

A Survey of Children's Health Care at Home

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ABSTRACT

This study is the product of a questionnaire to mothers of elementary school and nursery school children. It analyses the present situation of children's care at home.

These points were made clear:

1. *The mother's first concern for children of all ages was training, and concern for illness was very low.*
2. The mothers judged whether or not their children were sick mainly by such indications as body temperature, energy level and appetite (all ages). Other indications changed in accordance with the growth and development of their children.
3. The mother's concern for body temperature was very high, but it was not necessarily accurate.
4. Problems felt when the child was sick were the lack of an appropriate medical institution and the lack of someone to care for the child.

INTRODUCTION

As the extended family has changed to the nuclear family, several reports^{1,2} have discussed the mother's child care problems. But, as the nuclear family has flourished, night and holiday clinics have been set up and emergency medical systems have been established. As a result, care at home has not been widely discussed. However it has *been reported that infants and small children make up 80 percent of the sick and injured persons who visit clinics at night or on holidays and that over 80 percent of them do not need professional medical care*³. The majority of these unnecessary examinations seem to

be caused by a lack of health knowledge and by a tendency to depend on the doctor. Accordingly, we investigated the actual conditions of children's care at home and studied how the mothers' handling of health care varied with the growth and development of their children.

METHODS

The subjects of this study were the parents of 956 infants and small children attending 14 nursery schools in T City and 410 children at one elementary school in N Town. A questionnaire was taken home from each school by each child and brought back after it was filled out by the parents. The T City survey was conducted in mid-July and the N Town survey in early September, 1984. Respondents remained anonymous. The response rate was 857 (89.6%) in the nursery schools and 400 (98.0%) in the elementary schools. Such rates were very high. We analysed only the 810 nursery school and 369 elementary school questionnaires which the mothers had completed. The characteristics of the subjects are summarized in Table 1.

Table 1. Characteristics of the Subjects

Total Number		The Nursery School Children (n=810)			The Elementary School Children (n=369)		Number (%)
		0 ~ 2 year (n=60)	3 ~ 4 year (n=336)	5 ~ 6 year (n=414)	7 ~ 9 year (n=213)	10 ~ 12 year (n=156)	
Age of Mother	Child's Age (Each Total Number)						
	20 ~ 24 year	9 (15.0)	11 (3.3)	0 (0.0)	0 (0.0)	0 (0.0)	
	25 ~ 29 year	27 (45.0)	92 (27.4)	87 (21.0)	3 (1.4)	0 (0.0)	
	30 ~ 34 year	19 (31.7)	170 (50.6)	215 (51.9)	81 (38.0)	13 (8.3)	
	35 ~ 39 year	4 (6.7)	57 (17.0)	95 (22.9)	102 (47.9)	81 (51.9)	
	40 ~ 44 year	1 (1.7)	6 (1.8)	16 (3.9)	24 (11.3)	54 (34.6)	
	45 year over	0 (0.0)	0 (0.0)	0 (0.0)	3 (1.4)	8 (5.1)	
No Answer	0 (0.0)	0 (0.0)	1 (0.2)	0 (0.0)	0 (0.0)		
Family Type	The Extended Family	20 (33.3)	124 (36.9)	122 (29.5)	42 (19.7)	34 (21.8)	
	The Nuclear Family	40 (66.7)	211 (62.8)	291 (70.3)	162 (76.1)	111 (71.2)	
	No Answer	0 (0.0)	1 (0.3)	1 (0.2)	9 (4.2)	11 (7.1)	
Working Mothers		55 (91.7)	172 (51.2)	177 (42.8)	49 (23.0)	53 (34.0)	

It is important to realize that of the two groups, the elementary school children's mothers probably most closely reflect the total population of mothers in Japan. This is because all children must attend elementary school, but the nursery schools are heavily

utilized by working mothers. This is especially true for mothers of infants, since most nursery schools do not admit infants unless the mother is a certified job holder (Table 1).

T City is a commercial and a residential area, with good transportation facilities, while N Town is an agricultural district with scattered residential complexes. In recent years transportation facilities have improved significantly. In 1984 the population was 42,615 in N Town and 50,209 in T City. The total municipal area for each are 34.96 km² and 16.76 km², respectively. The number of medical facilities is similar in both areas, but N Town's facilities are smaller and less comprehensive than T City's.

RESULTS

1. Mother's consciousness of children's health

Figure 1 shows that mothers were most concerned about child training. But the concern decreased as the child grew older. On the other hand, the concern for learning increased with the child's age. The concern for growth and development of the body was the highest in mothers with children from 0 to 2 years old. The rate of concern for illness was less than 10 percent in any age group.

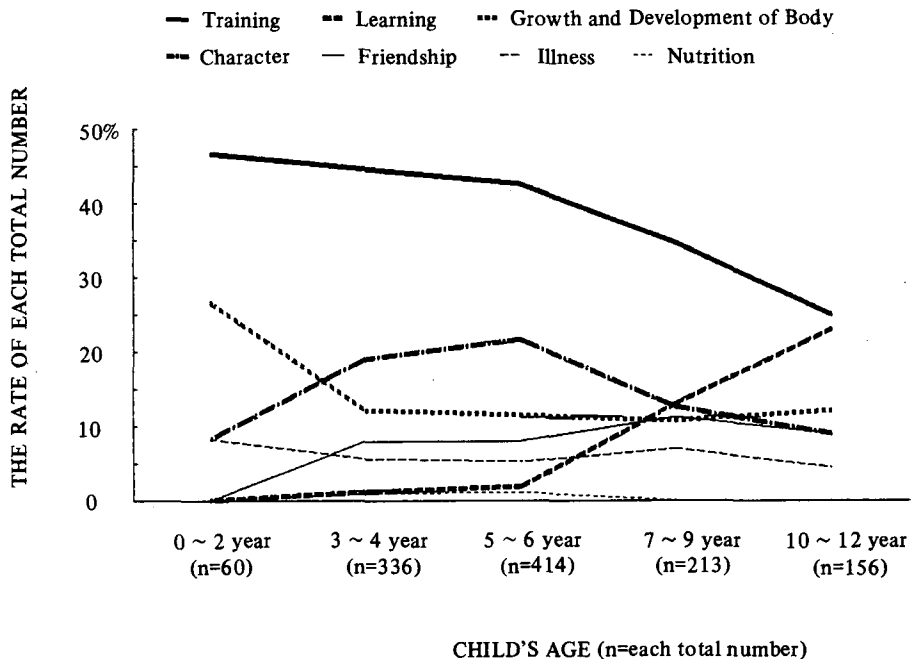


Fig. 1 The Primary Concern for Children

Table 2. Does the Mother Take Any Special Measures for Her Child's Health?

Total Number	Number (%)				
	The Nursery School Children (n=810)			The Elementary School Children (n=369)	
Child's Age (Each Total Number)	0 ~ 2 year (n=60)	3 ~ 4 year (n=336)	5 ~ 6 year (n=414)	7 ~ 9 year (n=213)	10 ~ 12 year (n=156)
Yes	25 (41.7)	171 (50.9)	214 (51.7)	131 (61.5)	71 (45.5)
No	34 (56.7)	158 (47.0)	197 (47.6)	80 (37.6)	82 (52.6)
No Answer	1 (1.7)	7 (2.1)	3 (0.7)	2 (0.9)	3 (1.9)

50.6 percent of the nursery school mothers took some steps (such as balancing the diet, or providing exercise) to ensure good health for their children. 54.7 percent of the elementary school mothers did the same, so there was no major difference between those groups (Table 2). As shown in Figure 2, light dress and outdoor play were the most common. Swimming and light calisthenics were more common with elementary school children, while rubbing with a dry cloth and light running were more frequent with nursery school children.

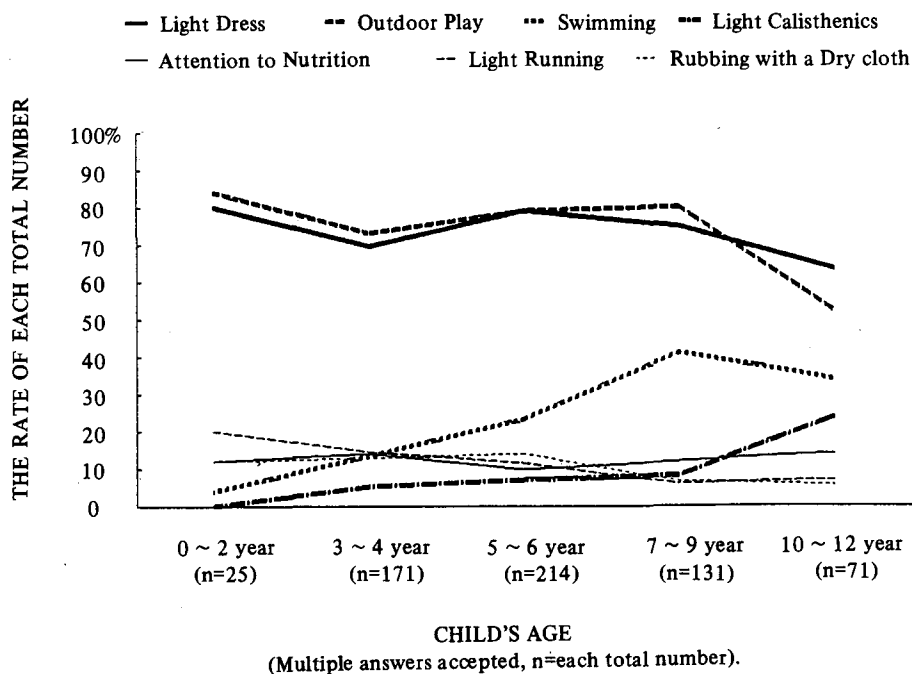


Fig. 2 What Measures are Most Commonly Used with Child?

2. Indicators of children's illness

As shown in Table 3, body temperature, energy level and appetite were the most commonly used indicators of health at any age. However, mood was more important than appetite to mothers of 0 to 2 year olds. Mood decreased in importance as the

Table 3. Indicators of Children's Illness Classified by Age

Multiple answers accepted
()=percentage of respondents

Total Number	The Nursery School Children (n=810)			The Elementary School Children (n=369)		
	Child's Age (Each Total Number)	0 ~ 2 year (n=60)	3 ~ 4 year (n=336)	5 ~ 6 year (n=414)	7 ~ 9 year (n=213)	10 ~ 12 year (n=156)
Appetite		22 (36.7)	130 (38.7)	187 (45.2)	112 (52.6)	79 (50.6)
Body Discomfort		0 (0.0)	16 (5.8)	33 (8.0)	28 (13.1)	35 (22.4)
Body Temperature		42 (70.0)	254 (75.6)	324 (78.3)	148 (69.5)	111 (71.2)
Ease of Going to Sleep		3 (5.0)	8 (2.3)	7 (1.7)	2 (0.9)	0 (0.0)
Energy Level		34 (56.7)	232 (69.0)	288 (69.6)	152 (71.4)	93 (59.6)
Facial Pallor		5 (8.3)	45 (13.4)	81 (19.6)	51 (23.9)	46 (29.5)
Headache		1 (1.7)	11 (3.3)	52 (12.6)	28 (13.1)	37 (23.7)
Mood		31 (51.7)	102 (30.4)	66 (16.0)	16 (7.5)	6 (3.8)
Play		8 (13.3)	47 (14.0)	69 (16.7)	28 (13.1)	6 (3.8)
Stool		8 (13.3)	65 (19.3)	46 (11.1)	26 (12.2)	7 (4.5)
Other		1 (1.7)	11 (3.3)	13 (3.1)	9 (4.2)	3 (1.9)
No Answer		7 (11.7)	18 (5.4)	13 (3.1)	5 (2.3)	5 (3.2)

Table 4. Cognizance of Mother's Own Child's Normal Temperature

Number (%)

Total Number	The Nursery School Children (n=810)			The Elementary School Children (n=369)		
	Child's Age (Each Total Number)	0 ~ 2 year (n=60)	3 ~ 4 year (n=336)	5 ~ 6 year (n=414)	7 ~ 9 year (n=213)	10 ~ 12 year (n=156)
Cognizant		47 (78.3)	273 (81.3)	340 (82.1)	187 (87.8)	135 (86.5)
Incognizant		8 (13.3)	51 (15.2)	59 (14.3)	21 (9.9)	13 (8.3)
No Answer		5 (8.3)	12 (3.6)	15 (3.6)	5 (2.3)	8 (5.1)

child grew older, and at the same time the mother paid increasing attention to facial pallor, and complaints such as headache and body discomfort (stomachache, bodyache, etc.). More than 80 percent of the mothers said they knew their own child's normal

temperature (Table 4). The peak of distribution was between 36.0°C and 36.4°C (Fig. 3).

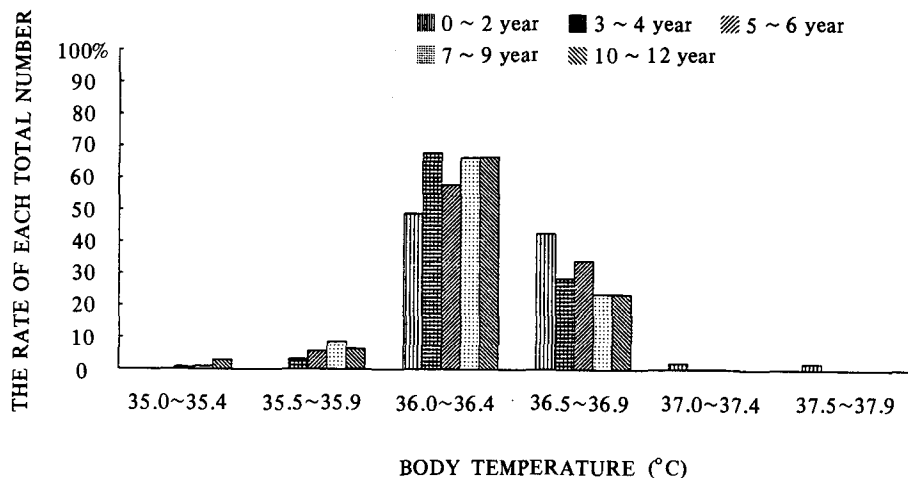


Fig. 3 Child's Normal Temperature According to the Mothers

3. Troubles when a child is sick

The elementary school child's mother had a greater number of problems when her child was sick, the most frequently cited being the lack of an appropriate medical institution (Table 5, 6). "No one to care for the child" and "lack of knowledge of care" were more common among nursery school children's mothers than elementary school mothers. "No one to take the child to the doctor" was the most common problem with children from 0 to 2 years old.

Table 5. Does the Child's Illness Cause Any Special Problems?

Total Number	Number (%)				
	The Nursery School Children (n=810)			The Elementary School Children (n=369)	
Child's Age (Each Total Number)	0 ~ 2 year (n=60)	3 ~ 4 year (n=336)	5 ~ 6 year (n=414)	7 ~ 9 year (n=213)	10 ~ 12 year (n=156)
Yes	25 (41.7)	103 (30.7)	109 (26.3)	96 (45.1)	60 (38.5)
No	29 (48.3)	210 (62.5)	279 (67.4)	109 (51.2)	78 (50.0)
No Answer	6 (10.0)	23 (6.8)	26 (6.3)	8 (3.8)	18 (11.5)

Table 6. Special Problems When a Child is Sick

Multiple answers accepted
()=percentage of respondents

Total Number	The Nursery School Children (n=237)			The Elementary School Children (n=156)		
	Child's Age (Each Total Number)	0 ~ 2 year (n=25)	3 ~ 4 year (n=103)	5 ~ 6 year (n=109)	7 ~ 9 year (n=96)	10 ~ 12 year (n=60)
Lack of Knowledge of Care		3 (12.0)	25 (24.3)	28 (25.7)	1 (1.0)	3 (5.0)
No Appropriate Hospital		2 (8.0)	21 (20.4)	34 (31.2)	44 (45.8)	32 (53.3)
No Clinic (or Doctor) Nearby		1 (4.0)	10 (9.7)	21 (19.3)	64 (66.7)	33 (55.0)
No One to Care for the Child		22 (88.0)	53 (51.5)	34 (31.2)	10 (10.4)	6 (10.0)
No One to Take the Child to the Doctor		6 (24.0)	17 (16.5)	8 (7.3)	2 (2.1)	0 (0.0)
Other		2 (8.0)	11 (10.7)	9 (8.3)	6 (6.3)	2 (3.3)

4. Resources of knowledge for home care

The most frequent resources of knowledge for home care were the mother's mother or grandmother, medical professionals (doctors, nurses, pharmacists, etc.), followed by layman's medical books, as shown in Table 7. Newspapers, magazines, television and radio were also common. About 40 percent of the mothers got some of their knowledge from school education (junior high, senior high, college), but only 20 percent used the public health center as a resource.

Table 7. Resources of Knowledge for Home Care

Multiple answers accepted
()=percentage of respondents

Total Number	The Nursery School Children (n=810)			The Elementary School Children (n=369)		
	Child's Age (Each Total Number)	0 ~ 2 year (n=60)	3 ~ 4 year (n=336)	5 ~ 6 year (n=414)	7 ~ 9 year (n=213)	10 ~ 12 year (n=156)
Layman's Medical Books		36 (60.0)	180 (53.6)	253 (61.1)	137 (64.3)	94 (60.3)
Lectures, Seminars		7 (11.7)	30 (8.9)	44 (10.6)	25 (11.7)	25 (16.0)
Newspapers, Magazines		25 (41.7)	116 (34.5)	158 (38.2)	105 (49.3)	65 (41.7)
School Education		35 (58.3)	140 (41.7)	161 (38.9)	94 (44.1)	57 (36.5)
Television, Radio		20 (33.3)	116 (34.5)	151 (36.5)	85 (39.9)	63 (40.4)
The Doctor, The Druggist		45 (75.0)	225 (67.0)	265 (64.0)	138 (64.8)	92 (59.0)
The Mother's Mother or Grandmother		44 (73.3)	241 (71.7)	286 (69.1)	143 (67.1)	90 (57.7)
The Public Health Center		16 (26.7)	70 (20.8)	63 (15.2)	46 (21.6)	26 (16.7)
Other		2 (3.3)	17 (5.1)	15 (3.6)	6 (2.8)	5 (3.2)
No Answer		0 (0.0)	22 (6.5)	20 (4.8)	17 (8.0)	18 (11.5)

5. Nursing and medical supplies and household medicine

Table 8 shows that about 90 percent of the mothers usually had a mercury thermometer, an ice bag, some adhesive bandages, gauze and bandage on hand at home. Only about 20 percent had a convenient triangular bandage for first aid, it was very low.

As shown in Table 9, over 70 percent of the mothers had stocked antibacterial medicines (e.g. Mercurochrome), cold medicine, muscle balms and eyedrops. Most of the nursery school children's mothers had anti-fever and analgesic suppositories on hand, but elementary school children's mothers kept such medicines in tablet form. Most elementary school mothers also kept drugs for the pharynx, for controlling intestinal function, for the stomach and for motion sickness, while nursery school mothers stocked chest ointments and enemas. 5.3 percent of the nursery school mothers and 8.4 percent of the elementary school mothers kept asthma medicines.

Table 8. Nursing and Medical Supplies on Hand at Home

Multiple answers accepted
()=percentage of respondents

Total Number	The Nursery School Children (n=810)			The Elementary School Children (n=369)		
	Child's Age (Each Total Number)	0 ~ 2 year (n=60)	3 ~ 4 year (n=336)	5 ~ 6 year (n=414)	7 ~ 9 year (n=213)	10 ~ 12 year (n=156)
Adhesive Bandages		59 (98.3)	326 (97.0)	402 (97.1)	203 (95.3)	143 (91.7)
Bandage		56 (93.3)	304 (90.5)	391 (94.4)	194 (91.1)	138 (88.5)
Cotton		55 (91.7)	294 (87.5)	372 (89.9)	184 (86.4)	132 (84.6)
Electronic Blood Pressure Meter		1 (1.7)	20 (6.0)	20 (4.8)	2 (0.9)	6 (3.8)
Electronic Thermometer		24 (40.0)	105 (31.2)	93 (22.5)	52 (24.4)	20 (12.8)
Eye Bandage		13 (21.7)	78 (23.2)	97 (23.4)	62 (29.1)	48 (30.8)
Gauze		56 (93.3)	316 (94.0)	393 (94.9)	196 (92.0)	138 (88.5)
Hot-Water Bottle		41 (68.3)	216 (64.3)	230 (55.6)	106 (49.8)	65 (41.6)
Ice Bag		51 (85.0)	306 (91.1)	393 (95.0)	198 (93.0)	139 (89.1)
Mercury Blood Pressure Meter		3 (5.0)	16 (4.8)	21 (5.0)	6 (2.8)	7 (4.5)
Mercury Thermometer		53 (88.3)	313 (93.2)	388 (93.7)	191 (89.7)	137 (87.8)
Stethoscope		2 (3.3)	9 (2.7)	11 (2.7)	5 (2.3)	1 (0.6)
Triangular Bandage		14 (23.3)	44 (13.1)	74 (17.9)	39 (18.3)	41 (26.3)
Other		2 (3.3)	4 (1.2)	6 (1.4)	4 (1.9)	2 (1.3)
No Answer		0 (0.0)	2 (0.6)	2 (0.5)	8 (3.8)	10 (6.4)

Table 9. House Medicines on Hand at Home

Multiple answers accepted
()=percentage of respondents

Total Number Child's Age (Each Total Number)	The Nursery School Children (n=810)			The Elementary School Children (n=369)	
	0 ~ 2 year (n=60)	3 ~ 4 year (n=336)	5 ~ 6 year (n=414)	7 ~ 9 year (n=213)	10 ~ 12 year (n=156)
Antibacterial Medicines	52 (86.7)	306 (91.0)	381 (92.0)	189 (88.7)	136 (87.2)
Anti-fever and Analgesic (Suppository)	49 (81.7)	252 (75.0)	301 (72.7)	106 (49.8)	62 (39.7)
Anti-fever and Analgesic (Tablet Form)	30 (50.0)	183 (54.5)	243 (58.7)	157 (73.7)	119 (76.3)
Asthma Medicines	2 (3.3)	19 (5.7)	22 (5.3)	16 (7.5)	15 (9.6)
Chest Ointments	27 (45.0)	164 (48.8)	187 (45.1)	70 (32.9)	36 (23.1)
Cold Medicine	42 (70.0)	247 (73.5)	324 (78.3)	148 (69.5)	124 (79.5)
Cough Medicine	28 (46.7)	166 (49.4)	208 (50.2)	100 (46.9)	67 (42.9)
Drugs for a Sore Throat	27 (45.0)	155 (46.1)	207 (50.0)	125 (58.7)	107 (68.6)
Drugs for Controlling Intestinal Function	33 (55.0)	182 (54.2)	226 (54.6)	139 (65.3)	101 (64.7)
Drugs for Motion Sickness	10 (16.7)	61 (18.2)	84 (20.3)	53 (24.9)	71 (45.5)
Drugs for the Stomach	19 (31.7)	135 (40.2)	165 (39.9)	118 (55.4)	98 (62.8)
Enemas	23 (38.3)	171 (50.9)	191 (46.1)	97 (45.5)	54 (34.6)
Eyedrops	41 (68.3)	254 (75.6)	314 (75.8)	154 (72.3)	116 (74.4)
Muscle Balms	41 (68.3)	234 (69.6)	308 (74.4)	157 (73.7)	122 (78.2)
Other	10 (16.7)	29 (8.6)	33 (8.0)	25 (11.7)	10 (6.4)
No Answer	0 (0.0)	5 (1.5)	4 (1.0)	11 (5.2)	10 (6.4)

DISCUSSION

The mother's first concern for children of all ages was training and it was shown that the mother's concern for illness was very slight. Only about 50 percent of the mothers took some steps to ensure good health for their children. This rate was slightly higher than the study by Matsunami et al⁴ which investigated the mothers of 3 year olds. In their study and ours about the same proportion of mothers used light dress to strengthen their children, but our mothers reported more outdoor play than Matsunami's group did.

The primary group of signs used by the mothers to evaluate their children's health were body temperature, energy level and appetite. These signs were most important at all ages. The mothers of under 4 year olds also included mood. This result was similar to our other research⁵ which surveyed mothers who visited emergency clinics at night.

The secondary group of signs depended upon the child's age. In general the mothers

of nursery schoolers watched stool and desire to play, while the mothers of older children noticed facial pallor, headache and discomfort. The latter two are the children's own complains rather than the mother's observation.

Though the foremost indicator of the children's condition was body temperature, and 80 percent of the mothers said they knew the normal temperature of their own children, the body temperature recorded by most mothers on the questionnaire was lower than the normal value which is described in pediatric medicine books.⁶ It is clear that although the mothers' concern over body temperature is high, it is not necessarily accurate.

These results suggest the following. Energy level, mood, appetite and play can be observed daily by the mother and will change when a child is sick. If the mother observes her child's everyday behavior well, then she can quickly identify health problems.

It is generally said that infants and small children take sick more than school age children. One would assume that mothers of the infants and preschoolers would have greater trouble when their children were sick. However our survey revealed that the elementary school children's mothers in T town had a greater number of problems. A report by Noguchi⁷ which dealt only with 4 year olds showed similar results concerning the difficulties of mothers with sick nursery schoolers. The trouble most strongly felt by mothers of elementary school children was mainly the lack of an appropriate medical institution. On the other hand, the mothers of nursery schoolers felt most troubled by the lack of someone to take care of the sick child, especially if the child was 2 years old or younger. This is because in Japan only working mothers can easily place an infant in a nursery school, so 91.7 percent of the mothers in this group have jobs outside the home (Table 1).

The most frequent resources of knowledge for home care were the mother's mother or grandmother and medical professionals. Few mothers got their knowledge from school education and public health centers. It is necessary to study further why schools and public health centers are not fulfilling their appointed roles in health education and health consultation.

The mothers of nursery school and elementary school children kept a good stock of nursing and medical supplies and household medicine at home. These possession rates are similar to the results⁸ of a census by the Ministry of Welfare.

CONCLUSION

The body temperature, energy level and appetite were the most commonly used indicators of health at any age. In order to quickly identify health problems, it is important that each mother spend some time with her own child every day and that she carefully observe the child's behavior.

The troubles faced when a child is sick are related mainly to the availability of an appropriate medical institution and a person to care for the child. Accordingly it is

necessary to improve these problems.

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