of the variables. In addition, its design is non-experimental, intra-group, field-based, because the characteristics of the study variables will not be altered (18) (19)(20), in which the information will be sought by going to the selected schools, which become the place of the events.(21)

The population considered is made up of parents who participated in the educational plans provided by the nursing professionals in the schools under study and 125 school-age children from four schools, distributed as follows:

Table 1. Population.

Educational Institution	Parent-Child Population
Admiral Illingworth Naval Academy	60
Naval Academy Vision	15
Simón Bolívar Republic	25
Dr. Alfredo Baquerizo Moreno	25
Total	125

Source: schools.

Since the population considered does not exceed 300 elements, therefore, it is not necessary to apply the sampling equation, therefore, convenience sampling is applied, that is, the sample is made up of 125 parents or guardians and school-age children, belonging to the four schools mentioned.(22)

The technique to be used for the collection of information, in the selected schools, is direct observation, with the instrument of the checklist (see annex 1), to analyze the two variables, that is, to be able to know the types of food contained in the school lunch box and the nursing educational plans that have been carried out in favor of the educational community belonging to these schools.

For the application of the field research, authorization was requested from the directors of the schools in question, after which the questionnaire was designed and duly validated, and then the instrument was socialized with the directors of the schools, parents and the corresponding nursing staff, to proceed to execute the instrument. The results were tabulated and processed using statistical tables and graphs, which favored the obtaining of the findings.

After that, the educational intervention was carried out for the parents, for six consecutive months, where nursing staff and a nutritionist, educated the representatives about the healthy school lunch box, evaluating these lunch boxes with the same checklist, for later discussion and to meet the objectives of the study.

Results

Once the methodology used in this research was described, the analysis and interpretation of the observed findings was carried out, considering the general data table and the graphs for each school. In the first place, the analysis and interpretation of results was carried out, considering the checklist inherent to the observation of the foods contained in the school lunch boxes of the children belonging to the sample, as follows:

Table 2. Results obtained in the field research with the application of the research instrument of healthy school lunchboxes

No	Sanitary conditions	ANAI						ANAVI						RSB						Dr. Alfredo Baquerizo M						Total					
		YES	% YES	NO	% NO	Total	% Total	YES	% YES	NO	% NO	Total	% Total	YES	% YES	NO	% NO	Total	% Total	YES	% YES	NO	% NO	Total	% Total	YES	% YES	NO	% NO	Total	% Total
1	The Lunch Box Contains Builder Foods	34	57%	26	43%	**60**	**100%**	8	53%	7	47%	**15**	**100%**	18	72%	7	28%	**25**	**100%**	17	68%	8	32%	**25**	**100%**	77	62%	48	38%	**125**	**100%**
2	The lunch box contains energy foods	36	60%	24	40%	**60**	**100%**	7	47%	8	53%	**15**	**100%**	9	36%	16	64%	**25**	**100%**	11	44%	14	56%	**25**	**100%**	63	50%	62	50%	**125**	**100%**
3	The lunch box contains at least one serving of fruits and vegetables	21	35%	39	65%	**60**	**100%**	5	33%	10	67%	**15**	**100%**	10	40%	15	60%	**25**	**100%**	9	36%	16	64%	**25**	**100%**	45	36%	80	64%	**125**	**100%**
4	The lunch box has an appropriate proportion of foods according to the child's age, weight, height and physical activity.	24	40%	36	60%	**60**	**100%**	7	47%	8	53%	**15**	**100%**	8	32%	17	68%	**25**	**100%**	9	36%	16	64%	**25**	**100%**	48	38%	77	62%	**125**	**100%**
5	In the lunch box there are fresh foods that are easy to handle and consume	32	53%	28	47%	**60**	**100%**	10	67%	5	33%	**15**	**100%**	23	92%	2	8%	**25**	**100%**	16	64%	9	36%	**25**	**100%**	81	65%	44	35%	**125**	**100%**
6	The lunch box contains liquids such as water, natural soft drinks or fruit juice	32	53%	28	47%	**60**	**100%**	8	53%	7	47%	**15**	**100%**	15	60%	10	40%	**25**	**100%**	14	56%	11	44%	**25**	**100%**	69	55%	56	45%	**125**	**100%**

7	Lunchbox foods do not contain overly elaborate foods such as cakes, puddings, empanadas, cakes, hamburgers	26	43%	34	57%	**60**	**100%**	7	47%	8	53%	**15**	**100%**	9	36%	16	64%	**25**	**100%**	11	44%	14	56%	**25**	**100%**	53	42%	72	58%	**125**	**100%**
8	If the lunch box contains an industrialized product, it is labeled and has an expiration date	44	73%	16	27%	**60**	**100%**	14	93%	1	7%	**15**	**100%**	21	84%	4	16%	**25**	**100%**	23	92%	2	8%	**25**	**100%**	102	82%	23	18%	**125**	**100%**
9	The lunch box does not contain packaged products that have trans fats in their composition, and high salt and sugar content	22	37%	38	63%	**60**	**100%**	7	47%	8	53%	**15**	**100%**	15	60%	10	40%	**25**	**100%**	13	52%	12	48%	**25**	**100%**	57	46%	68	54%	**125**	**100%**
10	Lunch box containers are airtight and safe. No spilling or combining of food	44	73%	16	27%	**60**	**100%**	12	80%	3	20%	**15**	**100%**	21	84%	4	16%	**25**	**100%**	21	84%	4	16%	**25**	**100%**	98	78%	27	22%	**125**	**100%**

Source: Checklist applied to children's lunch boxes in the schools under study.

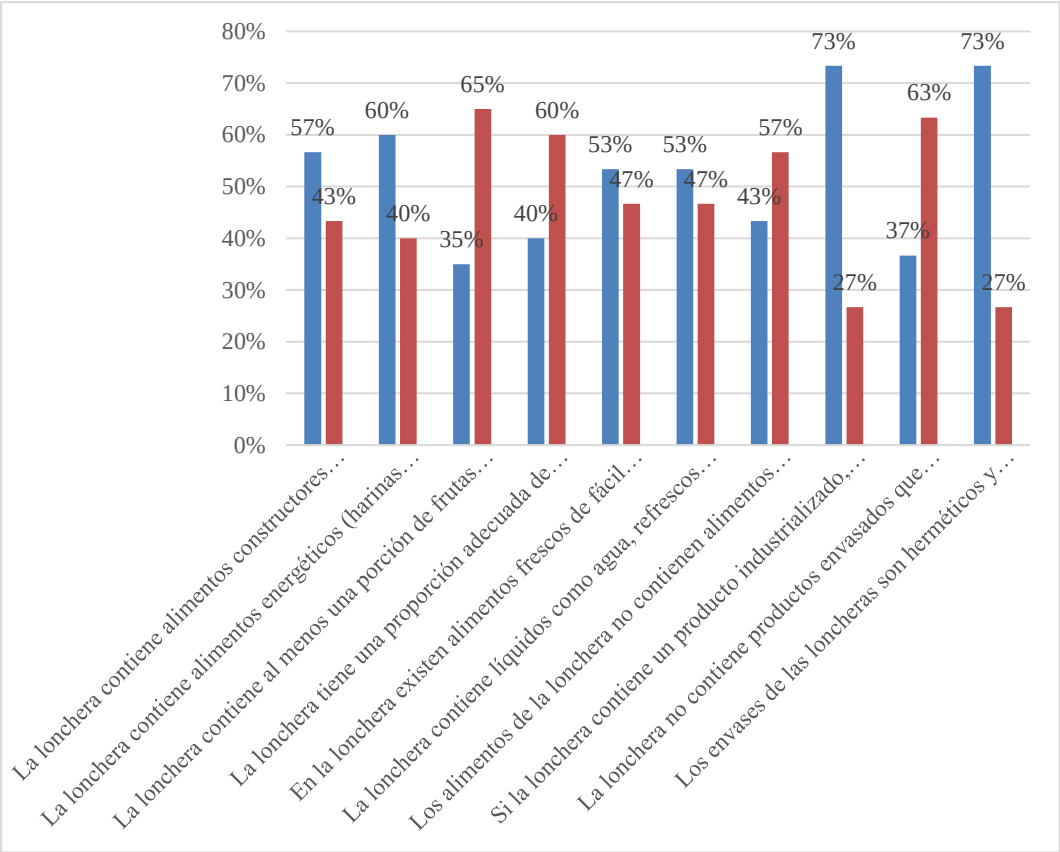

Figure 1. Results obtained in the field research with the application of the research instrument on the food in the school lunch box. Admiral Illingworth Naval Academy.

The results obtained showed that more than half of the school lunch boxes of the children who study at the Almirante Illingworth Naval Academy (57%), included in their content, construction foods such as dairy, meat and eggs, fresh foods that are easy to handle and consume, overly elaborated products such as cakes, puddings, empanadas, in addition to containing flours, cereals and packaged products with high sugar content. In 60% of cases, despite the fact that, in three-quarters of these lunch boxes (73%), these industrialized products had labeling, expiration date and their packaging was airtight, however, only a third of the school lunch boxes (35%) had supplies of fruits or vegetables.

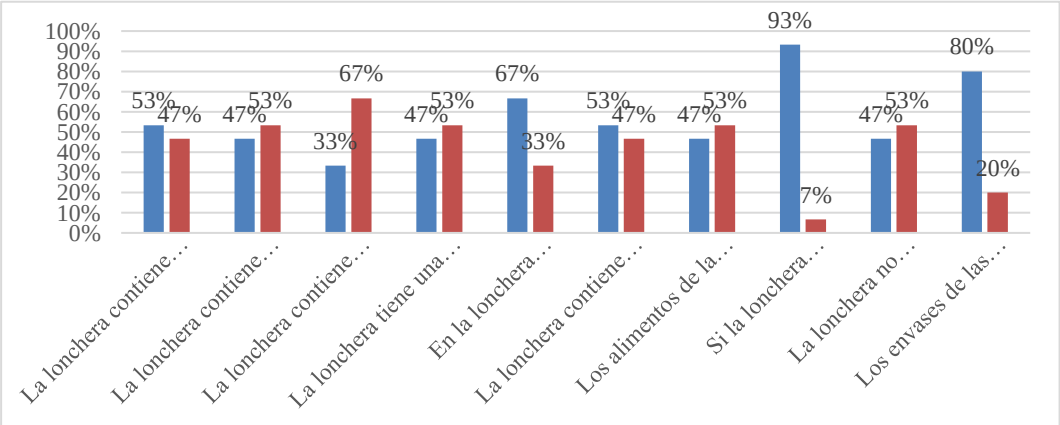

Figure 2. Results obtained in the field research with the application of the research instrument on the food in the school lunch box. Naval Vision Academy.

Source: Checklist applied to children's lunch boxes in the schools under study.

The results obtained showed that about half of the school lunch boxes of the children who study at the Naval Vision Academy, included in their content, construction foods such as dairy, meat and eggs (53%), fresh foods that are easy to handle and consume, overly elaborated products such as cakes, puddings, empanadas, in addition to containing flours, cereals and packaged products with high sugar content. In 47% of cases, despite the fact that, in five-sixths of these lunch boxes (93%), these industrialized products had labeling, expiration date and their packaging was airtight (80%). However, only one-third of school lunch boxes (33%) had fruit or vegetable supplies.

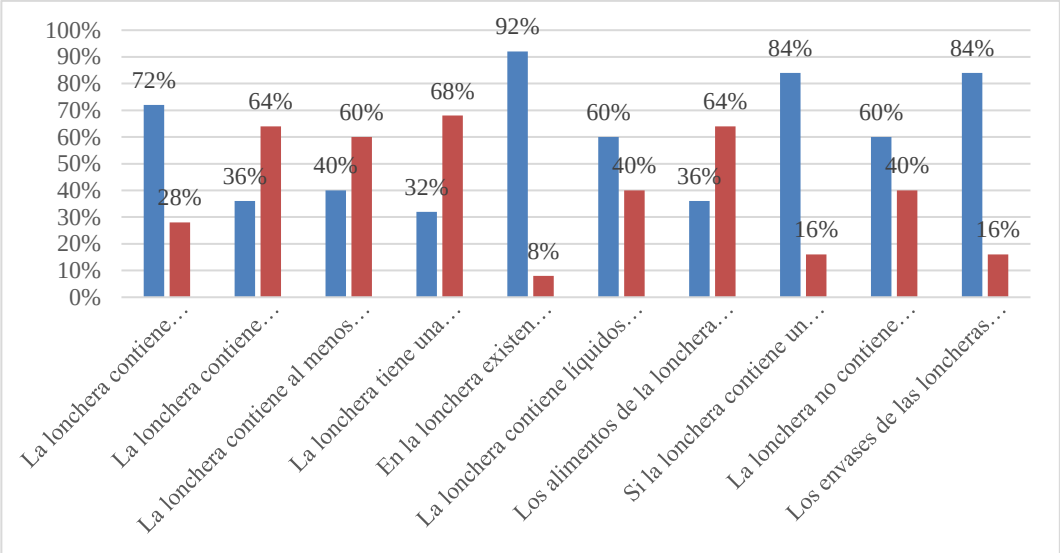

Figure 3. Results obtained in the field research with the application of the research instrument on the food in the school lunch box. Simón Bolívar Republic.

Source: Checklist applied to children's lunch boxes in the schools under study.

The results obtained showed that almost three quarters of the school lunch boxes of the children who study at the Simón Bolívar Republic School included in their content, construction foods such as dairy, meat and eggs (72%), fresh foods that are easy to handle and consume (92%), overly elaborated products such as cakes, puddings, empanadas (64%), in addition to containing packaged products with high sugar content. In 60% of cases, despite the fact that, in four-fifths of these lunch boxes (84%), these industrialized products had labeling, expiration date and their packaging was airtight. However, just over a third of school lunch boxes (40%) had supplies of fruit or vegetables, as well as flour and cereals (36%).

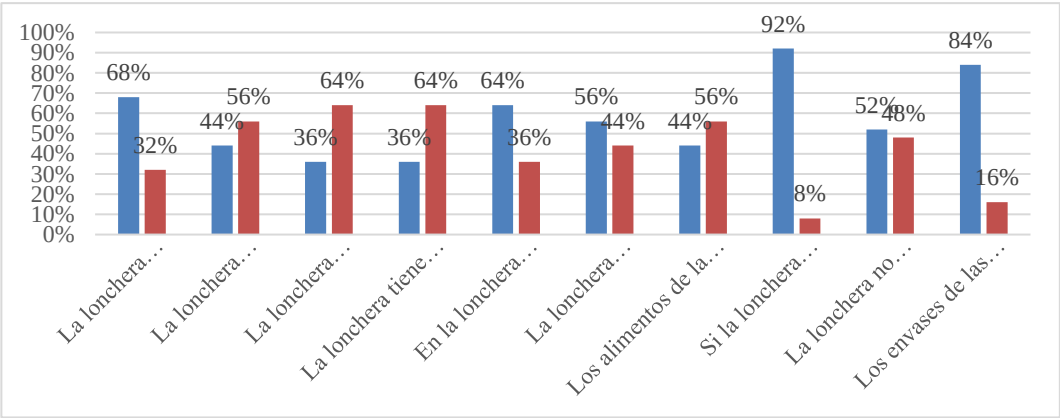

Figure 4. Results obtained in field research with the application of the research instrument on school lunchbox foods. Dr. Alfredo Baquerizo Moreno.

Source: Checklist applied to children's lunch boxes in the schools under study.

The results obtained showed that two thirds of the school lunch boxes of the children who study at the Dr. Alfredo Baquerizo Moreno School, included in their content, construction foods such as dairy, meat and eggs (68%), fresh foods that are easy to handle and consume (64%), overly elaborated products such as cakes, puddings, empanadas (56%), in addition to containing packaged products with high sugar content. In 52% of cases, despite the fact that more than four-fifths of these lunch boxes (92%), these industrialized products had labeling, expiration date and their packaging was airtight (84%). However, only slightly more than a third of school lunch boxes (36%) had fruit or vegetable supplies, as well as flour and cereals (44%).

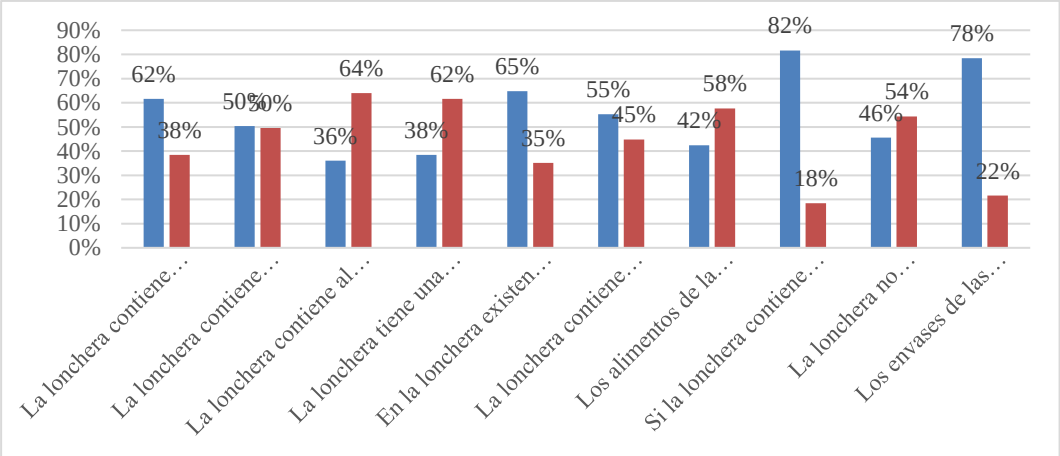

Figure 5. Results obtained in field research with the application of the research instrument on school lunch box foods. Total of the four schools.

Source: Checklist applied to children's lunch boxes in the schools under study.

The results obtained showed that almost two-thirds of the school lunch boxes of the children who studied in the four selected schools included in their content, construction foods such as dairy, meat and eggs (62%), fresh foods that are easy to handle and consume (65%), overly elaborated products such as cakes, puddings, empanadas (58%), in addition to containing packaged products with high sugar content. In 54% of cases, despite the fact that, in four-fifths of these lunch boxes (82%), these industrialized products had labeling, expiration dates and their packaging was airtight (78%). However, only slightly more than a third of school lunch boxes (36%) had fruit or vegetable supplies, and half of the lunch boxes had flour and cereals (50%).

Then, the educational intervention was carried out to the parents, for six consecutive months, on the importance of sending their children to school, bringing a healthy school lunch box, where in addition to the nursing staff, a nutritionist also collaborated. It should be added that all student representatives attended this educational intervention, which was carried out in each of the schools considered in this study.

After the educational intervention for the parents, the content of the school lunch box was evaluated in the children who went to school, after this time. Indeed, the results obtained demonstrated the following findings:

Table 3. Results obtained after educational intervention to parents or guardians, on healthy school lunch boxes

No	Sanitary conditions	Admiral Illingworth Naval Academy						Naval Academy Vision						Simón Bolívar Republic						Dr. Alfredo Baquerizo Moreno						Total					
		YES	% YES	NO	% NO	Total	% Total	YES	% YES	NO	% NO	Total	% Total	YES	% YES	NO	% NO	Total	% Total	YES	% YES	NO	% NO	Total	% Total	YES	% YES	NO	% NO	Total	% Total
1	The lunch box contains builder foods.	52	87%	8	13%	60	100%	13	87%	2	13%	15	100%	22	88%	3	12%	25	100%	22	88%	3	12%	25	100%	109	87%	16	13%	**125**	**100%**
2	The lunch box contains energy foods.	50	83%	10	17%	60	100%	12	80%	3	20%	15	100%	22	88%	3	12%	25	100%	22	88%	3	12%	25	100%	106	85%	19	15%	**125**	**100%**
3	The lunch box contains at least one serving of fruits and vegetables	51	85%	9	15%	60	100%	12	80%	3	20%	15	100%	22	88%	3	12%	25	100%	22	88%	3	12%	25	100%	107	86%	18	14%	**125**	**100%**
4	The lunch box has an adequate proportion of foods according to the age, weight, height and physical activity of the child (02-05 years)	52	87%	8	13%	60	100%	13	87%	2	13%	15	100%	22	88%	3	12%	25	100%	22	88%	3	12%	25	100%	109	87%	16	13%	**125**	**100%**
5	In the lunch box there are fresh foods that are easy to handle and consume	54	90%	6	10%	60	100%	14	93%	1	7%	15	100%	24	96%	1	4%	25	100%	24	96%	1	4%	25	100%	116	93%	9	7%	**125**	**100%**
6	The lunch box contains liquids such as water, natural soft drinks or fruit juice	50	83%	10	17%	60	100%	12	80%	3	20%	15	100%	23	92%	2	8%	25	100%	23	92%	2	8%	25	100%	108	86%	17	14%	**125**	**100%**
7	Lunchbox foods do not contain overly elaborate foods such	4	7%	56	93%	60	100%	1	7%	14	93%	15	100%	1	4%	24	96%	25	100%	1	4%	24	96%	25	100%	7	6%	118	94%	**125**	**100%**

	as cakes, puddings, empanadas, cakes, hamburgers																													
8	If the lunch box contains an industrialized product, it is labeled and has an expiration date	7	12%	53	88%	60	100%	3	20%	12	80%	15	100%	3	12%	22	88%	25	100%	3	12%	22	88%	25	100%	16	13%	109	87%	**125**	**100%**
9	The lunch box does not contain packaged products that have trans fats in their composition, and high salt and sugar content	3	5%	57	95%	60	100%	1	7%	14	93%	15	100%	1	4%	24	96%	25	100%	1	4%	24	96%	25	100%	6	5%	119	95%	**125**	**100%**
10	Lunch box containers are airtight and safe. No spilling or combining of food	56	93%	4	7%	60	100%	14	93%	1	7%	15	100%	24	96%	1	4%	25	100%	24	96%	1	4%	25	100%	118	94%	7	6%	**125**	**100%**

Source: Checklist applied to children's lunch boxes in the schools under study.

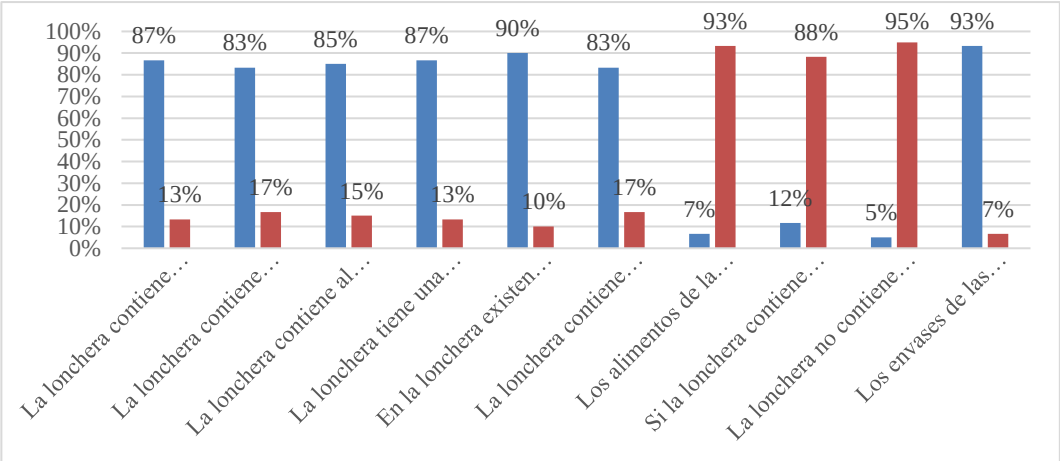

Figure 6. Results obtained in the field research with the application of the research instrument on the attendance of parents to the nursing advice on healthy school lunchboxes. Admiral Illingworth Naval Academy.

Source: Checklist applied to nursing education plans implemented on campus, taking into account the attendance of parents in these educational programs.

The results obtained showed that, after the educational intervention for parents and representatives, five-sixths of the school lunch boxes of the children studying at the Almirante Illingworth Naval Academy (83% to 87%), included in their content, construction foods such as dairy products, meats, eggs, flours, cereals, fruits, vegetables, water, natural soft drinks, fresh foods that are easy to handle and consume. in airtight containers, i.e., a margin more than 25% higher than that found prior to the educational intervention. Meanwhile, less than 10% of these lunch boxes had overly elaborate products such as cakes, puddings, empanadas, packaged foods with a composition of trans fats, and high salt and sugar contents, a percentage five times lower than that found prior to the education of parents and school representatives.

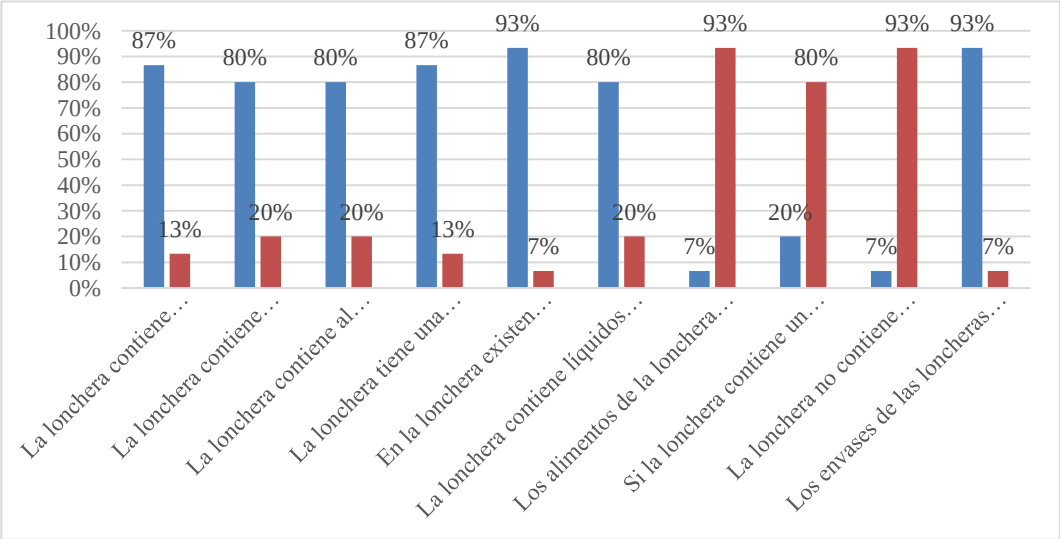

Figure 7. Results obtained in the field research with the application of the research instrument on the attendance of parents to the nursing advice on healthy school lunchboxes. Naval Vision Academy.

Source: Checklist applied to nursing education plans implemented on campus, taking into account the attendance of parents in these educational programs.

The results obtained showed that, after the educational intervention for parents and representatives, about five-sixths of the school lunch boxes of the children studying at the

Naval Vision Academy (80% to 87%) included in their content, construction foods such as dairy products, meats, eggs, flours, cereals, fruits, vegetables, water, natural soft drinks, fresh foods that are easy to handle and consume. in airtight containers, i.e., a margin more than 25% higher than that found prior to the educational intervention. Meanwhile, less than 10% of these lunch boxes had overly elaborate products such as cakes, puddings, empanadas, packaged foods with a composition of trans fats, and high salt and sugar contents, a percentage six times lower than that found prior to the education of parents and school representatives.

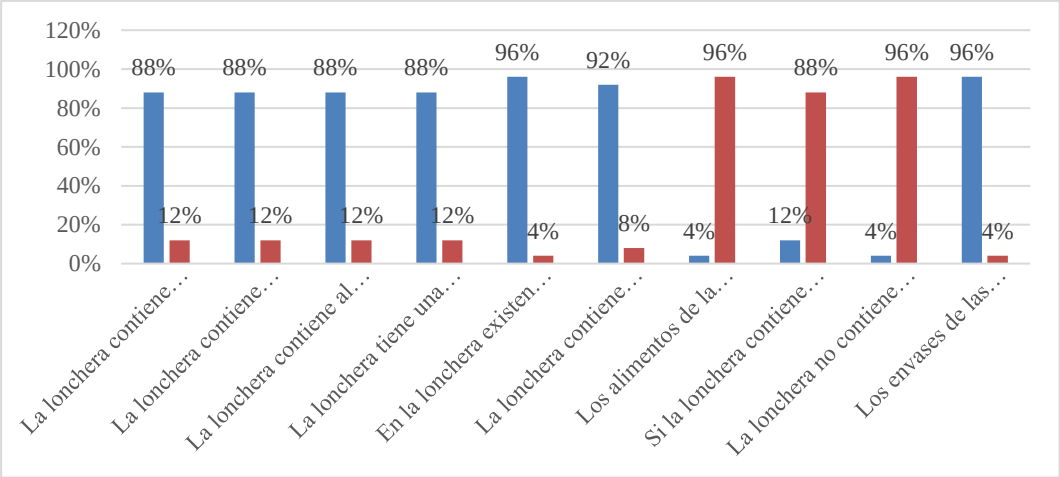

Figure 8. Results obtained in the field research with the application of the research instrument on the attendance of parents to the nursing advice on healthy school lunchboxes. Simón Bolívar Republic.

Source: Checklist applied to nursing education plans implemented on campus, taking into account the attendance of parents in these educational programs.

The results obtained showed that, after the educational intervention for parents and representatives, about seven-eighths of the school lunch boxes of the children who study at the Simón Bolívar Republic School (88%) included in their content, construction foods such as dairy products, meats, eggs, flours, cereals, fruits, vegetables, water, natural soft drinks, fresh foods that are easy to handle and consume. in airtight containers, i.e., a margin more than 30% higher than that found prior to the educational intervention. Meanwhile, less than 5% of these lunch boxes had overly elaborate products such as cakes, puddings, empanadas, packaged foods with a composition of trans fats, and high salt and sugar contents, a percentage seven times lower than that found prior to the education of parents and school representatives.

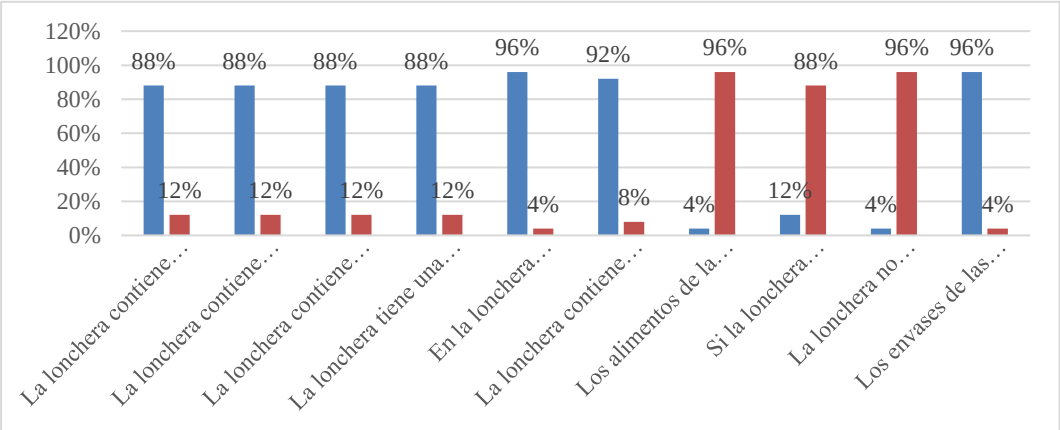

Figure 9. Results obtained in the field research with the application of the research instrument on the attendance of parents to the nursing advice on healthy school lunchboxes. Dr. Alfredo Baquerizo Moreno.

Source: Checklist applied to nursing education plans implemented on campus, taking into account the attendance of parents in these educational programs.

The results obtained showed that, after the educational intervention for parents and representatives, about seven-eighths of the school lunch boxes of the children who study at the Dr. Alfredo Baquerizo Moreno School (88%), included in their content, construction foods such as dairy products, meats, eggs, flours, cereals, fruits, vegetables, water, natural soft drinks, fresh foods that are easy to handle and consume. in airtight containers, i.e., a margin more than 30% higher than that found prior to the educational intervention. Meanwhile, less than 5% of these lunch boxes had overly elaborate products such as cakes, puddings, empanadas, packaged foods with a composition of trans fats, and high salt and sugar contents, a percentage seven times lower than that found prior to the education of parents and school representatives.

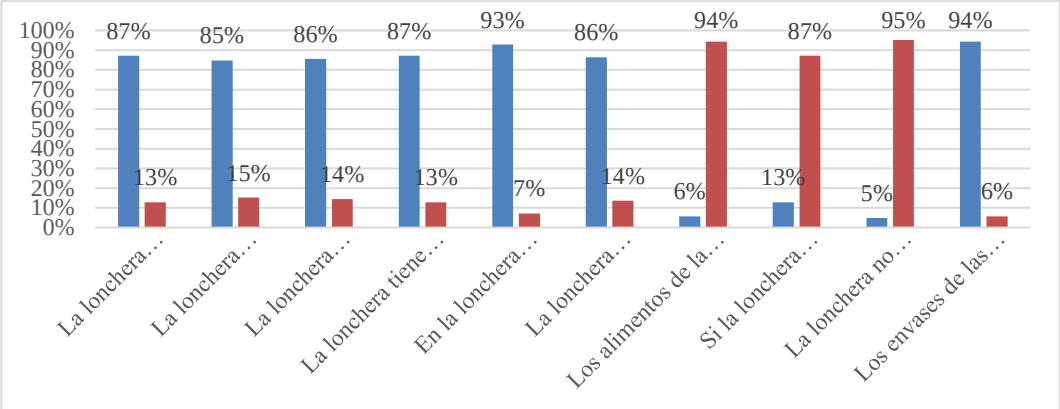

Figure 10. Results obtained in the field research with the application of the research instrument on the attendance of parents to the nursing advice on healthy school lunchboxes. Total of the four schools.

Source: Checklist applied to nursing education plans implemented on campus, taking into account the attendance of parents in these educational programs.

The results obtained showed that, after the educational intervention for parents and guardians, five-sixths of the school lunch boxes of the children studying in the four schools considered in this study (85% to 87%), included in their content, construction foods such as dairy products, meats, eggs, flours, cereals, fruits, vegetables, water, natural soft drinks, etc. Fresh food that is easy to handle and consume, in airtight containers, that is, a margin more than 25% higher than that found prior to the educational intervention. Meanwhile, less than 10% of these lunchboxes had overly elaborate products such as cakes, puddings, empanadas, packaged foods with a composition of trans fats, and high salt and sugar contents, a percentage five to six times lower than that found prior to the education of parents and school representatives.

Discussion

The results obtained during the observation of the foods contained in the school lunch boxes of the children belonging to the four schools belonging to the sample, showed that almost two thirds of the school lunch boxes included in their content, construction foods such as dairy, meat and eggs (62%), fresh foods that are easy to handle and consume (65%), But also, there were overly elaborate products such as cakes, puddings, empanadas (58%) and packaged beverages with high sugar content, in 52% of cases, most were airtight, while fruits and vegetables were only part of 36% of the lunch boxes observed.

Precisely, these results were close to the records of the Pan American Health Organization, which found levels of 44% to 66% of possession of food builders, energy, in school lunchboxes, with low contents of vegetables and fruits and high contents of

sweet, salty and fatty processed foods. These findings were also associated with those of the (3)Chamay and Saavedra (5), who reported a high content of processed foods, with high levels of sugar and highly processed products, such as sweets, empanadas, among others, prevailed in school lunch boxes, in 55% of cases.

In addition, these findings coincided with the results of Luna, which also found a high percentage of lunch boxes with sweets, empanadas, puddings, packaged and processed foods, with high levels of sugar, salt and fat. Similar results were observed in Diaz's study, which showed that school lunch boxes had packaged foods and beverages, such as snacks, chips and processed juices, that is, unhealthy foods that are associated with child malnutrition.(7)(8)

These findings, evidenced in the aforementioned references, demonstrate that the current situation regarding the unhealthy diet of schoolchildren continues to be a problem of high severity, which represents a risk factor for the acquisition of chronic hypertensive and metabolic diseases.

The results obtained after the educational intervention provided by the nursing professionals and a nutritionist, in favor of the parents and/or representatives of the children, showed that 85% of school lunch boxes included in their content, building and energy foods, such as dairy, meat, eggs, flours, cereals, as well as fruits, vegetables, water, etc. natural soft drinks, fresh foods that are easy to handle and consume, in airtight containers, that is, a level more than 25% higher than that found prior to the educational intervention. On the other hand, less than 10% of these lunch boxes had cakes, puddings, empanadas, snacks, packaged foods with a composition of trans fats, and high salt and sugar contents, a percentage five to six times lower than that found prior to the education of the parents and representatives of the schoolchildren, demonstrating the effectiveness of the educational intervention in the schools where the study was delimited.

In this regard, it should be noted that the findings of Juárez and Luna, who found somewhat similar results, in the first reference evidenced the effectiveness of educational programs on the healthy lunch box, demonstrated by a healthier diet of their children, contributing to the promotion of awareness of preparing their children's lunch box. with healthy foods, with building foods, energy foods, fruits, vegetables, at levels greater than 80%, with low inclusion of packaged and processed, fatty, sweet or salty products.(6)(7)

Also, these results coincided with those expressed by Juárez and Quishpi, who obtained an improvement in the consumption habits of schoolchildren, through the promotion of awareness of the healthy school backpack, provided by nursing professionals to parents, where the notable reduction of toxic foods and their replacement was noted. The lunch boxes contained fruits, vegetables, building and energy foods, in more than 80% of the cases.(6)(11)

For this reason, the hypothesis of the study was confirmed, i.e., that the nursing care applied through the educational intervention fostered the awareness of parents about the need to prepare healthy lunch boxes for school-age children, who study in the four schools under study.

Conclusion

The foods that were found in the school lunch boxes of school-age children showed that in most cases, they included in their contents, building and energy foods, fresh and easy to handle and consume, such as dairy, meat and eggs, but also, it was found in most of the sweet lunch boxes such as cakes. puddings, empanadas, packaged beverages with high sugar content, although fruits and vegetables were not found in the majority population of lunch boxes observed.

The attendance of parents or guardians at the educational intervention carried out by nursing and nutritionist professionals, as part of the school health program in the schools under study, was the majority to know the importance of including building foods, energy

foods, water, natural juices, fruits, vegetables, fresh products that are easy to handle, properly labeled, with an expiration date and airtight. in the school lunch box, avoiding highly processed foods, such as puddings, cakes, hamburgers, as well as items with high levels of fats and sugar, verifying that the educational intervention gave good results, increasing the number of lunch boxes with healthy food content by 25% to 30%.

It was possible to verify the hypothesis that the nursing care applied through the educational consultancies promoted the awareness of parents about the need to prepare healthy lunch boxes for school-age children, who study in the four schools under study.

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