

**MINISTRY OF HEALTH AND SOCIAL WELFARE
IN REPUBLIC OF SRPSKA**

UNICEF

BREASTFEEDING IN REPUBLIC OF SRPSKA

REPORT ON PROJECT REALIZATION

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1. Introduction

Out of all animal kinds in the world, the only one that is called intelligent – Homo Sapiens, feeds its youngs with milk of another kind although it is known that breastfeeding provides an ideal food for growth of infants and has unique biological and emotional influence to the health of mother and child. From the economic point of view, breastfeeding is much cheaper than the other ways of feeding infants and costs in health care are less since children and mothers are healthier. Almost every woman is able to breastfeed successfully with the support of the environment and professional support. However, in the conditions of more intensive advertisement campaign, artificial feeding from a bottle and nipple is more often in both, developing countries and developed countries.

All this made UNICEF and WHO initiate Global Initiative for Promotion, support and protection of breastfeeding. In 1981, the International Code of Marketing – replacement for mother’s milk on the World Health Assembly; in 1990 Declaration Innocenti was passed, in 1992 Baby Friendly Hospital Initiative – BFHI was initiated. In the Republic of Srpska, this initiative has been existed from 1997 in the form of a national program for promotion, support and protection of breastfeeding. Clinic for Gynecology and Obstetrics of the Clinical Center in Banja Luka was declared Baby Friendly Hospital on October 6, 1998.

Health statistics in Republic of Srpska so far did not include data on breastfeeding. Information was provided through the individual studies of the local character. However there was a need for the overall survey on breastfeeding which would allow insight in the current situation and enable better planning breastfeeding promotion activities. Pilot project - Breastfeeding in the Republic of Srpska was prepared as a necessary prerequisite for such a survey in October 1999. Report on its realization was submitted to UNICEF and obtained data were used for the preparation of project “Breastfeeding in the Republic of Srpska”.

2. Goals and tasks of project

Global goal of the project is determining breastfeeding rate in the Republic of Srpska.

Specific goals of the project are:

- Check relevant factors that influences breastfeeding,
- Based on the survey result, give proposal of measures for promotion of breastfeeding in the Republic of Srpska.

3. Survey methods

Methodology of survey is prepared according to the recommendations from the manual: "A Practical Handbook for Multiple Indicator Survey" part 7, UNICEF, 1995(1). Proper changes have been made due to the specific characteristics of the survey area.

3.1. Sample

Households with children up to 5 years are defined as target population. Cluster is population group chosen by random sampling, its size includes defined, already specified number of children under 5 years. Cluster sampling is two-phase process. Firstly, the number of regional units, in which segments will be located, is defined and after that, identification of group of households in which interviewing will be done, is defined. Defined size of cluster is 20 households.

Survey was conducted in 2900 households (145 clusters) in the territory of Republic of Srpska. According to the assessment, Republic of Srpska has 1404569 population out of which, 158301 are children younger than 6 years (11,27%). Out of 494691 households, 2900 were interviewed (0,57%). 1256 children were included and there was estimate that 896 (0,57%) children will be included.

It is estimated that in the region of Banja Luka, there is 629710 citizens (44,83% of the total population of RS). Out of that number, 72876 are children under 6 years (11,57%). 46,04% children that are younger than 6 years in the Republic of Srpska, live in the region of Banja Luka (tables 1 and 2). That population lives in 17 municipalities (table 3). Number of clusters in the municipalities Banja Luka region is given in the table 4.

It is estimated that in the region of Dobož there is 412876 citizens (29,40% of the total population of RS). Out of that number, 46816 are children under 6 years (11,34%). 29,57% children that are younger than 6 years in the Republic of Srpska live in the region of Dobož (tables 1 and 2). That population lives in 14 municipalities (table 5). Number of clusters in the municipalities of Dobož region is given in the table 6.

It is estimated that in the region of Srpsko Sarajevo there is 211275 citizens (15,04% of the total population of RS). Out of that number, 26581 are children under 6 years (12,58%). 16,79% children that are younger than 6 years in the Republic of Srpska live in the region of Srpsko Sarajevo (tables 1 and 2). That population lives in 16 municipalities (table 5). Number of clusters in the municipalities of Dobož region is given in the table 8.

It is estimated that in the region of Trebinje there is 150708 citizens (10,73% of the total population of RS). Out of that number, 12028 are children under 6 years (7,98%). 7,6% children that are younger than 6 years in the Republic of Srpska live in the region of Trebinje (tables 1 and 2). That population lives in 12 municipalities (table 9). Number of clusters in the municipalities of Trebinje region is given in the table 6.

Number of clusters and households that are included in the survey by regions is given in the table 11. Clusters are chosen by random sampling method from the list of settlements in Republic of Srpska.

47,43% village and 52,57% city households are included.

No.	REGION	TOTAL NUMBER OF CITIZENS	NUMBER OF CHILDREN UNDER 6	PERCENTAGE OF CHILDREN UNDER 6 IN THE TOTAL POPULATION
1	BANJA LUKA	629710	72876	11,57%
2	DOBOJ	412876	46816	11,34%
3	SRPSKO SARAJEVO	211275	26581	12,58%
4	TREBINJE	150708	12028	7,98%
	TOTAL	1404569	158301	11,27%

Table 1

(Total number of population, number of children under 6 years, percentage of those children in the total number of population in Republic of Srpska by regions)

No.	REGION	PERCENTAGE OF POPULATION IN RELATION TO THE TOTAL POPULATION OF RS	PERCENTAGE OF CHILDREN UNDER 6 YEARS IN RELATION TO THE TOTAL NUMBER OF THE CHILDREN IN RS
1	BANJA LUKA	44,83%	46,04%
2	DOBOJ	29,40%	29,57%
3	SRPSKO SARAJEVO	15,04%	16,79%
4	TREBINJE	10,73%	7,6%

Table 2

(Percentage of population in the region in relation to the total population in RS and percentage of children under 6 years in the regions in relation to the total number of those children in RS)

No.	MUNICIPALITY	NUMBER OF POPULATION	NUMBER OF CHILDREN UNDER 6	PERCENTAGE OF CHILDREN UNDER 6 IN THE TOTAL POPULATION
1	ŠIPOVO	7973	908	11,39%
2	□ELINAC	16980	2087	12,29%
3	BANJA LUKA	217968	25742	11,81%
4	GRADIŠKA	59494	6622	11,13%
5	KNEŽEVO	11793	1785	15,14%
6	KOTOR VAROŠ	16129	2492	15,45%
7	KOZARSKA DUBICA	33289	3119	9,37%
8	KRUPA	1615	204	12,63%
9	LAKTAŠI	39196	4237	10,81%
10	MRKONJI□ GRAD	16621	1875	11,28%
11	NOVI GRAD	28502	3064	10,75%
12	PRIJEDOR	90002	10530	11,70%
13	PRNJAVOR	48292	5206	10,78%
14	RIBNIK	7881	987	12,52%
15	SRBAC	24044	2765	11,50%
16	SRPSKA KOSTAJNICA	7467	942	12,61%

17	SRPSKI SANSKI MOST	2464	311	12,62%
	TOTAL	629710	72876	11,57%

Table 3

(Number of total population, children under 6 years and percentage of those children in the total number of population by municipalities in the region of Banja Luka)

No.	MUNICIPALITY	NUMBER OF CLUSTERS
1	ŠIPOVO	1
2	□ELINAC	2
3	BANJA LUKA	21
4	GRADIŠKA	6
5	KNEŽEVO	2
6	KOTOR VAROŠ	2
7	KOZARSKA DUBICA	3
8	KRUPA	½
9	LAKTAŠI	4
10	MRKONJI□ GRAD	2
11	NOVI GRAD	3
12	PRIJEDOR	9
13	PRNJAVOR	5
14	RIBNIK	1
15	SRBAC	2
16	SRPSKA KOSTAJNICA	1
17	SRPSKI SANSKI MOST	½
	TOTAL	65

Table 4

(Clusters in region of Banja Luka)

No.	MUNICIPALITY	NUMBER OF POPULATION	NUMBER OF CHILDREN UNDER 6	PERCENTAGE OF CHILDREN UNDER 6 IN THE TOTAL POPULATION
1	ŠAMAC	22111	2255	10,20%
2	BJELJINA	104832	10923	10,42%
3	BR□KO	35703	4135	11,58%
4	DERVENTA	37140	3929	10,58%
5	DOBOJ	76550	9043	11,81%
6	LOPARE	16047	1748	10,89%
7	MODRI□A	27111	2995	11,05%
8	PELAGI□EVO	4824	585	12,13%
9	PETROVO	11478	1411	12,29%
10	SRPSKI BROD	13034	1475	11,32%
11	SRPSKO ORAŠJE	2768	319	11,52%
12	TESLI□	43325	5953	13,74%
13	UGLJEVIK	16142	1845	11,43%
14	VUKOSAVLJE	1761	202	11,47%
	TOTAL	412826	46818	11,34%

Table 5

(Number of total population, children under 6 and percentage of those children in the total number of children by municipalities in the region of Doboj)

No.	MUNICIPALITY	NUMBER OF CLUSTERS
1	ŠAMAC	2
2	BJELJINA	10
3	BRČKO	4
4	DERVENTA	3
5	DOBOJ	8
6	LOPARE	2
7	MODRIČA	3
8	PELAGIČEVO	1
9	PETROVO	1
10	SRPSKI BROD	1
11	SRPSKO ORAŠJE	½
12	TESLIČ	5
13	UGLJEVIK	2
14	VUKOSAVLJE	½
	TOTAL	43

No.	MUNICIPALITY	NUMBER OF POPULATION	NUMBER OF CHILDREN UNDER 6	PERCENTAGE OF CHILDREN UNDER 6 IN THE TOTAL POPULATION
1	ŠEKOVIČI	9644	1135	11,77%
2	BRATUNAC	18754	2917	15,55%
3	HAN PIJESAK	4740	449	9,47%
4	MILIČI	9659	1444	14,95%
5	OSMACI	4529	679	14,99%
6	PALE	26046	2289	8,79%
7	ROGATICA	12383	1300	10,50%
8	SKELANI	0	0	0,00%
9	SOKOLAC	16858	1501	8,90%
10	SREBRENICA	16305	2569	15,75%
11	SRPSKA ILIDŽA	16170	1860	11,50%
12	SRPSKI STARI GRAD	2650	315	11,89%
13	SRPSKO NOVO SARAJEVO	8809	849	9,64%
14	TRNOVO	1652	165	9,99%
15	VLASENICA	19328	2889	14,95%
16	ZVORNIK	43748	6220	14,22%
	TOTAL	211275	26581	12,58%

Table 7

(Number of total population, children under 6 and percentage of those children in the total number of population by municipalities in the region of Srpsko Sarajevo)

No.	MUNICIPALITY	NUMBER OF CLUSTERS
1	ŠEKOVIĆI	1
2	BRATUNAC	3
3	HAN PIJESAK	½
4	MILIĆI	1
5	OSMACI	1
6	PALE	2
7	ROGATICA	1
8	SKELANI	0
9	SOKOLAC	1
10	SREBRENICA	2
11	SRPSKA ILIDŽA	2
12	SRPSKI STARI GRAD	½
13	SRPSKO NOVO SARAJEVO	1
14	TRNOVO	½
15	VLASENICA	2
16	ZVORNIK	4 ½
	TOTAL	23

Table 8

(Clusters in the region of Srpsko Sarajevo)

No.	MUNICIPALITY	NUMBER OF POPULATION	NUMBER OF CHILDREN UNDER 6	PERCENTAGE OF CHILDREN UNDER 6 IN THE TOTAL POPULATION
1	ĀAJNIĆE	4238	421	9,93%
2	BERKOVIĆI	2660	252	9,47%
3	BILEĆA	14695	470	3,20%
4	GACKO	11220	452	4,03%
5	KALINOVIK	4614	351	7,61%
6	NEVESINJE	21135	710	3,35%
7	LJUBINJE	4835	152	3,14%
8	RUDO	8807	831	9,43%
9	SRBINJE	22229	2088	9,39%
10	SRPSKO GORAŽDE	2453	263	10,72%
11	TREBINJE	36000	4320	12,00%
12	VIŠEGRAD	17822	1718	9,64%
	TOTAL	150708	12028	7,98%

Table 9

(Number of total population, children under 6 and percentage of those children in the total number of population by municipalities in the region of Trebinje)

No.	MUNICIPALITY	NUMBER OF CLUSTERS
1	□AJNI□E	½
2	BERKOVI□I	1
3	BILE□A	1
4	GACKO	1
5	KALINOVIK	½
6	NEVESINJE	1
7	LJUBINJE	½
8	RUDO	1
9	SRBINJE	2
10	SRPSKO GORAŽDE	½
11	TREBINJE	4
12	VIŠEGRAD	2
	TOTAL	14

Table 10
(Clusters in the region of Trebinje)

REGION	NUMBER OF CLUSTERS	NUMBER OF HOUSEHOLDS
BANJA LUKA	65	1300
DOBOJ	43	860
SRPSKO SARAJEVO	23	460
TREBINJE	14	280
TOTAL	145	2900

Table 11
(Number of clusters and households included in the survey, by regions)

All data that are used for calculation of samples are attached (Attachment 1) under the title Demographic movements.

3.2. Methodology of survey

Children born from January 1, 1995 until December 31, 1999 were included in the survey. It was anticipated that mothers give answers, in some exceptional cases: fathers and guardian, however in this survey, all answers were given by mothers.

People that were conducting this survey were selected and trained in the one-day educational seminar. During the seminar they got written instructions for filling in survey questionnaire, two record lists and survey questionnaire (material used during the training and survey are attached under 2, 3, 4, 5, 6).

3.3. Organization of survey

Process of survey was divided into:

- Preparation phase;
- Research survey;

- Phase of analyses and scientific data processing with preparation of report.

It was anticipated that preparation phase (preparation of research protocol and budget) is prepared in 45 days.

Research phase was divided into preparation phase, phase of fieldwork and phase of entering, control and validation of data.

Preparation research phase includes selection of those who conduct survey, education and preparation of those who conduct survey, testing and copying necessary written material. Phase of fieldwork includes interviewing 2900 households and quality control of fieldwork. Entering, control and validation of data were carried out during and after the conducted interview and fieldwork.

It was anticipated that this research phase lasts 45 days.

15 days were anticipated for phase of analyses and scientific data processing with preparation of reports. The way of statistical analyses of data is attached under 7, and anticipated breastfeeding indicators under 8; definitions and diagnostic criterion are under number 9.

All research phases were conducted according to plan.

4. Results

4.1. General data

1. 36 households (1,24%) did not want to participate in the survey and 189 (6,52%) could not be found at home though they were looked for twice. In 2900 households in Republic of Srpska, 1256 children under 5 were found (average 0,43 children per one household) and out of that 166 infants (children up to one year old). There were 1812 (62,48%) households without children under 5. Survey included 0,79% children under 5 out of the estimated number of these children in Republic of Srpska. It is estimated that 1,69% of the population in Republic of Srpska are children up to 1 year.

In 1300 households in the region of Banja Luka, 573 children under 5 years were found (approximately 0,44 children per one household). That is 0,79% out of the estimated total number of children under 5 years).

In 860 households in the region of Doboј, 290 children under 5 years were found (approximately 0,34 children per one household). That is 0,62% of the estimated total number of children under 5 years in that region.

In 460 households in the region of Srpsko Sarajevo, 224 children under 5 years were found (approximately 0,49 children per one household). That is 0,84% of the estimated total number of children under 5 years.

In 280 households in the region of Trebinje, 169 children under 5 years were found (approximately 0,60 children per one household). That is 1,41% of the estimated total number of children under 5 years.

Age structure of the children is given in the graph 2. to 7.

2. Sex structure of children

Sex structure of children under 5 years in the Republic of Srpska is given in the graph 8. There were 664 boys (52,83%) and 592 girls (47,17%) what is good from the point of estimate that in Republic of Srpska there are more women than men (49,7% men and 50,3% women). Most boys were found in the region of Srpsko Sarajevo (61,6%) and the smallest number in the region of Doboje (49,10%).

3. 88,93% of mothers in Republic of Srpska delivered babies in the age of 19 to 36, 4,62% were younger than 19 years and 6,45% were older than 36 years.

In the region of Doboje there are most mothers younger than 19 (7,24%). Graph 9 shows age structure of mothers on the day of delivery.

4. The most mothers have completed secondary school (76,19%), junior college and university - 12,42%, 10,67% elementary school and 0,72% has no education. The most fathers have completed secondary school (71,71%), 19,64 junior college and university, 8,33% elementary school and 0,32% has no education. Graphs 10 to 13 show educational structure of parents.

5. 60,96% fathers are employed and 35,15% mothers are employed in RS. The worst situation, as far as employment is concerned is in the region of Srpsko Sarajevo (43,69% fathers, 18,30% mothers), then in the region of Trebinje (49,10% fathers and 33,93% mothers), then in the region of Banja Luka (68,09% fathers, 37,435 mothers) and the best situation is in the region of Doboje (67,51% fathers and 44,44% mothers). Graph 14 shows the employment of parents.

6. 26.9% of the interviewed persons in Republic of Srpska did not want to disclose their average salaries by household members.

(In the region of Srpsko Sarajevo, almost 54,02% persons did not want to disclose their average salaries, 39,29% in Trebinje, 20,24% in Banja Luka and 11,81% in Doboje). This means that the most people who did not want to disclose their average salaries are from the regions with the lowest employment rate.

Only 7,95% households have income more than 100 KM per member. 18,75% has 50 to 100 KM, 18,83% - 30 to 50 KM, 22,83 – 10 to 30 KM and 5,75% below 10 KM.

Average monthly salary per member of household in Republic of Srpska (for those 73,1% households that disclosed their salaries) is 49,48 KM. Graph 15 to 19 show salaries per members of households.

7. Data on 30,66% interviewed being subtenants is indicative. Graphs 20 and 21 show types of living places.
8. 47,5% families have 1 child; 40,42% families have 2 children; 9,42% families have three children while only 3,65% families have more than three children. If we take into account negative population growth in RS (according to estimates it is -2,8) these are very unfavorable data.
9. Even 72,20% mothers in RS did not get home visits in the first month of their child's life. Graphs from 24 to 28 show home visits. It is necessary to form visiting nurse services in all places in RS and strengthen existing staff.
10. Most of mothers in RS (94,87%) have taken child to a doctor for the first examination (whereas the child was not sick) during first two months of life (graph 29). Data are quite uniform for regions (somewhat unfavorable for the region of Doboje 90%). This is a data that emphasize importance of the work of doctors and medical technicians in the counseling office for babies and other pediatric services in the implementation of BFHI program.
11. Most of mothers in RS get information on breastfeeding from health workers (48,39% and from mothers and mothers in laws – 32,92% - graph 30). In the region of Banja Luka, 72,23% mothers get first information from doctors or medical nurses; 14,99% from mother or mother in law; 6,13% through television, radio or newspapers. It is necessary to educate health workers intensively, increase number of high-quality health-promotional programs and articles in media and pay attention to the education of mothers and mothers in laws (invite them to the counseling centers for pregnant women and babies etc.). In the region of Doboje there should be increase of the health workers' influence to the forming opinion on breastfeeding; they should be taught health-promotional techniques. The rest is the same as for the region of Banja Luka.

In the region of Trebinje and Srpsko Sarajevo, the attention should be paid to mothers and mothers in laws (they should be intensively educated) since they have the most influence when forming opinion on breastfeeding and child's nutrition (Trebinje, 72,83%, Srpsko Sarajevo 60,40%). The rest is the same as for the region of Doboje.

12. Giving preparations with D₃ or AD₃ vitamins is the same in all regions and coverage is quite good (97,37% for RS).

According to the preliminary researches of frequency of nutritional anemia in case of pre-school children in RS, every third child is anemic. In the light of this data, giving preparation with iron is insufficient in RS (24,52%). In the region of Banja Luka – (29,49%), in Srpsko Sarajevo – almost not at all (2,23%) and in the region of Trebinje (1,18%). It can only be considered sufficient in the region of Doboj (45,52%) but we should define the length of therapy and doze which was not possible in this survey.

4.2. Data on breastfeeding

13. 95,78% children in RS had at least one breastfeeding. Data by regions do not differ significantly.
14. 27,57% children in RS were breastfed in the first 2 hours after the birth; 57,5% within 24 hours after the birth and 13,87% within 24 hours after the birth.

Children from Banja Luka were divided into those born until December 31, 1997 and those that were born in 1998 and 1999 (the beginning of the program implementation). Data were statistically checked.

15. 33,90% children in RS have been, from the birth, placed with the mother (“ROOMING IN”).
We have separated data for the region of Banja Luka and Srpsko Sarajevo for children born until Decemer 31, 1997 and those born in 1998 and 1999 and checked them statistically.
16. 24,80% children in RS (only children from 0 to 23 months have been taken into account) still breastfeed (majority in Doboj region).
17. 1,64% mothers have breastfeed their children up to 4 months; and 0,58% up to 6 months.
18. Average age of children when they completely stop to breastfeed in RS is 7,16 months. 23,46% children were continually breastfed during the first year of life. 68,39% children have been mostly breastfed up to 4 months and 54,62% have been mostly breastfed until 6 months of their life.
19. 48,11% mothers in RS breastfed their children “upon request” (mostly in Trebinje)
20. As the reason for stopping breastfeeding, most of mothers in RS answered “the milk was not enough” (41,27%) then “personal choice” (33,42%). In Srpsko

Sarajevo and in Trebinje, the first choice was “personal choice of mother”. It is necessary to explain more in the education of health workers and health education that more attention should be devoted to the explanation of reasons for not having sufficient quantity of milk (inadequate attaching baby to nipple). Mothers should be taught to breastfeed their children “upon request” and to adequately attach baby to breast

21. Types of milk that child had in the first 6 months of life and from the seventh months to one year is presented in the graph 50 to 53.
22. 46,45% children started taking solid and half-solid food in the period from 6 to 9 months.
23. Average age of children when they started taking tea was 13,31% and they had 27,15 days when they started taking water.
Practice of early giving water and tea was an emphasized problem. It is necessary to convince mothers that mother’s milk contains enough liquid for needs of child up to age of six months, except in the special cases when pediatrician recommends giving water (dehydration, high body temperature). Chamomile tea is given the most.
24. 41,69% children up to 5 years in RS were drinking from the nipple bottle during 24 hours before the interview.
41,69% children up to 1 year in RS were drinking from the nipple bottle during 24 hours before the interview. It is necessary to use every opportunity to explain mothers the harmfulness of nipple.

INDICATORS FOR BREASTFEEDING FOR ALL INTERVIEWED CHILDREN UP TO FIVE YEARS

1. 1,46% children that were exclusively breastfeeding up to 4 months (age);
2. 0,58% children that were exclusively breastfeeding up to 6 months (age);
3. 68,39% children that were mainly breastfeeding up to 4 months (age);
4. 54,62% children that were mainly breastfeeding up to 6 months (age);
5. 46,45% children that started with supplemented nutrition on time;
6. 23,46% children that were continually breastfeeding during the first year;
7. 95,78% children that breastfed at least once;
8. Average age of children (in months) when they stopped breastfeeding is 7,16 months;
9. 27,57% children that breastfed for the first time in two hours after birth;
10. 48,11% children that were breastfed “upon request”.

INDICATORS OF USING ARTIFICIAL FOOD FOR ALL INTERVIEWED CHILDREN UP TO 5 YEARS

- 1) 41,69% children that were breastfeeding with nipple bottle;
- 2) 21,18% children that were using adapted milk;

INDICATORS OF USING SUPPLEMENTED FOOD FOR ALL INTERVIEWED CHILDREN UP TO 5 YEARS

1. 97,37% children that were taking vitamin D₃ or AD₃;
2. 24,52% children that were taking iron preparations;
3. Average age of children when they started getting water was 27,15 days;
4. Average age of children when they started getting tea is 13,13 days.

5. Conclusion

Indicators of breastfeeding, artificial food and supplemented food in Republic of Srpska

BREASTFEEDING INDICATORS

- 1) 37,50% children under 4 months that were exclusively breastfeeding;
- 2) 33,33% children under 6 months that were exclusively breastfeeding;
- 3) 43,75% children under 4 months that were mainly breastfeeding;
- 4) 32,05% children under 6 months that were mainly breastfeeding;
- 5) 13,89% children from 6-9 months that started taking supplemented food on time;
- 6) 43,26% children that continually breastfeed during the first year;
- 7) 95,78% children that breastfed at least once;
- 8) Average age of children (in months) when they stop breastfeeding is 6,23 months;
- 9) 31,64% children that were breastfeeding for the first time during 2 hours after birth
- 10) 47,18% children that were breastfeeding "upon request".

INDICATORS OF USING ARTIFICIAL FOOD

- 1) 75,28% children under one year that were breastfeeding with nipple bottle;
- 3) 39,33% children under one year that were using adapted milk;

INDICATORS OF USING SUPPLEMENTED FOOD

1. 99,44% children under one year that were taking vitamin D₃ or AD₃;
2. 21,35% children under one year that were taking iron preparations;
3. Average age of children when they started getting water was 24,70 days;
4. Average age of children when they started getting tea is 11,57 days.

INDICATORS FOR GLOBAL REPORT FOR WORLD SUMMIT FOR CHILDREN 2001

Ord. No.	Indicator	Proportion	Rate	%
1	Exclusively breastfeeding under 4 months	18/48	0,3750	37,50
2	Continuous breastfeeding of children- age 12 from 15 months	8/35	0,2286	22,86
3	Continuous breastfeeding of children- age 20 from 23 months	5/75	0,0667	6,67
4	Timely introducing supplemented food	10/72	0,1389	13,89

5. Number of “Baby Friendly Hospital”, according to the data of the National BFHI Committee in Republic of Srpska is 2.

Taking into account the fact that in Republic of Srpska, BFHI Program has been implemented from 1997, during the survey, there was a question of influence of that program to the improvement of breastfeeding but also total mothers and children health. That is why, the following working hypothesis was pronounced:

Ha: Implementation BFHI Program significantly influences improvement of quality of mother and child health.

No additional indicators for the syntagm “improvement of quality of mother and child health” were defined, but answers to the current questions were used. Children were divided in two groups: those born in 1998 and 1999 in the region of Banja Luka (and Srpsko Sarajevo for the issue of “ROOMING IN”), when the program started to be implemented and those children born before that. Based on the answers (YES, NO), classical contingency table was prepared, based on which, test of working hypothesis Ha was carried out. The way of test conduct is shown for the question number 18 and 19.

	Was child breastfed during two hours after birth		Total
	YES	NO	
Children born from 31/121997	21 (a)	93 (b)	114 (a + b)
Children born after 31/121997	24 (c)	16 (d)	40 (c + d)
Total	45 (a+ c)	1099 (b + d)	154 (N=a+b+c+d)

Conducted testing and obtained result ($\chi^2 = 24,66$; $DF=1$; $p < 0,0005$) indicates that 0 hypothesis can be omitted and a working one according which there is a significant difference in the treatment of mothers and newborns before and after implementation of BFHI Program in our hospitals.

Contingency table 2x2 for question 19 looks like this:

	Was child placed with the mother (ROOMING IN)		Total
	YES	NO	
Children born from 31/121997	46 (a)	12 (b)	58 (a+b)
Children born after 31/121997	33 (c)	96 (d)	129 (c+d)
Total	79 (a+c)	108 (b + d)	187 (N=a+b+c+d)

Conducted testing and obtained result ($\chi^2 = 47,35$; $DF=1$; $p < 0,0005$) indicates that 0 hypothesis can be omitted and a working one according which there is a significant

difference in the treatment of mothers and newborns before and after implementation of BFHI Program in our hospitals.

Results of statistical checking show that introduction of BFHI Program in Republic of Srpska improved status of promotion, support and protection of breastfeeding.

Still, the situation cannot be considered satisfactory and thus, it is necessary to strengthen efforts on implementation of BFHI Program in Republic of Srpska.

Recommendations for improvement of situation:

- *Establish home visit services in all places in Republic of Srpska and strengthen their staff;*
- *Give priority to the education of health workers that work in primary health care for pregnant women, mothers and children since they are very important for the implementation of BFHI hospitals;*
- *Intensify health-educational work with pregnant women and mothers but include grandmothers and other members of family (pay attention to "adequate attachment of baby to breast", breastfeeding "upon request", giving water and tea, nutrition of infants and harmfulness of nipple);*
- *Increase number of high-quality health-promotional programs on radio and television and such articles in newspapers;*
- *Continue with implementation of program "School for pregnant women in Republic of Srpska", "Implementation of the international codex of marketing - replacement for mother's milk in Republic of Srpska" and Prevention of nutritional anemia at children under 5 years in Republic of Srpska."*

6. Literature

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7. Attachments

1. Demographic trends in RS
2. Instructions for training of interviewers
3. Instruction for filling in questionnaire on breastfeeding
4. Questionnaire form – Breastfeeding in Republic of Srpska
5. Record list with households with children under 5 years
6. Record list with households in which questionnaire form was not filled in
7. Registering, control and validation of data
8. Indicators of breastfeeding
9. Definitions and diagnostic criterion

Attachment 1.

Demographic trends in RS

According to the last census in 1991, there were 4365740 population in SR BIH that lived in the 51129 km² or 85,3 citizens in km². Whole territory was divided into 109 municipalities.

Republic of Srpska has, by its constituting, established new state in which census was carried out in 1993. In the territory of 32678 km² there were 2083667 citizens or 63,78 citizens in km² (data based on census from 1991). According to the unofficial data from 1993, there were 1378825 population in 76 municipalities in RS (data of the Institute for Statistics, Banja Luka), it is estimate that there were 685310 male (49,7%) and 693542 women (50,3%). Age structure that is shown in percentage shows that 32% persons was younger then 18 and 8% persons were older then 60 years (estimate of the total number of population in RS in March 1996 is 1391593). FZO considers that estimates of number of population exceed actual number for about 30000 people. This cannot be checked without census (table 1, 2 and 3).

Table 1

No.	Municipality	No. of households		Population		Population March 1996
		total	refugees out of this	1991	1993	
1	Banja Luka	64246	23096	195139	165039	21843
2	Bijeljina	30899	11338	96796	92747	10505
3	Bileća	3497	861	13269	12926	1189
4	Bratunac	5530	3902	33575	11484	1880
5	Brod	3842	2088	33517	11882	1306
6	Brčko	10525	5534	56629	22416	3578
7	Višegrad	5253	3112	21202	7760	1786
8	Vlasenica	5697	1628	22696	7456	1937
9	Vukosavlje	519	157	2030	-	176
10	Gacko	2933	1186	10844	9510	997
11	Glamoč	-	-	386	368	
12	Goražde	-	-	4956	-	
13	Gradiška	17536	4206	60062	50546	5962
14	Derвента	10947	4277	56328	21487	3722
15	Doboj	21940	5899	86243	48014	7459
16	Drvar	1	-	61	55	
17	Zvornik	12886	5642	63381	37377	4381
18	Ilijaš	16	16	168	33	5
19	Ilidža	4772	3084	1436	2137	1622
20	Jajce	157	-	2264	1152	53
21	Kalesija	1335	311	7294	3085	453
22	Kalinovik	136	526	4282	4580	462
23	Kladanj	-	-	303	137	
24	Ključ	2393	19	10083	8846	813
25	Knežev	3476	230	14615	13720	1181

26	Kozarska Dubica	9812	1169	31577	24538	3336
27	Kotor Varoš	4754	771	36670	20051	1616
28	Krupa na Uni	476	257	2629	2539	161
29	Kupres	-	2	853	901	
30	Laktaši	11553	2916	29910	30550	3928
31	Lopare	4730	590	19988	16584	1608
32	Lukavac	-	-	1120	-	
33	Ljubinje	1204	259	4088	4350	409
34	Maglaj	623	32	5041	3559	211
35	Milići	22447	505	11121	8196	968
36	Modriča	7991	3702	35413	17593	2716
37	Mostar	96	69	1200	496	32
38	Mrkonjić Grad	4742	208	26250	22970	16122
39	Nevesinje	5382	22496	13752	19076	1829
40	Novi Grad	8401	2143	35323	26119	2856
41	Novo Sarajevo	2596	1669	41221	6396	882
42	Olovo	-	-	745	70	
43	Orašje	816	64	3104	2909	277
44	Pale	7677	4329	14327	18942	2610
45	Pelagićevo	1422	247	15727	5155	483
46	Petrovac	-	-	3622	349	
47	Petrovo	3383	761	11698	10518	1150
48	Prijedor	26528	9126	112470	65557	9019
49	Prnjavor	14234	2911	46894	43904	4836
50	Rogatica	3650	1475	21569	9094	1241
51	Rudo	2596	455	11572	7842	882
52	Sanski most	726	92	6359	4226	246
53	Sokolac	4923	1760	14833	12332	1673
54	Srbac	7087	514	21660	22145	2409
55	Srbinje	6552	1553	35520	17072	2227
56	Srbobran	-	-	180	137	
57	Srebrenica	4806	2197	37211	3454	1634
58	Srpska Kostajnica	2021	604	6218	5806	687
59	Stari Grad	883	543	951	2277	300
60	Stolac	784	287	3535	3054	266
61	Teslić	12776	2108	58588	42953	4343
62	Tešanj	-	11	1771	-	
63	Travnik	-	1	1409	-	
64	Trebinje	8868	2465	29162	26176	3015
65	Trnovo	484	373	3983	-	164
66	Tuzla	-	2	104	-	
67	Ugljevik	4758	606	19300	16455	1617
68	Han Pijesak	1397	305	6085	4044	475
69	Vajniće	1249	619	8919	5623	424
70	Velinac	5005	444	18666	17641	1701
71	Šamac	6517	2366	24113	15882	2215
72	Šekovići	2833	224	9639	9269	963
73	Šipovo	2350	571	15553	12453	797
	TOTAL	427668	150913	1659202	1122014	153664

Table 2
Sex structure of population in Republic of Srpska
(estimate)

TOTAL	1378852	100%
MALE	685289	49,70%
FEMALE	693563	50,30%

Table 3
Age structure in Republic of Srpska
(estimate)

Age	No. of population	Percentage
0-6 years	153075	11
7-18 years	292234	21
18-59 years	834957	60
60 and more	111327	8
TOTAL	1391593	100

According to the given data, mortality rate by sex and in comparison with mortality rate by age in BiH and in RS is given in tables (tables 4 and 5).

Table 4
Mortality rate by years in BiH and RS

Born	DEATHS			Infants out this		
	total	male	female	total	male	female
14945	12119	7599	4520	216	139	77

Table 5

year	1986	1987	1988	1989	1990	1994 ⁰
No. of deaths	29127	29382	29555	30383	28777	12119
In 100 population	6,7	6,7	6,7	6,8	6,4	10,5*

* Calculated for estimated number of population of 1150000

⁰ Data for Republic of Srpska

According to available data, number of displaced persons and refugees in RS in 1996 was 435346. According to the data from Republic Institute for Statistics of Republic of Serbia (April 1995), there were 197925 refugees from SR BiH in Serbia. Table 6 shows a number of refugees by municipalities and number of households for 1996 in comparison with the number of permanent population and households (data from the Institute for Statistics, Banja Luka).

Table 6

No.	Municipality	No. of population			No. of households			Average No. of household members		
		Total	Refugees	Permanent	Total	Refugees	Perm.	Tot.	Ref.	Perm.
1	Banja Luka	217968	72848	145120	64246	22757	41489	3,39	3,3	3
2	Bijeljina	104831	37206	67625	30899	11272	19627	3,39	3,3	3,4
3	Bileća	11864	2849	9015	3497	889	2608	3,39	3,2	3,4
4	Berkovići	2660	826	1834	784	287	497	3,39	2,88	3,6
5	Bratunac	18762	13501	5261	5530	3909	1621	3,39	3,45	3,2
6	Brčko	35708	18144	17564	10525	5705	4820	3,39	3,18	3,6
7	Višegrad	17822	10110	7712	5253	3115	2138	3,39	3,25	3,6
8	Vlasenica	19328	5672	13656	5697	1617	4080	3,39	3,51	3,3
9	Vukosavlje	1761	488	1273	519	154	365	3,39	3,17	3,4
10	Gacko	9951	3694	6257	2933	1183	1750	3,39	3,12	3,5
11	Gradiška	59494	13228	46266	17536	4169	13367	3,39	3,17	3,4
12	Derventa	37140	13304	23836	10947	4364	6583	3,39	3,05	3,6
13	Doboj	76550	18853	57697	22563	6248	16315	3,39	3,02	3,5
14	Zvornik	43718	19729	23989	12886	5898	6988	3,39	3,35	3,4
15	Jezero	50033	0	533	157	0	157	3,39	0	3,3
16	Kalinovik	4614	1357	3257	1360	528	832	3,39	2,57	3,9
17	Kneževo	11793	770	11023	3476	256	3220	3,39	3,01	3,4
18	Kozarska Dubica	33289	3864	29425	9812	1160	8652	3,39	3,33	3,
19	Kotor Varoš	16129	2771	13358	4754	782	3972	3,39	3,54	3,3
20	Krupa na Uni	1615	839	776	476	276	200	3,39	3,04	3,8
21	Kupres	5	5	0	2	2	0	2,5	2,5	
22	Laktaši	39196	9647	29549	11553	3016	8537	3,39	3,2	3,4
23	Lopare	16047	1652	14395	4730	630	4100	3,39	2,62	3,5
24	Ljubinje	4085	757	3328	1204	269	935	3,39	2,81	3,5
25	Milići	9659	1943	7716	22847	581	22266	3,39	3,34	0,3
26	Modriča	27111	11812	15299	7991	3615	4376	3,39	3,27	3,
27	Mrkonjić Grad	16088	668	15420	4742	207	4535	3,39	3,23	3,
28	Nevesinje	18260	7330	10930	5382	2505	2877	3,39	2,93	3,
29	Novi Grad	28502	6421	22081	8401	2122	6279	3,39	3,03	3,5
30	Osmaci	4529	933	3596	1335	300	1035	3,39	3,11	3,4
31	Pale	26046	14221	11825	7677	4633	3044	3,39	3,07	3,8
32	Pelagićevo	4824	680	4144	1422	263	1159	3,39	2,59	3,5
33	Petrovac	0	0	0	0	0	0	0	0	
34	Petrovo	11478	2381	9097	3383	915	2468	3,39	2,6	3,6
35	Prijedor	9002	29079	6923	26528	9140	17388	3,39	3,18	3
36	Prnjavor	48292	9487	38805	14234	2922	11312	3,39	3,25	3,4
37	Rogatica	12383	4864	7519	3650	1527	2123	3,39	3,19	3,5
38	Rudo	8807	1606	7201	2596	466	2130	3,39	3,45	3,3
39	Skelani Srebren.	0	0	0	0	0	0	0	0	
40	Sokolac	16858	4735	12123	4969	1606	3363	3,39	2,95	3,
41	Srbac	24044	1506	22538	7087	524	6563	3,39	2,87	3,4
42	Srbinje	22229	5317	16912	6552	1749	4803	3,39	3,04	3,5
43	Srebrenica	16305	7849	8456	4806	2155	2651	3,39	3,64	3,1
44	Srpska Ilidža	16190	8943	7247	4772	2964	1808	3,39	3,02	4,0
45	Srpska Kostajnica	7467	1450	6017	2201	608	1593	3,39	2,38	3,7
46	Srpski Brod	13035	6401	6634	3842	1985	1857	3,39	3,32	3,5
47	Srpski Drvar	3	0	3	1	0	1	3,39	0	

48	Srpski Ključ	7881	50	7831	2323	16	2307	3,39	3,13	3,3
49	Srpski Mostar	326	199	127	96	70	26	3,39	2,84	4,8
50	Srpski Sanski Most	2463	271	2192	726	82	644	3,39	3,3	3,
51	Srpski Stari Grad	3050	1460	1590	899	543	356	3,39	2,69	4,4
52	Srpsko Orašje	2768	155	2613	816	70	746	3,39	2,21	3,
53	Srpsko Goražde	2453	937	1516	723	303	420	3,39	3,09	3,6
54	Srpsko Novo Sarajevo	8807	4651	4156	2596	1702	894	3,39	2,73	4,6
55	Teslić	43345	7725	35620	12776	2116	10660	3,39	3,65	3,3
56	Trebinje	30086	7914	22172	8868	2542	6326	3,39	3,11	3,
57	Trnovo	1642	1105	537	484	375	109	3,39	2,95	4,9
58	Ugljevik	16142	1542	14600	4758	574	4184	3,39	2,69	3,4
59	Han Pijesak	4740	1611	3579	1397	413	984	3,39	2,81	3,6
60	Čajniče	4237	1852	2385	1249	639	610	3,39	2,9	3,9
61	Čelinac	16980	1391	15589	5005	461	4544	3,39	3,02	3,4
62	Šamac	22110	7346	14764	6517	2322	4195	3,39	3,16	3,5
63	Šekovići	9612	647	8965	2833	224	2609	3,39	2,89	3,4
64	Šipovo	7973	1733	6240	2350	573	1777	3,39	3,02	3,5
	TOTAL RS	1391590	419879	971711	430173	132298	297875	3,39	3,17	3,

Sources of data:

1. For total population: estimate of the Republic Institute for Statistics in RS, Banja Luka, based on the number of households (census) in March 1996.
2. For permanent households: census of permanent, refugees and displaced households in March 1996.
3. For refugees and displaced population and households, final results of census from 1996 processed in: refugees and displaced persons in RS 1996, according to the way of accommodation in the current and previous place, by municipalities, municipal centers and other places, Urban Institute in RS, Banja Luka, December 1996
4. Relative data, calculated in the Institute for Health Protection RS, Tables 1-6, taken over from the “Analysis of Health Status of the Population in RS, 1991-1996 – ZZZZ RS (PHI RS)”

Table 7
Population – characteristics

REGION	nonresident	<20+64 reg	Women reg	Newborns reg 000	Deaths reg 000
Banja Luka	24%	42%	50%	9,9	10
Prijedor	26%	42%	51%	8,3	23,4
Doboj	29%	44%	50%	9,6	11,5
Bijeljina	33%	42%	51%	9	13,5
Pale	46%	39%	50%	3,8	8,4
Zvornik	41%	48%	49%	7,4	9,1
Trebinje	31%	45%	51%	11	10,3
Srbinje	35%	43%	50%	5,5	9,6

Rep. Srpska	30%	43%	50%	8,8	11,6
Min	24%	39%	49%	3,8	8,4
Mx	46%	48%	51%	11	23,4
factor	2,40%	1,20%	1,00%	2,90	2,8

Characteristics on population (table 7) were transferred from the publication: Material for discussion 1: calculation of funds for health in BiH, reports on methodology and results of the experimental 1997 – Department for International Development / part 2, Calculation of Funds for Health Care: Republic of Srpska – Table 6.

It is estimated that 11% of the total population of RS (153075) are children from 0 to 6 and 21% (292234) are children from 7 to 18 years (based on the estimate of the total number of population 1391593).

In average, there are 0,37 children from 0 to 6 per one household and 0,71 children from 7 to 18.

It should be emphasized (according to the data from table 7) that population growth is negative for RS (newborns per 000 – 8,8 – dead per 000- 11,6 = -2,8) that 30% population is nonresident (refugees, displaced persons), that 43% are in the age when they are capable to work, but number of invalids that are in the age when they should be capable of work, but they are not and number of those that are capable to work but are unemployed.

Attachment 2

TRAINING FOR INTERVIEWERS

- INSTRUCTIONS-

Principle of choosing households within local communities (clusters)

According to the methodological instructions, interviewer comes to the selected local community and find a building of the local community, if there is no such building, he/she goes to the school building, if there is no such building, he/she goes to the religious building and if there is no such building, he/she goes to the local shop.

After that, interviewer stands at the entrance door of the local community (or other mentioned building) and, by turning pen on the paper, define the direction of movement that matches the direction of the pen tip.

Interviewing starts in the house with the even number that is 500 meters far away from the mentioned entrance door and if there are no marked even numbers on the houses, the first house from the right side that is 500 meters far away from the house is taken and then, other houses on the right side.

In the cities, interviewing in the multistory building will be done only on the II and III floor and then the next house with the even number.

Instructions for filling in record list

Within their field work, interviewers will, besides filling in questionnaire forms have the obligation to fill in two record lists that should be filled in separately for each cluster – local community.

Lists and questionnaires should be filled in clearly with capital letters. Before beginning on the field, the following should be written on each list: name of municipality, family name of the interviewer, number - code of cluster. Every interviewer will be given these numbers – codes for their respective clusters - local communities.

1. Record list for the interviewed households with children younger than five years, in other words, children born in the period from January 1, 1995 to December 31, 1999 that are found in the selected households.

In the column (1) ordinal number of a household is written beginning with 1,2 etc. then, date of filling in questionnaire: day, month and year (2), column (3) - address of living. Then, name and family name of a mother (4), and if it is father or guardian. It should be written – whether it is father or guardian and then his name should be written as well. In

the column (5) name and family name of a child is written, column (6) is sex of child – for male it is M and for female it is Ž.

It is especially important to write down the exact date of child's birth (7): day, month and year based on which, the age of child on the date of filling in a form will be defined.

If an interviewer finds, within the same household, two or more children that are younger than 5 years, he/she fills in a special questionnaire form for each child. In the record list under the same ordinal number (of that household), he/she writes down a data for each child, separately.

2. Record list for visited households in which a questionnaire form was not filled in.

Write down an ordinal number of a household in which questionnaire form was not filled in (if they are not at home, the neighbors should be asked about it), in the column (4) the exact date of visiting household is written down. The reason why in the selected household, questionnaire form was not filled in, should be marked with sign "X" and it should be done in the proper column (5 or 6).

If members of the selected households are not home, the interviewer is obliged to visit them one more time and if he/she does not find them again, sign "x" should be written down in the column (7).

Attachment 3

INSTRUCTIONS FOR FILLING IN QUESTIONNAIRE ON BREASTFEEDING

It is the obligation of each interviewer to carry and use instructions for filling in questionnaire during his fieldwork. If you still have problems while filling in questionnaire, you should contact your coordinator.

Questionnaire form is filled in the households in which there are children under 5, in other words, that were born in the period January 1, 1995 and December 31, 1999.

Household means every family or other community of persons that said that they live together, spend their income together and eat together.

Exclusively child's mother should answer answers in the questionnaire. Exceptionally, answers can be given by father or guardian if they can give them.

Guardian is a person that guards or takes care of child.

1. Write down number of cluster, or local community (that number will be given to each interviewer for their respective clusters, by coordinator).
2. Write down ordinal number of household beginning with 1, 2 etc and mar (circle) if it is city or village household.
3. Write down name of place (city) e.g. Laktaši and address of visited household.
4. Mark down the sex of child, For male child it is M, for female child it is Ž.
5. Write down name and family name of mother and name of child. If the answer is given by father or guardian the sign X should be written down in the next box.
6. Write down date of birth of a child according to the following order: day, month, year, e.g. child that was born on February 5, 1998 will be written down such as: 05/02/98.
7. Write down the date of filling in questionnaire: first, day, month, year, e.g. 01/05/99.
8. Write down the age of mother, in years, e.g. 35.
9. Ask for education of mother or father. In the proper column, sign X (only one answer) should be written down.
10. Ask if father is employed and mark it down. Ask if mother is employed or if guardian is employed and mark down the answer.
11. Ask where family lives (house, apartment) and mark down the offered answer. If the answer is "other", then write down exactly where they live. Ask if the apartment (house) is their property or household members are subtenants. If the answer is "other", write down the way of living.
12. Ask about the total average monthly income in the household in convertible marks, e.g. total income in the family: 800 KM.
13. Write down, with number, number of household members.

14. Ask which live birth is it? Explain that it includes only children that are born alive, not, stillborn, not miscarriages etc.
15. Ask if a child breastfed at least once, or if he/she have ever breastfed and, depending on the answer, mark down the offered answer.
16. Ask if child still breastfeeds and, depending on the answer, mark down the offered answer.
17. Ask why child stopped with breastfeeding and, depending on the answer, mark down the offered answer.
18. Ask when child was breastfed for the first time and, depending on the answer, mark down the offered answer. Interviewed person can give only one answer to this question.
19. Ask if child was born in hospital and if the answer is yes, whether it was placed with the mother in the same room from the birth (rooming in) and, depending on the answer, mark down the offered answer.
20. Ask how old was child when he/she was given tea for the first time. The age should be shown in days if it was before one month passed and mark down whether it is day or month. Find out which kind of tea that was and write it down, e.g. chamomile. Ask about the age of child when he/she was given water for the first time. Age should be shown in months, days – if it was before one month passed and write down whether it was day or month.
21. Ask which kind of milk child had during the first six months of life and, depending on the answer, mark down the offered answer. Write down only one answer. The answer – only mother’s milk – means breastfeeding exclusively.

“Exclusively breastfeeding means that infant had milk only from his/her mother or milk of another wet nurse, or extracted milk from mother or wet nurse, without any other liquids or solid food except drops or syrup that contains vitamins, minerals and medicines.

** Adapted milk means industrially processed cow or soybean milk, or preparations, intended for child’s nutrition, e.g. Bebimil, Laktovit, HIP etc.

22. Questions are asked only for children that are older than 6 months. If a child is younger than 6 months, question number 22 should be answered. Ask which kind of milk child had during the first 7-12 months of life and, depending on the answer, mark down the offered answer. Write down only one answer.
23. Ask if child, during the last 24 hours had something from the nipple bottle (e.g. milk, water) and, depending on the answer, mark down the offered answer.
24. Ask how old child was (how many months) when he (she stopped to exclusively breastfeed. Write down number of months and days. If child was younger than one month, write down 0 in the first box and in the next

- one, write down number of days. For explanation of terms – exclusively breastfeeding – look again at definition in the question 21.
25. Ask how old was child (how many months) when he/she stopped breastfeeding. Write down number of months (it is not necessary to write down number of days). If a child is under one month, write down 0.
 26. Ask if mother breastfed (or not) child when he/she cries or ask (upon request) or when it is time for the meal (mother had previously defined the schedule) – see definitions – mark down one of the answers.
 27. Ask how old was child when you started feeding him/her with semi-solid food and solid food write down the age of child.
 28. Ask if during the first year of life, child took vitamin D3, AD or iron e.g. Retaferon, Orferon (in tablets, syrup or drops). Write down sign X in the box. It is possible to have several answers.
 29. Ask if home visit nurse or doctor visited you and your child from the local health institution. Write down X in the box. Mark down only one answer.
 30. Ask if child was taken during two first months to the first checkup to the doctor provided that child was not sick (weighting, measuring) and, depending on the answer, mark down the offered answer.
 31. Ask if mother got information on importance of breastfeeding and infant nutrition (give the offered answers). Write down only one answer and that the one that had a critical influence to the way of newborn – nutrition, writing down X in the box.

Attachment 4

UNICEF

Project:

BREASTFEEDING IN REPUBLIC OF SRPSKA

QUESTIONNAIRE

1. Cluster		2. Household No.	
		a) Village	b) city

Circle the number

3. Place and address		4. Sex of child	M	Ž
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Circle the number

5. Name and family name of mother (father or guardian) and child's name		
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Write down X here if the answer is given by father or guardian

6. Date of birth	day	month	Year
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Write down answer

7. Date of filling in questionnaire	day	month	Year	8. Age of mother (years)	
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Write down answer

9. Education:

	Without school	Elem.schoolnot completed	Elemen. school	Second. school	Junior school	University
Mother						
Father						

Write down in proper box

10. Employment:

Father	Yes	No	Mother	Yes	No	Guardian	Yes	No
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Circle the number

11. Lives in:

a) house	b) apartment	c) other (explain)	a) property	b) subtenant	c) other (explain)
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Circle the number

12. Average total monthly income in household in KM:	
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Write down the answer

13. Number of household members:	
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Write down the answer

14. Which in order is this live born child?	
---	--

Write down the answer

15. Did child breastfeed at least once, has he/she ever breastfed?	Yes	No
--	-----	----

Circle the number

16. Does child still breastfeed?	Yes	No
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Circle the number

17. If he/she does not breastfeed, why did he/she stop?	a) Personal choice of mother b) There is not enough milk c) Baby has health problems d) Mother has health problems e) Other reasons
---	---

Circle the number

18. When did he/she breastfeed for the first time?	a) During two hours after birth b) During 24 hours after birth c) After 24 hours after birth d) I do not know.
--	---

Circle the number

19. If child was born in hospital, was it from the moment of birth with mother in the same room (rooming in)?	Yes	No	I do not know
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Circle the number

20. How old was child when you first time gave him/her	tea		Which one	Water	
--	-----	--	-----------	-------	--

Circle the number

21. Which kind of milk did child have during the first six months?	a) only mother's milk
	b) mother's milk
	c) diluted cow milk (bought in the market)
	d) diluted "domestic" milk
	e) undiluted cow's milk
	f) adapted milk for infant (Bemil, Humana, HIP, Laktovit)
	g) other

Circle the number

22. Which kind of milk did child have during 7 th and 12 th month of life? (for children older than six months)	a) only mother's milk
	b) mother's milk
	c) diluted cow milk (bought in the market)
	d) diluted "domestic" milk
	e) undiluted cow's milk
	f) adapted milk for infant (Bemil, Humana, HIP, Laktovit)
	g) other

Circle the number

23. Did child have, in last 24 hours, something from nipple bottle (milk, juice, water)?	Yes	No	I do not know
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Circle the number

24. How old was child when he/she stopped to exclusively breastfeed?	months	days
--	--------	------

Write down the answer

25. How old was child when he/she stopped breastfeeding completely?	
---	--

Write down the answer

26. Did you breastfeed child:	a) "at time of meal" (according defined schedule)?
	b) "upon request" (when he/she cries or asks for it)?

Answer Yes or No

27. How old was child when you started to feed him/her with semi-solid or solid food?	
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Write down the answer

28. Did child in the period up to one year get (in tablets, syrup, drops ...)	a) Vitamins D3 or AD	
	b) Iron (Retaferon, Orferon)	

Answer Yes or No

29. Did home visit nurse or doctor from the local health institution come to visit you and your child?	a) during first seven days
	b) from 8 th to 14 th day
	c) from 15 th to 30 th day
	d) they did not come
	e) I do not know

Answer Yes or No

30. Did you take your child, during the first two months to the first checkup to the doctor, provided that he (she was not sick) ?	Yes	No	I do not know
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Answer Yes or No

31. Did mother get the information on importance of breastfeeding on nutrition of child from:	a) mother or mother in law	
	b) other family or friends	
	c) doctors or nurse	
	d) television, radio, news	
	e) did not get the information at all	
	f) do not know	
	e) other	

Answer Yes or No

NAME AND FAMILY NAME OF INTERVIEWER	
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Attachment 7

REGISTERING, CONTROL AND VALIDATION OF DATA

CHECKING DATA

Two types of mistakes were processed:

- Mistakes due to which these data out of interval of allowed values of answers and
- Mistakes due to the inconsistent data.

In order to avoid these mistakes, testing was done considering mistakes and corrections.

Basic corrections were done during the recording data, and when the data were recorded the following was done:

- Tests on the level of individual fields (corrected codes, control of data, control of dates, control of reasonable intervals for numerical data);
- Tests of consistency between fields (logic connection among answers) and
- Tests of main results to avoid accidental errors.

Data were entered in ACCESS database. Control and test of data was done in the projected ACCESS database. Additional control was done (tests of main results) in EXCEL where complete statistical processing was done. In this way, by combination of methods of tests and control (ACCESS, EXCEL) complete flexibility of data and high standard of data processing was enabled.

VALIDITY OF DATA

For those that did not get the answer, no replacement was made to avoid duplicating.

CALCULATION OF INDICATORS (PARAMETERS)

Indicators will be calculated and shown only for Republic of Srpska due to the size of samples.

Provided that fraction of sample was $f=n/N$ less than 0,05 or that sample has less than 5% of population units, formula for determining standard errors was simple since there is no

need to include factor of correction for final population (1-f). It should be emphasized that fraction of samples in all municipalities was under 0,05.

That is why, for determining population proportion $R = M/N$ (number of units M with determined characteristic through the number of units in the population) the formula is used:

$$R = \frac{\text{number of units with determined characteristics in sample}}{\text{total number of units in sample}}$$

Formula for calculating standard error for proportion is:

$$s.e.(p) = \frac{p(1-p)}{n}$$

Ratio of variance (correspondent relative standard error):

$$c.v.(p) = \frac{s.e.(p)}{p} \times 100$$

Confident interval for proportion (95% level of confidence where the ratio of confidence $Z = 1,96$ or about $Z = 2$):

$$(r \pm 2 \times s.e. (p))$$

For the illustration, one modality of answer to question 1 is shown. Table 1 shows certain proportions for variable 1. For each of them, absolute values (standard error) and relative values (ratio of variance in %).

TABLE 1
Methodological examples

No.	Republic of Srpska	Number of children in sample	Family answers yes	Family answers no	Standard error	Ratio of variance in %
		p	r	1-p	s.e (r)	s.v. (r)
1.	Indicator 1	48	18	30	0,129	0,717
2.						
3.						
4.						
5.						
TOTAL REGIONS						

Indicator 1 (Exclusively breastfeeding up to 4 months)

TABLE 2

No.	Republic of Srpska	Number of children in sample	Family answers yes	Family answers no	Tolerable error 95%	Conficent interval (with 95% of confidence)
		n	r	s.e ®	2 x s.e (r9	R +-2 x s.e (r)
1.		48	18	0,129	0,259	18+-0,259

Tolerable error is 95%.

Population indicators were calculated as proportions for some answers or as combination of answers (for numerical variables) and arithmetic values (for numerical variables). For some numerical variables, both, the highest and the lowest values were given. Different tests of hypothesis are used. χ^2 , Z-test, Mantel-Naenzelov χ^2 test and Fisher test in case when frequency was under $\chi^2 r$ than 5, were used for non-numerical variables in order to test differences among proportions in different populations.

For numerical variables, Wilcoxon Rank Sum test was used in order to test differences between middle values of variables as well as Student –t – test.

Attachment 8

Indicators of breastfeeding:

- % of children under 4 months that were exclusively breastfeeding
- % of children under 4 months that were mostly breastfeeding
- % of children under 6 months that were exclusively breastfeeding
- % of children under 6 months that were mostly breastfeeding
- % of children from 6-9 months that started getting additional food on time
- % of children that breastfeed continually during first two years of life
- % of children that continually breastfeed during the second year of their life
- % of children that breastfed at least once
- % average age of children in months when they stop breastfeeding
- % of children that were breastfeeding within two hours after the birth

Indicators of use of artificial food

- % of children under one year that take food by nipple bottle
- % of children that use supplemented food (explain which one, Laktovit, Bebimil etc.)

Indicators of use of supplemented food

- Percentage of children that used to get preparations with vitamin D3 or AD3 up to one year
- Percentage of children that used to get preparations of iron up to one year.
- Average age of child (in days or months) when they started getting water.
- Average age of child (in days or months) when they started getting tea.

Attachment 9

Definitions and diagnostic criterion

1. Household:

Household means any family or other community of persons that said that they live together, spend their income and eat together.

2. Breastfeeding upon request

Breastfeeding upon request means that mother breastfeeds child when he/she cries or “asks”

3. Breastfeeding in time of meal

Breastfeeding in time of meal means that breastfeeding is done according to the defined schedule by mother.

4. Rate of exclusive breastfeeding:

Rate of children younger than 4 months that exclusively breastfeed (indicators for assessment of breastfeeding, Geneva: WHO, No.10, February 1992).

5. Rate of children that mostly breastfeed

Rate of children that are younger than 4 months that mostly breastfeed.

“Mostly breastfeed” means that the larger source of child’s nutrition is mother’s milk, however child still can get drinks based on water (water with sugar, teas, infusions etc.), fruit juice, solutions of oral rehydration salt, vitamins, minerals or medicines in drops or syrup, ritual drops in limited quantities. This definition does not allow any liquid based on the food except fruit juice and water with sugar.

6. Rate of timely supplemented food:

Rate of children between 6 and 9 months that besides breastfeeding, gets additional food (indicators for assessment of breastfeeding practice, Geneva: WHO, No 10, February 1992).

7. Rate of continuous breastfeeding (2 years):

Rate of children of the age 20 to 23 that breastfeed (indicators for assessment of breastfeeding practice, Geneva, WHO, No. 10, February 1992).

8. Rate of feeding with bottle:

Rate of children that are younger than 12 months that get any food or drink from nipple bottle (indicators for assessment of breastfeeding practice, Geneva: WHO, No.10, February 1992).

