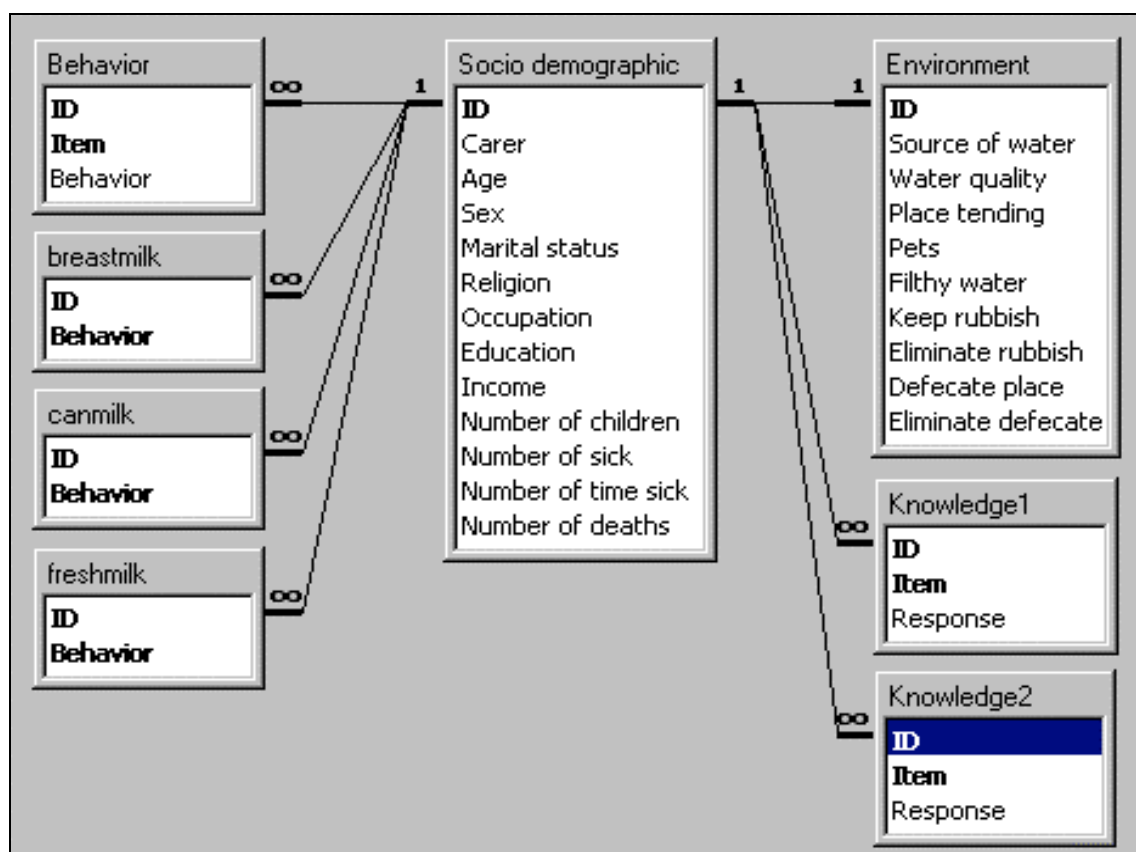


Appendix

Appendix

A. Data Structure

The data were gathered and entered into Microsoft Access. The data file is called data set diarrhea.mdb created by queries. There were created 4 main tables with socio-demographic, environment, knowledge and behaviour. These comprise column and 220 records. The relationships between tables were as follows



The data in the socio-demographic table consisted of identification of survey form, carer, age, sex, marital status, religion, occupation, education, income, number of sick, number of time sick and number of deaths. The data records were as follows

ID	Carer	Age	Sex	Status	Religion	Occupation	Education	Income	Children	Sick	Time	Deaths
1	1	32	1	2	1	5	3	2500	3	2	0	0
2	1	41	1	2	1	2	2	2000	3	2	0	0
.
220	1	26	2	2	2	2	1	3000	1	2	0	0

The data in the environment table consisted of identification of survey form, source of water, water quality, place tending, pets, filthy water, keep rubbish, eliminate rubbish, defecate place and eliminate defecate. The data records were as follows

ID	Source of water	Water quality	Place tending	pets	Filthy water	Keep rubbish	Eliminate rubbish	Defecate Place	Eliminate defecate
1	4	1	1	1	1	2	1	1	2
2	1	1	2	1	2	1	1	1	3
.
220	3	1	1	2	2	1	1	2	2

The data in the knowledge1 table consisted of identification of survey form, item, and response. The data records were as follows

ID	Item	Response
1	1	5
1	3	4
.	.	.
220	15	1

The data in the knowledge2 table consisted of identification of survey form, item and response. The data records were as follows

ID	Item	Response
1	16a	0
1	16b	1
.	.	.
220	16e	1

The data in the behavior table consisted of identification of survey form, item and behavior. The data records were as follows

ID	Item	Behavior
1	1	1
1	2	1
.	.	.
220	12	2

The data in the breastmilk table consisted of identification of survey form behavior. The data records were as follows

ID	Behavior
1	2
2	1
.	.
220	2

The data in the canmilk table consisted of identification of survey form, item and behavior. The data records were as follows

ID	Behavior
1	0
2	0
.	.
220	0

The data in the freshmilk table consisted of identification of survey form, item and behavior. The data records were as follows

ID	Behavior
1	0
2	0
.	.
220	0

The SQL command lists for data structure establishment were as follows:

```
SELECT socio-demographic.id, socio-demographic.carer, socio-demographic.age,
socio-demographic.sex, socio-demographic.marital status, socio-
demographic.religion, socio-demographic.occupation, socio-demographic.education,
socio-demographic.income, socio-demographic.number of sick, socio-
demographic.number of time sick and socio-demographic .number of deaths. The data
records were as follows
```

```
FROM socio demographic;
```

```
FROM socio demographic INNER JOIN environment (ON socio
demographic.id=environment.id) ON (knowledge1.id=socio demographic.id) ON
(knowledge1.id=socio demographic.id) ON (Behavior.id (breastmilk.id=socio
demographic.id), (canmilk.id=socio demographic.id), (freshmilk.id=socio
demographic.id)).
```

B. Programming preliminary result and statistical modeling

Matlab version 5 and Asp (McNeil, 1998) were used for graphical presentation and statistical analysis. The programs were as follows.

```
% Program creates the Figure3.2
```

```
getfile montri1
y=getnum;
y(:,8)=min(3,y(:,8));
y(:,10)=min(2,y(:,10));
putnum(y)
describe hist=1 font=8 fnwid=19;
```

```
% Program creates the Figure3.3
```

```
getfile enviro
y(:,8)=min(3,y(:,8));
y(:,10)=min(2,y(:,10));
putnum(y)
describe hist=1 font=8 fnwid=19;
```

```
% Program creates the Figure3.4
```

```
getfile know
describe hist=1 font=10;
```

```
% Program creates the Figure3.5
```

```
getfile refer
describe hist=1 font=10 fnwid=18;
```

```
% Program creates the Figure3.6
```

```
getfile behav
describe hist=1 col=[1:9] font=10 fnwid=18;
```

```
% Program creates the Figure3.7
```

```
getfile breastmil
y=getnum;
ok=y(:,3)>0;
y=y(ok,:);
putnum(y)
fn=str2mat('ID','sick','breast milk hygiene');
putfn(fn)
lab{2}={'1 sick ' '2 not sick '};
lab{3}={'1 washing every times' '2 washing some times' '3 never '};
putlab(lab)
describe hist=1 font=10 type=2 fnwid=22
```

```
% Program creates the Figure3.8
```

```
getfile canmilk
y=getnum;
ok=y(:,3)>0;
y=y(ok,:);
putnum(y)
fn=str2mat('ID','sick','can milk hygiene');
putfn(fn)
lab{2}={'1 sick ' '2 not sick '};
lab{3}={'1 washing every times' '2 washing some times' '3 never '};
putlab(lab)
describe hist=1 font=8 fnwid=20;
```

```
% Program creates the Figure3.9
```

```
getfile freshmil
y=getnum;
ok=y(:,3)>0;
y=y(ok,:);
putnum(y)
fn=str2mat('ID','sick','fresh milk hygiene');
putfn(fn)
lab{2}={'1 sick ' '2 not sick '};
```

```
lab{3}={'1 washing every times' '2 washing some times' '3 never' };
putlab(lab)
describe hist=1 font=10 type=2 fnwid=22
```

```
% Program creates the Figure3.10
```

```
getfile joinso
setvar y=15 'x=4 15'
stratify
setvar y=2 x=1 z=4 res=1
compair res=1 log=1 font=10
```

```
% Program creates the Figure3.11
```

```
getfile joinso
setvar y=15 'x=4 15'
stratify
setvar y=2 x=1 z=4 res=1
orplot res=1 log=1 font=10
```

```
% Program creates the Figure3.12
```

```
getfile joinen
%used joinen.m
setvar y=2 'x=6 2'
stratify
setvar y=2 x=1 z=4 res=1
orplot res=1 log=1 font=10
```

```
% Program creates the Figure3.13
```

```
setvar y=2 'x=8 2'
stratify
setvar y=2 x=1 z=4 res=1
orplot res=1 log=1 font=10
```

```
% Program creates the Figure3.14
```

```
setvar y=2 'x=10 2'
stratify
setvar y=2 x=1 z=4 res=1
orplot res=1 log=1 font=10
```

```
% Program creates the Figure3.15
```

```
setvar y=2 'x=14 2'
stratify
setvar y=2 x=1 z=4 res=1
orplot res=1 log=1 font=10
```

```
% Program creates the Figure3.16
```

```
getfile joinkn  
%used joinkn.m  
setvar y=2 'x=8 2'  
stratify  
setvar y=2 x=1 z=4 res=1  
orplot res=1 log=1 font=10
```

```
% Program creates the Figure3.17
```

```
getfile joinkn  
%used joinkn.m  
setvar y=2 'x=8 2'  
stratify  
setvar y=2 x=1 z=4 res=1  
orplot res=1 log=1 font=10
```

```
% Program creates the Figure3.18
```

```
setvar y=2 'x=32 2'  
stratify  
setvar y=2 x=1 z=4 res=1  
orplot res=1 log=1 font=10
```

```
% Program creates the Figure3.19
```

```
getfile joinbe  
%used joinbe.m  
setvar y=2 'x=10 2'  
stratify  
setvar y=2 x=1 z=4 res=1  
orplot res=1 log=1 font=10
```

```
% Program creates the Figure3.20
```

```
setvar y=2 'x=14 2'  
stratify  
setvar y=2 x=1 z=4 res=1  
orplot res=1 log=1 font=10
```

```
% Program creates the Figure3.21
```

```
setvar y=2 'x=16 2'  
stratify  
setvar y=2 x=1 z=4 res=1  
orplot res=1 log=1 font=10
```



```
% Program creates the Figure3.22
```

```
setvar y=2 'x=18 2'  
stratify  
setvar y=2 x=1 z=4 res=1  
orplot res=1 log=1 font=10
```

```
% Program creates the Figure 4.1
```

```
%choose determinant p-value <0.100 were 15 data.  
setvar y=9 x=[2 3 6 8 11 13 14 15 17 19 23 25 33 35 37 39 41 43]  
lreg font=7
```

```
% Program creates the Figure 4.2
```

```
%take 2 11 15 17 25 35  
setvar y=9 x=[3 6 8 13 14 19 23 33 37 39 41 43]  
lreg font=7
```

```
% Program creates the Figure 4.3
```

```
%take 3 23  
setvar y=9 x=[6 8 13 14 19 33 37 39 41 43]  
lreg font=7
```

```
% Program creates the Figure 4.4
```

```
%take 19  
setvar y=9 x=[6 8 13 14 33 37 39 41 43]  
lreg font=7
```

```
% Program creates the Figure 4.5
```

```
%take 33 37  
setvar y=9 x=[6 8 13 14 39 41 43]  
lreg font=7
```

```
% Program creates the Figure 4.6
```

```
%take 14  
setvar y=9 x=[6 8 13 39 41 43]  
lreg font=7
```

```
% Program creates the Figure 4.7
```

```
%take 6  
setvar y=9 x=[8 13 39 41 43]  
lreg font=7
```

**Risk factors Related to Accute Diarrhea Disease in Children
Aged under 5 Years in Pattani Province**

Date..... Interviewer.....

Explannation This questionair comprises 4 parts . Please mark (/) in front of the number that you regard as most valid and in really or put the absolute word in to the space.

Part 1 Socio-Demographic factors

The answer is 1. Mother 2. Other Care

Address..... Moo... Sub-district..... District..... Pattani Province

1. Age..... Years Age

2. Sex 1. Female 2. Male Sex

3. Status 1. Single 2. Married 3. Widowed/Divorce/Separate Sta

4. Religion 1. Buddhist 2. Muslim 3. Other (specify)..... Rel

5. Occupation 1. Agriculture 2. Employee 3. Commerce Occ
 4. Official 5. Housewife 6. Other (specify).....

6. Level of Education Gra

1. No schooling 2. Primary 3. Secondary

4. Diploma 5. Bachalor's Degree 6. Other (specify).....

7. Income of family (monthly) Baht Inc

8. How many children under 5 years old were in your care in the last year ? Chil

First age Years old..... Momth

Second age..... Years old..... Month

Third age..... Years old..... Month

9. Have your children ever had diarrhea disease in the last year? Sick

1. Yes How many times 2. No

10. Have any of your children dead from diarrhea disease in the last year? Dead

1. Yes How many Children..... 2. No

Part 3. Knowledge about the factors which cause diarrhea disease.

Explanation : Please mark (/) in front of the number that you regard most valid.

1. Which has been the cause of diarrhea disease? Caus
 - 1. Eating food infected. 2. Going to dirty areas without taking shoes on.
 - 3. Insect bite 4. Metabolism in children body 5. Not known

2. What is the carrier of diarrhea disease? Carr
 - 1. Fruit fly 2. Mosquito 3. Fly 4. Cockroach 5. Not known

3. What is the Symptom of diarrhea disease? Symp
 - 1. Excrement is water twice a day 2. Excrement is blood more once a day
 - 3. Excrement is water more than 3 times or blood 1 time/day
 - 4. Excrement is water more than 5 times or blood 2 time/day 5. Not known

4. How the diarrhea disease transferred? Tran
 - 1. By wound 2. By breath 3. By mouth
 - 4. By touching the skin 5. Not known

5. Which of the following statements is not correct for preventing diarrhea disease?
 - 1. Use toilet every time for eliminate the excrement. Prev
 - 2. Take on the shoes and prevent insect bite. 3. Washing hands before eat
 - 4. Eating the fresh food and drink boil water. 5. Not known

6. Why is it useful your food to heat? Heat
 - 1. Disinfected 2. Make appetizingly 3. Make more delicious
 - 4. Have more vitamin. 5. Not known

7. What kind of vaccine could decrease the incidence of diarrhea disease in children? Vac
 - 1. Pertussis 2. Diphtheria 3. Polio 4. Measle 5. Not known

8. Why is it important to washing your hands with soap after using the toilet? Was
 - 1. Clear faeces 2. Perfume hands 3. Prevent dry skin
 - 4. Eliminate germs. 5. Not known

9. What is the cause of death with diarrhea disease in children ? Deat
1. High fever and shock 2. Weakness due to not eating.
 3. Abdominal pain and vomiting 4. Dehydration with Diarrhea
 5. Not known
10. Which way is the disease transferred from children patients to others? Way
1. faeces 2. breath 3. sweat 4. urinate 5. Not known
11. What is the most effect of diarrhea disease in children? Eff
1. Poor Nutrition 2. Less resistance to disease Easy for sick
 3. Developing brian is impaired. 4. Dehydration loss of minerals.
 5. Not known
12. If your children have a diarrhea disease, how much will you give them to eat ? Eat
1. More than normal 2. Less than normal
 3. Wait until getting well and give them food as normal
 4. Not give any food. 5. Not known
13. If your child have had a diarrhea disease, how much will you give them to drink some water, solution oral rehydrate salt (ORS) , soup rice , fruit juice? Drin
1. More than normal 2. Less than normal
 3. Wait until getting well and give them drink as normal
 4. Not give any food 5. Not known
14. How do you prepare the easy solution of Oral Rehydrate Salt (ORS) for a child patient with diarrhea ? ORS
1. Boil water 1 bottle (750 cc) , sugar 2 spoon, salt ½ teaspoon mix together
 2. Boil water 1 bottle (750 cc), sugar 5 spoon, salt 2 teaspoon mix together
 3. Boil water 1 bottle (350 cc) , sugar 2 spoon, salt ½ teaspoon mix together
 4. Boil water 1 bottle (350 cc), sugar 5 spoon, salt 1 teaspoon mix together
 5. Not known
15. How long do you keep the solution of Oral Rehydrate Salt (ORS) for drink ? Lon
1. Not more than 24 hr. 2. Not more than 2 days.
 3. Not more than 3 days. 4. Notr more than 1 wks. 5. Not known

16. Which of the following danger signs in a diarrhea patient would indicate refer to a Hospital ? (Can answer more than 1 choice) Refe

1. Heavy diarrhea 2. Heavy vomiting 3. Can't eat or drink
 4. Blood in defecate 5. Heavy weekness 6. Not known

Past 4 Behavior of child cares's for prevention diarrhea disease

Explannation : Please mark (/) in front of the number that you regard most valid.

1. How do you washing your hands before cooking? Cook

1. Wash with soap every time. 2. Wash with water only every time.
 3. Wash with soap some times. 4. Wash with water only some times
 5. Don't wash

2. How do you washing your hands and your children's hands before giving them a meal ? Weat

1. Wash with soap every time. 2. Wash with water only every time.
 3. Wash with soap some times. 4. Wash with water only some times
 5. Don't wash

3. Do you ever give reheat meals to your children ? Rehe

1. Everytime 2. Often time 3. Some time
 4. Seldom 5. Never eat

4. How do you washing your hands after using the toilet ? Toil

1. Wash with soap everytime. 2. Wash with water only everytime.
 3. Wash with soap sometimes. 4. Wash with water only sometimes
 5. Don't wash

5. How do you washing your hands after you cleaned your children's feces ? Fec

1. Wash with soap everytime. 2. Wash with water only everytime.
 3. Wash with soap sometimes. 4. Wash with water only sometimes
 5. Don't wash

6. What kind of milk does your child drink now ? Milk
1. Breast milk (**Answer choice 7 , not answer choice 8 and 9**)
2. Can milk (**Answer choice 8 , not answer choice 7 and 9**)
3. Fresh milk (**Answer choice 9 , not answer choice 7 and 8**)
4. Other..... 5. Not eating
7. If your child has breast milk, do you ever washing your breasts Brea
before give them?
1. Wash with soap every time. 2. Wash with water only every time.
3. Wash with soap some times. 4. Wash with water only some times
5. Don't wash
8. If your child has can milk, how do you washing the bottle, Bott
nipple and cover before using them again ?
1. Wash with soap every time. 2. Wash with water only every time.
3. Wash with soap some times. 4. Wash with water only some times
5. Don't wash
9. If your child has fresh milk, do you ever check the expire date? Fres
1. Every time 2. Often time 3. Some time 4. Seldom 5. Never
10. What do you do about food or milk kept over night before Over
giving it to a child ?
1. Heat every time 2. Often heat 3. Heat some time
4. Never heat 5 . Never eat
11. If you have a diarrhea patient in your house, how do you clean Clea
on their dress ?
1. Boil and wash with soap 2. Wash with soap only
3. Wash with water only 4. Other..... 5. Do nothing
12. How often do you cut your child's fingernails ? Nail
1. Twice a week 2. once a week 3. once a for twight weeks
4. once a month 5. Other.....

Part 2 Environment Factors.

1. What source of water do your children drink ? Water
 1. Well water 2. Reservoir water 3. Rain Water
 4. Bottled water 5. Other (specify).....
2. What approach do you use to improve the water quality before giving to your children ? Appr
 1. Boil 2. Filter (Include bottled water)
 3. Use chemical(specify)..... 4. Other (specify)..... 5. Not improve
3. Which off area are you tending the children ? Area
 1. Raised on the ground 2. On the ground
4. Are there any pets or the corrals near your place? Pets
 1. Yes 2. No
5. Is there any filthy water near your place ? Filth
 1. Yes 2. No
6. Do you eliminate your rubbish correctly to keep your place hygienic ? Rub1
 1. Yes 2. No
7. What method do you use to eliminate your rubbish ? Rub2
 1. Burn 2. Bury 3. Municipality's to collection
 4. Other (specify)..... 5. Not eliminate
8. Where does the defecation place of child ? Where
 1. In the toilet 2. On the ground 3. In the forest
 4. In the river 5. Other (specify).....
9. what are your method for cleaning when child defecate on the floor? Floor
 1. Wipe only 2. Wipe and wash with the water.
 3. Wipe and wash with soap 4. Use other method.....
 5. Not elimate

Part 3. Knowledge about the factors which cause Diarrhea Disease.

Explanation : Please mark (/) in front of the number that you regard most valid.

1. Which has been the cause of Diarrhea Disease ? Caus
 1. Eating food infected. 2. Going to dirty areas without taking shoes on.
 3. Insect bite 4. Metabolism in children body 5. Not known
2. What is the carrier of Diarrhea Disease ? Carr
 1. Fruit fly 2. Mosquito 3. Fly 4. Cockroach 5. Not known
3. What is the Symptom of Diarrhea Disease ? Symp
 1. Excrement is water twice a day 2. Excrement is blood more once a day
 3. Excrement is water more than 3 times or blood 1 time/day
 4. Excrement is water more than 5 times or blood 2 time/day 5. Not known
4. How the Diarrhea Disease transferred? Tran
 1. By wound 2. By breath 3. By mouth
 4. By touching the skin 5. Not known
5. Which of the following statements is not correct for preventing diarrhea Disease ? Prev
 1. Use toilet every time for eliminate the excrement.
 2. Take on the shoes and prevent insect bite. 3. Washing hands before eat.
 4. Eating the fresh food and drink boil water. 5. Not known
6. Why is it useful your food to heat ? Heat
 1. Disinfected 2. Make appetizingly 3. Make more delicious
 4. Have more vitamin. 5. Not known
7. What kind of vaccine could decrease the incidence of Diarrhea Disease in children ? Vacc
 1. Pertussis 2. Diphtheria 3. Polio 4. Measle 5. Not known
8. Why is it important to washing your hands with soap after using the toilet ? Wash
 1. Clear faeces 2. Perfume hands 3. Prevent dry skin
 4. Eliminate germs. 5. Not known
9. What is the cause of death with Diarrhea Disease in children ? Deat
 1. High fever and shock 2. Weakness due to not eating.
 3. Abdominal pain and vomiting 4. Dehydration with Diarrhea
 5. Not known

10. Which way is the Disease transferred from children patients to others? Way

1. From faeces 2. From breath 3. From sweat
 4. From urinate 5. Not known

11. What is the most effect of Diarrhea Disease in children? Effe

1. Poor Nutrition 2. Less resistance to disease Easy for sick
 3. Developing brain is impaired. 4. Dehydration loss of minerals.
 5. Not known

12. If your children have a Diarrhea Disease, how much will you give them to eat? Eat

1. More than normal 2. Less than normal
 3. Wait until getting well and give them food as normal
 4. Not give any food. 5. Not known

13. If your child have had a Diarrhea Disease, how much will you give them to drink some water, solution oral rehydrate salt (ORS), soup rice, fruit juice? Drin

1. More than normal 2. Less than normal
 3. Wait until getting well and give them drink as normal
 4. Not give any food 5. Not known

14. How do you prepare the easy solution of Oral Rehydrate Salt (ORS) for a child patient with diarrhea? ORS

1. Use boil water 1 bottle (750 cc), sugar 2 spoon, salt ½ teaspoon mix together
 2. Use boil water 1 bottle (750 cc), sugar 5 spoon, salt 2 teaspoon mix together
 3. Use boil water 1 bottle (350 cc), sugar 2 spoon, salt ½ teaspoon mix together
 4. Use boil water 1 bottle (350 cc), sugar 5 spoon, salt 1 teaspoon mix together
 5. Not known

15. How long do you keep the solution of Oral Rehydrate Salt (ORS) for drink? Long

1. Not more than 24 hr. 2. Not more than 2 days.
 3. Not more than 3 days. 4. Not more than 1 wks. 5. Not known

16. Which of the following danger signs in a Diarrhea Patient would indicate refer to a Hospital? (Can answer more than 1 choice) Refer

1. Heavy diarrhea 2. Heavy vomiting 3. Can't eat or drink
 4. Blood in defecate 5. Heavy weakness 6. Not known

Past 4 Behavior of child cares's for prevention Diarrhea Desease

Explannation : Please mark (/) in front of the number that you regard most valid.

1. How do you washing your hands before cooking? Wcok

- 1. Wash with soap every time.
- 2. Wash with water only every time.
- 3. Wash with soap some times.
- 4. Wash with water only some times
- 5. Don't wash

2. How do you washing your hands and your children's hands before giving them a meal ? Weat

- 1. Wash with soap every time.
- 2. Wash with water only every time.
- 3. Wash with soap some times.
- 4. Wash with water only some times
- 5. Don't wash

3. Do you ever give reheat meals to your children ? Rehe

- 1. Everytime
- 2. Often time
- 3. Some time
- 4. Seldom
- 5. Never eat

4. How do you washing your hands after using the toilet ? Wtoit

- 1. Wash with soap everytime.
- 2. Wash with water only everytime.
- 3. Wash with soap sometimes.
- 4. Wash with water only sometimes
- 5. Don't wash

5. How do you washing your hands after you cleaned your children's feces ? Wfece

- 1. Wash with soap everytime.
- 2. Wash with water only everytime.
- 3. Wash with soap sometimes.
- 4. Wash with water only sometimes
- 5. Don't wash

6. What kind of milk does your child drink now ? Milk

- 1. Breast milk (Answer choice 7 , not answer choice 8 and 9)
- 2. Can milk (Answer choice 8 , not asnwer choice 7 and 9)
- 3. Fresh milk (Answer choice 9 , not answer choice 7 and 8)
- 4. Other.....
- 5. Not eating

7. If your child has breast milk, do you ever washing your breasts before give them? Brea

- 1. Wash with soap every time.
- 2. Wash with water only every time.
- 3. Wash with soap some times.
- 4. Wash with water only some times
- 5. Don't wash

8. If your child has can milk, How do you washing the bottle, nipple and cover before using them again ? Bott

- 1. Wash with soap every time.
- 2. Wash with water only every time.
- 3. Wash with soap some times.
- 4. Wash with water only some times
- 5. Don't wash

9. If your child has fresh milk, do you ever check the expire date? Fres

- 1. Every time
- 2. Often time
- 3. Some time
- 4. Seldom
- 5. Never check

10. What do you do about food or milk kept over night before giving it to a child ? Over

- 1. Heat every time
- 2. Often heat
- 3. Heat some time
- 4. Never heat
- 5. Never eat

11. If you have a Diarrhea patient in your house, how do you clean on their dress ? Clea

- 1. Boil and wash with soap
- 2. Wash with soap only
- 3. Wash with water only
- 4. Other.....
- 5. Do nothing

12. How often do you cut your child's fingernails ? Nail

- 1. Twice a week
- 2. once a week
- 3. once a for twight weeks
- 4. once a month
- 5. Other.....