Medical University - Varna
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NURSERIES IN SUPPORT OF PARENTS FOR FORMATION OF HEALTHY HABITS OF THE CHILD

ABSTRACT

of dissertation

for the award of the scientific and educational degree "Doctor"

Academic supervisor

Assoc. Prof. Katya Genova Eguruze, PhD in Public Health

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The dissertation contains 176 standard pages and is illustrated with 4 tables, 40 figures and 6 annexes. The reference list includes 182 references, 81 in Cyrillic and 101 in Latin.

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The defense materials are available in the Research Department of Medical University - Varna and are published on the website of Medical University - Varna.

Note: In the abstract the numbers of tables and figures do not correspond to the numbers in the dissertation.

CONTENTS

ABBREVIATIONS USED

BACHP - Bulgarian Association of Health Care Professionals

HEI - higher education institution

Nursery

EU - European Union

CRE - Committee on Research Ethics

MH - Ministry of Health

NSI - National Statistical Institute

UCI - united children's institution

GP - General Practitioner

WHO - World Health Organization

C.P.E. – Early childhood Center

NICE - National Institute for Health and Clinical Excellence

UNICEF – United Nations Children's Fund

I. INTRODUCTION

"Habits acquired in childhood do not just matter –
they are the basis of everything!"
Aristotle

For every society, the most valuable thing is the children and all efforts should be focused on their proper upbringing and cultivation of personality. This applies in full force to Bulgaria. In this sense, the development of every Bulgarian child in the period of early childhood is extremely important.

According to the UNICEF Discussion Report on Early Childhood Development, "the environment and conditions that the family, community and state provide for the physical, emotional and intellectual development of children in these early years are decisive both for the individual future of each child and for the potential and prospects of Bulgarian society." A number of studies of early childhood are conducted worldwide, which provide substantiated evidence that it is crucial for socialization, health, education and life realization of the individual.

Because of this, it is essential that the state provides support and assistance to families with children up to the age of 3.

In Bulgaria, there are different practices to support young parents in the upbringing and cultivation of the personality of their children. Modern living conditions require a large number of children to be enrolled in childcare facilities - nurseries - from an early age. In the hectic everyday life, the desire to keep a job and to develop their careers makes it necessary for many mothers to return to work before the expiry of the statutory parental leave. Some families do not have the necessary resources to provide for the upbringing and cultivation of the personality of their children at home. Sometimes young mothers who have two or more children with a small gap and have to stay at home longer to care for them have difficulties and need support and help. These are women who have grown up in families with working mothers and for them the most natural solution is to entrust their children to the care of nurseries.

Nurseries are the first step in raising children. They have proven to be a particularly suitable form of bringing them up. Until recently, it was believed that entering a nursery was not for the child's good, because of the separation from the mother and the loss of security. However, the desire to raise children up in large groups which offer opportunities for socialisation and receiving skilled care is increasingly gaining ground.

In practice, children spend more of the day in the nursery than in a family environment. Therefore, the educational process takes place primarily in the nursery, which is why it plays an essential role in the child's upbringing and cultivation of personality. Today, professional care is provided in nurseries by qualified nurses.

One of the main areas in the cultivation of personality of children is the formation of healthy habits. They are part of creating a positive attitude of the child towards a healthy lifestyle. The idea of healthy living starts in the family right from the birth of the child. The beginning in the creation of healthy habits should be set in a family environment. The nurse in the nursery helps parents in their efforts to build positive habits in their child. To achieve the

desired results, they need to interact and cooperate closely. They should be partners, complement each other and make uniform demands on the child in the process of formed habits. If what has been established in the family is not practised and maintained in the nursery and vice versa, habit sustainability will not be achieved.

In our society we still have examples of low health culture. Therefore, the problem of inculcating an active attitude to health by creating positive health habits is becoming increasingly relevant. A good health education in childhood is the key to a healthy lifestyle later on.

Early childhood is a particularly important period in a child's development. This is the best time to build the foundations of a healthy lifestyle with the active participation of parents and nurses in the nursery.

II. PURPOSE, OBJECTIVES, METHODS AND ORGANISATION OF THE STUDY

2.1. PURPOSE, OBJECTIVES AND HYPOTHESES OF THE STUDY

PURPOSE: To study and analyze the role of the nurse in the nursery for the formation of healthy habits of children, together with parents and to develop approaches to improve the interaction between the nurse and the family.

Main research **theses:** The nurse is the main figure of the nursery and as such plays a decisive role in the upbringing of children and the formation of healthy habits. Training for a healthy lifestyle begins with birth in a family environment and the main responsibility of parents is the formation of healthy habits of their children.

OBJECTIVES

In order to achieve our goal, we set the following objectives:

1. To study and analyze the scientific literature on the problem related to the organized upbringing and formation of healthy habits in children up to 3 years of age in the world and in Bulgaria.
2. To study the coverage of children in nurseries in Bulgaria for the period 2010-2020.
3. To study the level of health related habits of children attending nursery through the eyes of parents and nurse.
4. To study the interaction of parents and the nurse regarding health-related habit formation.
5. To develop a methodology to improve the effectiveness of parent-nurse interaction in health-related habit formation.
6. To approbate the methodology and evaluate its impact on the level of health habits of children.

WORKING HYPOTHESES OF THE STUDY

1. Implementation of a methodology to improve the effectiveness of parent-nurse interaction will lead to faster and more sustained formation of health-related habits in children.
2. The nurse in the nursery does not take an active part in the process of creating healthy habits in children up to 3 years of age.
3. The interaction between the parents and the nurse in the nursery, in terms of forming healthy habits, is unsatisfactory and there is no feedback.
4. Support to parents by the nurse will increase the effectiveness of building healthy habits in children.

2.2. SUBJECT, OBJECT AND SCOPE OF THE STUDY

The **subject** of the present study is the interaction between family and nursery for the formation of health habits in children under 3 years of age.

The **object** of the study - three groups of respondents were selected: nurses, parents and children up to 3 years of age attending nursery.

Scope of the study:

- **First respondent group:** Nurses practicing in nurseries located in the city of Varna - 49 nurses were covered, which is 31.5% of the nurses working in nurseries in Varna.

- **Second respondent group:** Parents of children up to 3 years of age attending nurseries in Varna - 844 covered, which are 41.6% of the parents of children attending nursery in Varna.

- **Third respondent group:** Children up to 3 years of age attending nursery - 844 covered, which is 41.6% of children attending nursery in Varna.

Logical units of the study:

- Each nurse working in a nursery in Varna.
- Every parent of a child under 3 years of age attending a nursery.
- Every child aged up to 3 years attending a nursery in Varna.

Technical units:

- A total of 12 nurseries in the city of Varna were surveyed. The nurseries included in the study were identified by typological selection by location.

Inclusion criteria

- **First respondent group:**

✓ Nurses practicing in nurseries in Varna.
✓ Nurses with at least 1 year of professional experience in a nursery.

- **Second respondent group:**

✓ Parents of children up to 3 years of age.
✓ Over 18 years of age.
✓ Signed informed consent.

- **Third respondent group:**

✓ Children up to 3 years of age to observe healthy habits.
✓ Regularly attended nursery.
✓ With signed informed consent by the parent.

Observers

A significant part of the study was carried out by the PhD student, with the directors of the nurseries as collaborators in the above mentioned structures - previously familiarized with the goal, the methodology of the study and trained in the use of the instruments (questionnaires) and the methodology of the parent training.

2.3. TIME AND STAGES OF IMPLEMENTATION

Time and place of studies:

Study of:

- ✓ Nurses' opinion of children's level of proficiency in healthy habits prior to parent education took place in June 2020.
- ✓ Parents' opinion on their children's level of health habits proficiency, prior to the training, took place in June 2020.
- ✓ Validation of the own methodology in a separate nursery - Nursery "Detelina" in the period January - June 2021.
- ✓ The opinion of the nurses on the level of mastery of health habits in children, after approbation of the Methodology was conducted in June 2021.

STAGES OF THE SCIENTIFIC STUDY

stage	**description of the activity**	**tool**	**time**	**location**
First	Formulation of the problem, definition of the goal, objectives and design of the study, development of the hypotheses, instrumentation and organizational plan.	Study of literature on the problem.	January - June 2020	Medical University -Varna
Second	After permission from the CRE of the Medical University - Varna, conducting a study. Conduct a survey with parents and nurses to establish the level of children's proficiency in healthy habits prior to the Methodology approbation.	Informed consent of parents Questionnaire No.1 for nurses Questionnaire No. 2 for parents	June 2020	Children's nursery in Varna.
	Analysis of the results. Determination of the group of parents who will participate in the training and the group of children who will be observed.	Statistical processing of the data. Preset criteria for selection of children. Development of Methodology for improving the effectiveness of interaction between the nurse and parents.	July - August 2020	Medical University -Varna Children's nursery in Varna.
Third	Conduct parent training. Implementation of the Habit Creation Methodology. Study of the level of children's mastery of healthy habits.	Training of parents. Observation of the group of children on whom the Methodology is applied.	January - June 2021	Medical University -Varna Children's nursery in Varna.
Fourth	Conduct a post-test survey of the Habit Creation Methodology. Conducted with the nurses to establish the level of children's mastery of healthy habits.	Checklist for monitoring habits. Development of an assessment scale.	June 2021	Medical University -Varna Children's nursery in Varna.

Fifth	Analysis and assessment of the level of children's mastery of healthy habits.	Statistical processing of the data.	June - August 2021	Medical University -Varna
Sixth	Preparation of conclusions and recommendations. Formation of the dissertation.		August - October 2021	Medical University -Varna

2.4. METHODS OF THE STUDY

- **Documentary method** - study of documents from the history of nursery work in the world and Bulgaria, and documents regulating it in modern times.
- **Questionnaire method** – study of the opinion of parents and nurses in the nurseries about the healthy habits of children.
- **Surveillance** - conducted by the nurses in the nursery on the children included in the study for approbation of our own Methodology for a period of 6 months.
- **Statistical methods** - for the statistical presentation of the results were used:

A/ ***Descriptive and evaluation methods:***

- ✓ Variance analysis of quantitative variables - mean value, standard deviation, minimum, maximum.
- ✓ Frequency analysis of qualitative variables which includes absolute frequencies, relative frequencies (in percentages), cumulative relative frequencies (in percentages).
- ✓ Graphical representations.

B/ ***Hypothesis testing methods*** - non-parametric methods - χ^2 method (Chi-square test).

C/ ***Correlation analysis*** - Spearman's coefficient.

Data processing was performed using SPSS v. 20.0 for Windows, and the significance level of the results was taken as $p<0.05$.

2.5. INSTRUMENTS OF THE STUDY

- **Questionnaires**

In order to achieve the aim and objectives of the study, 3 questionnaires have been developed which contain closed and open questions.

Questionnaire № 1 - about the opinion of the nurses to establish the level of mastery of healthy habits of children before the implementation of the Methodology. The questionnaire contains 25 questions, 8 open and 17 closed, divided into 4 groups:

Group 1 of questions for demographic and general data

Group 2 of questions - assessing children's basic hygiene and eating habits

Group 3 of questions - related to the nurse's competence to form habits in children

Group 4 of questions - about the interaction of the nurse in the nursery with the parents of the children

Questionnaire № 2 - about the parents' opinion on the level of their children's mastery of healthy habits before the implementation of the Methodology. The questionnaire contains 25 questions, 5 open and 20 closed, divided into 5 groups:

Group 1 of questions for demographic and general data

Group 2 of questions - assessing children's basic hygiene and eating habits

Group 3 of questions - about the interaction of the parents with the nurse in the nursery

Group 4 of questions - related to the awareness and the need of the parents for training for the formation of healthy habits

Group 5 of questions - about the involvement of parents in the formation of healthy habits in their children

Habit monitoring list

To be completed by the nurse to monitor the change in the development of each of the habits after the implementation of the Methodology. The Habit Monitoring list contains two tables and two closed questions:

- ✓ The first table includes habits related to eating
- ✓ In the second table hygiene habits are listed
- ✓ The two questions explore the nurse's opinion on difficulties encountered in forming the habits

2.6. METHODOLOGY FOR IMPROVING THE EFFECTIVENESS OF INTERACTION BETWEEN THE NURSE AND PARENTS.

The methodology was developed after the baseline survey prior to parent training.

Purpose of the methodology: Improving the interaction between the nurse in the nursery and the parents in building healthy habits of children up to 3 years of age.

Object: Children in the nursery

Subject: Healthy habits of children in the nursery

Subjects: Nurses and parents

Term of Methodology Approval: 6 months

Fig. 1. Methodology for improving the effectiveness of interaction between the nurse and parents.

Objectives of the Methodology:

1/ To obtain informed consent from parents for the inclusion of their children in the study.

2/ To explore the need for parent training for healthy habit formation.

3/ To familiarize parents and nurses with the Methodology of interaction for building healthy habits of children up to 3 years of age:

- ➢ To develop and approbate a Model for Building Healthy Habits in the Nursery involving the active participation of the nurse and family.
- ➢ To organize and test the training of parents by developing a guide "Practical advice for parents".

- To develop evaluation criteria and to propose activities for creating a specific habit, according to the age group of the child.

4/ To create optimal conditions for monitoring and building healthy habits of children in the nursery and family.

5 / The observation should be carried out within 6 months and monitoring should be carried out through an evaluation scale developed by us.

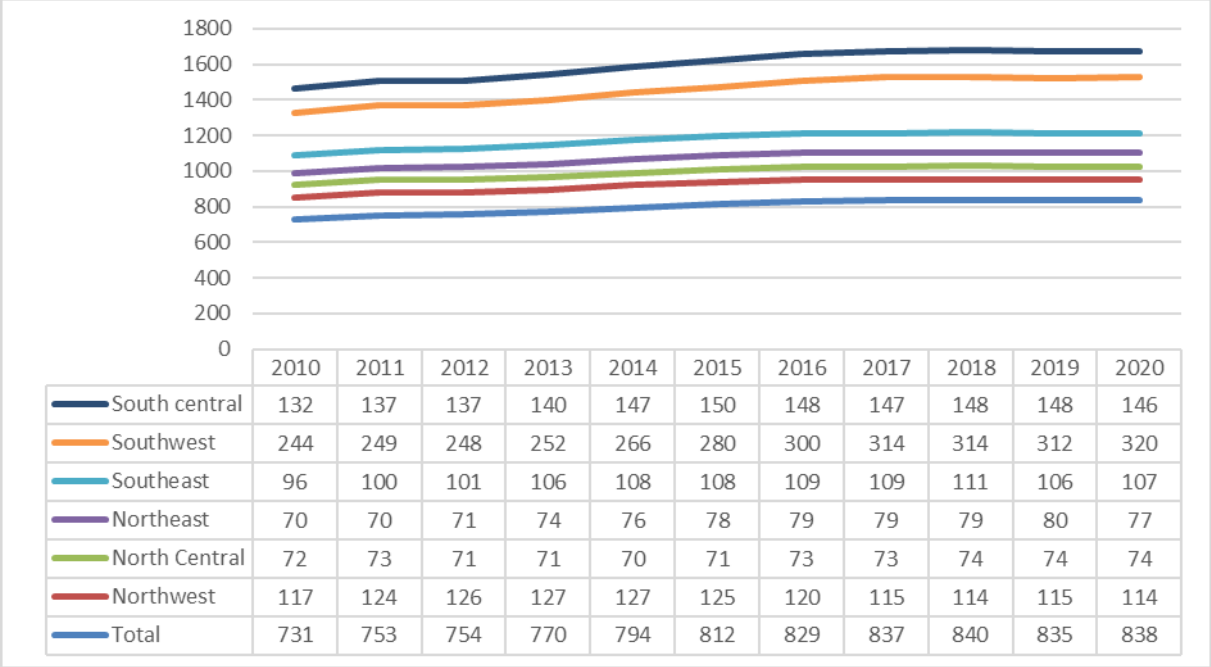
6/ To process and analyze the results obtained from the whole process.

The sequence of tasks in time is an algorithm of application of the Methodology, presented in synthesized form in fig. 2: establishing the initial level of children's health habits when they enter the nursery; parent training; interaction between the nurse in the nursery and the parents for a period of 6 months; supervision of the nurse over the children; registration of the results - the change in the health habits of the children; evaluation.

The study was conducted after obtaining permission from the Commission on Ethics of Research at MU-Varna - Minutes / Decision № 94, meeting on 25.06.2020. All participants in the study have signed an informed consent.

III. RESULTS AND DISCUSSION

3.1. Characteristics of children enrolled in nurseries by age groups and planning areas in Bulgaria for the period 2010-2020.

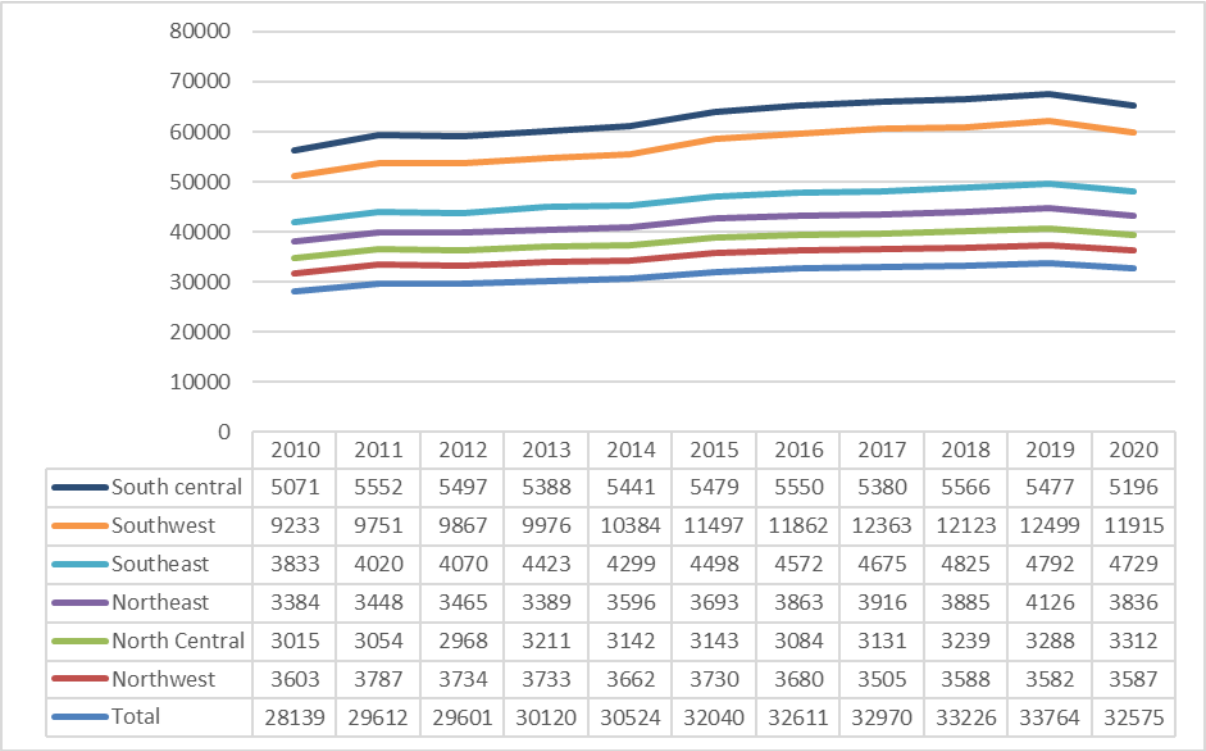


	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
South central	132	137	137	140	147	150	148	147	148	148	146
Southwest	244	249	248	252	266	280	300	314	314	312	320
Southeast	96	100	101	106	108	108	109	109	111	106	107
Northeast	70	70	71	74	76	78	79	79	79	80	77
North Central	72	73	71	71	70	71	73	73	74	74	74
Northwest	117	124	126	127	127	125	120	115	114	115	114
Total	731	753	754	770	794	812	829	837	840	835	838

Fig. 2. Number of nursery groups for the period 2010-2020 (Based on NSI data)

Fig. 2 shows the number of nursery groups for the period 2010-2020. At present, the situation shows an increase in their number in the country. In all regions of Bulgaria there is a gradual increase in the number of nursery groups, including nursery groups in kindergartens. In 2010 they were 731, and in 2020 - 838, and it is noteworthy that most are in the South-West region. This is due to the larger population, because this area includes Sofia (capital) and Sofia region. In recent years, many young people and families in the capital and other major cities in the region are looking for work, which increases the need for more nurseries, and therefore places in nursery groups. In spite of the increasing number of nursery groups and nursery places, they are still insufficient to meet the needs of Bulgarian families in many regions of the country.

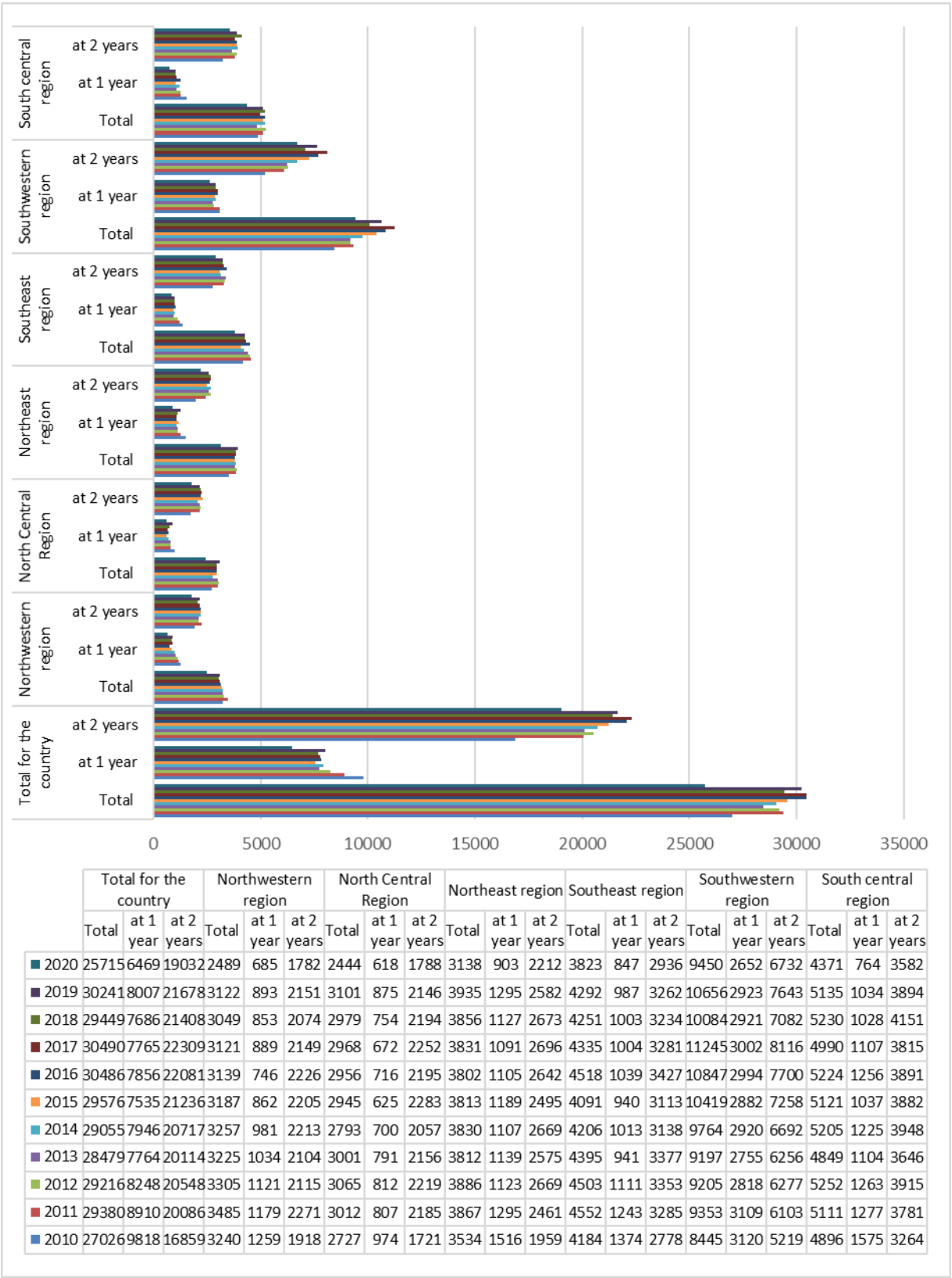
According to the National Statistical Institute, at the end of 2020 the total number of places in nurseries was 32 575, compared to 28 139 in 2010. The tendency of a smooth increase is maintained, and the first place in this indicator is held by the South-West region (Fig. 3). The increase in nursery places is a result of the increased number of new nurseries opened in the country over this period.



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
South central	5071	5552	5497	5388	5441	5479	5550	5380	5566	5477	5196
Southwest	9233	9751	9867	9976	10384	11497	11862	12363	12123	12499	11915
Southeast	3833	4020	4070	4423	4299	4498	4572	4675	4825	4792	4729
Northeast	3384	3448	3465	3389	3596	3693	3863	3916	3885	4126	3836
North Central	3015	3054	2968	3211	3142	3143	3084	3131	3239	3288	3312
Northwest	3603	3787	3734	3733	3662	3730	3680	3505	3588	3582	3587
Total	28139	29612	29601	30120	30524	32040	32611	32970	33226	33764	32575

Fig. 3. Number of places in the nursery groups for the period 2010-2020 (Based on NSI data)

Fig. 4 shows the number of children attending nursery by age group. The results presented by the National Statistical Institute show that in all regions the children who enter the nursery at the age of two predominate. One of the main problems for children entering the nursery is that the number of nursery places is several times smaller than the number of children who need this service.



	Total for the country			Northwestern region			North Central Region			Northeast region			Southeast region			Southwestern region			South central region		
	Total	at 1 year	at 2 years	Total	at 1 year	at 2 years	Total	at 1 year	at 2 years	Total	at 1 year	at 2 years	Total	at 1 year	at 2 years	Total	at 1 year	at 2 years	Total	at 1 year	at 2 years
2020	25715	6469	19032	2489	685	1782	2444	618	1788	3138	903	2212	3823	847	2936	9450	2652	6732	4371	764	3582
2019	30241	8007	21678	3122	893	2151	3101	875	2146	3935	1295	2582	4292	987	3262	10656	2923	7643	5135	1034	3894
2018	29449	7686	21408	3049	853	2074	2979	754	2194	3856	1127	2673	4251	1003	3234	10084	2921	7082	5230	1028	4151
2017	30490	7765	22309	3121	889	2149	2968	672	2252	3831	1091	2696	4335	1004	3281	11245	3002	8116	4990	1107	3815
2016	30486	7856	22081	3139	746	2226	2956	716	2195	3802	1105	2642	4518	1039	3427	10847	2994	7700	5224	1256	3891
2015	29576	7535	21236	3187	862	2205	2945	625	2283	3813	1189	2495	4091	940	3113	10419	2882	7258	5121	1037	3882
2014	29055	7946	20717	3257	981	2213	2793	700	2057	3830	1107	2669	4206	1013	3138	9764	2920	6692	5205	1225	3948
2013	28479	7764	20114	3225	1034	2104	3001	791	2156	3812	1139	2575	4395	941	3377	9197	2755	6256	4849	1104	3646
2012	29216	8248	20548	3305	1121	2115	3065	812	2219	3886	1123	2669	4503	1111	3353	9205	2818	6277	5252	1263	3915
2011	29380	8910	20086	3485	1179	2271	3012	807	2185	3867	1295	2461	4552	1243	3285	9353	3109	6103	5111	1277	3781
2010	27026	9818	16859	3240	1259	1918	2727	974	1721	3534	1516	1959	4184	1374	2778	8445	3120	5219	4896	1575	3264

Fig. 4. Number of children enrolled in the nursery for the period 2010-2020. (Based on NSI data)

Table 1. Nurseries and places in them on 31.12.2020 by statistical regions and districts

Statistical districts Regions	Nurseries	Places at the end of the year	
		Total	including independent nurseries
Total	**838**	**32,575**	**14,196**
North West	**114**	**3,587**	**1,764**
Vidin	11	260	72
Vratsa	29	826	258
Lovech	14	496	330
Montana	18	548	376
Pleven	42	1,457	728
North Central	**74**	**3,312**	**2,215**
Veliko Tarnovo	21	1,087	824
Gabrovo	11	593	288
Razgrad	10	384	287
Ruse	24	885	564
Silistra	8	363	252
Northeastern	**77**	**3,836**	**2,710**
Varna.	43	2,025	1,194
Dobrich	11	667	587
Targovishte	8	354	300
Shumen	15	790	629
Southeastern	**107**	**4,729**	**2,245**
Burgas	39	1,795	425
Sliven	13	677	483
Stara Zagora	42	1,667	1,137
Yambol	13	590	200
Southwestern	**320**	**11,915**	**3,209**
Blagoevgrad	54	1,905	877
Kyustaendil	15	493	180
Pernik	15	483	148
Sofia	37	1,007	140
Sofia (capital)	199	8,027	1,864
South Central	**146**	**5,196**	**2,053**
Kardzhali	13	515	80
Pazardzhik	22	585	-
Plovdiv	71	2,846	1,743
Smolyan	15	370	40
Haskovo	25	880	190

Source: https://www.nsi.bg/bg/content/3342/%D0%B4%D0%B5%D1%82%D1%81%D0%BA%D0%B8-%D1%8F%D1%81%D0%BB%D0%B8

Table 1 presents the number of nurseries and places in them by statistical regions and districts at the end of 2020, according to the National Statistical Institute. According to this information, children in Varna, which is the third largest city in Bulgaria, are cared for in 43 nurseries and nursery groups to the United children's institutions (UCI), which makes 2,025 vacancies for 2020. The number of admitted children is 2,090, while the total number of children in the age group of 1 and 2 years is 8,601. The number of children this year who are old enough to attend nurseries is more than 4 times higher than the vacancies in health facilities. From this it can be concluded that there is a shortage of places in the nurseries in Varna and this deprives a significant part of the children up to 3 years of age of the opportunity to be raised and educated in children's groups.

The discrepancy between the number of places in nurseries and the number of children to be enrolled in them is valid not only for Varna but for the whole country. This trend of a significant shortage of nursery places compared to the number of children of nursery age in the country has been going on for a long time. Such data were published in 2014 in the Report of Bulgaria on Early Childhood Development, prepared by the World Bank in the framework of the initiative Systematic approach to better results in education - Early Childhood Development (SABER-ECD). It highlights that only 20% of children under 3 years of age in the country have access to early childhood care in nursery or nursery groups in pre-primary schools and recommends that the government's efforts should focus on children aged 1-3 years.

3.2. Healthy habits of nursery children as seen through the eyes of parents and nurses (results of own study)

Habits are specific behaviours that are characterised by being performed repeatedly, automatically and with little variation. This makes them effective due to the reduction of mental effort cost in the child (American Occupational Therapy Association (2014); Lally P., & Gardner, B. (2013)).

The study of the level of health related habits of children attending nursery starts with the study of parents' opinion regarding the cultivation of personality of children.

The mean age of the children studied was 2.8 ± 0.49 years (1.1 - 3.7 years), with a slight preponderance of girls over boys (53.0% for girls and 47.0% for boys, respectively) (Fig. 5) There was no significant difference in the age of the children in terms of sex ($p>0.05$). The data confirm the registered trend from the National Statistical Institute that children enter the nursery between the ages of two and three.

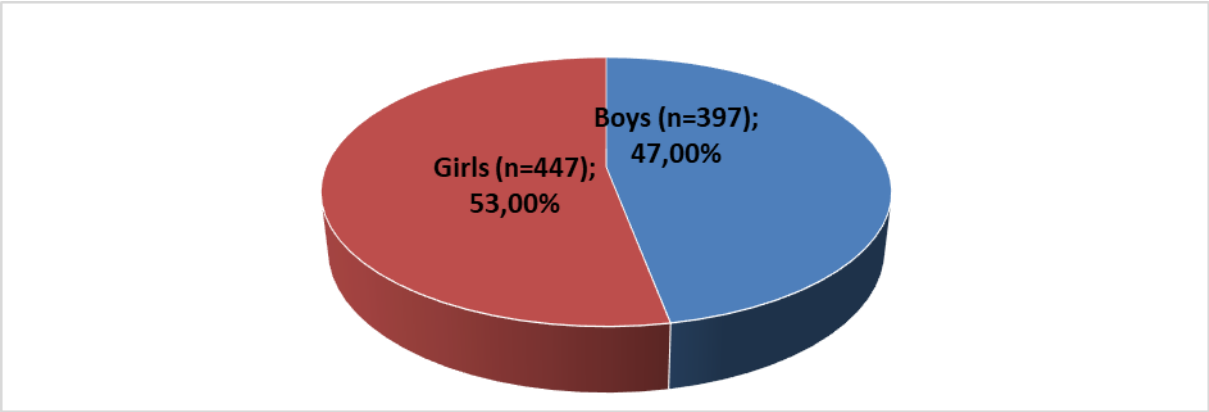


Fig. 5. Distribution according to sex of the surveyed children

The relative share of children attending nursery for a period of approximately 1 year prevails (66.7%) (Fig. 6). This finding is a result of the fact that the majority of children enter nursery between the ages of 2 and 3 years. That is why their stay in the nursery is about 1 year - until they turn 3 years old.

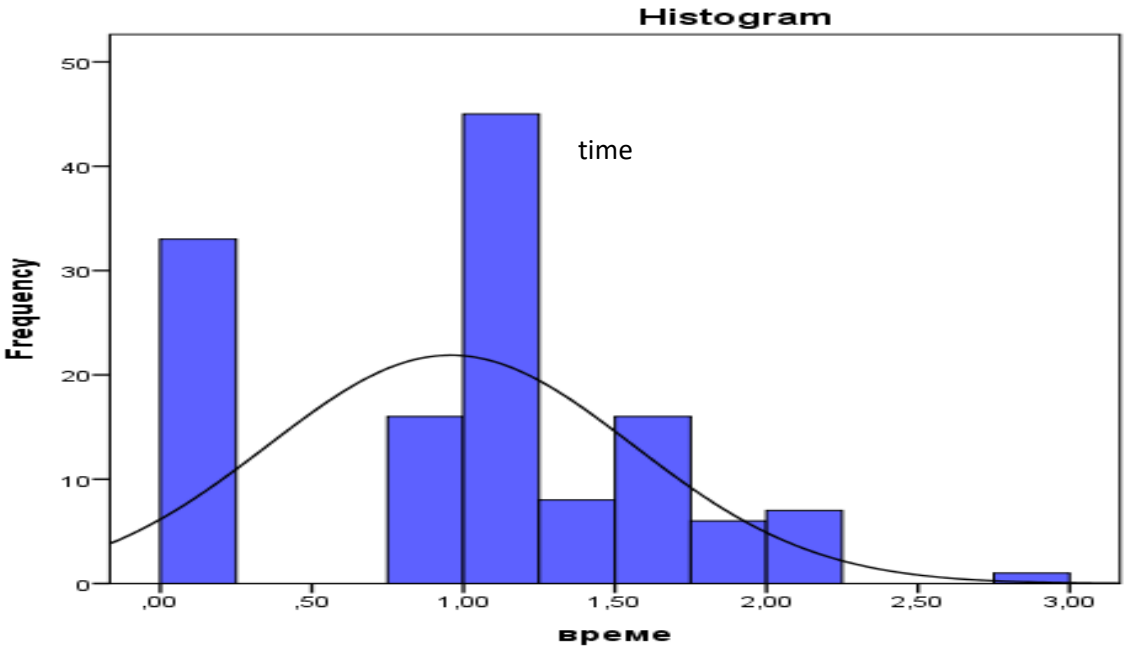


Fig. 6. Distribution according to the time for which the children attend the nursery (in years)

The average age of the surveyed parent was 33.7 ± 4.59 years (23 - 45 years), the majority of the respondents were women (90.6%), persons with higher education (77.3%) (Fig. 7) and working parents (87.2%) (Fig. 8).

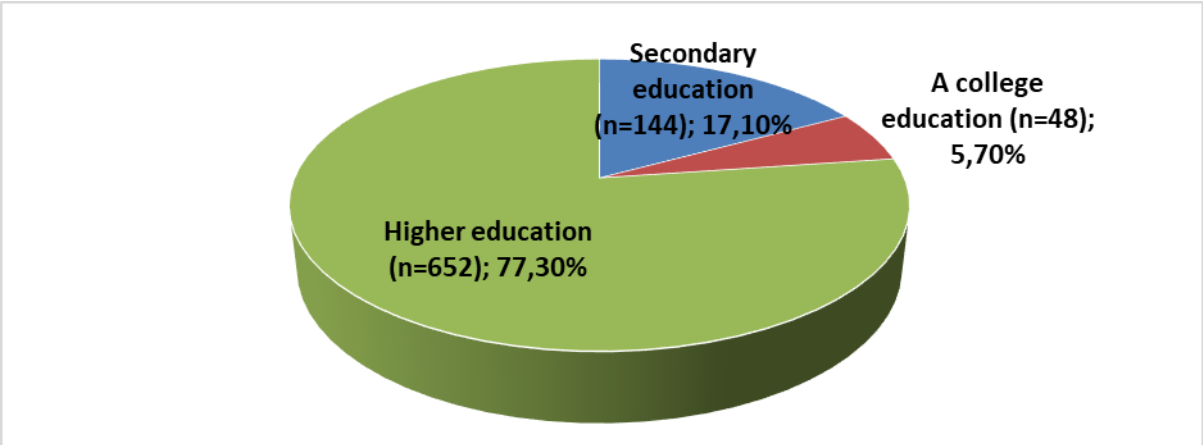


Fig. 7. Distribution of parents according to educational level

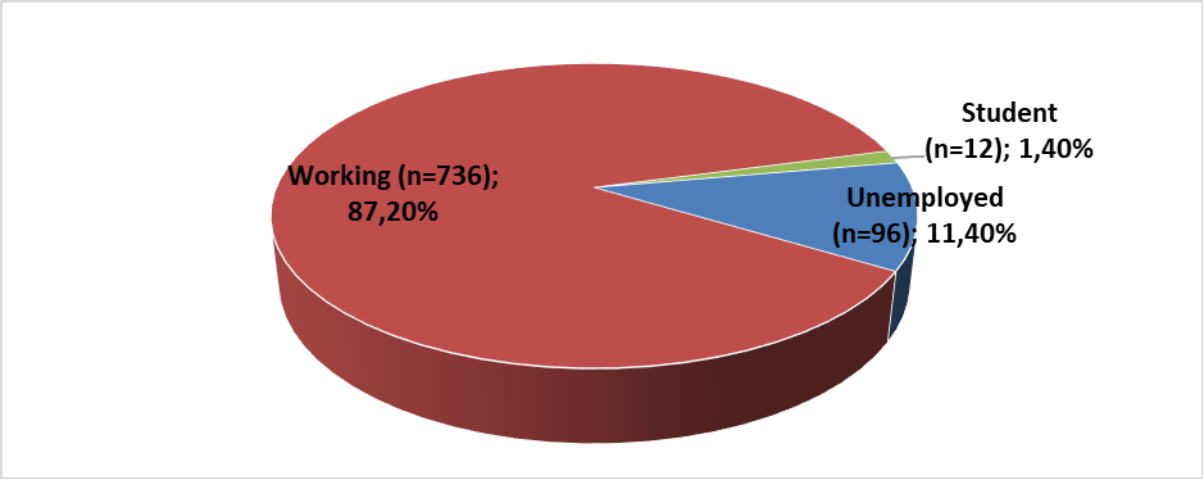


Fig. 8. Distribution of parents by employment

The results of the survey among parents show that the children who are the first child in the family have a predominant relative share (65.0%), while only 4.4% are third in a row (Fig. 9). Probably due to the young age of the parents, first born children dominate. At the beginning of parenthood, the family has not yet established experience and traditions in child upbringing. In the period of habit formation, they feel insecure and need support and information. And with each new child in the family, the parenting experience increases, the stock of information and knowledge is replenished and the parents become more confident. However, this does not mean that they do not need qualified support and assistance in forming healthy habits in their children.

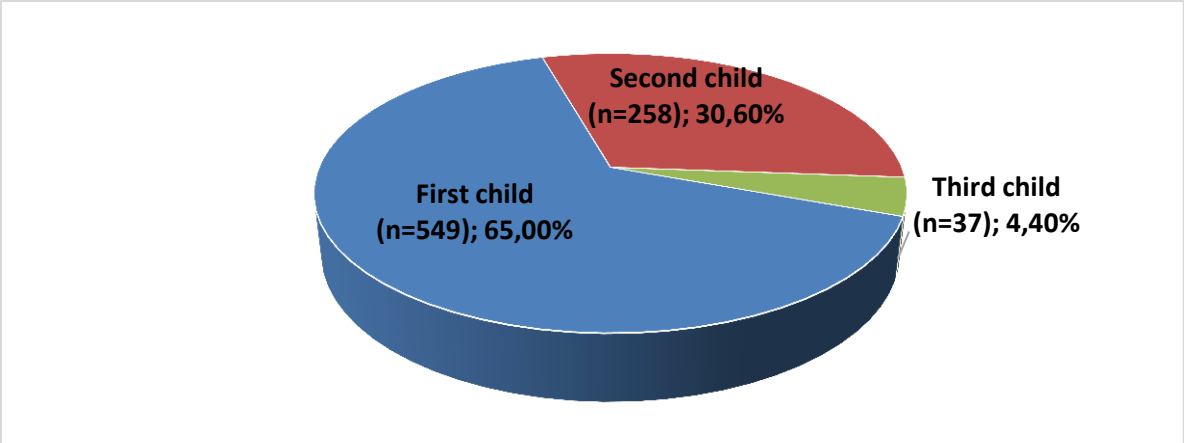


Fig. 9. Sequence of the child in the family

According to 69.7% of the parents surveyed, both parents are involved in building healthy habits in their child. At the same time ¼ (25.4%) answered that the upbringing of the child is mainly done by the mother 10). The obtained results correspond with the established traditions of the family as a social unit, both parents being involved in the upbringing and cultivation of personality of children, including the formation of their habits. In families in which, for whatever reason, the father is absent more often and for a longer period of time, this task is mainly undertaken by the mother.

Motivation, willpower and rewards are three of the many factors contributing to behaviour change and healthy habits. These factors are considered in the context of promoting one's own desire for change, not just externally controlled behavior change. This externally controlled change in behavior is often due to the family, but in combination with encouraging the child to gradually change their own behavior is extremely important for the formation of habits.

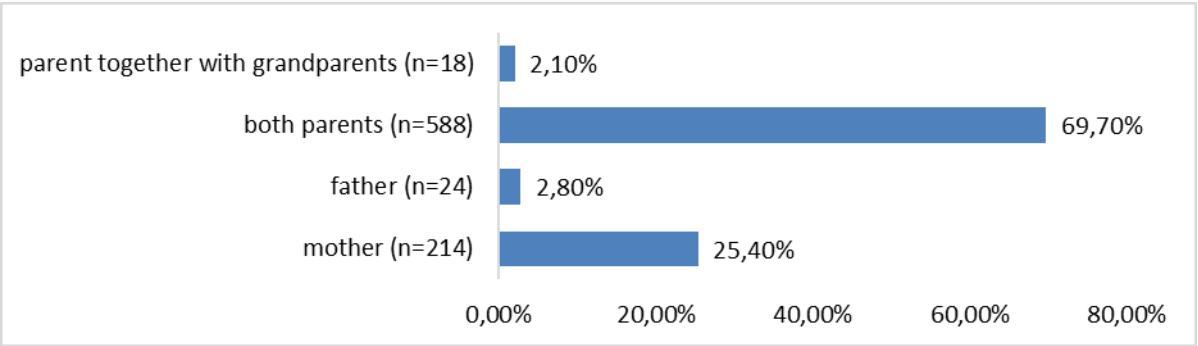


Fig. 10. Which family member spends more time building the child's healthy habits

A significant part of the parents share that they spend time every day to build healthy habits in performing daily activities (94.3%) (Fig. 11). A low proportion of respondents reported that they pay attention to forming certain habits when they have time or only in the evening. The high percentage indicates a good trend, showing the family's assumption of responsibility for the upbringing of the child and the parents' desire to raise a healthy and educated generation.

Challenges such as fatigue, impaired health and poor sleep limit willpower and reduce the energy needed to create and maintain healthy habits in children. Nurses can provide specialized help in these areas through assessment and health education for parents of children in the nursery. Other interventions that could be effectively guided by nurses working on behavioral health include communication with parents, daily practice of forming new habits, maintenance and reinforcement of old ones to lay the foundation for healthy living for children in the future. In this area, assessment and promotion of positive healthy habits can be a central topic of discussion in communication between nurses and children's families.

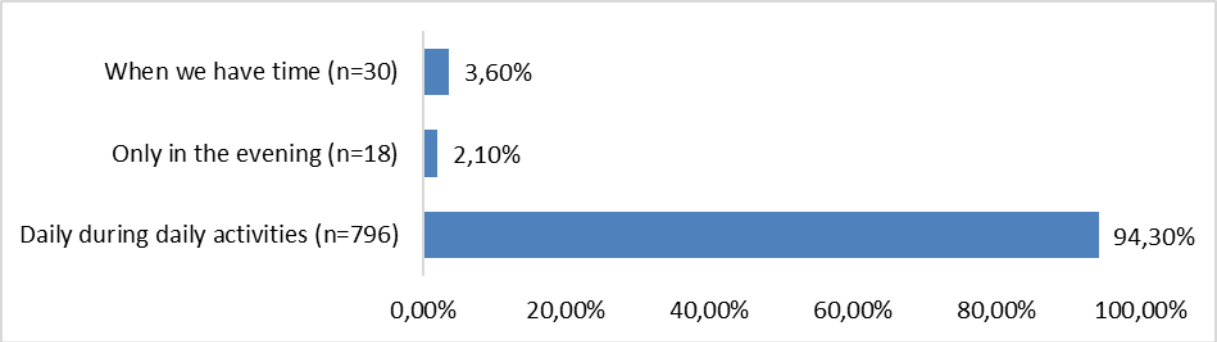


Fig. 11. Time spent daily by parents to build healthy habits in the child

Just over half of the parents surveyed (55.7%) reported that they sometimes have difficulty establishing healthy habits (Fig. 12).

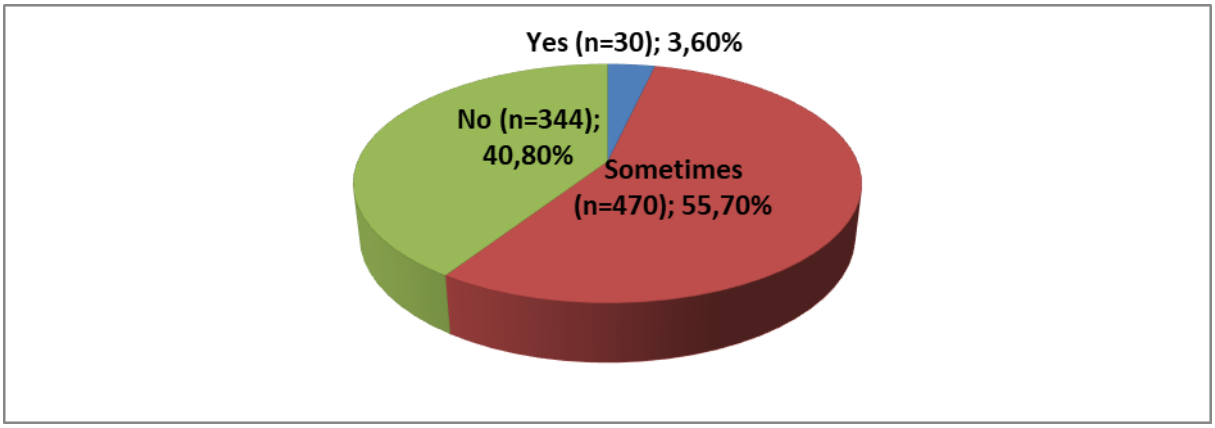


Fig. 12. Parents' difficulties in establishing healthy habits

There was a significant difference in terms of difficulties encountered by parents in creating habits and order of the child ($\chi 2 = 80.64$ $p < 0.001$) The relative share of parents experiencing difficulties in creating healthy habits decreases with increasing order of the child in the family (Fig. 13).

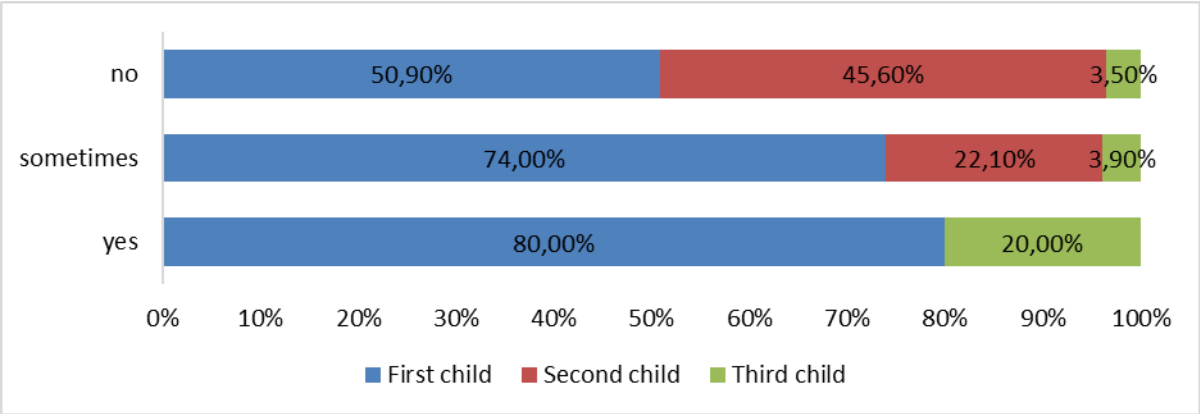


Fig. 13. Difficulties of parents in establishing healthy habits according to the order of the child in the family

The main reason parents gave as a factor making it difficult to build healthy habits was the child's reluctance to do certain activities (86.7%), only 6.7% said they did not have enough time to build the habit, and the same number - 6.7% - gave other reasons.

Motivation is the first of the three factors for behaviour change and habit formation. It itself is seen as an internal state, but it should not be forgotten that there are conditions that can have a positive impact on taking action for change. Action is incorrectly equated with motivation because it could exist in the absence of action.

Motivational factors can be: necessity, interest or desire, beliefs, expectations and commitment.

On necessity as a motivational factor, authors such as Farkas, M., Cohen, M., McNamara, S., Nemec, P. B., & Cohen, B., as well as Miller, W. R., & Rollnick, S have written. In their view, necessity should be viewed from the perspective of the individual who would make a change and represents external pressure to make things different. Interest or desire, unlike necessity, is an internal pressure to change. An individual may have a great need and little desire or vice versa. Great need and great desire make change very likely.

Beliefs that will achieve success are discussed in detail in the Theory of Planned Behavior and the Health Belief Model. Beliefs associated with changing behavior to create a particular habit imply a belief in the effectiveness of the new behavior. All of these factors contribute to determining whether parents intend to implement behavior change to set an example for their children and whether they will take action to do so (Ajzen I. (2011); Carpenter C. J. (2010)).

The onset of change may result from a carefully reasoned decision and also seem impulsive or spontaneous, sometimes as a result of a significant event. From research conducted in Germany, it was found that some actions occur after a carefully considered decision to seek help or change behaviour. Much of human behavior can be described as irrational and / or meaningless (Anweiler O. (1990)). Environmental factors influence behaviour to a greater extent than most people recognise and the extent to which an individual can control their behaviour is also relevant. For example, children who live at risk will have difficulty establishing healthy habits.

The other group that has been studied in the development of healthy habits of the child up to 3 years of age are nurses in the nursery. The mean age of the nurses studied was 55.9 ±

10.1 years (34-73 years). Over ¼ (26.5%) of the nurses were of retirement age. The average length of service of nurses in nurseries is 16.7 years ± 15.7 years (1 year - 50 years). It is noteworthy that younger nurses are less likely to seek employment with children in nurseries.

Nurses with college education predominated (57.1%), while those with higher education accounted for 34.0% (Fig. 14). In view of the more mature age of the nurses working in the nurseries, it is logical that most of them have a college education, due to the many changes in the educational and qualification degrees in the different periods of graduation.

According to Neal D. T. et al. In everyday life, "habits" are often used as a synonym for standard behaviors, but in psychology they are actions that are performed automatically in response to specific cues related to their performance. For example, automatic hand washing is performed after using the toilet, or eye washing is performed after rising from sleep.

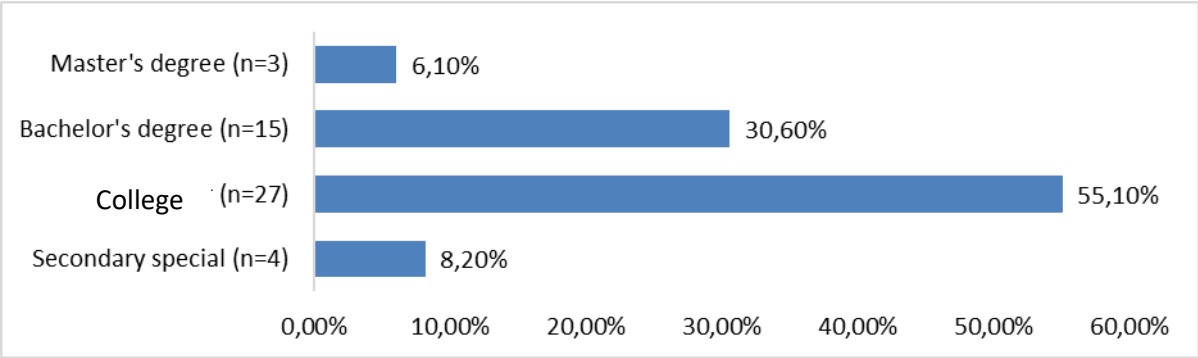


Fig. 14. Distribution of nurses according to educational level

More than 4/5 (83.2%) of the nurses rated the habits that children possess as good, very good and excellent (Fig. 15). The high assessment of the level of built habits of children given by nurses shows that families have successfully laid the foundations for building habits in the home environment. In the process of working with children and observing them, they have a basis to make an assessment of each child regarding the level of habits developed.

A study by Lally R. et al. (2010) demonstrates that it takes approximately 2 months of regular repetition for a behaviour to become a habit - sometimes less time is needed for simple actions and longer for more complex patterns of behaviour.

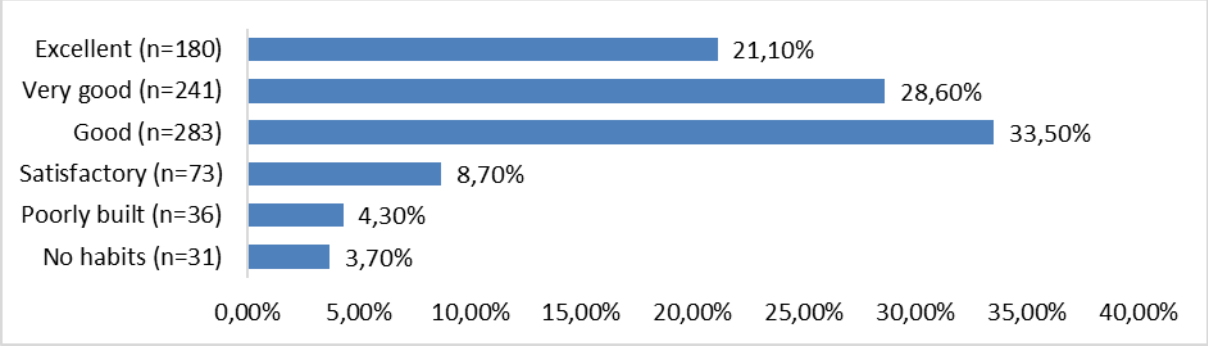


Fig. 15. Nurses' assessment of children's level of established habits

In order to investigate the habits of the children in the nursery, we determined at which age group what habits they should master (Tab. 2).

Table 2. Habits a child should have according to age

Age	Habit
3 -18 months	Eats with a spoon
	Drinks from a cup
	Uses potty
	Reports physiological needs
	Brushes teeth
	Washes hands
	Washes face
	Washes his/her mouth
	Uses a napkin
	Uses a handkerchief
	Disposes of waste in a bin
	Puts hand in front of mouth when sneezing, coughing, yawning
19 -24 months	Eats with a spoon
	Drinks from a cup
	Uses potty
	Reports physiological needs
	Brushes teeth
	Washes hands
	Washes face
	Washes his/her mouth
	Uses a napkin
	Uses a handkerchief
	Disposes of waste in a bin
	Puts hand in front of mouth when sneezing, coughing, yawning
	Uses toilet
	Dresses
	Undresses
	Puts on shoes
	Takes off shoes
25 -30 months	Regulates physiological needs
	Uses potty
	Uses toilet
	Eats with a spoon
	Eats with a fork
	Drinks from a cup
	Brushes teeth
	Washes hands
	Washes face
	Washes his/her mouth
	Uses a napkin
	Uses a handkerchief
	Disposes of waste in a bin
	Puts hand in front of mouth when sneezing, coughing, yawning
	Dresses
	Undresses

	Puts on shoes
	Takes off shoes
	Uses toilet paper
31 -36 months	Regulates physiological needs
	Uses potty
	Uses toilet
	Eats with a spoon
	Eats with a fork
	Uses a knife
	Drinks from a cup
	Brushes teeth
	Washes and dries his/her hands
	Washes and dries his/her face
	Washes his/her mouth and dries his/her face
	Uses a napkin
	Uses a handkerchief
	Disposes of waste in a bin
	Puts hand in front of mouth when sneezing, coughing, yawning
	Dresses
	Undresses
	Puts on shoes
	Takes off shoes
	Uses toilet paper
	Arranges his/her clothes

The average number of habits children possessed on entry to the nursery was 2.6 ± 3.6 (0-18 habits) with 82.6% of children possessing up to two fully developed habits. The different ages at which children enter the nursery and the time at which the foundations of habit formation are laid in them justify the differences obtained in the number of habits that children possess on entry to the nursery. The fact that an overwhelming percentage of children have very few fully developed habits is extremely worrying.

When organising the mealtime routine, it is necessary to create conditions for a calm, positive and active attitude towards eating, which is a prerequisite for a good appetite and a nutritious meal. For this purpose, the necessary preparation is carried out in advance. There are certain rules relating to the organisation and hygiene of meals at different ages. While children are in infancy, they are extremely dependent on their parents to be fed, toddlers from one to three years are fed at an age-appropriate table and chair, at first with assistance, and later independently.

A long wait before feeding stresses the child and this can lead to a deterioration in their appetite. During the feeding of the child, the caretaker should speak kindly, without distracting the child with toys or other, so that the focus is on building certain eating habits. Simple changes in the environment could influence the child's behavior, such as placing napkins and utensils on the dining table (Wansink B. (2010)).

It is important to keep the child moderately active during mealtimes, such as holding their bottle or cup, which is a prerequisite for forming independent and clean eating habits. The atmosphere, utensils and the type of food are also important.

The emphasis on "small profits" and "key habits", according to Duhigg C., makes success more likely. Key habits are the fundamentals that support other healthy habits, such as the use of cutlery leads to a culture of eating and the prevention of possible infections from hand-eating.

The opinion of the two groups of respondents - nurses and parents, was sought regarding the hygienic habits that each child has acquired.

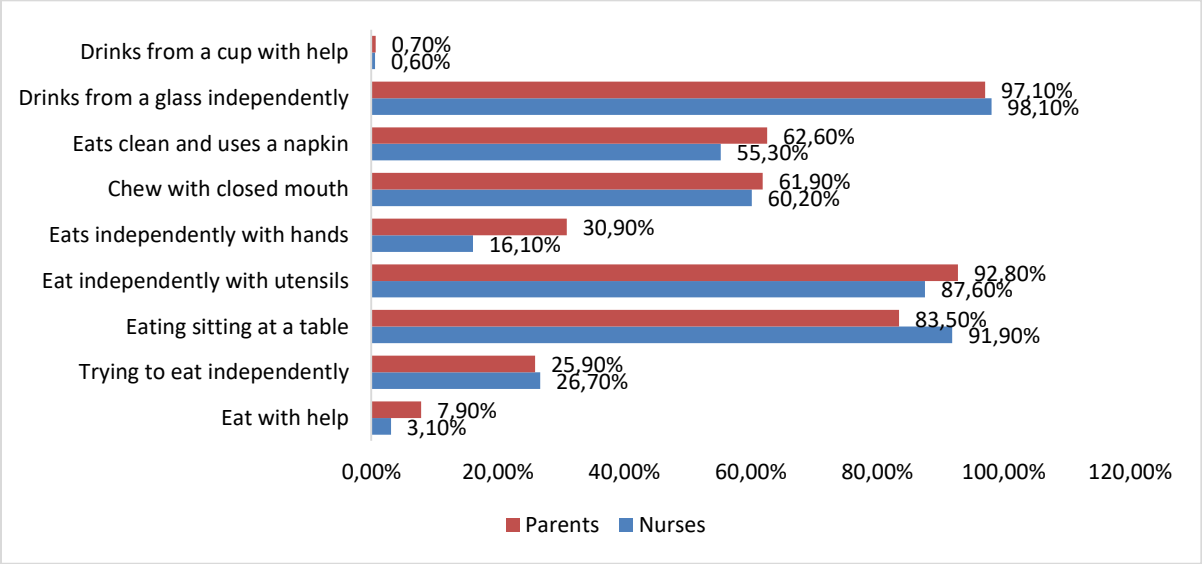


Fig. 16. Eating habits that children have

A study of children's eating habits did not reveal a significant difference between the opinions of nurses and parents, with the exception of assisted feeding and hand-feeding, where the relative share of parents is predominant, which is approximately 2 times higher than that of nurses ($\chi 2 = 4.75$; $p = 0.030$) (Fig. 16).

Fig. 16 the results indicate that the majority of children drink from a cup independently, eat independently with utensils, and eat sitting at a table. More than half eat clean and use a napkin and chew with their mouth closed.

For children who lack willpower, implementing "strengthening" measures can be valuable before making major changes to reduce impulsivity or increase tolerance for delayed gratification. Children are often impulsive, such as getting up from the dining table before they are finished when a greater stimulus appears. If they know in advance that after brushing their teeth there will be a reward, show patience and perform the actions of the habit long enough, thus postponing the pleasure for later. Even something as simple as working on a child's posture can change things. By overcoming the habit of lying down at the table during meals, children strengthen their willpower and cope better with tasks that have nothing to do with posture. The correct positioning of the dining table is most pronounced among children, who follow the advice of adults most diligently.

The results show that only less than 1% of children continue to need help drinking from a cup.

The relatively low percentage of children who still cannot eat on their own and drink from a cup with help requires hard work to develop these habits.

Many factors that contribute to good overall health are expressed through habits - washing your hands, brushing your teeth, exercising regularly, eating healthy or washing your face after sleep.

Similarly, many factors that contribute to poor health are also habits, such as sneezing, coughing or yawning without putting a hand in front of the mouth.

To create and maintain a healthy lifestyle, it is important to develop positive healthy habits.

Sometimes useful habits for a given circumstance take root and continue even when there is a change in the situation, personal values, beliefs, or goals and they become undesirable or less useful.

Replacing a new habit with an old one may be more effective than trying to increase attention and willpower to resist the old habit, which means that the goal of "doing more" is easier to achieve than the goal of “do less” (Hagger MS & Luszczynska, A. (2014); Lally P. & Gardner, B. (2013)). According to Hagger M. S. & Luszczynska A. (2014). The goal of "do less" or "stop" can have a paradoxical effect, in which mental efforts to control actions and to track the possibility of failure, lead to the very actions that the individual is trying to avoid.

Relatively small, challenging, achievable goals or victories allow you to focus on change without burdening children, and in this way, it allows the constant effort needed to make new behavior a habit.

In contrast to eating habits, hand and face washing habits show several significant differences in the opinions of nurses and parents (Fig. 17).

Brushing teeth after meals is carried out mainly at home (respectively 53.2% for parents and 7.5% for nurses) ($\chi2 = 113.95$; $p < 0.001$).

Hand washing after sleep is more common in nurseries (54.0% for nurses and 28.8% for parents, respectively) ($\chi2 = 39.08$; $p < 0.001$).

Hand washing before using the toilet is done more in the nursery (49.1% for nurses and 23.7% for parents, respectively) ($\chi2 = 42.41$; $p < 0.001$).

A significant proportion of parents report that their children wash their face after sleep (71.9%), while this activity is reported by only 29.8% of nurses ($\chi2 = 105.61$; $p < 0.001$).

Brushing your teeth after eating is done more often at home, because the family provides better conditions for this habit. In addition, children eat at home during the week only for dinner, while breakfasts and lunches happen in the nursery and there with several meals it is more difficult for all children to brush their teeth. This implies that each child has a personal toothbrush.

The other habit in which there is a significant difference in the opinion of the two groups of respondents is washing the face after sleep. The washing of the face after a night's sleep is carried out by all members of the family whom the child sees and imitates. After an afternoon nap in the nursery, the children no longer have such an example and have to be asked by the nurse to wash their faces. For this reason, there is a difference in the assessment of nurses and parents.

Linking new behaviors to established habits can make some activities easier. For example, if the child already has a habit of washing their eyes in the morning after sleep, they may associate going to the tap with brushing his teeth.

There are no significant differences in the other habits, as only when washing the mouth after eating there is a slight predominance of the parents' answers. In other habits, the opinion of nurses has a slightly higher share.

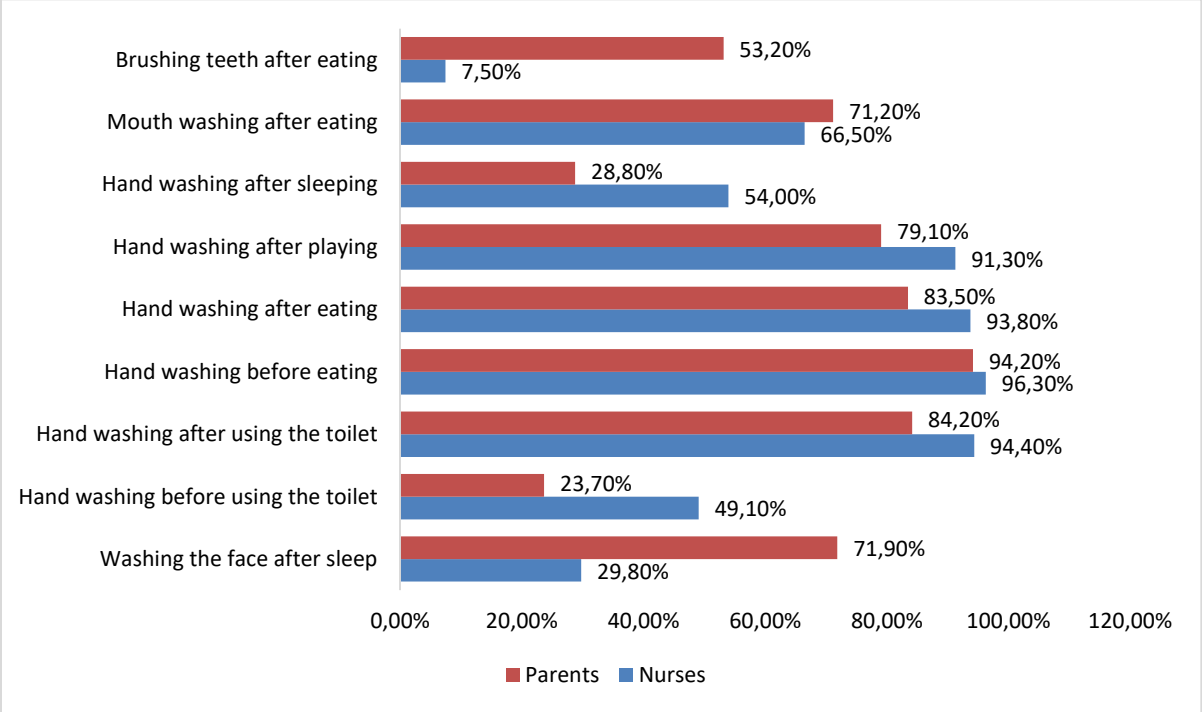


Fig. 17. Habits that children have for brushing teeth, face and hands

Washing your hands with soap at certain times, such as before and after going to the toilet or before eating, can prevent infectious diseases by interrupting the transmission of infectious agents.

Studies have shown that washing hands with soap reduces the risk of diarrhea by 47% (Cairncross S. et al. (2010); Curtis V., Cairncross S. (2003)), of acute lower respiratory tract infections with up to 34% (Luby S et al. (2005)) and of soil-borne helminths by 55% (Strunz EC et al. (2014)). Washing hands with soap is recognized as one of the most cost-effective health interventions to reduce the severity of disease (Bartram J., Cairncross S. (2010)). However, it is estimated that only 19% of the world's population washes their hands with soap after using sanitary facilities or handling children's excrement (Freeman M. C. et al. (2014)).

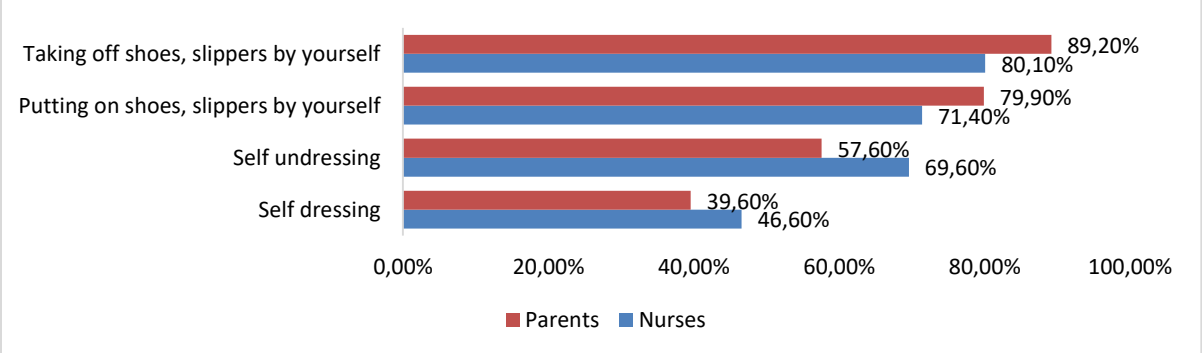


Fig.18. Self-care habits that children have

A study of self-care habits did not reveal a significant difference in the opinion of nurses and parents (Fig. 18). On the other hand, there is a higher relative share of parents who report that the child can put on and take off shoes on their own, while according to nurses, the relative share of children who can dress and undress themselves prevails.

The results obtained are expected, as at this age up to 3 years the fine motor skills of children, which are necessary for putting on and taking off shoes and slippers, as well as putting on and taking off clothes, are still being improved. Putting on shoes and putting on clothes are more difficult activities to perform, as the child has to tie ties, fasten buttons, close zippers, which in most cases makes it very difficult.

According to the Oxford English Dictionary, the word "Hygiene" is defined as "Conditions or practices conducive to maintaining health and preventing disease, especially through cleanliness". According to other literature, it is defined as the science of preventive medicine and health care through cleanliness.

The World Health Organization (WHO) and other studies provide similar definitions of hygiene, such as the concept of cleaning and any practice aimed at maintaining health and preventing the spread of disease (Oosterom J .; Rasool Hassan B. A. (2012)). Hygiene is much more than cleanliness because it focuses on preventing a number of diseases (Hygiene. Wikipedia (2018)). All disease control interventions rely more on hygiene to achieve their goal.

In the Fig. 19 presents different hygiene habits that children should have.

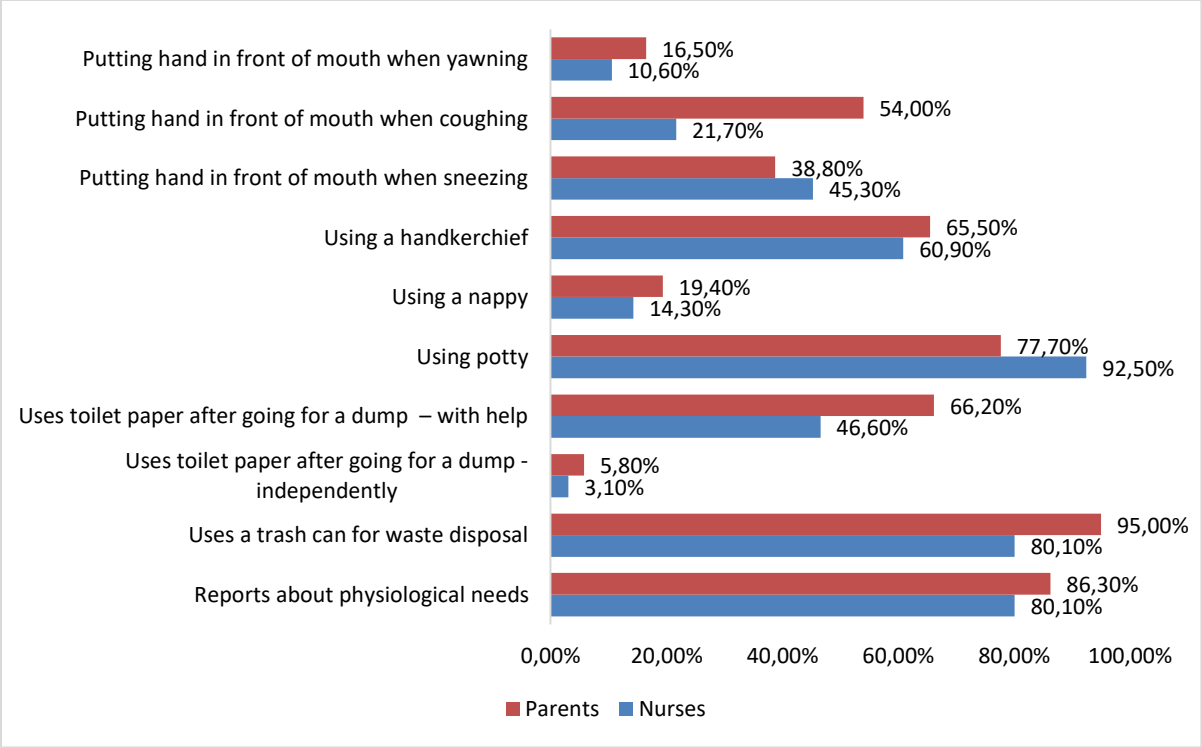


Fig. 19. Hygienic habits that children have

The results of the study did not show a significant difference in the placement of the hand in front of the mouth when yawning and sneezing, using a handkerchief, using diapers, self-use of toilet paper after defecation and reporting physiological needs.

If the goal is to eliminate or change a bad habit, then you need to pay attention to the place, time of day and days of the week, the emotional state of the child. It is necessary to plan the actions of adults in order to encourage or shape his behavior in order to eliminate the bad habit.

Removing an already established habit is difficult. At the age of 3, children must have finally stopped using diapers. According to Yin H. H., engaging in repetitive patterns of behavior leads to changes in the brain, and the habit is likely to persist. Eliminating this habit requires perseverance on the part of the parents and the nurse in the nursery in order to remove it and replace it with the habit of using a potty.

Willpower is often used to develop positive habits. It is an important component for initiating change, as well as for ensuring consistency in the efforts needed to change or establish habits (Baumeister R. & Tierney J. (2011)). Positive health habits sometimes require sacrificing momentary comfort or pleasure because of the potential for long-term benefits in the future. Mischel W. finds that the ability to slow down satisfaction is related to success in various areas of life.

Duckworth A. & Gross J. J. consider a newer concept of willpower in relation to a certain character trait or ability that relates to "passion and perseverance for particularly long-term goals."

The goals or values of personal life can nurture the will (Carver C. S. & Scheier M. F. (2001); Duckworth A. & Gross J. J. (2014); Miller W. R. & Rollnick S. (2013)).

Willpower requires energy. According to some laboratory studies by Baumeister R. & Tierney J., even "a small exercise in self-control is associated with a large drop in brain glucose levels." This fact shows why it is difficult for young children to show a significant amount of willpower in mastering habits, and adults must intervene in this process.

Children were significantly more likely to put their hand to their mouth when coughing when at home (54% for parents and 21.7% for nurses, respectively) ($\chi 2 = 56.83$; $p < 0.001$). Probably this result is due to the fact that one, two or three children are raised in the family. This allows parents to notice that the child is coughing and to direct his attention to placing his hand in front of his mouth. Coughing is an alarm signal for parents and makes an impression, as it is usually associated with a health problem.

The relative share of children who use a potty in the nursery is higher (92.5% for nurses and 77.7% for parents, respectively) ($\chi 2 = 19.32$; $p < 0.001$).

The daily routine in the nursery necessarily includes certain times of the day when children are put on the potty, as well as always at the child's signal. This methodical habit formation determines the results obtained. In a family setting, children do not always signal their physiological needs, are often in nappies for parental convenience and do not experience the discomfort of wetting. Parents also sometimes fail to prompt the child to carry out their physiological needs in the potty, engrossed in work or other activities.

Children are more likely to receive help at home with the use of toilet paper after defecation (66.2% for parents and 46.6% for nurses, respectively) ($\chi 2 = 22.41$; $p < 0.001$). This activity is very delicate and involves manipulation in the intimate area, which is why nurses refrain from performing it. In building this habit, the responsibility lies solely with the parents. Specifically at home, the child must learn exactly how to perform certain actions in order to use toilet paper for its intended purpose and maintain good hygiene of the genitals.

A higher percentage of parents indicate that children use a rubbish bin for waste disposal (95% for parents and 80.1% for nurses, respectively) ($\chi 2 = 42.77$; $p < 0.001$). The results are quite high and relatively close, which shows a serious commitment of both the institution of the nursery and the family to instill in children a sense of order and cleanliness.

In 2018, a team of authors issued a practical guide to the nursery teacher. It describes in detail the responsibilities of nurses in developing habits in children aged 12-24 months and 24-30 months. At each age group, tasks are presented that children perform on the instructions of an adult, through which the skills of independence and skills for basic activities are formed, such as independent eating, using napkins, handkerchiefs, arranging clothes after undressing, etc. (Dimitrov D. et al.).

In building the child's healthy habits in the nursery, the nurses are guided by the methodology created by the teacher in the kindergarten (82.3%). They receive information about the health habits of children in early childhood in the period of acquiring the profession and in improving their skills through additional courses, as well as from the scientific literature on the subject. Higher education is cited as the only source of information on health habits by 2.0% of nurses surveyed, and 1.4% do not seek additional information because they are doing as they see fit.

In summary, it can be said that the regime of the nursery includes a number of activities aimed at forming and strengthening certain health habits. They are demonstrated and monitored by the nurse, who requires the children to perform them at designated times or times. Every day, children repeat these actions on their own or with help, which over time become sustainable and become a habit. In this process, the role of parents is indisputable, who must maintain and strengthen the already established habits. The following is practiced daily in the nursery:

- ✓ Washing hands before and after meals, after play;
- ✓ Washing the face after sleep;
- ✓ Disposal of waste in the waste bin;
- ✓ Use of cutlery;
- ✓ Use of napkin and handkerchief;
- ✓ Undressing and arranging clothes;
- ✓ Putting on clothes;
- ✓ Taking off and putting on slippers and shoes;
- ✓ Putting your hand in front of your mouth when sneezing, coughing, yawning;
- ✓ Removing diapers and using a potty, etc.

Preschools, including nurseries, should be targeted for interventions to change health behavior. Once a child learns good hygiene at an early age, he or she will grow up with appropriate behavior and influence other members of his or her family (Joshi S. (2011)).

3.3. Interaction of parents and nurse for the formation of health-related habits

There is a thought of B. J. Fogg, a professor at Stanford, who summarizes the idea of habit formation well: "If you plant the right seed in the right place, it will grow without further encouragement." This is a very successful metaphor for creating habits. The "right seed" is the behavior that is chosen. The "right place" is the sequence of actions and their results. According to B. J. Fogg, focusing on motivation as the key to habits is completely

wrong. If you choose the right behavior and arrange it in the right sequence, you will not need motivation to succeed in forming the habit. This will happen as "a good seed planted in a good place."

Laying the foundations of healthy habits is primarily the responsibility of the family, but the nursery is actively involved in this process.

According to 92.0% of parents, the place for building the child's healthy habits is both in the family and the nursery, and only 8.0% indicate that only the family is such a place. This result is logical, as parents rely heavily on the nursery in their child upbringing. In addition, they estimate that in the nursery their child is cared for by professionals who are familiar with the methodology of creating healthy habits. At the same time, they take responsibility for the health culture of their children and recognize the fundamental role of the family in health education. This result unequivocally shows the attitude of parents to the nursery, as a partner with whom they pursue the same goals, one of which is the correct, timely and sustainable acquisition by children of healthy habits.

The main source of information for building healthy habits in parents is the child's personal physician (58.1%), followed by the Internet (41.5%) and the nurse in the nursery in third place (35.0%) (Fig. 20). Parents trust and seek more information from GPs, probably because their child has been in their care since birth and expect them to be best acquainted with their children. A large percentage of the surveyed parents are from the generation that grew up with modern technology and are used to looking for and finding information. This determines the placement of the Internet in second place. Photos, other people's experiences, videos, etc. can be found on the Internet. For more than 1/3 of the surveyed parents, the nurse in the nursery is a reliable source of information that they trust in the formation of healthy habits in their children.

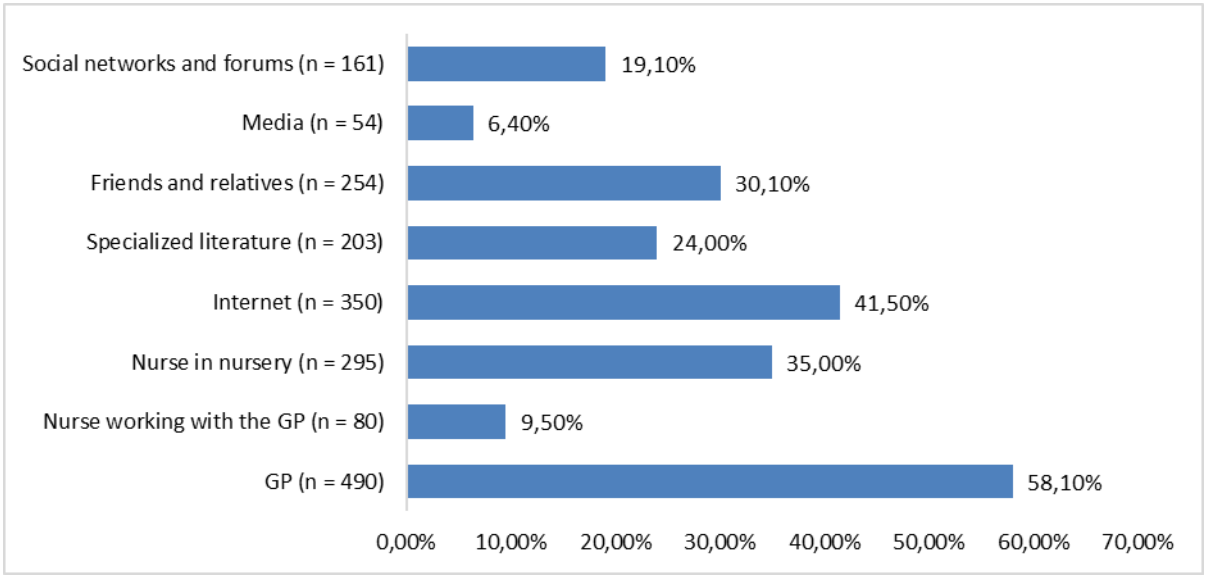


Fig. 20. Sources of information for parents

There was a significant difference in the behavior of parents and nurses in nurseries in the search for cooperation in building healthy habits of the child ($\chi 2 = 61.69$; $p < 0.001$). More than 2/3 (69.1%) of the parents state that they rely on the assistance of a nurse in the nursery

in case of a problem related to building the child's healthy habits. On the other hand, medical specialists seek more frequent cooperation from parents (99.3%). In the period in which the child is raised and educated in the two institutions (family and nursery), they interact to achieve common goals related to the creation and strengthening of healthy habits in children. As the parents have other sources of information, 1/3 of them are looking for a solution to their problems with the children from the nurse in the nursery.

Approximately 100% of the surveyed nurses in the process of building children's habits seek help and support from parents.

Due to the frequency and nature of communication with families and young children, nurses in nurseries are in a position to influence behavior from an early age (Foy J. M. (2010)).

Half of the parents define the communication with the nurse as sufficient (51.8%), and 38.6% actively communicate with her in the nursery regarding issues and problems related to the upbringing and education of their child (Fig. 21). A continuous process of communication between the nursery and the family is created. A small percentage (4.5%) of the surveyed parents say that their communication with the nurse in the nursery is weak. In modern conditions, parents are provided with opportunities to contact the team in the nursery through many channels - personal meetings, social networks, mobile devices and more. The choice of the opportunity to communicate is strictly individual, which determines the high assessment given by parents for communication.

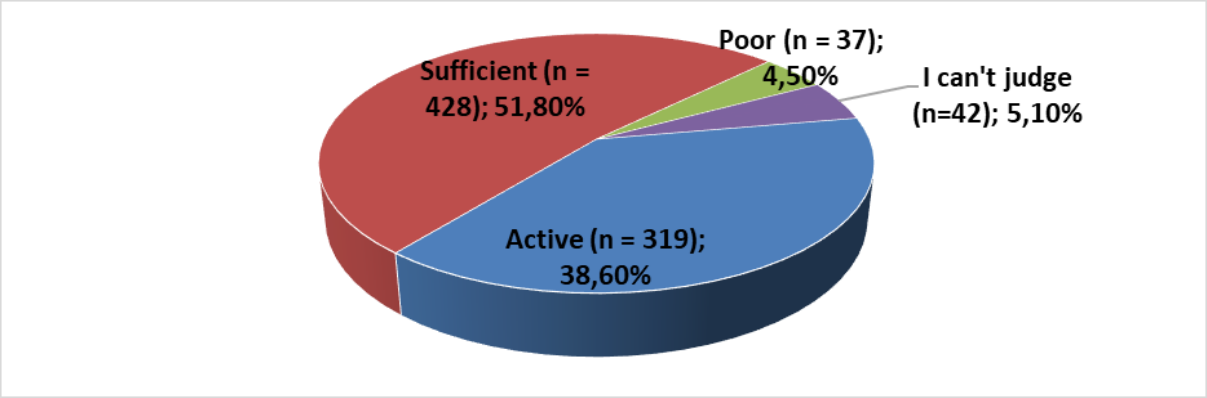


Fig. 21. Evaluation of communication with the nurse by the parents

It is interesting that 44.6% of the surveyed parents indicate that they are fully acquainted with the work of the nurse in the nursery in terms of forming healthy habits in children (Fig. 22). These results support their opinion on active communication with the nursery. The parents are interested in the conversations and the nurses inform them about the activities in the daily routine related to the healthy lifestyle of the children

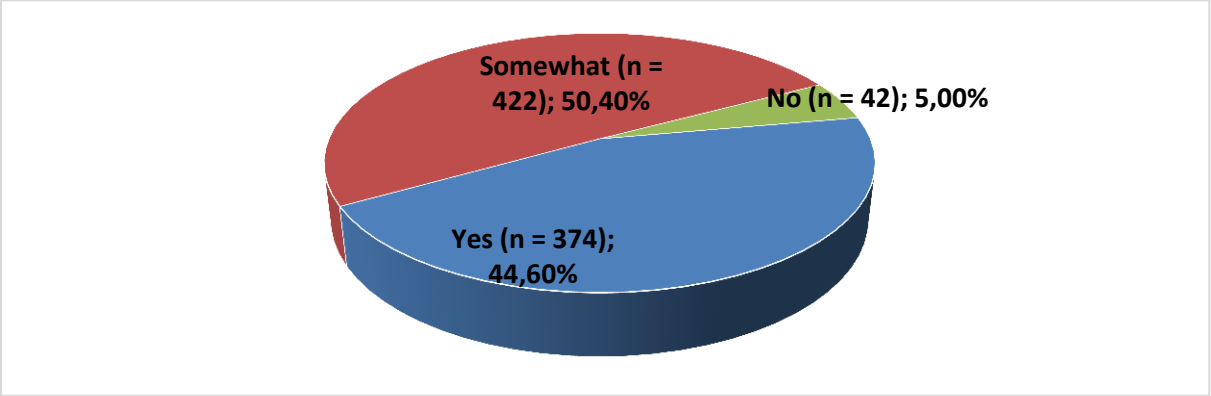


Fig. 22. Awareness of parents about the work of the nurse to form healthy habits of children

Lally R. and Gardner B. (2013) suggest that experts provide advice on habit formation as a way to encourage long-term change in people's behavior. In fact, the tips for creating habits are simple and come down to: "Repeat the action in the same context!". This may be relevant to the formation of habits in young children. In the nursery, nurses as specialists need to adhere to these tips when building habits in children. Creating a habit follows its sequence. It begins the moment the new behavior is initiated and selected and the context in which it will take place. Later, the child is trained in order to achieve automaticity, which is assimilated through continuous repetition. The formation of the habit culminates in the moment it was created and its power has grown so that it continues over time with minimal effort or thought. For this to succeed, this process must not be interrupted or limited to the nursery, but must be continued in the family. Therefore, there is a need for constant exchange of information between nurses in the nursery and parents.

There was a significant difference in the awareness of the parents about the work of the nurse in the formation of healthy habits of the child and the communication between them ($\chi 2 = 245.38$; $p < 0.001$). Parents who actively communicate with the nurse are significantly more informed about her activities about the formation of habits compared to others in whom communication is limited (Fig. 23).

There was also a positive moderate relationship between the level of communication and the level of awareness of parents about the activities of the nurse in the nursery ($\rho = 0.440$; $p < 0.001$).

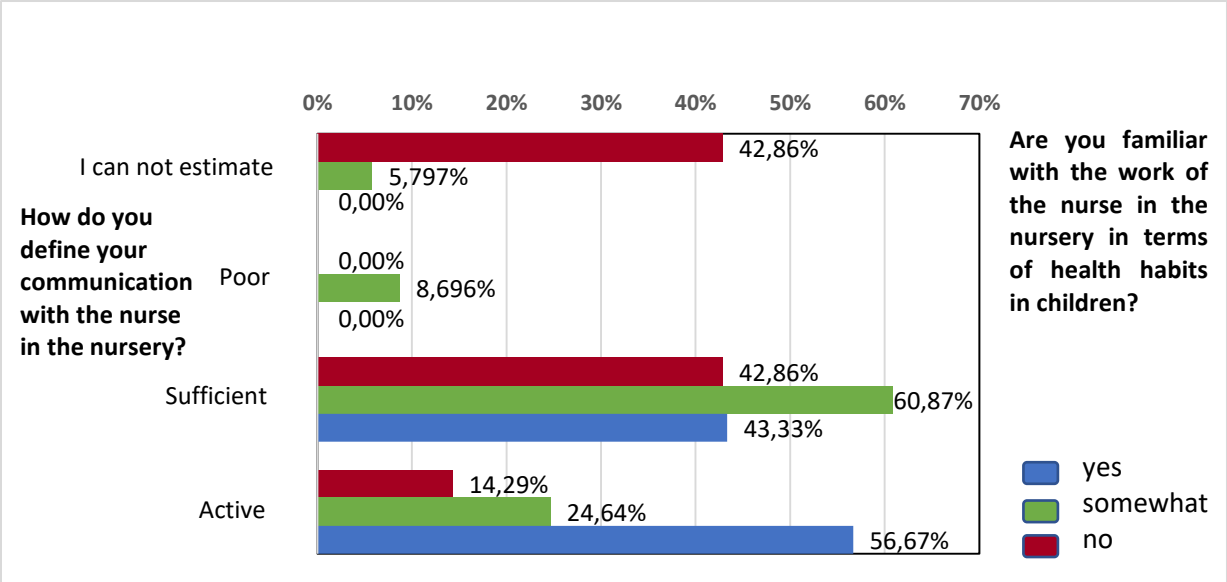


Fig. 23. Relationship between communication and parents' awareness of the nurse's activities

Over 2/3 (68.7%) of the surveyed parents indicate that the nurse informs them about the health habits that need to be worked on. There was a significant difference in parental awareness and communication with the nurse ($\chi 2 = 59.34$; $p < 0.001$), as well as a positive moderate relationship between the two studied indicators ($\rho = 0.316$; $p < 0.001$) (Fig. 24). The result is expected, as it is logical to get more information about the child's healthy habits when maintaining a high level of communication with the nurse in the nursery.

Creating healthy habits could help: keep parents aware, identify the reasons for the change, and create a plan to develop or eliminate the habit.

Communication with parents should help them in choosing behavior, the sequence that they must follow in order to achieve the desired results in the formation of the child's habit.

Raising family awareness makes it easier to set specific and measurable goals and track children's progress. Seeking feedback is useful for increasing motivation, supporting the constant efforts of young people and providing a sense of success.

It is notable that despite the long experience of nurses in nurseries, nearly half (47.2%) say that they have problems in building healthy habits of children, and all seek help from parents in case of problems with building a particular habit.

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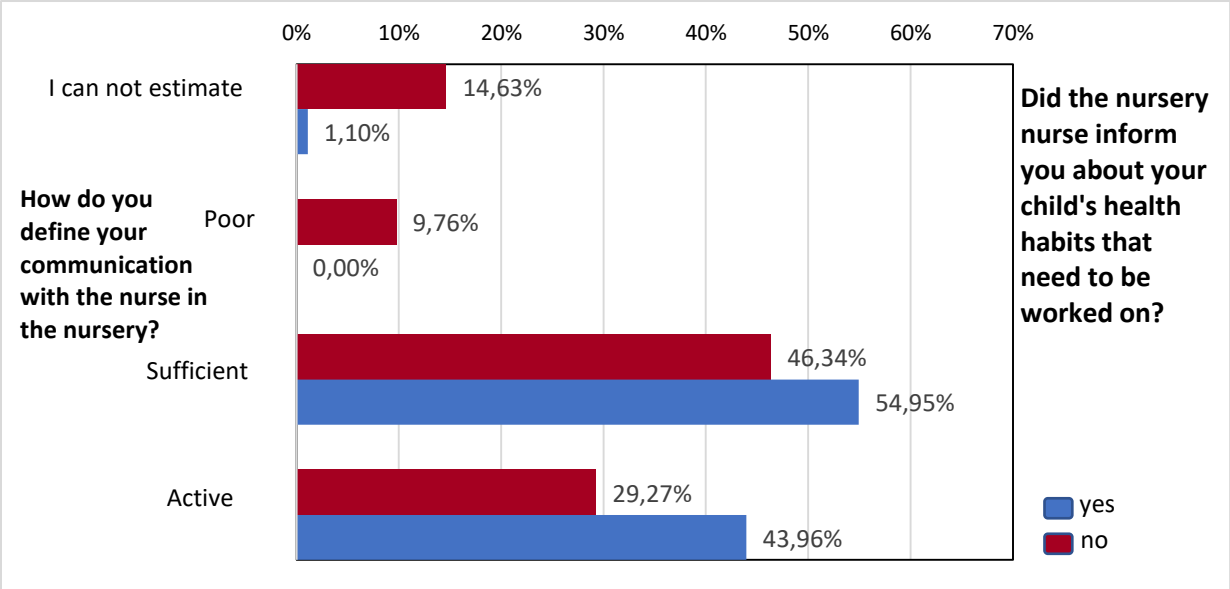

Fig. 24. Relationship between communication and parents' awareness of the habits to be worked on with their child

Modern children are a generation that grows up with strong individualism. A significant proportion of nurses are of pre-retirement and retirement age and received their basic education many years ago, when the approach to children was different. This fact undoubtedly makes it somewhat difficult to find the right path to the new generation of children and creates some problems. In the process of upbringing, nurses rely entirely on the partnership of parents. Therefore, the best choice to solve a problem is to turn to them for help and overcome difficulties together.

Both parents and nurses meet with understanding from the other side regarding the child's difficulties in implementing basic health habits (98.4% for parents and 96.0% for nurses, respectively). A significant part of the surveyed nurses (97.4%) share that their parents seek advice from them in case of habits related to habits. The care for the proper health education of the children unites the parents and the nurses in the nursery. Sharing problems and the will to find the right solution helps them in the process of creating and establishing healthy habits in children.

3.4. Need for training of nurses and parents to form healthy habits

A significant part of the nurses (98.2%) share that they feel prepared in building healthy habits in children.

Only 12.9% need additional training to acquire skills related to habits-building activities in children under 3 years of age (Fig. 25).

Sometimes nurses may be discouraged by the lack of significant progress they are making in the children they care for and may lose hope of change. They do not always explore options and strategies for new approaches, probably because innovation requires a breadth of knowledge, an understanding of the complexity of habit formation, behavior change, and the influence of other factors on choices and actions. This requires continuous acquisition of new knowledge, improvement of new skills and application of new approaches to involve parents in the process of building habits in children.

Nurses and other service providers can benefit from specific training, such as wellness coaching (Swarbrick M. (2006); Swarbrick M. (2015)) and action planning to gain knowledge on how to best support and guide parents in the education and upbringing of children to achieve maximum health well-being.

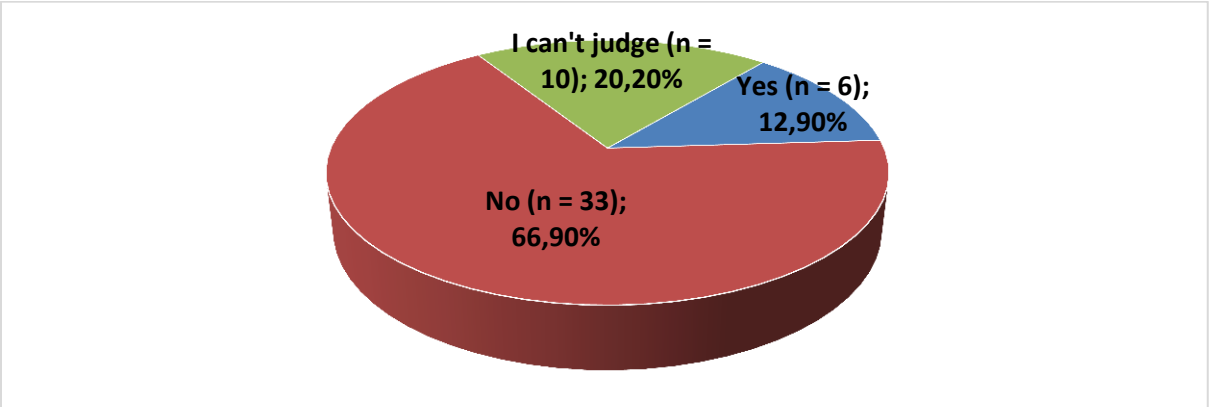

Fig. 25. Need for additional training of nurses on the acquisition of skills for building healthy habits in children under 3 years of age

The main form of training that the surveyed nurses point out for themselves are one-time lectures on a specific topic (48.4%), and 31.5% would like the formation of skills for building healthy habits in early childhood to be carried out in basic training. The rest prefer to attend short-term training courses.

A significant part of the nurses (73.6%) said that they would support the creation of a unified methodology for building healthy habits in children in early childhood, to be used in all nurseries (Fig. 26).

It is extremely important in the nursery to work according to the generally accepted uniform methodology for the formation of healthy habits. In this way, the efforts of the nurses can be united, experience can be exchanged between them and they can help each other. The methodology is necessary both for creating positive habits and for correcting negative ones that already exist.

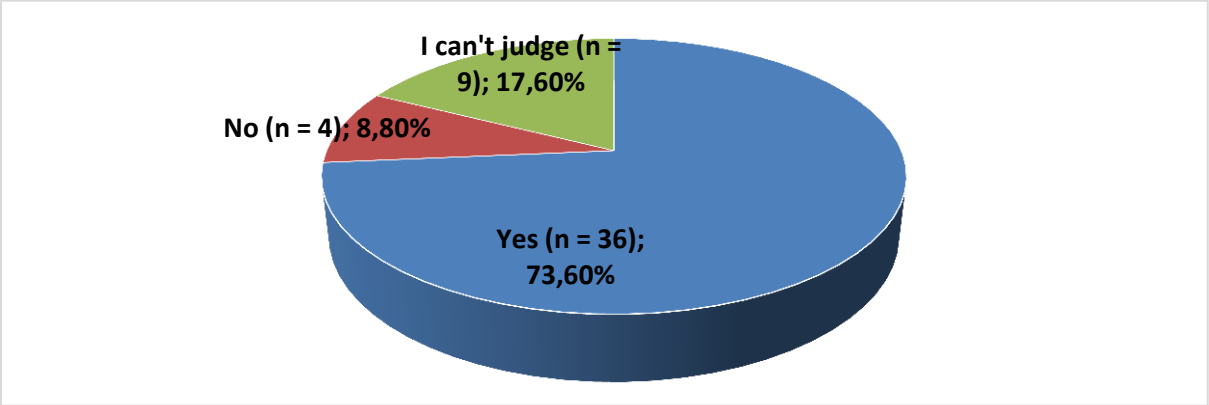

Fig. 26. Nurses' support of a uniform methodology for building healthy habits

Building good habits and eliminating bad ones is difficult, especially for children. The nurse must constantly evaluate and make efforts to improve the physical condition, emotional well-being and habits of young children (Duran LS (2003); Happell B. et al. (2013); Happell B. et al. 2014)). Demonstrating a good personal example by health professionals (Blake H. et al. (2013); Phiri L. P. et al. (2014) has a positive effect in the process of forming healthy habits.

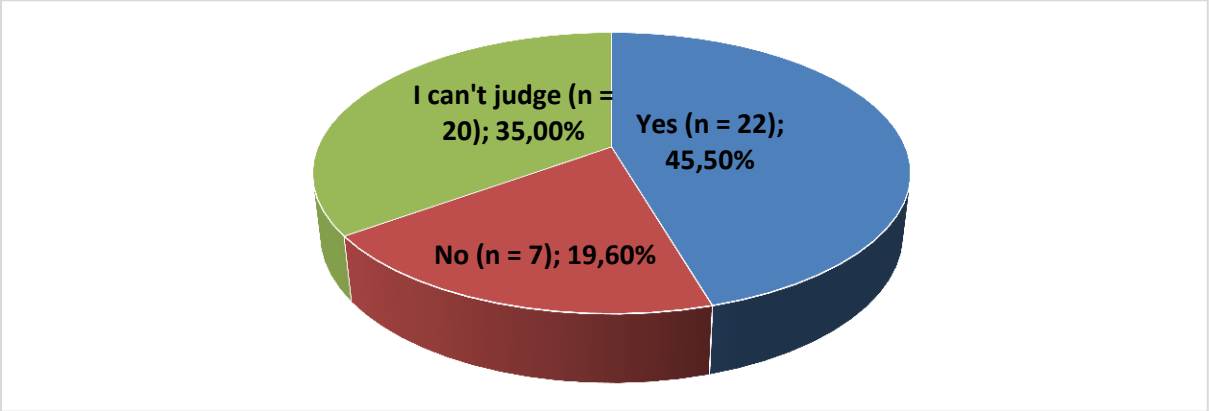

Fig. 27. Participation of nurses in training parents to build healthy habits

Less than half of nurses would participate in training parents to build healthy habits in early childhood (45.5%) (Fig. 27). In the high employment of nurses, it is difficult to find time to organize and conduct training for parents. However, the expressed readiness of almost half of them speaks of a serious commitment and desire to support the family of each child in the process of sanitary enlightenment.

Only 22.2% of parents admit that they need additional information to acquire the necessary knowledge and skills to form the healthy habits of their child (Fig. 28). Young parents receive much of the necessary knowledge through various sources of information. However, about 1/5 of them are willing to fill in the gaps in creating habits in their children

Health professionals are able to build the relationship with parents needed to explore a child's needs and priorities. By adopting a joint personality-oriented approach, their cooperation will help achieve the set goals

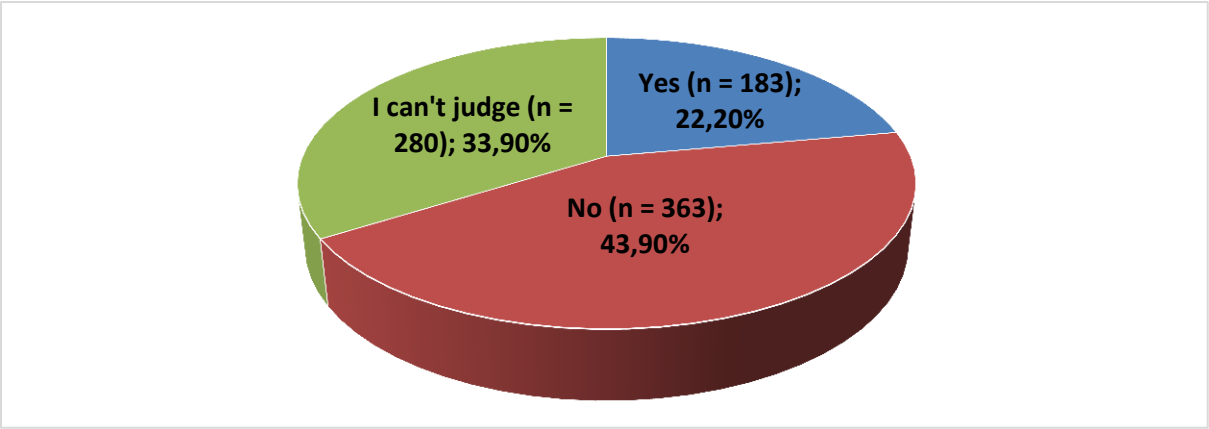

Fig. 28. Need for additional information from parents to build healthy habits of the child

Half of the parents (52.8%) express readiness to be trained in building healthy habits of children up to 3 years of age (Fig. 29). They believe that information on the subject alone is not enough to successfully deal with the formation of habits. They appreciate the fact that children are small and require a specific approach for which they do not have the necessary knowledge and skills. For this reason, they want to learn exactly how to approach their children so that they can achieve positive results with them.

The stated desire of parents to be trained in creating healthy habits in their children shows a desire for change.

The reasons for change can stimulate action and include the results of achieving the goal of change (Nemec P. B. (2015)), i.e. well-behaved children with positive health habits.

Effective change plans include the support, encouragement and practical assistance needed to implement each step of it, i.e. "when barrier X arises, then action Y" (Gollwitzer P. M. & Sheeran P. (2006)).

Such an action plan can be developed jointly between the nursery and the parents to resolve any problems in the upbringing of the children and, if necessary, discuss changes in it.

Lally P. et al. (2008) and McGowan L. et al. share that the rules for creating habits, together with the approach "Small changes" have been proven as a strategy for changing behavior.

This approach aims to realize small changes in lifestyle. The concept suggests that small changes are much better and can be easier to maintain, because change is not always difficult and challenging. This fully applies to healthy habits and the change that must be achieved in children's behavior. It is a known fact that great results can be achieved through small changes.

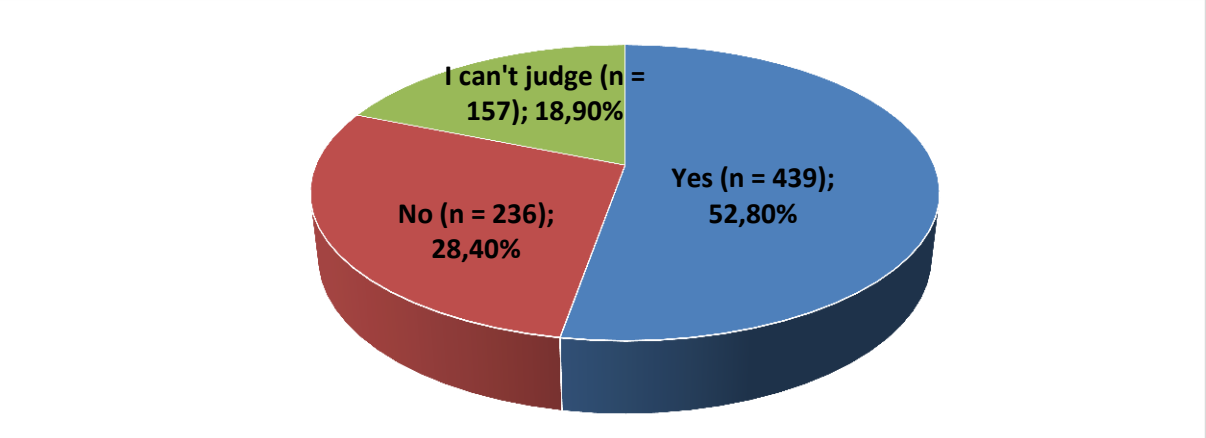

Fig. 29. Participation of parents in training to build healthy habits

In Fig. 30 present the forms of training that are preferred by nurses and parents. Both groups have the same preferences, the first being the creation of a parent's manual for building healthy habits (50.7% for parents and 40.30% for nurses, respectively). This is a form that allows nurses to prepare the most important rules for parents when creating a certain habit on paper, and can illustrate and enrich the information so that it becomes interesting and accessible. The handbook could contain algorithms for those health habits that parents have difficulty with. Parents could suggest the content of the manual through their questions to the

nurses related to the development of certain habits and difficulties encountered. In such a written form of education it is possible to combine the required and offered information, the competencies of nurses and the knowledge needs of parents. In addition, the manual can be used repeatedly and whenever necessary.

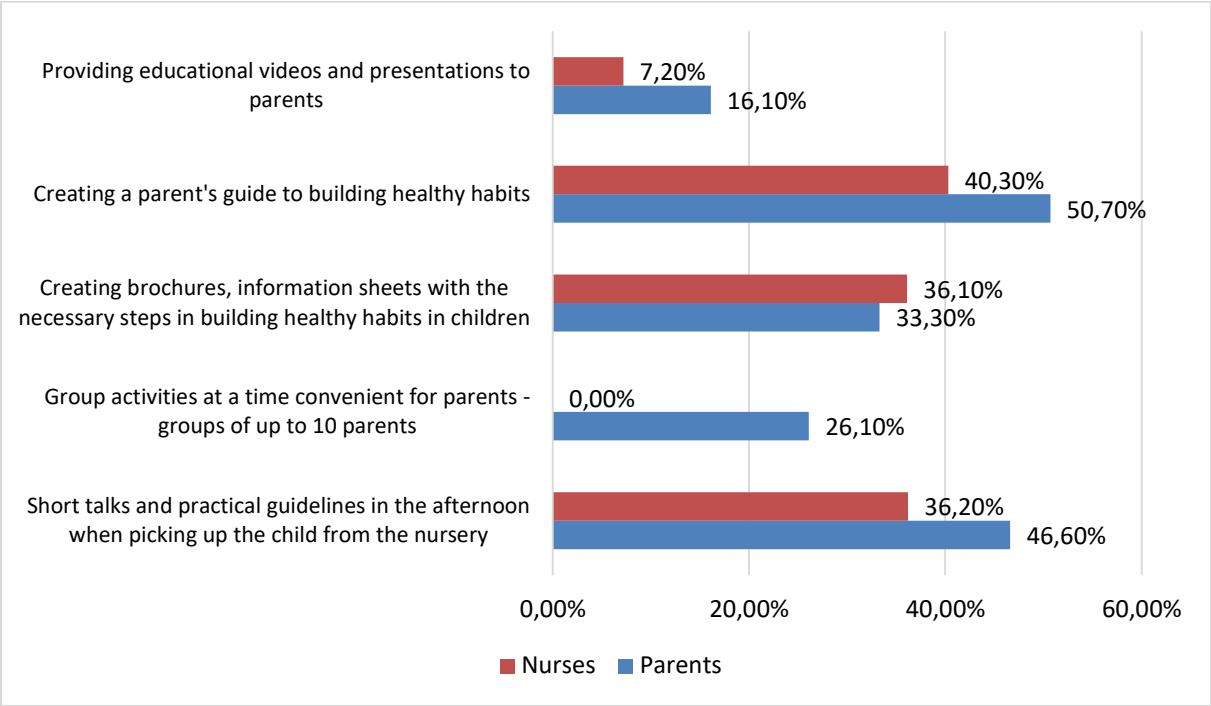

Fig. 30. Form of training

Secondly, both groups of respondents set short talks and practical guidelines that happen in the afternoon when taking the child from the nursery (46.6% for parents and 36.2% for nurses, respectively). This form of training has the advantage that it provides specific information in a synthesized version during the physical meeting between parents and a nurse in the nursery. The discussion is ongoing and there is no way the information can be used repeatedly. Sometimes words are not enough, in short conversations it is possible to miss important moments and forget some of the information.

The least preferred form of education is the provision of educational films and presentations to parents (16.1% for parents and 7.2% for nurses, respectively). They require special preparation, specific equipment and a group of parents to present the information visually. In modern conditions, this implies a very streamlined organization with determining the place and time of training, which requires compliance with certain rules. This is probably the reason why educational films and presentations are not a preferred form of education. It is notable that the parents are looking for communication with the nurse.

The nurses can benefit from training and support in their nursery workplace to develop and apply acquired knowledge and skills, both personally and professionally. They can use the experience gained to advise and train parents to cope successfully and smoothly with the education of healthy behavior of their children. The aim of the training is to increase the knowledge of parents, which could have a positive impact on themselves and lead to a change in their healthy behavior. As new habits in children require long periods of development and

development, parent training should include feedback, observation, guidance, encouragement and rewards. For their part, when parents work on developing their children's health habits, there should also be observation, guidance, encouragement and rewards.

According to Furlong M. et al. and Kaminski J. W. et al. a number of documents in various fields prove the effectiveness of educating parents to improve children's behaviour.

The Incredible Years program has received support in a number of randomized trials, as noted by Scott S. et al., Hartman R. R. et al., Webster-Stratton C. et al., Drugli M.B. et al. and NICE. According to Barlow A. Et al., Hutchings J. et al. and Gross D. et al. new evidence confirms its efficacy in young children. The application of the program shows that it is feasible and effective in educating parents with young children. Within the framework of The Incredible Years, separate training programs have been developed for parents of children in different age groups. The programs focus on strengthening the parent-child interaction, promoting the ability of parents to support the social and emotional development of children. The training includes various techniques that guarantee the quality of training. The programs have been implemented in more than twenty countries with an exceptional diversity of cultural traditions for more than 30 years.

According to Lavigne J. V. et al., McMenamy J. et al. Parent training programs are not widely available and there is limited evidence of their feasibility and effectiveness in childcare facilities.

Carey WB, McDevitt SC point out that differences in behavior among children are a major aspect of early childhood and begin with the perception of temperament in the first year of life, as a trait that describes a wide range of characteristics such as cheerful and adaptable children, or those that slowly accept change and tend to react negatively.

As development progresses, the young child strives for autonomy by learning from successes and failures while communicating and interacting with nurses. The quality and intensity of these experiences are regulated by differences in temperament. For most children, the second year is the most problematic, which is associated with a healthy phase of development, when the child plays, is disappointed or resists the expectations of adults (parents and nurses) related to nutrition, bathing, dressing and sleep time.

Children are individuals with their own character, temperament and peculiarities. Very often they have their own opinion and defend it. Negativeness is typical in early childhood. When habits are nurtured, they require repetition, perseverance and effort. Children do not always agree to follow the instructions of adults, especially when it comes to something new and unfamiliar to them. In these cases, the approach that adults will choose to stimulate the child and create interest in the habit is especially important. Parents need to be helped in this direction by suggesting different approaches to success with their children.

For example, children sometimes refuse to do something on the pretext that they are tired or simply say they do not want to do it. The adult in this situation can agree with the child to do only a little of this without having to do it for a long time, for example only for one minute and declare what the child has done as a victory for the day. Another approach is when the parent encourages the child with love, telling them that what they needs to do is a gift and a great experience. After the child completes the action, give them a rest or a treat - something they wants and look forward to. Parents need to know that they should not postpone the actions of a habit for later, because it confuses the child and he understands that

he can gain time. Children need to be talked to, explained to, answered honestly. Only then will their resistance be reduced, fears of the unknown and the new will be avoided. In the process of building healthy habits you need to create positive emotions, to show the fun side of the actions related to the habit. Sometimes children find an action difficult. This can be overcome by doing a small dose of the difficult things and then allowing the child to be distracted by a favorite activity.

Behavior change can occur in response to rewards. According to Bandura A., reward is associated with this change in behavior, with expectations. It has long been established that rewards have an effect on provoking and maintaining certain behaviors, especially in young children. External rewards are less effective in the long run, but help people develop and maintain positive behaviors.

In raising children, rewarding has a very successful educational effect. Promises of a reward in the future for the performance of a task now are not very successful, as children want to receive their reward immediately, to see or feel it. Therefore, the method of rewarding in the performance of certain activities has a motivating effect on children in early childhood and can be used in the formation of healthy habits.

If the child makes an independent choice to perform actions that he or she knows will be rewarded, this is likely to lead to greater long-term success, although direct rewards can now also be effective (Drebbing CE et al. (2007)).

Praise from adults can serve as a reward, but some research shows that the way praise is made is important to children. Too much emphasis on effort (for example, "I know you've worked very hard on this") can reduce self-efficacy, i.e. the child can build an unrealistic self-image and overestimate, although research results are conflicting in terms of effects on children when praising efforts or praising their abilities (Lam S. F. (2008)). Exaggerated praise can create problems in children with low self-esteem (Brummelman E. et al. (2014)).

Praise focused on traits such as intelligence, as opposed to praise focused on the use of behavioral strategies, can also have different effects. Dweck CS, a longtime researcher on the effects of praise on children, recommends that praise be focused on "commitment, perseverance and the like" to increase motivation, as it shows what they have done to be successful and what they need to do to be successful again in the future. "While praising individuals for their intelligence or other obvious traits "gives them not motivation and resilience, but fixed thinking with all its vulnerability."

Of particular importance in the process of habit formation is the environment in which the actions of the habit are practiced. First of all, it must be positive, predisposing and comforting for the child. Adults should organize it so that the child is not distracted when performing the habit. It is good to do the actions together with the child until they show a desire to do them independently. This way he will not feel alone in the new task and at the same time he will always have an example in front of him. Apart from the purely mechanical execution of the movements, it is also good for the parent to give verbal guidance and explanations to the child, to reinforce the effect of success with a positive attitude and praise.

It always starts with a demonstration only by the adult, then the child gets involved and does it with the adult, until the repeated repetitions are consolidated and the child begins to perform the habit independently, first with verbal commands and reminders, and finally completely autonomously. This is a long and difficult process that requires patience and

perseverance on the part of adults, a lot of positive emotions and satisfaction with the success achieved with the child. However, children are different and for each of them you need to find the right approach in creating healthy habits. In most cases, instinct guides parents in choosing an approach to the child, because they know them best and have the most direct observations of his development. Nursery nurses, on the other hand, professionally assess what needs to be done for each child in order to succeed in forming healthy habits in him. Successful laying of the foundations of a child's healthy lifestyle, starting with the formation of healthy habits in early childhood, largely depends on good communication and cooperation between parents and nurses.

3.5. Author's methodology for improving the effectiveness of the interaction between the parents and the nurse in the formation of healthy habits in the child

The results of the one-time study contain the main prerequisites for the development of the methodology:

- The claims of the nurses that they need a unified methodology for creating healthy habits of children in the nursery.
- Expressed desire of the parents for additional training and interaction with the nurse in the nursery for the formation of healthy habits in children.
- Difficulties that parents experience in the process of creating healthy habits for their children.

The main elements of the developed methodology are:

1. Determining the initial level of hygienic and health habits of the children entering the nursery;
2. Parent training;
3. Interaction for a period of 6 months;
4. Results;
5. Evaluation.

The approbation of the Methodology for Improving the Effectiveness of the Interaction between the Parents and the Nurse in the Formation of Health Habits was conducted for 76 new children who have successfully passed the adaptation period in the nursery "Detelina". It covered the period January 2021 - June 2021. At the end of this period, habits were monitored. The nurses in the nursery where the testing took place filled in a Habit Monitoring List.

Nursery "Detelina" in Varna was chosen to test the Methodology for improving the effectiveness of interaction between nurses and parents, as it has a sufficient number of groups, has the highest attendance of children in an epidemic situation and is the only nursery in the Asparuhovo region with a population of different ethnicity.

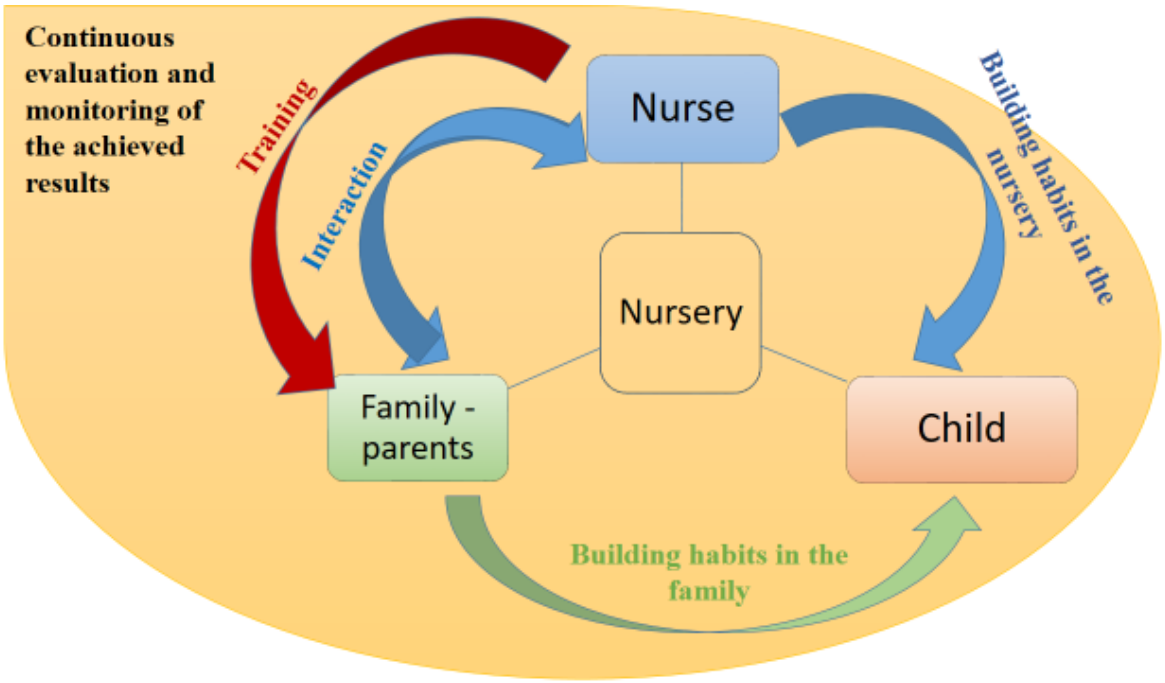

Fig. 31. Model for building healthy habits in the nursery with the participation of a nurse and family

The model we offer includes three main elements - the nurse, the parents and the child, which are united by the nursery institution (Fig. 31).

We have proven that for the proper development of healthy habits in the child, parents need **training**. It is a one-way process directed by the nurse to the parents and involves several highlights:

- ✓ Organizing individual meetings between the nurse and the parents at a time appropriate for the parents;
- ✓ Continuous counseling by the nurse to support parents in forming habits in the child;
- ✓ To make it easier for parents to develop and provide guidance with practical tips for forming healthy habits;
- ✓ Creating conditions for feedback from parents to the nurse.

There is a two-way process of **interaction** between the nursery nurse and the child's family, which consists of:

- ✓ Joint discussion of problems that have arisen in the formation of a healthy habit and search for ways and means to solve;
- ✓ Providing support and encouragement to the family in case of difficulties in the process of forming a certain habit in the child;
- ✓ Providing methodological assistance if necessary and desired by parents;
- ✓ Facilitate the process of communication between the nurse in the nursery and the child's family via e-mail, Viber, Skype, Facebook, telephone, etc.

During the interaction, it is important that the information flows both in the direction from the nurse to the family, and vice versa - from the parents to the nurse. In this way their efforts to achieve positive results in the formation of healthy habits in the child are united, the criteria and requirements for the child are unified.

The **child** is the main object of influence by the parents and the nurse in the nursery, so that they can build positive health habits

In the formation of habits in the ***family*** is necessary:

- ✓ Persistence in building healthy habits;
- ✓ Following the recommendations of the nurse in the nursery in building habits;
- ✓ Stimulating the child in case of success;
- ✓ Good personal example from the parents, guaranteeing the proper formation of healthy habits;
- ✓ Creating a favorable environment in which to form each of the healthy habits;
- ✓ Preventing coercive methods by the family to build the habit

In the formation of healthy habits, the child is influenced by the ***nurse*** in the nursery, through:

- ✓ Constant monitoring of the child;
- ✓ Continuous support and exercise of the habit that is currently being formed;
- ✓ Encouraging the child to maintain the habit;
- ✓ Encouraging the child to succeed.

It is extremely important in the whole process of forming healthy habits in children to constantly provide feedback to enable the family and the nurse to adjust their actions in a direction that ensures the development and establishment of sustainable positive habits in children.

In the process of creating healthy habits in the child, all activities are subject to continuous evaluation in the context of the nursing process and monitoring of the results achieved (Appendix 3).

As a result of the survey among parents on the health habits of their children, it was found that they need additional information in this regard and prefer to receive it in a specially designed guide for parents. We identified the basic habits that children need to master in early childhood and compiled such a guide to help parents (Fig. 32), (Appendix 4).

We called the guide "Practical Tips for Parents." In it we tried to synthesize the information about the most important health habits and to offer the parents valuable practical advice. The guide outlines some basic guidelines for building habits in young children. Several hygienic habits are considered, for which short algorithms are proposed. Also included are tips on habits related to feeding children, putting on clothes and putting on shoes.

To make it easier for parents, guidelines are given for faster and correct formation of healthy habits and some difficulties on the part of the child that may arise during the development of the habit are considered. The practical guide describes common mistakes made by adults in developing habits in young children.

Source: https://en.ppt-online.org/496931

Fig. 32. Title page of a practical guide for parents

The guide aims to help parents in the process of creating healthy habits for their children. It is richly illustrated with colorful pictures to be attractive and interesting to parents, and at the same time to facilitate them. The information is short and accessible, and ends with an author's poem, which can help children more easily remember and perform various activities related to habits.

3.6. Level of children's health habits after approbation of the Methodology for interaction between parents and nurse

When the goal is to achieve something in the upbringing of the child, it is especially important to carefully consider the path to be taken, how to go and with whom. Creating a plan to follow in the process of forming a healthy habit is one of the main tasks of parents and nurses, so that there is something to be guided by and expect positive results. This plan does not have to be complicated. It is important to be well thought out and consistent with the characteristics of the child.

Despite the well-known fact that habits influence behavior, encouraging their formation is a relatively new field of research in the field of health psychology (Gardner B. (2011); Karppinen P. (2018); Lally P. (2013)).

Lally R. & Gardner B. (2013), Rothman A. J., et al. note that more and more literature sources emphasize the importance of the principles for the formation of healthy habits.

Psychological research conducted for decades shows that repeating a simple action in certain circumstances, through learning, leads to the action that is activated when exposed to the same circumstances. In other words, according to Bayley P. J. et al. and Lally R., et al. (2010) these are habitual actions, and when the cause of the action is transferred to external signals, it reduces the dependence on conscious attention or motivation. Therefore, habits can be maintained even when lacking conscious motivation or interest (Gager K.). Habit making rules have been tested as a behavior change strategy (Lally P. (2008); McMenamy J. et al. (2011)).

In the process of promoting health behavior change and forming positive habits, it was found that current procedures for planning and documenting activities did not always meet best practices. Habit formation activity plans, in general, do not always focus on core healthy habits, but on vague goals and objectives with a timeframe of several months, in the hope that this will reduce the frequency of documentation while allowing for a wide variety of actions to be covered consistent with the set plan. Unfortunately, such planning rarely leads to change, especially for building good health habits, as they require specific and short-term goals and an action plan.

It is important for nurses in nurseries to document their activities in shaping children's habits, as well as the results achieved.

When short-term goals, tasks and plans are met, there is often a reluctance to add more documentation to day-to-day work, but this is necessary whether or not there are standards for documenting these activities if the aim is to increase the likelihood of successful results.

These facts and the established desire and need of the parents we studied prove that it is important to train families to form habits in children. On the other hand, creating a specific habit in each child is also a product of training that must be carried out by parents and the nurse in the nursery. Healthcare professionals are competent and can apply a variety of techniques and approaches to succeed in this process. But parents need to be helped by educating themselves.

All this provoked us to look for the most appropriate way to perform this task and so the idea was born to develop a guide "Practical advice for parents" that will help families in developing healthy habits in children. The form of training was suggested to us by the parents and nurses themselves, who expressed their preference for it during our study.

Of the children surveyed, 51.3% were boys and 48.7% were girls, with only 3.9% (n = 3) of parents saying they had problems developing healthy habits and 7.9% (n = 6) having difficulty in certain situations. The main reasons for the difficulties are the unwillingness of the child to perform the set tasks (55.6%) and the lack of sufficient time for the parents to take care of the child (44.4%). These difficulties could be overcome after talking and consulting with the nurse in the nursery. Children at this age go through a period of asserting their identity and denying everything that adults want from them. Perhaps this is the reason why parents report their unwillingness to perform certain activities related to the formation of a habit. In such cases, it is good to approach the child with more attention and patience, to stimulate them with some reward for his work. It is important to note that moral incentives have a better effect - to praise the child, to reward them with a pleasant experience. Therefore, parents can also be taught how to stimulate their children and how to turn habit activities into enjoyable and accessible play.

It is well known that working parents have limited free time. But in order to help their children to create a certain habit, it is not necessary to spend special time on it. It is enough to perform the activities correctly according to the certain habits that the child is currently forming. Children up to the age of 3 learn mainly by imitation. At this age, they carefully observe the adults and eagerly "absorb". If parents set a good example for their children in following the daily health habits that they themselves have, it is not necessary to set aside special time for this. Children just watch and repeat. So naturally and without problems they learn these habits.

When approving the methodology for building healthy habits of children in the nursery, the opinion of nurses and parents on the level of habits of children who will be monitored was initially studied. In FIG. 33. a comparative analysis of the mastery of eating habits by children at the beginning of the process of interaction between the nurse and the family within the applied Model for building healthy habits and at the end is shown. The data clearly show a significant increase in the number of children who have acquired the studied habits within 6 months. Regarding drinking from a cup with help (before - 97.40%, after - 1.30%), self-feeding with hands (before - 25%, after - 1.30%) and feeding with help (before - 3.90%, after - 1.30%) there is a tendency to reduce the number of children who have them at the end of the study period. These results are well illustrated in Fig. 30, showing their change.

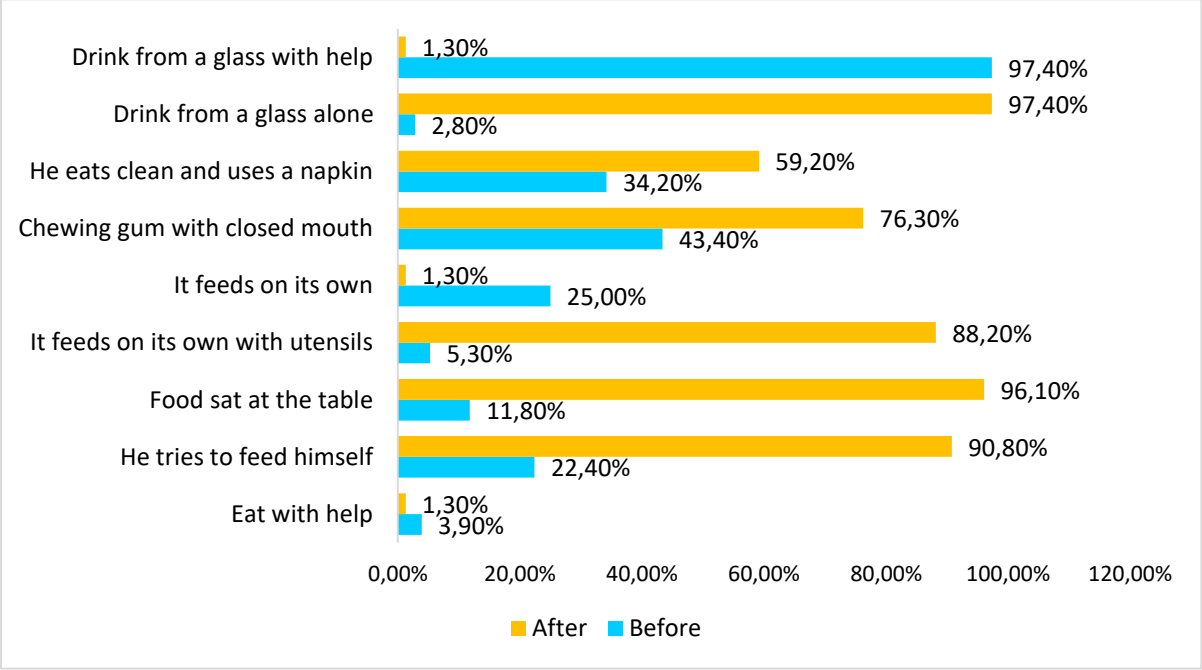

Fig. 33. Eating habits that children have before and after applying the Methodology

After the implementation of the Methodology, we analyzed how children's habits change. A positive effect was observed for all habits studied. As can be seen from Fig. 34. 41.20% children's habit of drinking from a cup with help has changed, as a result they have started to cope on their own. There was also a decrease in the percentage of children whose habit of eating independently but with hands (8.10%) or with help (41.90%) had changed. Almost all children studied showed a change in the habit of drinking from a cup independently (99.20%), eating independently with utensils (99.30%), sitting at a table

(95.60%) and eating cleanly using a napkin (93.40%). Positive results were also obtained for chewing with mouth closed - 78.80 % change and trying to eat independently - 34.50 % change. These results support our idea that when parents have the necessary information and work with their children on learning certain habits, success is achieved. Eating habits can be practiced several times a day - at each meal, enabling parents to frequently correct children's mistakes.

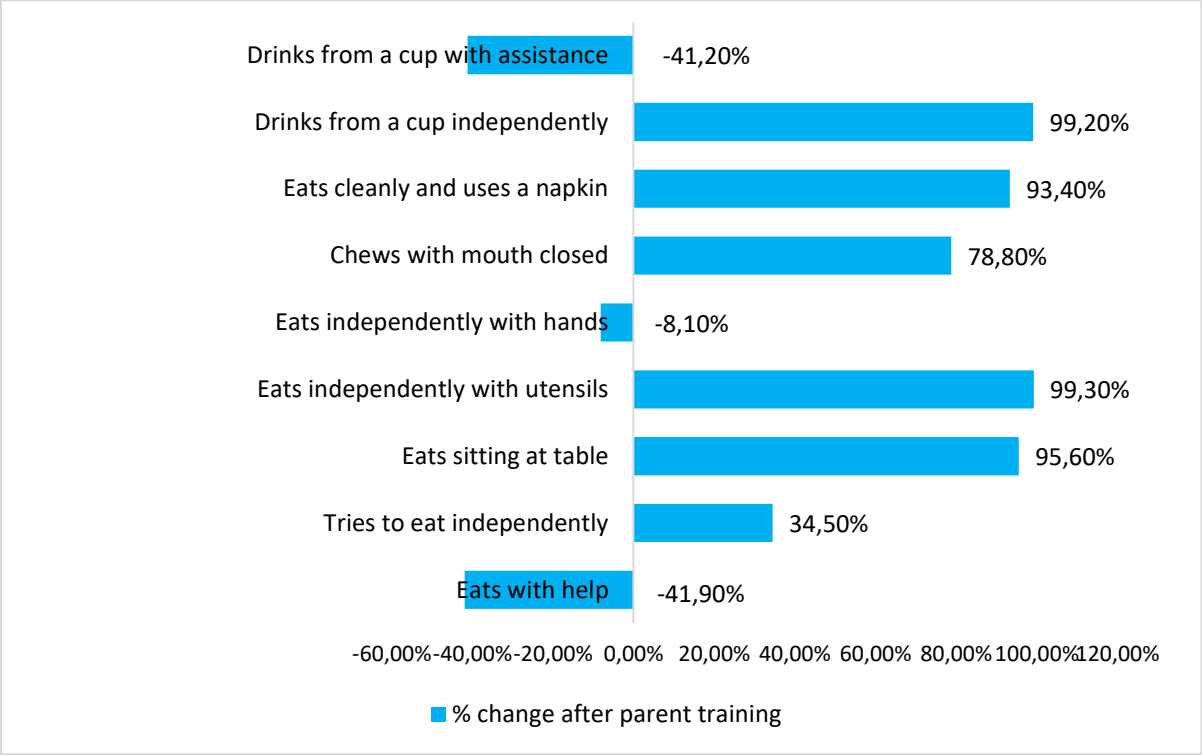

Fig. 34. Change in eating habits that children have after training of parents and application of the Methodology

The comparative analysis of the habits related to hygiene presented in fig. 35, also show a significant increase in the number of children who have mastered them after the training of the parents and the application of the Methodology. Significant progress has been made in hand washing before and after meals, 76.30% and 76.00%, respectively, at the end of the 6-month follow-up period, with only 6.60% and 13.20% of children initially experiencing these habits. The indicators regarding the habits for washing hands after play (72.40%) and after using the toilet (71.10%) have also improved a lot compared to the initial data, respectively - 17.10% and 9.20%. The least success was achieved in terms of brushing teeth after meals (at the beginning - 7.50% and at the end - 26.30%), although the trend is to increase the number of children who have mastered this habit.

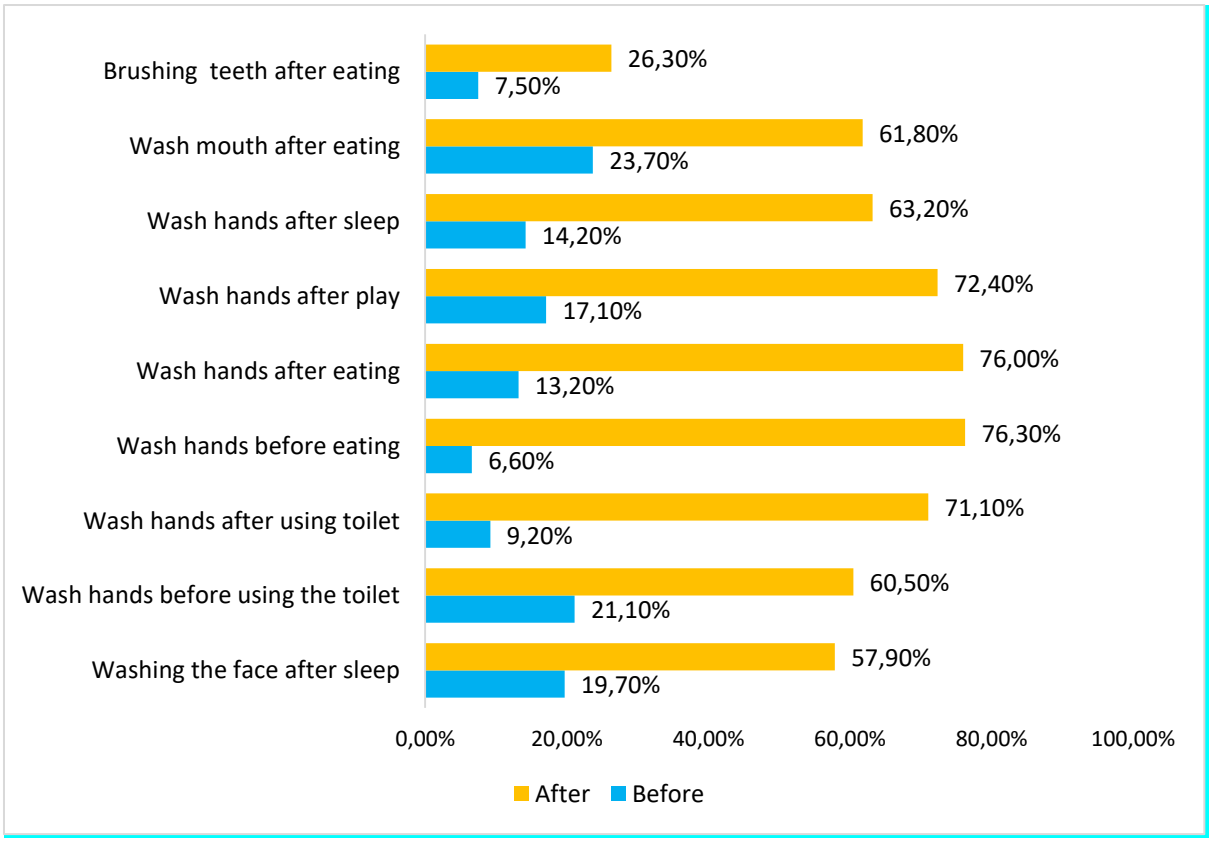

Fig. 35. Hygienic habits that children have before and after applying the Methodology

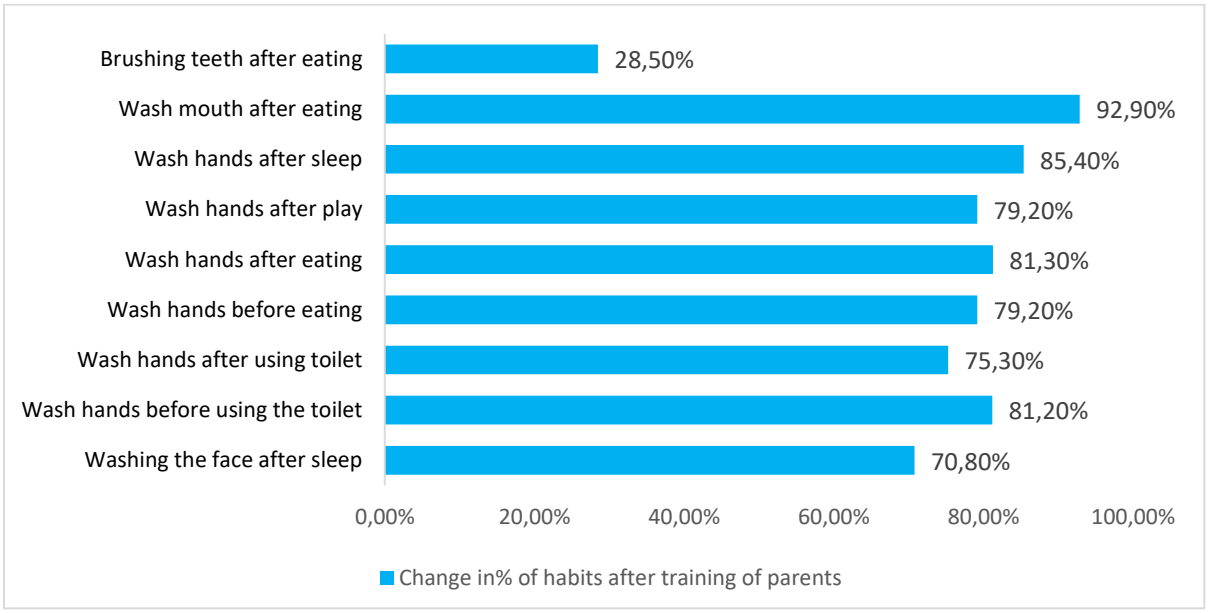

Fig. 36. Change in the hygienic habits that the children have after training of the parents and application of the Methodology

The results are similar when monitoring the change in the hygienic habits of the studied children after training of their parents (Fig. 36.) In all observed habits there is a significant change and good control. Almost all children have acquired the habit of washing their mouths after eating, and it has changed 92.90%. Over 80% change shows the habit of

washing hands after sleep (85.40%), after eating (81.30%) and before using the toilet (81.20%). The relative share of children who, after the parents' training, wash their hands after playing and before eating is also high - a change of 79.20% for both habits. As a result of the targeted influence of parents, 75.30% is the change in the habit of washing hands after using the toilet, and 70.80% is the change in the habit of washing the face after sleep. The progress of children in terms of brushing their teeth after meals is relatively lower - only 28.50% change. Probably this result is due to the fact that it is traditionally accepted to brush your teeth twice a day - in the morning after sleep and in the evening before bedtime.

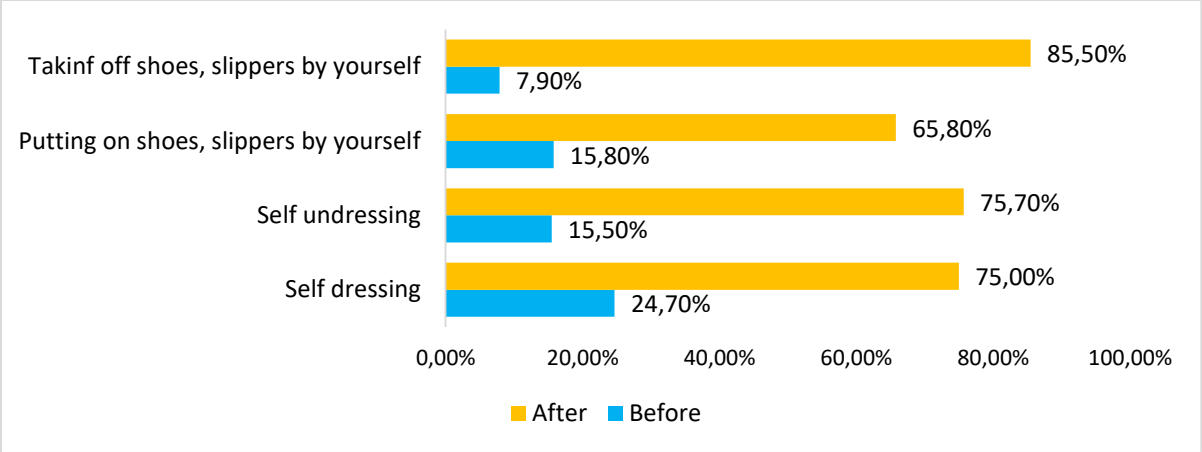

Fig. 37. Self-care habits that children have before and after applying the Methodology

With regard to the habits of dressing and undressing, the comparative analysis shows an increase in the number of children who, after the application of the Methodology, have started to perform these activities independently (Fig. 37). Almost the same is the percentage of children who at the end of the study period have learned to undress - 75.70% and to dress - 75.00% independently. The result is similar with regard to putting on and taking off shoes and slippers. Most children (85.50%) have learned to take off their shoes and slippers. The graph shows that mastering the habit of wearing shoes and slippers is the most difficult for children and the result achieved there is lower compared to other habits referred to in the graph - only 65.80%.

It is extremely important for children in early childhood to acquire basic self-care habits. In this way they will enter the kindergarten prepared and independent. After the training of the parents, the children managed more successfully with the formation of the habits for self-undressing, as the change of this habit is 93.70% and independent footwear with a change of 92.10% of shoes and slippers, as shown in fig. 38. The habit of undressing has changed 79.50%, and the habit of self-undressing - 53.60%. These daily activities can be more easily learned by children by being creative. For example, semicircles of colored paper can be glued to the soles of shoes or slippers, and children should try to put them on in such a way that when they bring their feet close to each other, a full circle is formed, or for the blouses they choose to wear to have a picture in front and the children should try to always see the picture when dressing.

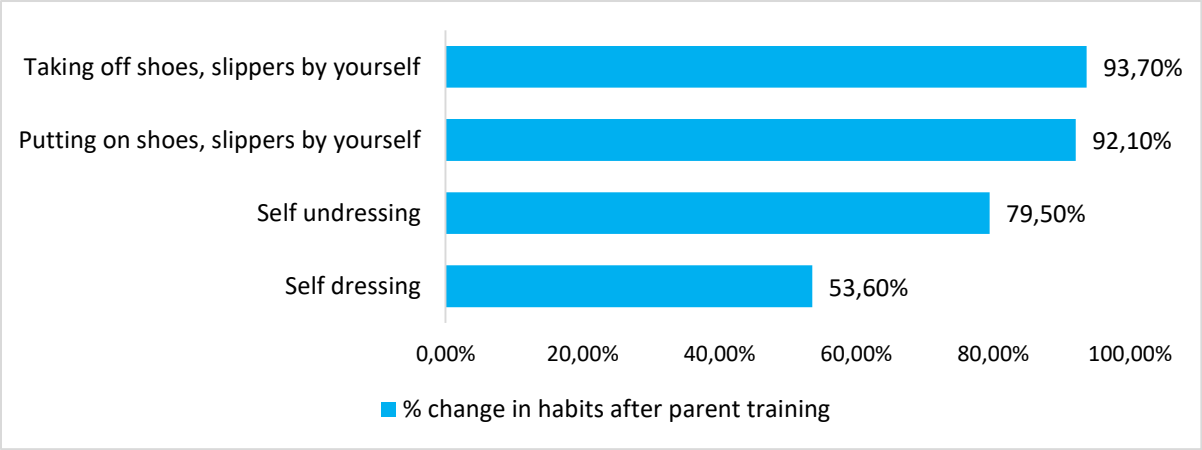

Fig. 38. Change in the self-care habits that children have after training of parents and application of the Methodology

In Figure 39, the significantly lower percentage of children using a nappy (19.20%, compared to 89.50% at baseline) or needing help with toilet paper (3.9%, compared to 68.40% at baseline) is notable. This is indicative of the results of implementing the Nurse-Parent Interaction Methodology in terms of habit formation. Usually removing a nappy from a child's daily routine is a long, torturous and difficult process. Parents often make several unsuccessful attempts until they achieve success. The child grows up during this time and unfortunately a positive result becomes even more difficult to achieve. From the data we obtained, it is clear that over a period of 6 months, in a significant number of cases the desired outcome was achieved and the child acquired the habit of reporting his physiological needs (67.10%). In all the other habits studied, children were successful by more than 60%, with the least progress in terms of independent use of toilet paper (before - 7.90%, after - 36.80%). The result of the habit of putting one's hand in front of one's mouth when yawning is interesting, where the change for the studied period is most noticeable (before - 14.50% and after - 93.40%).

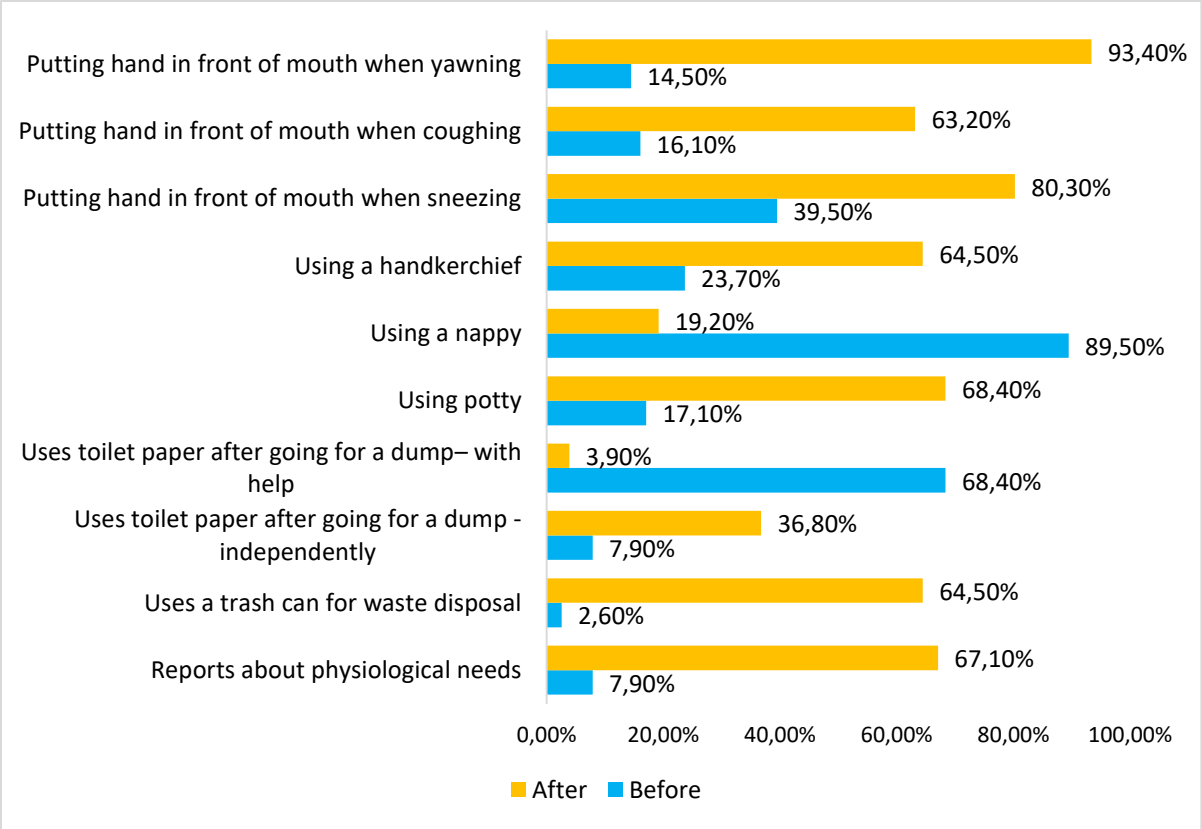

Fig. 39. Hygienic habits that children have before and after applying the Methodology

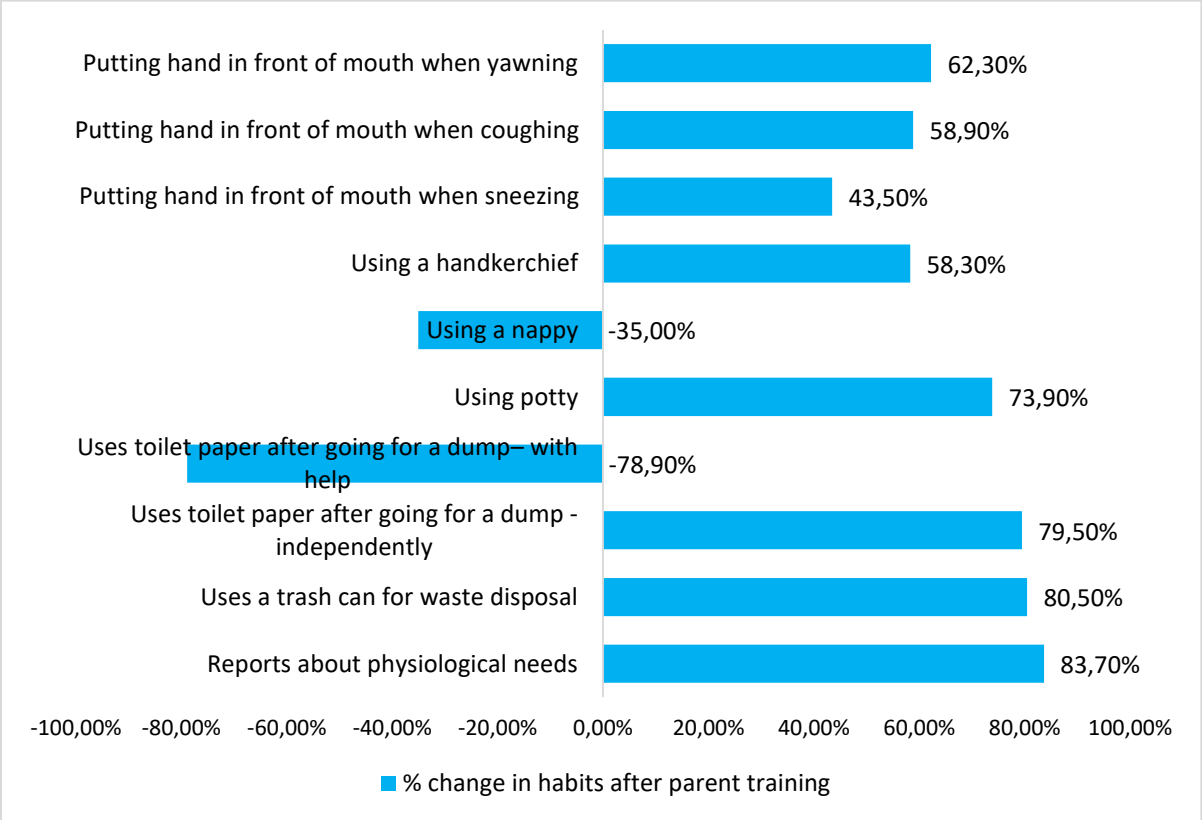

Fig. 40. Change in the hygienic habits that the children have after training of the parents and application of the Methodology

In FIG. 40 we can see that after the training of parents the use of nappies by children has changed by 35.00%, and the habit of performing their physiological needs in a potty has changed by 73.90%. An even higher percentage of change - 78.90% is observed in the habit of using toilet paper with help, as the change for self-management of this activity is 79.50%. One serious problem in early childhood for parents is the communication of the child's physiological need. This habit has successfully changed to 83.70%. Eliminating the use of nappies and informing children about physiological needs requires more perseverance on the part of parents. Sometimes the formation of these habits takes more time. In their creation, the role of the nurse in the nursery is invaluable, as often the change of circumstances is an occasion to change the rules, i.e. in the nursery the child is more inclined to accept the new, seeing the good example of other children and fulfilling the requirements in the individual regime moments.

When studying children's health habits, we also looked at some cultural habits related to health. From the results of the study we found that the habit of disposing of waste in the trash has changed 80.50%. The habits of children to put their hand in front of the mouth when yawning (62.30%), when coughing (58.90%), when sneezing (43.50%) have changed to a great extent. The change in the habit of using a handkerchief for its intended purpose is 58.30% after the parents have been trained. The personal example of adults is extremely important for the formation of children's cultural habits. If the child witnesses all these activities properly performed by the parents, they are much more likely to perceive and assimilate them quickly by virtue of imitation and vice versa - if they witness non-compliance with these cultural norms, the child perceives and imitates them, because as they cannot judge that they are wrong.

The conclusions we can draw from the results achieved with the children after testing the Methodology for improving the effectiveness of the interaction between the nurse and the parents in terms of forming healthy habits show that parents need to be supported in fulfilling their roles in the family. This can be done in different ways. We chose the method of training and found significant good results in children in the acquisition of certain healthy and eating habits.

The methodology for improving the effectiveness of the interaction between the nurse and the parents in terms of forming healthy habits includes an assessment of the habits acquired by each child. This assessment is made periodically by the nurse in the crèche and the results are provided to the parents of the child concerned in order to get acquainted with them and to discuss any issues that may arise.

We have developed a form containing an assessment sheet, which indicates the habits that the child should have, according to the respective age (Table 3), assessment criteria and the necessary activities to be undertaken to create a specific habit (Table 4).

Table 3. Fiche for assessment of habits according to age group

FICHE FOR ASSESSMENT OF HABITS ACCORDING TO AGE GROUP

Age	Habit	Evaluation	Activities
3 -18 months	Eats with a spoon		
	Drinks from a cup		
	Uses potty		

	Reports physiological needs		
	Brushes teeth		
	Washes hands		
	Washes face		
	Washes his/her mouth		
	Uses a napkin		
	Uses a handkerchief		
	Disposes of waste in a bin		
	Puts hand in front of mouth when sneezing, coughing, yawning		
19-24 months	Eats with a spoon		
	Drinks from a cup		
	Uses potty		
	Reports physiological needs		
	Brushes teeth		
	Washes hands		
	Washes face		
	Washes his/her mouth		
	Uses a napkin		
	Uses a handkerchief		
	Disposes of waste in a bin		
	Puts hand in front of mouth when sneezing, coughing, yawning		
	Uses toilet		
	Dresses		
	Undresses		
	Puts on shoes		
	Takes off shoes		
25-30 months	Regulates physiological needs		
	Uses potty		
	Uses toilet		
	Eats with a spoon		
	Eats with a fork		
	Drinks from a cup		
	Brushes teeth		
	Washes hands		
	Washes face		
	Washes his/her mouth		
	Uses a napkin		
	Uses a handkerchief		
	Disposes of waste in a bin		
	Puts hand in front of mouth when sneezing, coughing, yawning		
	Dresses		
	Undresses		
	Puts on shoes		
	Takes off shoes		
	Uses toilet paper		

31-36 months	Regulates physiological needs		
	Uses potty		
	Uses toilet		
	Eats with a spoon		
	Eats with a fork		
	Uses a knife		
	Drinks from a cup		
	Brushes teeth		
	Washes and dries his/her hands		
	Washes and dries his/her face		
	Washes his/her mouth and dries his/her face		
	Uses a napkin		
	Uses a handkerchief		
	Disposes of waste in a bin		
	Puts hand in front of mouth when sneezing, coughing, yawning		
	Dresses		
	Undresses		
	Puts on shoes		
	takes off shoes		
	Uses toilet paper		
	Arranges his/her clothes		

Table 4. Evaluation criteria and the necessary actions to be taken to create a specific habit

Points	Evaluation	Activities
0	The child is not interested in the habit	Intensive work with the child to increase interest and learn the habit (illustration with pictures, games and songs)
1	The child shows interest and the habit creates a positive emotion in him	
2	The child observes the adult and repeats what is shown	More frequent explanation, demonstration and practice of the habit
3	The child always needs a reminder and help in making the habit	More often demonstrate and practice the habit
4	Sometimes the child performs the habit on their own	If necessary, remind and invite the child
5	The child regularly performs the habit on their own	There is no need for additional work with the child to master the habit

Options for extending the applicability of the Methodology

The Methodology we developed meets 3 important needs:

- Reducing the difficulties of parents in creating habits in their children.
- Training of parents for the formation of healthy habits.
- Providing nurses in nurseries with a unified methodology – a validated algorithm of action to increase the level of healthy habits in children.

Our Methodology has shown its suitability for application in modern conditions of nurseries in our country. The methodology assumes not a one-step process, but a cycle of implementation, training, monitoring, monitoring and evaluation of results.

The developed "Practical advice for parentss" guide was easily and well received by parents and improved their communication with nurses. The improved level of mastery of children's health habits during the observed period is evidence of increased effectiveness of cooperation between the family and the nurse in the child's estate.

All this gives us reason to offer the Methodology for wider application in nurseries in Bulgaria.

IV. CONCLUSIONS, CONTRIBUTIONS AND RECOMMENDATIONS

CONCLUSIONS

1. Nursery in Bulgaria is a unique form of complex educational, health and social care for children up to 3 years of age, ensuring their proper physical, mental and cultural development.
2. The main problem for the upbringing and education of children up to 3 years of age is the limited number of places in nurseries, due to which many children are deprived of the opportunity for early socialization in an appropriate environment with quality professional care.
3. Creating healthy habits for children is a priority for both the family and the team of the nursery, respectively the nurse.
4. The snapshot study of the health habits of children attending nurseries showed the important role of collaboration between the nursery and the children's family. Consistency was found in the views of nurses and parents regarding most of the children's eating and self-care habits, as well as their preferred forms of learning. Differences were found with regard to habits of washing face, hands and brushing teeth, use of potty and toilet paper, use of dustbin for waste disposal, placing hand in front of mouth when coughing.
5. The Methodology developed by us for improving the effectiveness of the interaction between the parents and the nurse unites the three main elements - family, child and nurse in the conditions of the nursery.
6. The approbation according to the exact algorithm of the Methodology for 6 months in one nursery (among 76 children) showed a positive change in the level of mastering the health habits.
7. The Methodology developed by us to improve the effectiveness of the interaction between the family and the nurse through training of parents has proven to be effective and useful in building healthy habits of children in nurseries.

CONTRIBUTIONS

Contributions of theoretical significance

1. For the first time in Bulgaria a study was conducted on the formation of healthy habits in early childhood with the participation of nurses in nurseries and parents.
2. The role of the nurse in the upbringing and development of healthy habits in early childhood is described in detail.
3. The need to train parents on the proper and effective creation of healthy habits in children is proven
4. The readiness of the nurses in the nurseries to participate in parent education has been identified.
5. Theoretically substantiated and proposed Model for building healthy habits in the nursery with the participation of the nurse and the family.

Practical - applied contributions

1. A Methodology for improving the effectiveness of the interaction between the parents and the nurse in the nursery with regard to the formation of healthy habits in children has been developed and implemented.
2. A guide has been developed to train parents to build healthy habits with precise and clear guidelines.
3. A system has been set up to monitor the habits that the child should have, according to the age and the necessary activities to correct the gaps

RECOMMENDATIONS

To the Health Development Directorate of the Municipality:

1. Systematic training of nurses to improve their professional competencies related to the upbringing, education and communication with children and their parents with emphasis on the application of modern techniques and methods for building healthy habits
2. Providing a guide "Practical advice for parents", which can be used in nurseries in Varna
3. Providing an opportunity and creating channels for continuous communication with feedback between nurses and parents.

To the Higher Education Institutions and Bulgarian Association of Health Care Professionals:

1. We propose to include the topic "Interaction of the nurse / midwife with parents and children in the nursery for the formation of healthy habits" in the curriculum in the discipline "Nursing in Pediatrics" in the discipline Clinical (educational) practice in the "Nursery" for specialty "Nurse" and in the discipline "Special Obstetric Care in Neonatology and Pediatrics" for the specialty "Midwife" within 2 academic hours.
2. Providing specialized courses in the framework of postgraduate studies and the Lifelong Learning Program for nurses and midwives working in nurseries

V. PUBLICATIONS AND PARTICIPATIONS RELATED TO THE THEME OF THE DISSERTATION

1. **Grozdeva D.,** K. Eguruze, Formation of healthy habits in early childhood in the conditions of a pandemic by COVID - 19. Collection of reports. Eighteenth National Scientific Session for Students and Teachers, Pleven, 2020, pp. 97-104, ISBN-978-954-756-248-6 (in Bulgarian)
2. **Grozdeva D.,** K. Eguruze, Creating eating habits - challenges for the nurse in the nursery. Collection of reports. National scientific-practical (on-line) conference with international participation, Stara Zagora, 2020, pp. 36-41, IBSN: 978-954-305-570-8 (in Bulgarian)
3. **Grozdeva D.,** Formation of healthy and hygienic habits in children up to 3 years of age - a challenge for parents and nurses in nurseries. Mr. Nursing, issue 3/2021, pp. 63-68, ISSN 1310-7496 (in Bulgarian)
4. **Grozdeva D**., K. Eguruze, Establishing healthy habits in children of less than three years of age – a challenge for parents, International Scientific Conference on public health (on line) RSU Research week, Riga, Latvia, 24-26.03.2021