The Effect of Health Education on Case Management of Acute Respiratory Illnesses among Mothers or Other Care - Givers of Under Five Children in Sululta Awraja

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THE EFFECT OF HEALTH EDUCATION ON CASE MANAGEMENT OF ACUTE RESPIRATORY ILLNESSES AMONG MOTHERS OR OTHER CARE - GIVERS OF UNDER FIVE CHILDREN IN SULULTA AWRAJA

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ABSTRACT

This study on the effect of health education on case management of acute respiratory illness(ARI) among mothers or other care givers of under five children was done in Sululta Awraja which is one of the rural districts of Addis Ababa Administrative Region in the central part of Ethiopia. The aim of the study was to determine the incidence of ARI and to compare the knowledge, beliefs, attitudes and practices of mothers of under five children before and after an intervention of acute respiratory illness (ARI) specific and general health education.

540 households were selected randomly from three Farmers'Associations which are found within five kilometres radius of a health center. Mothers or other care-givers were interviewed about their knowledge, attitude, beliefs and practices. One week after the baseline survey ARI specific health education was conducted in one Farmers' Association, general health education was given in the second community and no health education in the control Farmers' Association. The intervention and the control communities were selected randomly. The health education was given monthly for four months. Fortnightly visits to both intervention communities were carried out to determine incidence. At the end of the four months maternal knowledge, attitudes,

beliefs and practices were assessed by questionnaire. Practice was verified with health institution records.

The study showed that the incidence of ARI and acute lower respiratory illnesses episodes were 13.9 and 7.4/ 100 children /four months. The occurrence of ARI was two times higher in children under one year of age as compared to children 1-4 years. The percent change in maternal knowledge, attitude, beliefs and practice after ARI specific health education was 30.4%, 51.9%, -.75% and 68% respectively. The percent change in maternal knowledge, attitudes, practices and beliefs after general health education intervention were -33.4%, 66.3%, 64% and -5.2% respectively. 75% of the Mothers or other care-givers of under five children from the ARI specific health education communities brought their sick children with ARI to the health center as compared to only 30.7% from the general health education intervention community. No change was observed on the knowledge, attitudes,practices and beliefs of mothers or other care-givers of under fives in the control community.

The study showed that ARI is common in under five children and the risk of ARI is much higher in under one children. The study also showed ARI specific health education is effective in changing the knowledge, attitudes and practices of care-givers and general health education is effective in changing attitudes.

INTRODUCTION

Diarrhoea, acute respiratory infections and protein energy malnutrition are considered to be the three leading killing diseases of early childhood (1). The acute respiratory infections are divided into upper and lower respiratory infections and include simple common cold, otitis media, tonsillitis, laryngitis, bronchitis, bronchiolitis and pneumonia. The acute respiratory infections also include some vaccine preventable diseases like whooping cough (pertussis), diphtheria and the complications of measles.

Although there are no accurate figures of incidence and prevalence globally, the existing data show that acute respiratory infections (ARI) are one of the major causes of death among children under five years of age. Out of the total 15 million deaths among under five children worldwide, nearly one-third of the deaths are caused by ARI; and of these, approximately 90% are caused by pneumonia alone. This means that there are about 4.5 million deaths due to ARI in the world each year. The mortality rate of ARI in developing countries is more than 30 times higher when compared to the USA and Canada (2). The occurrence of ARI in under five children is about four to eight episodes per child per year; this

Case management of ARI at the health center and health station level involves appropriate antibiotic treatment after classifying the degrees of severity based on the clinical findings. Case management at the community level also includes differentiating the seriousness of the clinical syndromes followed by advice on home care, antibiotic treatment and referral of the severe cases. At the household level, care-givers should have the appropriate knowledge of home care with an early warning system of self-referral. Community and household case management of ARI is particularly important in developing countries, where the access to appropriate health institutions is often very difficult. Therefore health education of mothers is seen as a way to improve this management.

This study tried to assess the effect of health education on case management of ARI among mothers and other care-givers of under five children. The purpose was to compare the knowledge, beliefs, attitudes and practices of mothers with regard to case management of ARI, especially of acute lower respiratory illnesses(ALRI) among under five children before and after an intervention of health education specifically about ARI.

The study was conducted in Sululta Awraja (district), which is one of the six rural districts near

to Addis Ababa in central Ethiopia. The area of the Awraja is 1164 sq.km making it the largest Awraja of the Region. Sululta Awraja is divided into 101 Farmers'Associations. In the Awraja there is only one medium sized town which is called Chancho. Climatically about 62% of the Awraja is Woinadega(middle highland), with a mean annual temperature of 20.7 degree centigrade. This shows that the Awraja has temperate to cold climate.

The total population of the Awraja is 119,000 people out of which 3.6% live in urban areas and 94.6% live in rural places. The sex ratio is 1.1 male to 1 female. About 19% and 21% of the total population are children under five years of age and women in child bearing age group respectively. Almost all of the population in the district are Oromos and speak Oromigna. Most of the people are strict Ethiopian Orthodox Christians. The population is economically dependent on cattle rearing and the literacy rate in the Awraja is only 18%.

The health institutions in Sululta Awraja are one health center and four health stations. The health center and three of the health stations are under the Ministry of Health, whereas the remaining health station is under the Ministry of Industry. In Sululta there are 13 community health agents(CHA) and 35 trained traditional birth attendants(TTBA). The catchment area of the health center includes Chancho town and 47

Farmers'Associations with a total population of 63,000 people. The health center is staffed by two physicians,three nurses, four health assistants, one sanitarian, one pharmacy technician, one laboratory technician and ten administrative personnel.

The major health indices in the Awraja are:

Infant Mortality Rate (IMR)	82.5/ 1000 live births
Crude Birth Rate (CBR)	44.6/ 1000 population
Crude Death Rate (CDR)	16.7% 1000 population

Source - Data Organized by Central Statistics Authority for Menagesha Awraja,1984 census,CSA.

The morbidity statistics in the health center and health stations show that ARI is the second most frequent illness comprising 23.9% and 25.5% of the total patients seen in the health center and in the health stations respectively. Therefore, this situation makes Sululta an appropriate setting for this ARI study.

STUDY OBJECTIVES

GENERAL OBJECTIVE

To assess the effect of ARI specific health education on knowledge, beliefs, attitudes and practices of mothers and other care-givers of under five children.

SPECIFIC OBJECTIVE

- to assess the knowledge, beliefs, attitudes and practices of mothers and other care-givers with regard to case management of ARI.
- to compare the effect of ARI specific health education and general health education on case management of ARI.
- to determine the health care seeking practice of mothers and care-givers after an intervention of ARI specific health education.

HYPOTHESES

- The effect of ARI specific health education on case management of ARI is significantly greater than the effect of general health education.
- The practice of mothers and other care-givers to seek medical care for acute respiratory illness in under five children is significantly greater among those who attend health education focused on ARI as compared to those who do not.

LITERATURE REVIEW

Acute respiratory illnesses in children in developing countries contribute to high mortality rates and a correspondingly high incidence of other accompanying severe diseases. Factors like poor sanitation, inadequate nutrition, crowding and environmental pollutants play important roles in ARI morbidity and mortality. As a result prevention and control of ARI is probably directly proportional with the overall development of a community. However, community based case management of ARI has proved to be effective in many studies done in underdeveloped countries.

MORTALITY

Acute respiratory illnesses are among the major causes of morbidity and mortality in children in developing countries. In many nations of Africa and a number of countries of Asia and Latin America, about 50% of all deaths occurs in children under five year old (3). ARI is estimated to be the immediate cause in one-third to one-forth of these deaths. In other words, at least four million ARI related deaths occur each year or 11,000 per day. Extensive and precise mortality figures concerning ARI are not yet available in developing countries, but it has been shown that the distribution of ARI mortality from country to country closely correlates with that of infant mortality rate (4). A retrospective

study done in 1981 in Jumala, which is situated in the rural mountainous region of Nepal, showed ARI to be one of the major causes of infant mortality. The total infant mortality rate was 488.9 per 1000 live births of which 333.3 per 1000 were attributed to ARI. The researchers explained that this strikingly high figure of ARI mortality could be due to the high rate of parental smoking, high incidence of measles, heavy exposure of domestic smoke pollutants and poor living conditions of the population (5).

Analysis of the information from 32 different countries also showed that mortality rates associated with ARI were extremely high in children under one year of age (1000 or more per 100,000 live births) (4). Phadke et al. showed that mortality was highest during the first three months of life, it decreased from 4-9 months and then increased again from the 10th - 12th months. Phadke also suggested that the vulnerability of infection in children during 10-12 months could be due to increased contact with the external environment and wider exposure to infections (6). The increased mortality shown in the first three months of life could be due to the low state of immunity in that age group.

Mortality due to ARI usually has a direct relationship with the overall development of a country. In 1977 mortality from ARI among under fives in North

America and Australia was 8 per 100,000 whereas in Africa it was 467 per 100,000 (7). The rate of reduction in mortality is very slow in developing countries as compared to that of the industrialized countries. The mortality from pneumonia and influenza among infants in the USA and Canada decreased at an annual mean rate of about 15% from 1969 to 1977. In countries like Latin America, such as Costa Rica and Cuba where the health information system is well organized the mean annual reduction was 8% in the same time period(7).

Another way of showing deaths is through the case fatality rate, which expresses the frequency of affected children dying from pneumonia and other acute respiratory infections. Hospital based figures from different countries showed that the case fatality range from 2.7%-12.3%. These data were not comparable because of the differences in the definitions of cases. However, even the smallest rate of 2.7% in Kuala Lampur is very high as compared to the reported figures from developed countries. These rates were even higher in the rural settings where there are inadequate diagnostic and treatment facilities. Estimated figures done in the different rural settings show that the case fatality rates to be approximately 10% (7). A study conducted in Goroca, Papua New Guinea, show that the case fatality of ALRI among untreated cases were 25% whereas in those who

were treated using antibiotics in different health institutions case fatality rates were reduced to as low as 4% (7). These high figures of deaths show that there are enormous losses of productive person-years in the developing countries.

MORBIDITY

ARI among the general population particularly in children under five years of age is extremely common. Shamar et.al determined the morbidity pattern of children up-to five years of age in Jaipur,Indonesia which showed that the main causes of morbidity were acute upper respiratory tract infections, diarrhoea, and dysentery. Banik et. al reported a similar trend in morbidity patterns that respiratory diseases accounted for 59% of all illnesses and their incidence was higher in late infancy (10 to 12 months) (8).

Statistical information about the incidence of acute respiratory infections in the general population is scarce. The limited data from community based longitudinal studies indicate that they are very common. On average a child in an urban area has from 5-8 episodes of respiratory illnesses annually during the first five years of life (2). The same incidence range was observed in towns of Costa Rica (9), Ethiopia (10), India (11) and the USA(12) (table 1). The available data suggest that

even the mean duration varies little, amounting from seven to nine days with one or more respiratory symptoms per episode. In rural areas of Bangladesh (13),China (14),Ethiopia (15), Guatemala (16), Indonesia (17) and Papua New Guinea (18) the reported annual incidence per child was lower than in towns, ranging from one to three episodes per year (table 2). Although the incidence of ARI in children in urban areas is higher than in rural areas, they are not quite comparable since the methodologies of the studies were different (7). One study in Trinidad used the same methodology in both rural and urban localities and found that the incidence of respiratory illnesses for all ages was 7.7 episodes per person per year in urban part of Spain and 4.4 episodes per person per year in rural Sangre Grande. This type of study was also done in Sheffield, England which showed an incidence of 6.1 episodes over all per person per year(7). There are very few community surveys in which the occurrence of pneumonia in children has been registered over a long period of time. A compiled result of six studies in rural and urban localities of different countries are listed on tables 1 and 2. The annual incidence of pneumonia was between 30 and 40 per hundred children under five in urban areas of N. Carolina (19) and Washington state (20). The rate was 91 among Indians living in an underdeveloped part of the Colorado Plateau

(21). In the rural area of Dang Guna, near Beijing, China, the registered annual incidence of pneumonia was 74.6 per 1000 (22) and in Narangual, Punjab, India, 94.1 per 1000 (23). In the survey of Tari Barin, in Papua New Guinea, it was estimated that the incidence of pneumonia was 256 per 1000 in the first year of life and 62 per 1000 in children aged from one to four years(24,7).

Table 1. Community Based Longitudinal Studies on the Frequency of Upper and Lower Acute Respiratory Illnesses in Rural Areas.

Study area	Study Year	No. of children	No. episodes of Respiratory Illness per year and age under 1	1-2	2-3
Matlab, Bangladesh	1978-79	197	2.1-2.4	2.5	2.3
Dong Guna, China	1981-82	134	____	3.5	_____
Dabat, Ethiopia	1968	202		3.1	_____
Three Mayan Indian villages, Guatemala	1959-64	2877	1.2	0.9	0.5
Pindok Pinang, Indonesia	1970-71	877	_____	1.6	_____
Asaro valley, Papua New Guinea	1980-81	1100	1.8	0.4	_____

Source -" The magnitude of the problem of ARI. ARI in childhood. Douglas and Kerby Eaton (eds) Sydney AUS : University of Adelaide 1985".

Table 2. Community Based Longitudinal Studies on the Frequency of Upper and Lower Acute Repiratory Illnesses in Urban Areas.

Study Area	Study Year	No. of Children	No. episodes of Respiratory illness per year and age under 1	1-2	2-3
San Jose, Costa Rica	1966-67	137	5.9	7.2	4.2
Addis Ababa, Ethiopia	1975	216	7.9	____	6.6
New Delhi, India	1962-67	7493	5.6	5.3	4.8
Vellore, India	1965-67	135	7.3	____	6.2
Tecumseh, Michigan	1969-71	707	6.1	5.7	4.7
Seattle, Washington	1969-72	309	4.5	5.0	4.8

Source - " The magnitude of the problem of ARI. ARI in childhood. Douglas and Kerby Eaton (eds) Sydney :AUS University of Adelaide, 1985".

A study done in Tecumseh, Michigan showed that the incidence of ARI in infants under one year of age was 6.1 illnesses per year. It also showed the annual rate of illness decreased with increasing age. When the annual incidence is compared by sex it showed that in infants under one year of age and one to two years of age the boys experienced more illnesses than the girls but at three years of age, the sex ratio reversed and girls had more frequent attacks than the boys. The study also revealed that in lower respiratory illnesses boys had more marked frequency of illnesses than the girls. The sex difference was also evident in frequency of reports of illness which showed that, for children under three years of age boys had more than twice as many episodes as girls(19).

Research in Tari, Papua New Guinea in 1972-73 showed that a child could expect to suffer two attacks of ALRI by the age of five year and of these 1.4 attacks could be classified as severe on the basis of respiratory rate (20).

A rural community study in Nepal showed that the average number of ARI episodes per child during the six months study period was 2.3. The maximum of 3.4 episodes was among 1-2 years of age group and the minimum of 1.8 episodes was among 2-5 years age group. The average number of severe ARI episodes per child was 0.15 in the

six months study period (5). The incidence of lower respiratory infections during the first year of life varied from 36 episodes per 1000 child years in Chapel Hill, North Carolina, to 460 episodes per 1000 child years in Papua New Guinea. Studies from Papua, New Guinea and Navajo reservations in New Mexico and Arizona revealed an incidence of pneumonia was four to six times higher during the first year of life than during the second through fourth years. Studies in China and Colombia found that pneumonia occurred during the first year of life 1.5 to 1.8 times more frequently than during the third and fourth years (21).

Health Service utilization

The magnitude of the illness could also be illustrated by health institution attendance. Figures analyzed by the WHO showed that 22%-42% of clinic visits in urban and rural areas of the world are related to ARI (21). In semi-rural northern Nigeria, 25% of the visits to clinics for children under five years of age were due to ARI. The frequency of hospitalization for pneumonia is highly variable. During a two years period, 3.2 cases per 1000 children less than five years of age required hospitalization in neighborhood health centers in Colombia (22). Monto and Johnson reported an annual hospitalization rate of 4.8 cases per 1000 children in

Panama Canal (23). ARI accounted for 13% of hospital admissions in Bangkok, Thailand; for 15.5% in Papua New Guinea and for 25% in Chandigarh, India (24). A two year ambulatory study in Cali, Colombia in 1979, ALRI accounted for 4% of all visits to the health centers. Seventy cases of ALRI per year were diagnosed for every 1000 children less than the age of five years who were observed in the clinic (22).

Reliable morbidity figures would provide the most valuable way of measuring the burden that ARI places on health care services. Absenteeism in different employment groups of mothers and other care-givers in relation to ARI in children influence the economic aspect of the community as well as the country. Even mild upper respiratory tract infections account for a large number of lost working days (1).

Acute respiratory infections are among the leading causes of health service utilization in developing countries. Information from Brazil (5), Nigeria (26), Thailand (27), and Iraq (28) indicate that ARI constitute 30% to 60% of all children attending out-patient health units, most of them because of pneumonia. Another way of showing health service utilization is through the information on the number of children admitted into hospital. Recent data from Bangladesh (29), Burma (30), Pakistan (31), and Zambia (32) showed that between 30%

and 36% of admissions of children were attributable to ARI. Pneumonia and broncho-pneumonia accounted for 70%-80% (33).

ETIOLOGY

Acute Respiratory Infections are caused by a wide range of organisms including viruses, bacteria, mycoplasma and chlamydia. Knowledge of the prevalence of etiologic agents in a community is important for planning and implementation of effective preventive and control programmes of ARI. The common cold and other upper respiratory infections are usually caused by viruses which are self-limiting. Upper respiratory illnesses are not usually accompanied by serious signs and symptoms except when complicated with bacterial super-infections. In early childhood, bacterial complications of viral upper respiratory infections are common.

Many studies conducted in developed countries where ARI morbidity and mortality are low showed that viruses are the major causes of illnesses. This was illustrated in Tecumesch, USA where 87.3% of the study subjects had viral infections and 11.0% had bacterial infection (19). In developed countries bacterial ARI is no longer a serious problem due to the introduction of appropriate antibiotic therapy (34). In developing countries primary and secondary bacterial ALRI are still major

causes of mortality. Bacteriologic findings in lung aspirates from children in developing countries who had not had antibiotic therapy showed that bacterial agents were isolated in 62% of the cases. Of the total bacterial aspirates 54% were due to H. influenza and S. pneumonia, while staphylococcus aureus accounted for 17% (22). In a study done in India the main cause of infection was staphylococcus aureus in 56.7% of pneumonias (35). This was further demonstrated in Papua New Guinea where H. influenza and S. pneumonia and staphylococcus aureus are the main causative agents (36). In early childhood, bacterial complications of viral upper respiratory infections may occur because of the high carrier rate of the infectious bacterial agents, although carrier rate of H. influenza and S. pneumonia is unclear. In Papua, New Guinea these organisms are acquired by almost all infants by the age of three months (5). A study done in Senegal also showed that S. pneumonia and H. influenza in the nasopharynx predisposes to the development of pneumonia (36). The predominance of bacterial etiology has major implications for case management. The effective use of therapeutic agents such as co-trimoxasole and ampicillin will thus reduce morbidity and mortality in the majority of cases.

RISK FACTORS

It is essential to know the environmental factors associated with the morbidity and mortality of ARI in order to formulate effective preventive and controlling measures. It is commonly known that infections are passed around within families, often after being brought by young children from places where children gather such as schools and playgrounds. Another predisposing factor is a defective immune response which is usually associated with malnutrition, especially in developing countries. Parental smoking and domestic smoke from cooking may also increase the risk of ARI. Improved personal hygiene and feeding practices could also play important roles in preventing and controlling of ARI in developing countries.

Nutrition

Ordinary childhood diseases can become very serious and frequently lead to death in children whose nutritional status is poor. A longitudinal study in Manila showed that the annual incidence of ARI was over seven episodes per child and ARI was found to be more common in children who were malnourished than in those who had normal weight for their age. A hospital based study in the same area illustrated that the case fatality rate for ARI was six per 1000 in those with mild

malnutrition and 23 per 1000 in those who were severely malnourished (37). The relationship between malnutrition and severe ARI was further demonstrated in San Jose, Costa Rica (38) where mortality from acute respiratory illness was 12 times higher in malnourished infants than in those having normal weight.

Vitamin A deficiency is a major nutritional problem second only to protein energy malnutrition in the world (39). Vitamin A deficiency can result in the reduction of the production of mucus in the respiratory tract, hence pathogenic microrganisms adhere to the respiratory epithelium more easily and cause illness. This was demonstrated in a study done in preschool children in rural Indonesia where children with mild xerophthalmia had twice the risk of developing ARI as compared to normal children (40). Community based studies in Indonesia (41) and India (34) have shown respiratory infections to be more frequent and more severe among children with vitamin A deficiency.

Another important nutrition-related risk factor are the feeding practices of infants. Many studies have shown that breast fed infants have lower rates of ARI than bottle fed infants. This was observed in several studies done in New Zealand (42) where bottle fed infants had four times the risk of ARI. A study done in NewCastle, England (43) also showed that breast feeding

is protective against illness and artificially fed infants had two to three times the risk of ARI as compared to those of breast fed children. Mortality rates are also lower in children who are breast fed as compared to non-breast fed in Brazil (43,44).

Low Birth Weight

Low birth weight is defined as a birth weight lower than 2500 gm (45). The incidence of low birth weight in many developing countries ranges from 20% to 40% while in developed countries it varies from 5% to 7% (19). A study made in Birmingham, England in 1969 showed that the major cause of death in low birth weighed infants was pneumonia (46). This was also confirmed in a study done in England, Wales and Scotland (47).

Environmental Pollutant

Mortality from ARI decreased in developed countries since the first half of the century due to the gradual socio-economic development. However, recently in most of the industrialized countries the occurrence of ARI has increased because of adverse environmental conditions (23). The unfavorable environmental conditions did not show major improvement in most developing countries. About 90% of the rural and 30% of the urban households in developing countries use wood, crop residues and manure

from domestic animals for cooking and heating. The smoke of these materials damage the tracheo-bronchial mucosa and the alveolar epithelium which may contribute to increased susceptibility to infections (19). Of the 132 infants admitted to a hospital in South Africa due to severe ARI, 70% were exposed to smoke from cooking and heating (48).

Research done in a residential suburb of London showed that the children of adult smokers have an increased rate of bronchitis and pneumonia (49). Schenker et al. showed an association between the number of smokers in the house and occurrence of ARI (50). A two year prospective study in Boston showed that maternal smoking was associated with an increased rate of ARI signs and symptoms (49).

PREVENTION AND CONTROL

Although the term "ARI" includes some relatively mild illnesses it also includes pneumonias which can be fatal. The present methods of prevention and control of pneumonia are inadequate, particularly in developing countries. Because of the high mortality attributed to ARI, the WHO has developed standard guidelines for the control of ARI (51,52). A protocol for the clinical management of pneumonia in under five children was also developed in Papua New Guinea by Shann et al. after

several years of experimental trials (53). Another study by Edmundson and Harris reviewed recent epidemiological studies and suggested appropriate treatment and case-management guidelines (54). Several field trials have been made based on the suggested protocols and most of them showed the need to understand what families already know, what makes care givers seek treatment for the child and what are the signs and symptoms recognized. Therefore, it is essential for any intervention to be successful to know the customs, traditions, perceptions and beliefs which are known to have significant influence on the behavior and attitudes to illness and treatment.

Before interventions are implemented it is also important to know the signs and symptoms of ARI which are recognized by the mothers. In a study conducted in India where pneumonia morbidity and mortality was found to be high, the major symptoms observed by mothers were fever (94%), breathlessness (76%), and cough (70%) (55). A study done in Gambia has showed that fast breathing is a sign of severe illnesses and hence, fast breathing was predictive for the presence of pneumonia (56). The commonest reasons for a mother to seek treatment for a child were fever, severe cough, difficulty of breathing and systemic signs like poor appetite and being sleepy. Many of the signs and symptoms are already recognized by mothers in different cultures (55,56).

The suggested control programmes are standardized case management, immunization and health education (51,52,57). The activities in the control programme involve voluntary community health workers as well as salaried health workers who are essential in implementing effective control programme. A study done in Indonesia suggested that there were certain limitations in this type of intervention, because community health workers need considerable training time and continuous ongoing supervision.

About 50% of children with pneumonia die within three to four days of illness which allows very few days for family members to learn and recognize ARI signs and symptoms, give supportive care at home for mild upper respiratory illness and seek medical care urgently for more serious lower respiratory illness (54). For this reason maternal education on the important signs and symptoms and case management is mandatory. Flow charts have proved useful as educational tools since they provide clear points of reference for both mothers and educators. They can also be useful in the field and are helpful for project supervisors who monitor health programmes (51,58). The Family Asthma Programme in Buffalo, New York (49,50), is one example of these efforts. In that particular programme, education was conducted by a team of health professionals in six, two-

hour sessions, two group of parents and other care-givers and was followed by a decreased number of emergency treatments.

Simply giving information may increase patients knowledge but does not necessarily bring the changes in health behavior which are required for case management of ARI (61,62,58,63). Therefore, health education should aim at motivating family members, particularly care-givers, to adopt the new health care behavior on an ongoing basis (64,55,65). An intervention of mass education on childhood pneumonia and case-management done in Godchiroli, India, showed a significant reduction in infant and childhood mortality rates (66). Another intervention study in Bagamoyo, Tanzania has also shown a reduction in 67.4% in ALRI specific mortality rate among under five children after an intervention of health education and case-management of ALRI by village health workers (67).

A community based survey conducted in Bohol, Philippines on health care practice of mothers showed that 10% of urban and 4% of rural mothers referred their children for medical care, 10% of urban and 12% of rural did nothing, while 80% of urban and 84% of rural mothers gave medicine without consulting a health worker (54).

In general, treatment with antibiotics at home and active case detection methods reduce mortality. However,

since active case finding is time-consuming and is not feasible in most circumstances, it is essential to rely on specific community education to encourage mothers to recognize early signs of pneumonia and to seek care quickly from health institutions. In addition, case finding also misses children who develop pneumonia between visits. Therefore, better education of care givers to recognize signs and symptoms of ARI is the main method of improving case detection and reduction of mortality (67).

MATERIALS AND METHODS

This study on the effect of health education on case management of ARI among mothers or other care-givers of under five children was conducted in Sululta Awraja from April,1990 to August, 1990. The study included 540 mothers or other care-givers of under five children living in three Farmers' Associations which were within five kilometres from Chancho health center and at least 15 kilometres apart from each other.

From the five Farmers' Associations found within five kilometres radius of Chancho health center, three Farmers' Associations were selected using a simple random sampling procedure. The Farmers' Associations within five kilometres radius were chosen because of their access and equal distance from the health center. The three Farmers' Associations were relatively far apart so that contamination of intervention and investigation was minimized.

The sampling procedure was started by choosing the Farmers' Associations for the ARI specific, general health education intervention and control group using a lottery technique. Then discussions were conducted with the formal and informal community leaders concerning the purpose of the study. The maps of the villages of the Farmers' Associations were sketched and each household was numbered. From the numbered households 540 houses

were selected randomly using a random table. Interviews were conducted with mothers and other care-givers of under five year old children. If the selected household was without a child who was under five years of age, then the adjacent household was interviewed. This also held true if the sampled household members were not willing to respond, which happened only rarely. If there were more than one under five children in a household then the mother was interviewed about the youngest under five child.

To ensure an adequate response rate and to obtain the informed consent of the study subjects, the study was discussed in general terms with the Farmers' Association leaders,the Awraja health committee and by the Revolutionary Ethiopian Womens' Associations(REWA). Mothers or other care-givers were informed about the study through the Farmers' Associations and the REWA.

Before the study was conducted, three types of questionnaires were prepared (see Annex I). The first type of questionnaire was used at the beginning of the study as a baseline survey in all three Farmers' Associations. The questionnaire constituted an assessment of knowledge, beliefs, attitudes and practices regarding the case management of ARI. The second type of questionnaire was used every fifteen days following the baseline survey. The interviews were conducted in both

intervention communities but not in the control Farmers' Association. The second questionnaire consisted of questions about signs and symptoms of ARI and an assessment of the previous medical history of the child. This part of the questionnaire was designed to show the incidence and the actual medical care seeking practice of mothers and other care-givers. The third type of questionnaire was administered at the end of the intervention in all three Farmers' Associations to see the difference in knowledge, attitudes, beliefs and practices of care-givers after the intervention of health education.

The questionnaires were first written in English and then directly translated into both Oromigna and Amharic. All questionnaires were back-translated to assess reliability. Then the questionnaires were pretested in a community which is similar in social, economic and educational back ground but 35 kilometres away from the study communities. For this purpose 30 households were selected randomly using the random table, and were interviewed.

To conduct the interviews ten interviewers and two supervisors were recruited. The selection criteria for the interviewers were females who:

- were in the child bearing age
- had completed at least 10th grade but not more than

12th grade

- could read, write and speak Oromigna
- were resident within five kilometres radius of the Chancho Health Center
- were neither very active nor very passive
- Kept high levels of personal hygiene

The interviewers were trained with general and specific techniques of interviewing (see Annex II).During the training interviewers were taught to :

- understand the purpose of the study
- know the type of data to be gathered
- record answers without expressing their own opinions
- follow the schedule of the study.

Two supervisors were also recruited and trained in the same way with special emphasis on how to supervise the interviewers.

After the training, the interviewers were divided into two groups of five. One group was assigned to the ARI specific intervention community and the other group went to the general health education intervention community. The interviews were conducted for a total of four months and the interviewers did not know about the different interventions throughout the study period. The baseline and final interviews took fifteen days each; the

questionnaire which was used every fifteen days took three to five days of interviewing. Supervision was done by the supervisors and administrative workers from the health center. Supervision and monitoring were conducted every day checking the questionnaires for misscoding and other problems. Additionally, 5% of the interviewed households were re-interviewed during the intervention period on 10 different days after each fortnightly interview.

Training of Health Assistants

Before the intervention started, four health assistants were selected based on their concern,commitment, knowledge, community acceptance and their ability to speak and teach in Oromigna. This information was obtained from personnel files, personal discussions with the health workers and conversations with community leaders. The health assistants were then trained in ARI,and how to approach and educate mothers using the module of ARI from the Ministry of Health. The training was conducted for four days on the magnitude of the illness, etiological agents, diagnostic criteria, signs and symptoms, epidemiology and disease prevention and case management at home, primary care level and referral. At the end of the training a short quiz was administered and were found to have satisfactory

knowledge about the characteristics and case management of ARI. The programme of the trained health assistants was arranged in such a way that, during the study period they didn't go to the other study communities for any other activities and they were also told not to conduct ARI specific health education in any other sessions or places. In addition,all health workers in the health center had monthly seminars on case management of ARI and the recording system. Co-trimoxasol and procaine penicillin were constantly available in the health center throughout the study.

ARI specific Health Education Intervention Community

After thorough discussions about the importance of the study with the formal and informal community leaders, the times and places of health education were decided. Then the responsibility of informing mothers was given to the REWA and some informal leaders. After the time and place of health education was decided, the initial surveys on the assessment of knowledge, beliefs, attitudes and practices of mothers and about the health and health related situations was conducted.

Following the initial survey, health education about ARI was given to the selected mothers or other care givers monthly in one

community for four consecutive months. In every session

health education covered the seriousness of the illness, etiology, signs and symptoms and case management of ARI. To assist in health education posters were prepared and pretested in a different community (see annex III). The education was given for 15 - 20 mothers on one session which lasted for 45 minutes to one hour. 93% of the mothers attended the health education four times throughout the study period and 1% of the mothers attended only once. The health assistants rotated systematically to teach mothers and balance out any differences in the skill or enthusiasm of the health assistants.

General Health Education Intervention Community

In the community with general health education all activities were carried out like that of the ARI intervention community except that there was no health education specifically on ARI. Only routine health education about EPI diseases, family planning and childhood diseases was continued monthly for four consecutive months.

Control Community

In the control community there was no intervention of health education and the questionnaires which were administered every fortnight in the intervention

communities were not used. The purpose of this study community was to control the effect of the repeated visits made in the community with general health education and ARI specific health education communities.

Sample Size Calculation

Sample size calculation was done using the calculator of sample size in the statistical package of EPI INFO version 5.0. In the calculation the confidence level was 95% ,the power was 80%, the ratio of exposed to non-exposed was 1:1 and the difference needed by the intervention was 10%. As a result the number of study population needed for this study was calculated to be 438. On the calculated sample size 20% was added for the probable drop outs and the final sample size calculated was 525.

Analytic Methods

Analysis of the study was done using the SPSS/PC package. Variables were combined to determine the economic status, practice, attitudes,beliefs and knowledge. Measurements for economic status were created by combining (adding) numbers of cows, oxen and type of roof. The highest and the lowest scores for economic status were 8 and 1 respectively. A score of <4.5 is considered as low (0 - 1 oxen, 0 - 3 cows and roof made

of grass) and ≥ 4.5 were considered as high (Oxen ≥ 2, ≥ 4 cows and roof made of corrugated iron sheets).

Questions were combined and a new variable called practice was created. Each answer was scored as zero or one. Open ended questions were coded into "home fluid and food"," take the child to a traditional practitioner", "take the child to health institutions" and "local herbs". Then, "increasing home fluid and food", "taking the child to a health institution" and "ventilating the child when the child has fever" were scored as one. "Decreasing or stopping fluid or food", "local herbs" and "take the child to a traditional healer" and "wrapping with more clothes" whenever the child has fever were scored as zero. The highest practice score was 21 and the lowest was zero.

Attitude questions were scored as one when they answered to "continue or increase the amount of fluid and food", when care-givers answer that cough, difficulty of breathing and fever are "very dangerous" and "dangerous" and when they answered they "prefer to take the child to health institution" whenever the child is sick. A score of zero was given when the care-givers "want or prefer to discontinue or reduce fluid or food" when the child was ill, when they answered that cough, difficulty of breathing and fever to be "not dangerous" and when they

"prefer to take their sick children to a traditional healer and give local herbs". The maximum score for attitude was 18 and the minimum score was zero. Questions numbered 40 - 44 and 46 were added to produce the variable "knowledge". When care-givers answered that ARI is caused by "germs" and "exposure to dirt" the knowledge was given a score of one and when they attributed the cause to "effects of the sun", it was given a score of zero. The maximum knowledge score was 5 and the minimum was zero.

Questions numbered 45.1 - 45.18 were combined to make the category of "beliefs". A score of one was given when care-givers "disagree" or "strongly disagreed" that cough, difficulty of breath and fever are caused by evil spirit or can be cured by spiritual beliefs and a score of zero was given if care-givers "agreed" or "strongly agreed" to the above statements (Annex - I). The maximum and minimum scores were 18 and zero respectively.

For knowledge, attitude, practice and beliefs, individuals scoring greater than or equal to 50% of the total possible score were called positive, and those scoring less than 50% were called negative.

To show if there is a difference between pre- and post- intervention mean scores a paired T-test statistical analysis was performed. To compare the effect of health education in all the three Farmers'

Associations one way analysis of variance (ANOVA) was also done. This method of statistical analysis showed whether there was a statistically significant difference among Farmers' Associations or not. If there is a statistically significant difference in mean scores among the Farmers' Associations the method pinpoints the area of difference.

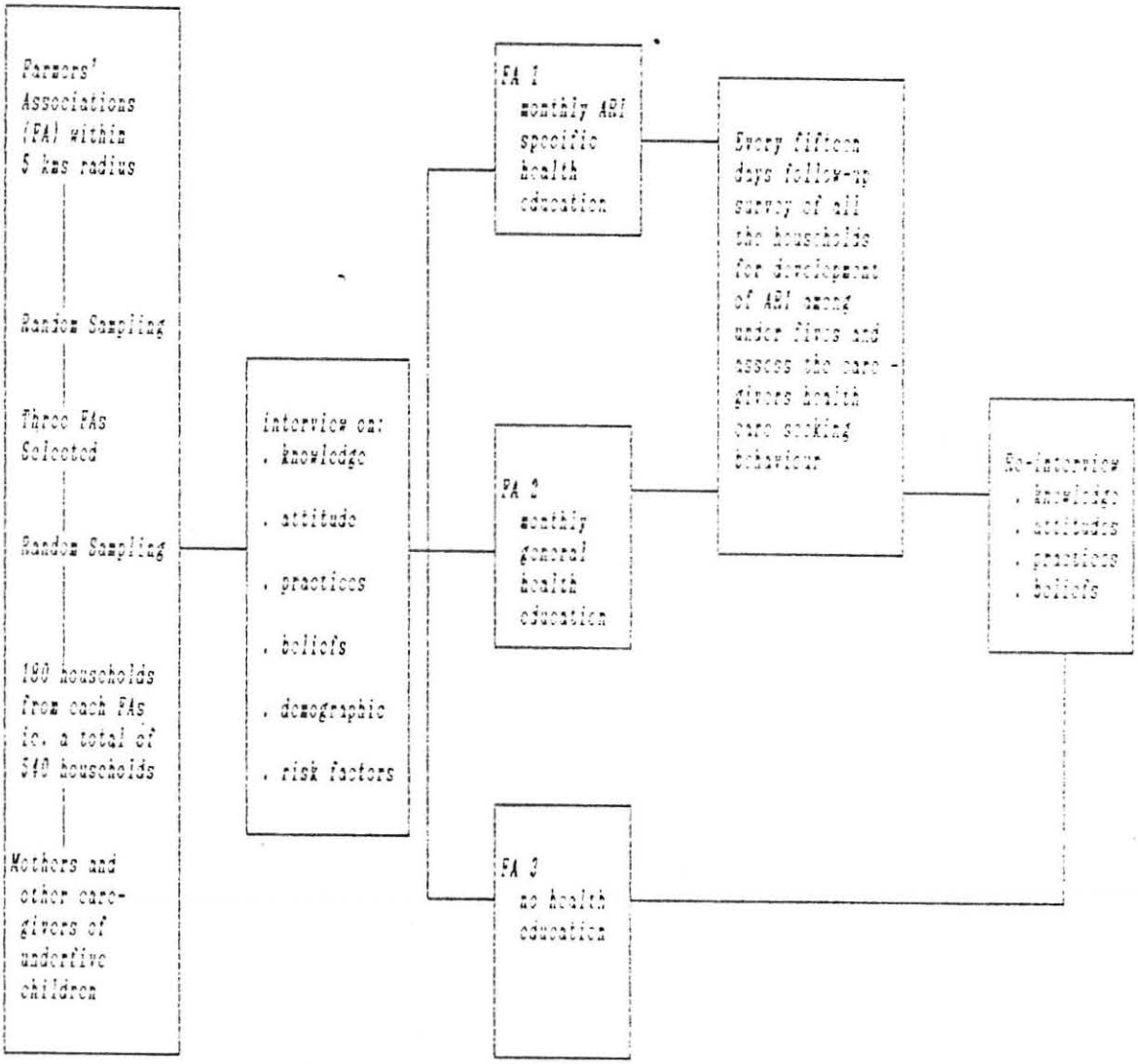


Fig 1 Sampling Frame

OPERATIONAL DEFINITION

1. Care-giver - is a person who is taking care of a child in the absence of the mother for more than one month. A care-giver can be a relative (father, grand parents, uncle, ant, sister,brother etc.) or non-relative (step mother, adoption, etc.).
2. Acute Respiratory Illness - is defined as cough, fever, hoarseness and as well as the symptoms included in ALRI.
3. Acute lower respiratory illness - a child is considered to have ALRI if he/she has more than two of the following signs or symptoms in addition to cough.
   - cyanosis
   - not able to drink and eat
   - difficulty of breathing
   - chest in drawing
   - fast breathing
   - severe wheezing
   - cough
4. Knowledge - Facts that the investigator thinks are true or false with regard to the cause, case management, symptoms and prevention of ARI.

5. Belief - is the conviction that the investigator holds about what the cause, case management and prevention of ARI.
6. Attitude - a predisposition to respond in favourable or unfavourable manner towards ARI.
7. Practice - a repeated action or habit of case management of ARI.
8. Cough or cold - is a child with one of the following signs and symptoms: cough, wheezing and fever but no chest in drawing and no fast breathing.
9. Pneumonia - a child with fast breathing (50 per minute or more if the child is 2 months up to 12 months; 40 per minute or more if a child is 12 months up to 5 years) as well as cough and fever but no chest in drawing.
10. Severe pneumonia - In addition to cough a child with one or more of the following signs and symptoms is considered as have severe pneumonia: chest in drawing, cyanosis, not able to eat or drink in association with cough.
11. Negative practice - is a practice scoring < 11.
12. Negative attitude - is an attitude scoring < 9.
13. Negative belief - is a belief scoring < 9.
14. Negative knowledge - a knowledge scoring < 2.5.

RESULTS

Of the 540 households selected at the beginning, 473 (86.6%) continued throughout the study period. 67 (12.4%) mothers and other care-givers left the area and were considered to be drop-outs. The total number of households in Kore Roba, Guto and Arbi Akako at the time of post-intervention interview were 158 (86.8%), 147 (82.6%) and 168 (93.3%) respectively. There was no statistically significant difference in drop-out rate among Farmers' Associations ($p > .05$).

The age distribution of mothers was classified as young (15-34), middle aged (35-49) and elderly (50 +). As is shown on table 3, there was no statistically significant difference in the distribution of maternal and other care-givers age in any of the three Farmers' Associations ($p > .05$). There was also no statistically significant difference among Farmers' Associations, in the proportion who are illiterate. The number of illiterate ranged from 157 (88.2%) in the general health education intervention community to 164(91.6%) in the control community.

The economic status of the communities was classified as high or low. In contrast to the other two Farmers' Associations, the general health education intervention community had a greater proportion 123

(69.9%) of population with lower socioeconomic status as compared to 107 (59.4%) and 106 (58.6%) of the other two. This difference was statistically significant. However, a comparison of the means showed that there was no statistically significant difference among the Farmers' Associations.

Marital status was classified as married and others (Single divorced,widowed and separated). 162(89%), 168 (94.4%) and 162 (90%) in ARI specific health education, general health education intervention and control Farmers' Association respectively were married. There was no statistically significant difference in marital status among Farmers' Associations.

Table 3 shows the relationship of the child with the care-givers. 162 (89%) in ARI specific health education intervention, 165 (92.7%) in general health education intervention and 160 (88.9%) in the control community were mothers. However the difference was not statistically significant.

Table 3. General Characteristics of Care-Givers by Farmers' Associations, Sululta Awraja, 1990.
(percentage in parenthesis)

Characteristics	ARI specific	General HE	Control FA	P Value
Age (in year)				
15-34	86(47.0)	109(61.2)	90(50.3)	0.07
35-49	75(41.4)	54(30.3)	67(37.3)	
50+	21(11.6)	15(08.4)	23(12.7)	
Total	182 (100)	178 (100)	180 (100)	
Education				
illiterate	165(90.6)	157(88.2)	164(91.1)	0.61
literate	17(09.4)	21(11.8)	16(08.9)	
Total	182 (100)	178 (100)	180 (100)	
Economic Status				
Low	107(59.4)	124(69.9)	105(58.6)	0.04
High	73(40.6)	54(30.1)	75(41.4)	
Total	180 (100)	178 (100)	180 (100)	
Marital Status				
Married	162(89.0)	165(92.7)	160(88.9)	0.16
Others	20(11.0)	13(07.3)	20(11.1)	
Total	182 (100)	178 (100)	180 (100)	
Relation to child				
Mother	162(89.0)	165(92.7)	160(88.9)	0.39
Others	20(11.0)	13(07.3)	20(11.1)	
Total	182 (100)	178 (100)	180 (100)	

INCIDENCE

Of the total 586 under five children surveyed every fortnight 95 of them were found to have one or more of the signs and symptoms of ARI in the four month study period. 16 of these had unspecified infections and 79 had ARI. As is shown on table 4, out of the 79 under five children with ARI, 34 (43%) had cough or colds, 38 (48.1%) had pneumonia and 7 (8.9%) had severe pneumonia.

Table 4. ARI Among Under-Five Children by Severity and Farmers'Associations, Sululta Awraja, 1990. (percentage in parenthesis)

Farmers' Assoc.	No sign of ARI	cough	Pneu-monia	Severe Pneumonia	Total
Specific HE FA	253 (86.3)	19 (6.5)	15 (5.1)	6 (2.1)	293 (100)
General HE FA	254 (86.7)	15 (5.1)	23 (7.8)	1 (0.3)	293 (100)
Total	507 (86.6)	34 (5.9)	38 (6.3)	7 (1.2)	586 (100)

$p > .05$

The proportion of under five children who had ARI and ALRI during the four months period were 13.9% and 7.9% respectively in the two study communities. The incidence of ARI was 0.5 episodes per child-year and the incidence of ALRI was 0.2 episodes per child-year. The average number of episodes of ARI by severity by age is shown in table 5. The average number of ARI episodes are higher in the age group between 0-1. 32% of all children with ARI are less than 1 year of age. The average number of ARI episodes in this age group is 0.23. The relative risk of having ARI among under one year children was 2.05 with 95% confidence interval of (1.35,3.13) times higher as compared to 1 - 4 year children(table 5). During the four months,the average number of episodes between male and female in all age groups were 0.14 and 0.12 episodes respectively. There was no statistically significant difference in the incidence of ARI between females and males (table 6).

Table 5. ARI Episodes Among Under Five Children by Severity and Age, Sululta Awraja, 1990.
(average ARI episodes in parenthesis)

Age	n	No sign of ARI	cough	Pneu-monia	Severe Pneumonia	Total ARI
0-1	113	87 (0.77)	14 (0.12)	10 (0.09)	2 (0.02)	26(0.23)
1-2	108	91 (0.84)	6 (0.05)	11 (0.10)	0 (0.00)	17(0.16)
2-3	165	153 (0.93)	4 (0.02)	6 (0.04)	2 (0.01)	12(0.07)
3-4	112	98 (0.88)	4 (0.03)	7 (0.06)	3 (0.03)	14(0.13)
4-5	88	78 (0.89)	6 (0.07)	4 (0.04)	0 (0.00)	10(0.11)
Tot.	586	507 (0.87)	34 (0.06)	38 (0.06)	7 (0.01)	79(0.13)

Table 6. ARI episodes Among Under Five Children by Sex.

(average ARI episodes in parenthesis)

Sex	n	No sign of ARI	Cough	pneu-monia	Severe pneumonia	Total ARI
Male	334	286(0.85)	20(0.06)	24(0.07)	4(0.01)	48(0.14)
Female	252	221(0.87)	14(0.05)	14(0.05)	3(0.01)	31(0.12)
Total	586	507(0.87)	34(0.06)	38(0.06)	7(0.01)	79(0.13)

$p > .05$

PRACTICE

Negative practices decreased after the intervention of ARI specific health education. The prevalence of negative practices at the beginning of the survey was 14 (7.9%), 13 (7.5%) and 5 (2.9%) in the ARI specific health education, general health education and control Farmers' Associations respectively. After the intervention of health education, the prevalence of negative practice changed to 4 (2.5%), 4 (2.7%) and 6 (3.9%) in the ARI specific health education, the general health education intervention, and the control Farmers' Associations respectively. The percent change of negative practice was calculated to be 68.3% in the ARI specific health education intervention community, 64% in the general health education intervention community and -34% in the control community. Although there was a change between the pre and the post test in negative practice in general health education intervention and control communities, the change was not statistically significant. There was no statistically significant difference in the change (reduction) of negative practice between the ARI specific health education intervention and the general health education intervention community. The difference between ARI specific health education intervention and the control community was statistically highly significant.

When comparison of mean scores was done, the F-test showed that there was a highly statistically significant difference between ARI specific health education and general health education and between ARI specific health education intervention and control communities (Table 7).

Table 7 Mean Care-givers' Practice Scores by Intervention & Farmers' Association, Sululta, 1990.

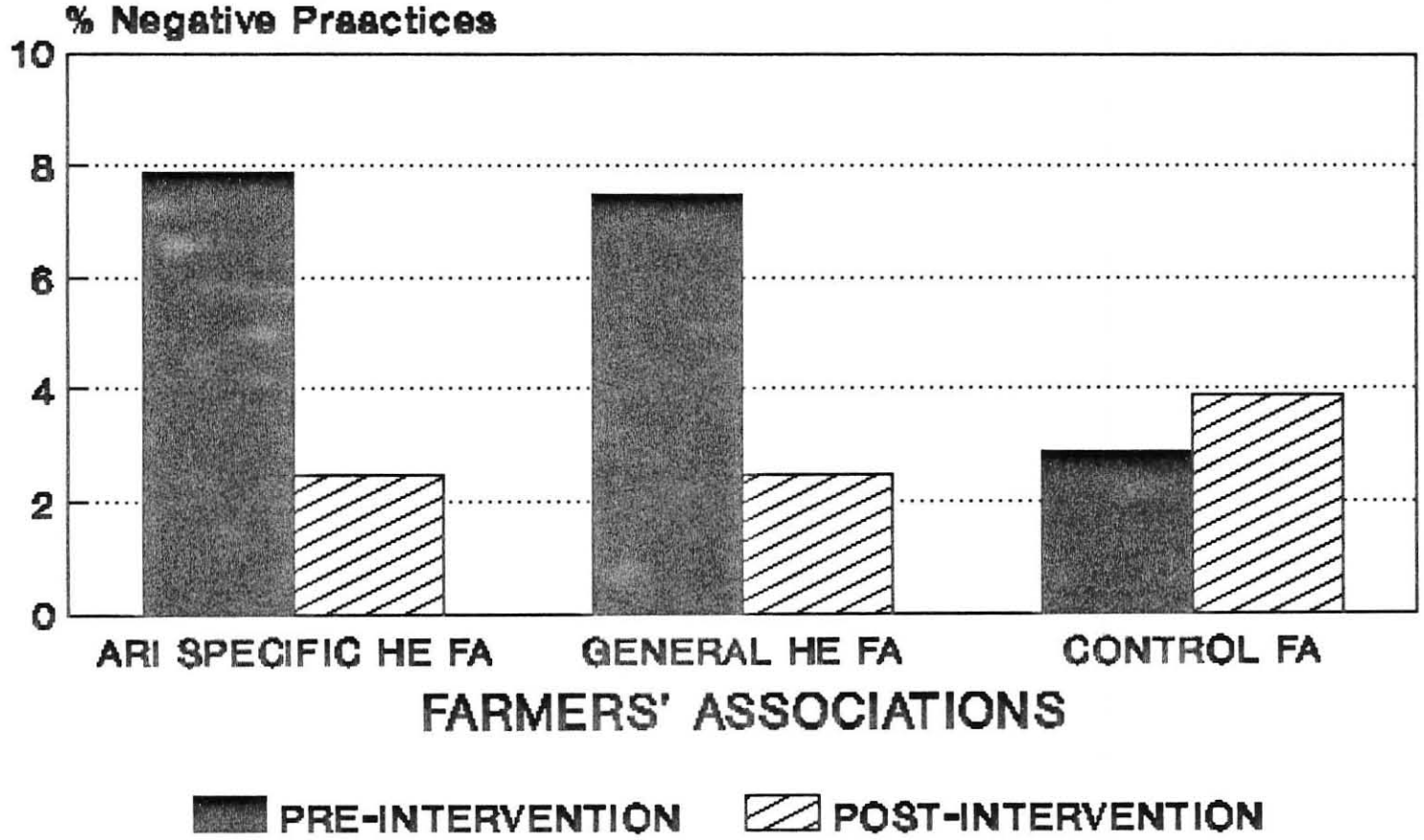
Farmers Associations	Mean Practice Score		
	Pre-interven	Post-interven	p value
ARI specific HE FA	17.2	18.5	0.000
General HE FA	17.0	17.5	0.215
Control FA	17.4	17.1	0.115
F -test	0.271	0.000 *	

* Area of difference

ARI specific versus general health education communities

ARI specific intervention community versus control community

Negative Practice of Care-Givers
by Farmers' Association & Intervention



SULULTA 1990

Out of the total episodes of ARI in the study communities, 40 (50.6%) were from Kore Roba and 39 (49.4%) were from Guto Farmers' Associations. In the assessment of the actual practice, 35 of 40 cases (87.5%) of the ARI specific health education intervention Farmers' Associations were reported to be treated with home care (by increasing food and fluid) and by taking the children to the health center when the illness worsened. In the general health education intervention Farmers' Associations 22 of 39 patients (56.4%) of the episodes were treated with home care and taken to the health center when the illness worsened. The difference in health care seeking practice among the two intervention communities was statistically highly significant. The rate ratio of home care and taking to a health institution was 3.4 with 95% confidence interval of (1.43,8.33) times higher in the ARI specific intervention communities. The records from the health center showed that 30 of the reported 40 cases (75%) from the ARI specific health education intervention area, 12 of the reported 39 cases (30.7%) from general health education intervention area and 11 cases from the control community were brought to the health center. This difference was statistically significant with a rate ratio of 2.44 and a 95% confidence interval (1.02,5.89)

when the ARI health education intervention community is compared to the general health education intervention community.

ATTITUDE

The prevalence of negative attitudes toward ARI decreased in both intervention communities. The number of negative attitudes before intervention was 14 (7.9%) in the ARI specific health education area, 18 (10.1) in the general health education intervention community, and 16 (8.9%) in the control Farmers' Associations. There was no statistically significant difference among Farmers' Associations in attitude at baseline. After the intervention of health education, the prevalence of negative attitudes was 6 (3.8%) in the ARI specific intervention community, 5 (3.8%) in the general health education community, and 20 (11.4%) in the control community. The percent change in the ARI specific health education intervention area was 51.9%, 66.3% in the general health education intervention community, and -28.1% in the control community. This shows that there was an improvement in the health education intervention communities but deterioration in the control Farmers' Associations and these differences were statistically significant. The control community showed that there actually was an increase in negative attitude but it was

not significant. When attitude was dichotomized into positive and negative there was no significant difference in the change of negative attitude between ARI specific health education intervention community and general health education intervention community. However, when mean post intervention attitude scores were compared using one way analysis of variance, the F-test showed that there was a statistically significant difference in the post intervention scores between ARI specific health education and general health education intervention communities and between ARI specific health education and control communities (Table 8).

Table 8. Mean Care-givers' Attitude Scores by Intervention & Farmers' Association, Sululta, 1990.

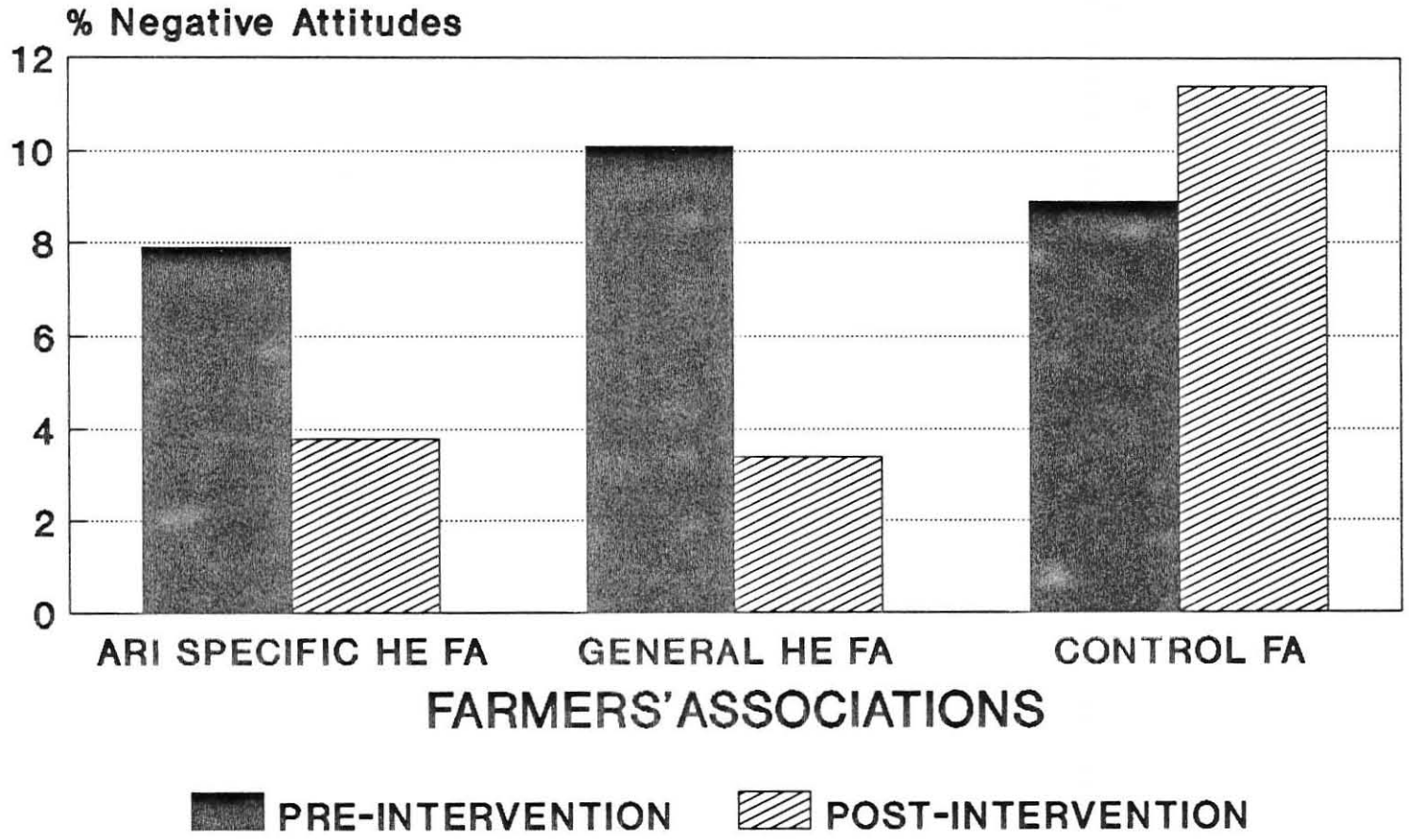
Farmers Associations	Mean Attitude Scores		
	Pre interven	Post interven	p value
ARI Specific HE FA	17.3	18.0	0.025
General HE FA	16.5	17.2	0.042
Control FA	16.8	16.7	0.700
F-test	0.095	0.000 *	

* Area of difference

ARI specific versus general health education intervention communities

ARI specific intervention community versus control community

Negative Attitude of Care-Givers
By Farmers' Association & Intervention

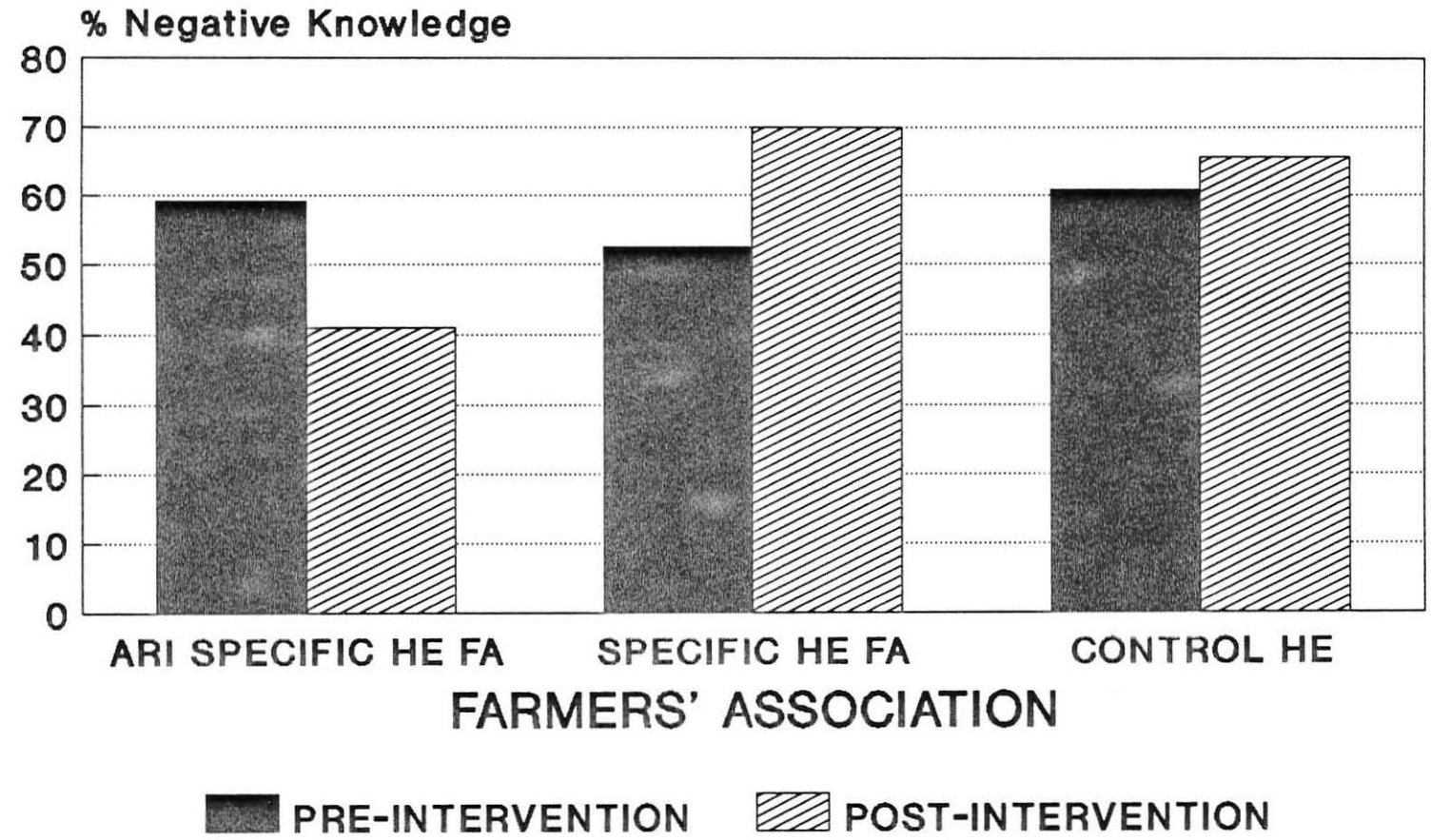


SULULTA 1990

KNOWLEDGE

The prevalence of negative knowledge before the intervention of health education was 67 (59.1%), 89 (52.4%), and 109 (60.9%) in Kore Roba, Guto and Arbi Akako respectively. After the intervention of health education, the prevalence of negative knowledge was 65 (41.1%), 102 (69.9%), and 109 (65.5%) in ARI specific, general health education and control communities respectively. The percent changes were 30.4% in ARI specific health education intervention, - 33.4% in general health education intervention, and -7.5% in control Farmers' Associations. The percent change was highly significant in the ARI specific and general health education intervention communities, whereas the change was not statistically significant in the control community. There was a statistically significant difference in the change of negative knowledge between ARI specific and general health education communities and between the ARI specific health education intervention community and the control community. Comparing the mean knowledge scores gave the statistically significant results in both pre and post-intervention surveys (Table 9).

Negative Knowledge of Care-Give
By Farmers' Association & Intervention



SULULTA 1990

BELIEFS

There was no reduction in negative beliefs in any of the three communities. The prevalence of negative beliefs during the baseline survey before intervention was 95 (52.8%) in ARI specific health education intervention, 95 (54.0%) in general health education and 94 (52.2%) in control Farmers' Associations. After the intervention of health education the prevalence of negative beliefs was 84 (53.2%) in ARI specific health education, 83 (56.5%) in general health education, and 92 (54.8%) in control Farmers' Associations. As a result the percent changes were -0.75%, -5.2%, and -5% in the ARI specific, General health education and in the control communities respectively. There was no significant difference between the pre intervention and the post intervention results within any of the Farmers' Associations. When the beliefs of ARI specific health education intervention Farmers' Association are compared to the general health education intervention Farmer's Association and control community after the intervention of health education, no statistically significant change was noted among all Farmers' Associations. The same result was obtained when the mean scores were compared using t-test and one way anova (table 10).

Table 10. Mean Care-givers' Belief Scores by Intervention & Farmers' Association, Sululta, 1990.

Farmers Associations	Mean Belief Scores		
	Pre interven	Post interven	p value
ARI Specific HE FA	13.3	13.5	0.479
General HE FA	13.5	13.0	0.186
Control FA	13.4	13.4	0.895
F-test	0.911	0.670	

DISCUSSION

The general characteristics of the whole population were not significantly different among the three Farmer's Associations except for some moderate economic differences in one. Therefore, the study population in all Farmer's Associations are generally considered comparable. Nevertheless, it happened that there were more people of low economic status in the group which was given statistical significance. However, the level of significance was only($p = 0.049$) when the economic status among Farmers' Associations were compared using the two categories low and high. A t-test performed on the difference in mean economic status was insignificant ($p > 0.05$).

The proportion of children who had ALRI in the study period were comparable with some studies done in rural areas of China (23), India (24) and Papua New Guinea (25). However, the average number of ARI episodes per child in Sululta is remarkably low when compared to other community based studies done in Ethiopia (24),Indonesia (26) and Papua New Guinea (27). This may be due to differences in the operational definition of ARI cases in this study in keeping recent WHO ARI control guidance. These other studies of ARI included conditions like runny nose, tonsillitis and otitis media. In

addition, this area of Ethiopia has not been affected by drought, is close to the capital city and the economic status and nutritional status of the children are probably better although there are no specific studies. On the other hand, this study was done during the rainy season. This season might be thought to have a relatively high incidence, although local health institution records suggest that the dry and cold season has an even higher rate. These reasons may account for some of the differences.

As in the other studies done in Ethiopia (24), Nepal (15), and Papua New Guinea (27) ARI episodes in this study are significantly higher in children under one year of age. This probably is due to the low immune status in this age group. But in contrast to other studies there was no significant difference in the occurrence of ARI among males and females in any age group.

In general the prevalence of negative practices was quite low even before the intervention of health education was introduced. This may be due to the geographical proximity of Sululta to the capital city that might have enabled the members of these study communities to make frequent visits and gather new ideas and better ways of practice. It is also possible that the majority of the study population gave the correct answer telling the interviewers what they thought was

desired. Another reason for this low prevalence of negative practice could be the arbitrary cut-off 50% used to dichotomize negative and positive practice. There was no significant difference in practice before intervention which indicates that the groups were comparable at the time of the baseline study. The statistically significant changes which we obtained in the ARI specific health education community and the lack of change in the general health education and the control community shows that the ARI specific health education intervention was effective. This was verified by the fact that a statistically significant larger number of mothers and care-givers from the ARI specific community brought their sick children with ARI to the health center, showing that there is a change in actual practice due to the intervention of ARI specific health education. Comparable results were also observed in Tanzania (78) where mothers were more likely to bring their children to a health institution after an intervention of ARI specific health education. The fact that the prevalence of negative practice as measured by the post intervention questions was reduced in the general health education community, but the health institution records did not show increased numbers of children from this community being brought there, suggest that desirability bias may be affecting their responses to the post intervention.

For both practice and attitude, when the scores were dichotomized into positive and negative, there was not a significant difference at post test between the ARI specific and general health education communities. However, when mean post test scores are used, a significant difference is seen. This is likely due to the arbitrary nature of the cutoff point when dichotomization is used, and perhaps also to the relative statistical efficiency changes in mean scores.

The prevalence of negative attitudes was lower than expected during the baseline survey. This may be due to some of the same reasons as for the low prevalence of negative practice. The lack of statistically significant difference in attitudes among Farmers' associations show that the communities were comparable at baseline. There were significant changes in attitudes both in the ARI specific health education and the general health education communities which may be attributed to the results of the interventions. The change in negative attitude in the general health education intervention community may be explained by the introduction of general and comprehensive health education which might have broadened their outlook on case management and causality of illnesses as compared to the very specific health education on ARI.

The prevalence of negative knowledge on causes and

case management of ARI is high. This was probably due to their low literacy rate. There was a significant difference in negative knowledge among Farmers' Associations before intervention. This difference was due to the relatively high prevalence of negative knowledge in the general health education community and which deteriorated after the intervention. After the intervention of health eduction, there were significant changes (reduction) in negative knowledge in the ARI specific community but not in the other two communities. Therefore, the change in knowledge could be attributed to the effect of ARI specific health education.

The prevalence of negative beliefs is relatively high. This may be because of their traditional ideas of spiritual disease causality which have been held for generations and are unlikely to change from four months of health education. This was why this study tried to differentiate beliefs from knowledge. Anything related to the spiritual causation of ARI was classified as belief. Questions referring to scientific concepts of disease, such as germs, dirt, and poor nutrition causing disease were classified as knowledge. It was felt that although beliefs were unlikely to change from the intervention, knowledge could change. People are capable of adding new ideas of disease without discarding the old. In fact, this is what was found in the study. The

interventions had no effect on belief, although ARI specific health education did lead to an improvement in knowledge scores. Thus, while many mothers may still believe, for example that the evil eye causes difficulty breathing, they now know that germs are also capable of causing this.

This study attempted to avoid selection bias by using a random sampling procedure in selecting the study population. Recall bias in measuring the incidence was avoided by the fortnightly visits made by the interviewers to detect ARI cases. In the control Farmers' Associations there was no health education given and they didn't have forthightly visits. This was done to control the effect of the repeated visits which by themselves may affect maternal and other care-givers behaviour by means of the so called "Howthorn effect". The other benefit of the control group was to compare the effect of ARI specific and general health education with no health education. The control group helped us to control the change in practice which could have happened by the fortnightly visits made by the interviewers. Desirability and interviewer bias were minimized by selecting interviewers who are non health workers and females from the community. In this study two ways of analysis were used to show the effect of health education. This was done because of the difference in the

merits and demerits of the ways. At the beginning analysis was made dichotomizing the scores. Limitations in dichotomizing were the arbitrary cut-off, loss of information which may cover the truth. To overcome these limitations comparison of means was done which is efficient and could avoid the loss of information but less intuitive and is a simple average

Limitations in the study include both the relatively short period of time of intervention and of follow-up. An intervention over a longer period of time may result in larger changes. It would also be important to know whether or not the changes in practice in the ARI specific intervention community are sustained past the study period. The ultimate end points of interest, which are morbidity and mortality from ARI, although clearly important, were beyond the scope of this study.

Caution should be used in interpreting the figures calculated in this study for annual incidence rates, as this study was conducted mainly during the rainy season (May through August). Health institution records indicate that there are a higher number of consultations for ARI during the months of October and November when the weather is usually dry, cold and windy. Another limitation of the study was the relatively few signs and symptoms involved in the detection of ARI which may have accounted for the relatively low number of ARI episodes.

The 50% arbitrary cut-off point for knowledge, attitudes, practices and beliefs could have accounted for the high prevalence of negative knowledge and beliefs and the low prevalence of negative practice and attitude.

Although the changes seen in practice, attitude and knowledge among the women of the ARI specific intervention community were all highly statistically significant, it might be argued that the absolute changes in score were relatively small and that the clinical significance of the change is limited. However, the fact that health institution records show that more than twice as many children from the ARI specific community were brought to the health institution as compared to the general health education and control communities (30 vs. 12 and 11 children) respectively, suggest that the effect is important clinically.

Major emphasis on ARI specific health education should be recommended with caution. ARI specific health education should not be confused with exclusively vertical, particular disease oriented health education. These paper tried to show that: first, before giving any health education one should identify the priority health problems; second, health workers should be motivated and convinced that health education affects the outcome; third, appropriate training of health workers on health education is necessary;fourth, the time, and number of

attendants of health eduction should be convenient for the care-givers as well as for the educators; fifth, above all ARI specific health education should be incorporated with other specific health education programmes but emphasis should be made on that particular priority disease problem. Implementing specific health education with other health education programme should be designed in such a way that the community as will and the health workers should jointly identify the priority health problems. Hence, specific health education should be given more frequently, the time and place of health education should be convenient and the education should be two way discussion in a relatively small groups if possible.

Therefore we cannot conclude from this study that health education is effective since we used small group discussions with appropriately selected and well trained health assistants. Additionally posters were used and women had access to health centers and health centers had enough drugs. In implementing this type of intervention care should be taken since the routine group health education may not have strong effects. Referral to health institution should be carefully recommended since most mothers in developing countries may not have easy access to health institutions and, on the other hand, shortage of drugs in health institutions might increase

frustrations although increasing foods and fluids and using community health workers may be appropriate everywhere.

Although ARI is an important cause of morbidity and mortality in developing countries, clearly it is not the only cause. This study did not measure practices related to other important diseases. It is possible that women in the general health education community had more improvement in practices related to other diseases than women in the ARI specific community. For example, they may give more appropriate care for children with diarrhoea. Future studies need to take this into consideration. In Sululta Awraja ARI is the most frequent cause of morbidity at the health institutions. This is comparable with Nigeria (34)and the figures analyzed by WHO (30). Therefore, ARI would seem to require the necessary attention of the responsible health workers. Therefore, health institutions should have a sufficient amount of drugs, as well as well trained health workers and the referral system should be well organized.

Morbidity and mortality due to ARI are highly determined by the overall socio-economic development of any community. One way of measuring the health status of a given community is the magnitude of infant the mortality rate. As in other developing countries, the

infant mortality rate in Sululta Awraja is high (82.5/1000 live births). Thus it is to be expected that mortality due to ARI is also high. Therefore, community and household management of ARI cases is particularly important in developing countries, where access to health institutions is often difficult. Health education to mothers is seen as a way to improve this management.

CONCLUSIONS

This 16 weeks study showed that the incidence of ARI is relatively low compared to other Ethiopian studies. It also illustrated that the prevalence of negative practices and attitudes were low whereas the prevalence of negative knowledge and beliefs were high in the study communities at baseline.

ARI specific health education was effective in changing the knowledge, attitude and practice of case management among care-givers of under five children, whereas general health education was only effective in changing negative attitudes. ARI specific health education made an important impact in changing the health care seeking behaviour (increased modern health service utilization and increasing fluids and food to sick children.). The intervention had no effect on the beliefs of the communities.

RECOMMENDATIONS

1. Health workers should give special attention to ARI case management since the morbidity from these diseases is relatively high among the under five children who visit the health center.
2. ARI specific health education to mothers by health assistants in health institutions and out reach sites at convenient time to mothers can be recommended as it is effective in changing the health care seeking practice, knowledge and attitude of the care-givers of under five children.
3. Further studies should be carried out to determine:

a) the sustainability of the changes noted in this study

b) the effect of a longer intervention or interventions using other techniques on the outcomes of interest

c) the effect of ARI specific health education on morbidity and mortality from both ARI and other diseases

d) the effect of ARI specific health education in other settings, such as urban centers and other countries.

4. Since health assistants are few in number, consideration should be given to training community health agents about ARI case management in such a

way they can be utilized in educating the care-givers of under five children regarding their practice, attitude, knowledge and belief of these diseases and to eventually facilitate and sustain the referral system.

5. To ensure continuity and expand the control programme in Sululta Awraja, training of salaried and community health workers in quarterly refresher courses and monthly in service training on case-management and health education of ARI should continue and drugs should be made available in all health institutions.

6. To compensate for the effect of ARI specific health education on infant mortality, hence, narrowing the natural birth spacing, education on family planning should be integrated in the general health education along with ARI specific health eduction. Distribution of oral contraceptives will be maintained at the community level under the supervision of the salaried health personnel who come on a monthly basis.

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Questions from 1 to 46 were interviewed at the baseline and after the intervention of health education to assess the knowledge,attitudes,practices and beliefs of care-givers.

ANNEX I

KNOWLEDGE, BELIEFS, ATTITUDES AND PRACTICES STUDY ON PRIMARY CARE - GIVERS OF UNDER FIVE AGE CHILDREN IN SULULTA AWRAJA 1990

I. Questionnaire on knowledge, beliefs, attitudes and practices.

Questions to mothers or other primary care-givers ounder-five age children.

1. Name of the Farmers' Association _____
2. House number_____
3. Name of the mother or other care-giver _____
4. Age of the mother or other care-giver _____
5. Gender
   1. Male
   2. Female
6. Has any of your under five children been sick with cough?
   1. Yes 2. No

7. If yes, for how long was the child(ren) so sick?

    1. less than one week
    2. 1 - 4 weeks
    3. more than four weeks

8. If the child was sick with cough, what did you do?

_____

_____

_____

9. If none of your children were sick, what would you do if the child

9.1- develops cough for less than one week?

_____

_____

_____

9.2- develops cough for 1 - 4 weeks?

_____

_____

_____

9.3- develops cough for more than four weeks?

_____

_____

_____

10. Has any of your children been sick with fever?

    1. Yes
    2. No

11. If yes, for how long was the child(ren) so sick?

    1. one day
    2. 2-3 days
    3. 4-5 days
    4. more than five days

12. If a child was sick with fever,what did you do?

_____

_____

_____

13. If none of your children were sick with fever, what would you do if the child develops fever?

_____

_____

_____

14. Has any of your children ever had difficulty in breathing?

    1. Yes
    2. No

15. If yes, for how long was the child(ren) so sick?

    1. less than one day
    2. 1-2 days
    3. more than two days

16. If a child was sick with difficulty of breathing, what did you do?

_____

_____

_____

17. If none of your children were sick with difficulty of breathing, what would you do if the child develops difficulty of breathing?

_____

_____

_____

18. Has any of your children had convulsions in association with fever?

    1. Yes
    2. No

19. If the child had a convulsion, what did you do?

_____

_____

_____

20. If none of your children had a convulsion, what would you do if your child(ren) has convulsion?

_____

_____

_____

21. Has any of your children had whooping cough?

    1. Yes
    2. No

22. If the child had whooping cough, what did you do?

_____

_____

_____

23. If none of your children had whooping cough, what would you do if your child develops whooping cough?

_____

_____

_____

24. Has any of your children had pneumonia?

    1. Yes
    2. No

25. If the child had pneumonia, what did you do?

_____

_____

_____

26. If none of your children had pneumonia, what would you do?

_____

_____

_____

27. What would you do if the under five child develops fever?

    1. Add more clothes
    2. Wrap the child with light clothes and try to ventilate
    3. No change

28. Has any of your children refused to eat or drink in association with:

    28.1- cough 1. Yes 2. No

28.2- difficulty of breathing

1. Yes 2. No

28.3- fever

1. Yes 2. No

29. If the child(ren) refused to eat or drink in association with the above mentioned illnesses, did you

    1. discontinue (decrease) feeding or giving fluid
    2. continue feeding or giving fluid (usual amount)
    3. increase feeding or giving fluid

30. Do you prefer to

    1. discontinue or
    2. continue feeding when your child has difficulty of breathing?

31. Do you prefer to

    1. discontinue or
    2. continue feeding when your child has fever?

32. Do you prefer to

    1. discontinue or
    2. continue feeding when your child has difficulty of breathing?

33. Do you want to

    1. decrease

2. increase
3. continue the same the amount of food or fluid when your child has cough?

34. Do you want to
    1. decrease
    2. increase
    3. continue the same the amount of food or fluid when your child has difficulty of breathing?

35. Do you want to
    1. decrease
    2. increase
    3. continue the same the amount of food or fluid when your child has fever?

36. Do you prefer to wrap the child with
    1. heavy clothes
    2. light clothes (ventilate)
    3. no change

37. What do you prefer to do when a child develops cough?
    1. home therapy
    2. local herbs
    3. take the child to a traditional healer
    4. take the child to a holy water
    5. take the child to a health institution
    6. other,specify _____

38. What do you prefer to do when a child develops difficulty of breathing?

    1. home therapy
    2. local herb
    3. take the child to a traditional healer
    4. take the child to a holy water
    5. take the child to a health institution
    6. other,specify _____

39. What do you prefer to do when a child develops fever?

    1. home therapy
    2. local herbs
    3. take the child to a traditional healer
    4. take the child to a holy water
    5. take the child to a health institution
    6. other, specify _____

40. What do you think are the causes of cough?

_____

_____

41. What do you think are the causes of difficulty of breathing?

_____

_____

_____

42. What do you think are the causes of fever?

_____

_____

43. What do you think are the causes of whooping cough?

_____

_____

_____

44. Please indicate whether or not the following are very dangerous, dangerous or not dangerous.

44.1- Cough

1. very dangerous
2. dangerous
3. not dangerous

44.2- Difficulty of breathing

1. very dangerous
2. dangerous
3. not dangerous

44.3- Fever

1. very dangerous
2. dangerous
3. not dangerous

45. Please indicate whether you strongly agree(SA), agree(A), disagree(DA), or strongly disagree(SDA).

45.1- Cough can be caused by an evil eye.

1. SA 2. A 3. DA 4. SDA

45.2- Difficulty of breathing can be caused by an evil eye.

1. SA 2. A 3. DA 4. SDA

45.3- Fever can be caused by an evil eye.

1. SA 2. A 3. DA 4. SDA

45.4- Cough can be caused by an evil spirit.

1. SA 2. A 3. DA 4. SDA

45.5- Difficulty of breathing can be caused by an evil spirit.

1. SA 2. A 3. DA 4. SDA

45.6- Fever can be caused by an evil spirit.

1. SA 2. A 3. DA 4. SDA

45.7- Cough can be caused by quarrelling with supernatural forces(Wukabi).

1. SA 2. A 3. DA 4. SDA

45.8- Difficulty of breathing can be caused by quarrelling with supernatural forces (Wukabi).

1. SA 2. A 3. DA 4. SDA

45.9- Fever can be caused by quarrelling with supernatural forces (Wukabi).

1. SA 2. A 3. DA 4. SDA

45.10- Cough can be cured by holy water.

1. SA 2. A 3. DA 4. SDA

45.11- Difficulty of breathing can be cured by holy water.

1. SA 2. A 3. DA 4. SDA

45.12- Fever can be cured by holy water.

1. SA 2. A 3. DA 4. SDA

45.13- Cough can be cured by a wizard.

1. SA 2. A 3. DA 4. SDA

45.14- Difficulty of breathing can be cured by a wizard.

1. SA 2. A 3. DA 4. SDA

45.15- Fever can be cured by a wizard.

1. SA 2. A 3. DA 4. SDA

45.16- A child can die of cough.

1. SA 2. A 3. DA 4. SDA

45.17- A child can die of fever.

1. SA 2. A 3. DA 4. SDA

45.18- A child can die of difficulty of breathing.

1. SA 2. A 3. DA 4. SDA

45.19- It is not necessary to take a child to a health institution when he/she develops cough.

1. SA 2. A 3. DA 4. SDA

45.20- It is not necessary to take a child to a health institution when she/he develops difficulty of breathing.

1. SA 2. A 3. DA 4. SDA

45.21- It is not necessary to take a child to a health institution when he/she has fever.

1. SA 2. A 3. DA 4. SDA

46. What are the signs and symptoms of pneumonia.

_____

_____

_____

Name of the respondent

_____

Name of the interviewer

_____

Questions 47 to 96 were interviewed at the baseline survey to describe the socio-economic and demographic data.

47. What is the relation between the primary care taker and the child?

1. mother
2. father
3. grand mother
4. grand father
5. sister
6. brother
7. aunt
8. uncle
9. adopted
10. other,specify ____

48. If the person responsible is not the childs' mother, what has happened to the mother?

1. divorced
2. died
3. separated
4. sick
5. other, specify _____

49. If the primary care-giver is not the mother of the child how long has the child been with the other primary care-giver?

1. less than one month
2. 1-2 months
3. 3-5 months
4. 6-8 months
5. 9-12 months
6. more than 12 months

50. Are the grandparents of the under fives living in the same village?

    1. Yes

    2. No

51. Ethnicity

    1. Amhara

    2. Oromo

    3. Other, specify _____

52. Religion

    1. Ethiopian Orthodox Christian

    2. Muslim

    3. Other, specify _____

53. Occupation of the primary care-giver

    1. house wife
    2. student
    3. farmer
    4. government employee
    5. local drink seller
    6. merchant
    7. other,specify _____

54. Occupation of the head of the household

    1. farmer

    2. merchant

    3. government employee

    4. other, specify _____

55. Educational status of the primary care-giver

    1. Illiterate

    2. can read but not write

    3. can read and write

4. completed grade 1-3

5. completed grade 4-6

6. completed grade 7-12

7. completed grade > 12

56. Educational status of the head of the household

1. illiterate

2. can read but not write

3. can read and write

4. completed grade 1-3

5. completed grade 4-6

6. completed grade 7-12

7. completed grade > 12

57. Marital status of the mother or the primary care-giver

1. married

2. single

3. divorced

4. widowed

5. other, specify _____

58. Economic status

58.1- Number of oxen

1.none

2. one

3. two

4. three

5. four

6. more than four

58.2- Number of cows

1. none
2. 1-4
3. 5-8
4. 9-12
5. > 12

58.3- Type of roof

1. grass
2. corrugated iron sheets
3. other, specify _____

59. Number of rooms

1. one
2. two
3. three
4. four
5. greater than four

60. How long has the house been at the present site?

1. less than one year
2. 1-2 years
3. 3-4 years
4. more than four years

61. How many windows are open during the day?

1. none
2. one
3. two
4. three
5. four
6. more than four

62. Is the kitchen a separate room?

    1. Yes
    2. No

63. Do you make fire in the living house?

    1. Yes
    2. No

64. What do you use for making fire?

    1. wood
    2. charcoal
    3. wood and charcoal
    4. dried manure
    5. other, specify _____

65. How long is the fire burning in the house?

    1. the whole day
    2. half a day
    3. in the evening
    4. other, specify _____

66. What is the source of light in the house?

    1. electricity
    2. kerosene lamp
    3. gas lamp
    4. other, specify _____

67. From where do you get drinking water?

    1. pipe
    2. unprotected well
    3. protected weell
    4. unprotected spring
    5. protected spring
    6. river
    7. other, specify _____

68. Sanitary facilities

1. none or open field
2. shared pit latrine
3. private pit latrine
4. other, specify ____

69. Do animals live in the house?

1. Yes
2. No

70. How many adults smoke in the house?

1. none
2. one
3. two
4. three
5. four
6. more than four

71. What do they smoke?

1. cigarettes
2. pipe
3. cigar (tenbaho)
4. traditional (gaya)
5. other, specify _____

72. Does the father smoke?

1. Yes
2. No

72.1- If yes, how many times per day? _____

73. Does the mother or the primary care-givers smoke?

1. Yes
2. No

73.1- If yes, how many times per day? _____

74. How many people live in the house?

1. two
2. three
3. four
4. five
5. six
6. seven
7. eight
8. nine
9. ten
10. more than ten

75. How many of the children in the house go to school?

1. none
2. one
3. two
4. three
5. four
6. five
7. six
8. seven
9. eight
10. nine
11. ten
12. more than ten

76. Have you attended antenatal care during your last pregnancy?

1. Yes
2. No

77. If yes, how many times did you attend antenatal care?

1. none
2. once
3. two times
4. three times
5. four times
6. more than four times

78. Who assisted the delivery of your last child?

1. nobody
2. a person who has no knowledge or experience
3. traditional birth attendant
4. trained traditional birth attendant

5. health institution

6. other, specify _____

79. How many children does the mother of the under five has?

1. one 5. five 9. nine

2. two 6. six 10. ten

3. three 7. seven 11. more than ten

4. four 8. eight

80. What is the space (difference in years) between the youngest child and the second from the last child?

1. more than one year 4. three years

2. one year 5. more than three years

3. two years

81. From where does the family get health services?

1. traditional healer 5. community health agent

2. self treatment 6. health institutions

3. holy water 7. other,specify _____

82. Were you at the health institution in the last month?

1. Yes

2. No

83. If yes, why did you go to the health institution?

_____

_____

_____

II Questionnaire about the under five

84. Name of the under fives	Age	male	female
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

85. Was the youngest under five child breast fed?

1. Yes
2. No

86. If yes,for how long?

1. less than three months
2. 4-6 months
3. 7-9 months
4. 10-12 months
5. greater than 12 months

87. When was additional feeding started for the youngest under five?

1. less than four months
2. 4-6 months
3. 7-9 months
4. more than nine months

88. Was the youngest under five bottle fed?

1. Yes
2. No

89. Was the youngest under five vaccinated?

1. Yes
2. No

90. If yes, how many times?

1. one time
2. two times
3. three times
4. four times
5. five times
6. more than five times

91. Was the youngest under five child vaccinated after the age of nine months?

1. Yes
2. No

92. Has the youngest child had oral vaccines

1. Yes
2. No

93. If yes, how many times?

1. one time
2. two times
3. three times
4. four times

94. How many people share bedroom a with the under five?

1. none
2. one
3. two
4. three
5. four
6. five
7. six
8. seven
9. eight
10. more than ten

95. Which of the following illnesses had the last under five experienced?

95.1- measles	1. Yes	2. No
95.2- whooping cough	1. Yes	2. No
95.3- pneumonia	1. Yes	2. No
95.4- wheezing	1. Yes	2. No

96. Has the child experienced the following signs and

symptoms in the last fifteen days?

1. cough
2. difficulty of breathing
3. fever
4. fast breathing
6. wheezing
7. not able to eat and drink
8. abnormally sleepy or difficulty to wake
9. convulsion

Name of the respondent

_____

Name of the interviewer

_____

Questions 1 to 15 were interviewed every fortnightly determine the incidence of ARI and to assess the actual practice of care-givers.

III Questionnaire about the sick under five

1. Name of the farmers association _____
2. House number _____
3. Name of the under five _____

   Age _____

   Gender _____
4. Has the child experienced the following signs or symptoms in the last fifteen days?

   1. cough
   2. difficulty of breathing
   3. fever
   4. fast breathing
   5. chest in drawing
   6. wheezing
   7. not able to eat or drink
   8. abnormally sleepy or difficulty to wake
   9. convulsion
5. What did you do to help the child?

   _____

   _____

   _____
6. Was the child breast fed?

   1. Yes
   2. No

7. If yes, how long?

   1. less than three months
   2. 4-6 months
   3. 7-9 months
   4. 10-12 months
   5. more than 12 months

8. When was additional feeding started?

   1. less than four months
   2. 4-6 months
   3. 7-9 months
   4. more than nine months

9. Was the child bottle fed?

   1. Yes
   2. No

10. Was the child vaccinated?

    1. Yes
    2. No

11. If yes, how many times?

    1. once
    2. two times
    3. three times
    4. four times
    5. more than four times

12. Was the child vaccinated after the age of nine months?

    1. Yes
    2. No

13. Has the child had oral vaccines?

    1. Yes
    2. No

14. If yes, how many times?

    1. once
    2. two times
    3. three times
    4. four times

15. Which of the following illnesses had the child experienced?

15.1- measles	1. Yes	2. No
15.2- whooping cough	1. Yes	2. No
15.3- pneumonia	1. Yes	2. No
15.4- wheezing	1. Yes	2. No

Name of the respondent

_____

Name of the interviewer

_____

ANNEX II

TRAINING MANUAL FOR THE INTERVIEWERS

Summary of the Training Given to the Interviewers

- The questionnaires were distributed to the interviewers.
- The questionnaires were read through together with the interviewers and explanations were given.
- A half day period was given to the interviewers to thoroughly study the questionnaires.
- An interview was done with one patient in the health center to demonstrate to the interviewers.
- The interviewers did role playing.
- Field practice was also undertaken in a community 40 kms from the health center.

Instruction and Guidelines Given to the Interviewers on how to Identify the Households

Before going out to the research area, interviewers were instructed to make sure that they were in possession of chalk, drawing papers, pencils, erasers and rulers. Then the following guidelines were given:

1. To introduce themselves to the Farmers' Associations Officials and show their letters that request cooperation.
2. To select a spot from where they can see the entire

village.

3. To draw a map of the Farmers' Association showing each house, roads, trees, hills etc.
4. To number each house on the map.
5. To write the given number on the houses with the caution that - it must be seen easily.
   - it must be protected against the rain.
6. To give the map to the instructor so that the instructor will select the house numbers using a random table and assign the houses to each interviewer.
7. To look at the map of the Farmers' Associations and locate the houses they are assigned to.

Clarification Concerning the Usage of the Questionnaires

The following instructions were given concerning the usage of the questionnaires :

1. To ask the questions as they are written in the questionnaire. If the mother or the person who is taking care of the child could not understand the question, it is necessary to repeat the questions two or three times. If again it is not understood, ask the question in another way without changing meaning. They were instructed not to lead the respondent to a particular answer.

2. The answers for the open-ended questions should be written clearly as has been stated by the respondent

3. The opinions (answers for the closed ended questions) should not be given as a multiple choice questions unless it is instructed. Encircle the serial number corresponding to the respondent's answer.
4. If the answer did not have a specific serial number, write the answer on the space provided under "others, specify".
5. If the respondent gives two answers encircle both serial numbers, but if it is not present in the options write the answers in the space provided under "others, specify".
6. They were instructed to be sure that they have completed all questions and have written their names and the respondents' name before leaving the households.
7. To hand over the filled questionnaires to their supervisors during supervision or lunch break or at the end of the day.

Clarifications on Specific Questions

Questionnaire I and II

Questions from 1 to 4,8 to 10,12,13 16,17,19,20,22,23,25,26,40 to 43,46,83,84 = should be written clearly as has been stated by the mother or the primary care-givers.

Questions from 27 to 36 and 44 to 45 = options (choices for the answers) should be given or read.

Questions from 37 to 39 and 47 to 60 = answers should not be given as a multiple choice questions. Encircle the serial number corresponding to the respondent's answer.

Question no. 54 - occupation of the head of the household is the main occupation that generates income for the family.

Question no. 55 and 56 - give reading material (the questionnaire) to verify the ability of the respondent.

Question no. 85 to 97 - is about the last (youngest) under five in the family; be sure to ask the specific questions about the youngest under five. Answers for these questions should not be given as a multiple choice questions. You should encircle the serial number corresponding to the respondent's answers.

Questionnaire III - is about the sick under five children and the questions will be asked every two weeks. Question no. 1,2,3 and 5 - answers should not be given as a multiple choice but the serial number corresponding to the respondents answer should be encircled.

Interview

The interviewers were instructed:

1. To check their pencil, pen, eraser, sharpener, and the number of questionnaires they have.
2. To put these materials in the bag.
3. To locate the houses on the map.
4. To go to the first household and explain the purpose of their visit and ask if there are children who are under five years of age. If there are none, proceed to the next household.
5. If there is a child who is under five years of age, to ask politely if they can talk to the mother or to the person who is taking care of the child.
6. If the mother or the person who is taking care of the children is not present, ask when she/he will be back and leave a message that you will be back.
7. If there are two mothers of under five children residing in the same house, interview both of them separately using two separate questionnaire.

ANNEX III

HEALTH EDUCATION GIVEN ON ACUTE RESPIRATORY ILLNESS TO MOTHERS OR OTHER CARE-GIVERS IN SULULTA AWRAJA, ETHIOPIA 1990

ARI, especially pneumonia, is one of the commonest causes of morbidity in Sululta Awraja. Among the under five children seen in the health center 9 % of the children who came to the health center had pneumonia. Many mothers could recognize this illness as a serious problem. The illness can be treated effectively at home and at the health center.

Definition - ARI is inflammation of the respiratory system. Pneumonia is infection of the lung.

Etiology - ARIs are caused by different kinds of germs which are very small and can't be seen by the naked eye. These germs are present everywhere but are especially found in dirty places. The infection can be transmitted from one child to another. The diseases are severe in children who are under nourished, non breast-fed and debilitated. Crowding and smoke (cigarette, fire) are said to predispose children to ARI.

Clinical Manifestations -

Cough - is the most common manifestation of ARI. Most coughs are not serious and they usually get better by themselves in one to two weeks. If cough is accompanied by some other severe signs, it will be a life threatening illness (see figure - 5).

Fever - Fever could be the sign of different infectious diseases. High grade fever is very dangerous and should be lowered immediately (see figure - 6).

Loss of appetite (decreased ability to feed) - A child feeding less than half as much as usual in the preceding 24 hours (one day) is considered seriously ill. A child with even a mild illness may lose his/her appetite. Children have many mild illnesses and if they stop feeding every time when they are ill, they may become undernourished; as a result undernourished children take longer to recover from infections (see figure - 7)

Fast breathing - Fast breathing is a serious sign of ARI.Fast breathing means a breathing which is faster than usual (see figure - 8).

Chest in drawing - Chest in drawing is a very

serious sign of ARI which is the result of severe pneumonia. Chest in drawing is when the muscles between the ribs retracted inwards during inspiration. This sign is usually accompanied with flaring of the nose (see figure - 9).

Treatment -

Home care (see figure - 10)

1. Continue feeding - Continue feeding during an acute respiratory infection and increase feeding during convalescence to make up the lost weight. Loss of appetite is common during ARI and encourage the child to eat small but frequent feeds. If the child has fever, lowering the temperature, may help some children eat. Clear the nose if it is blocked and interferes with feeding. Usually foods given during respiratory infections should have high amounts of nutrients; for example gruel made of mixed cereals with a small amount of oil or butter and milk.

2. Increase fluid - Children with respiratory infections lose more fluid than usual, especially when they have fever. Encouraging extra-fluids will help the child from deteriorating. In the exclusively breast-fed

infants, breast-feed frequently. In children who are not exclusively breast-fed, offer the child extra to drink :breast milk, clean water, clean fluid or milk.

3. Reducing fever - Don't over-wrap a child with a fever; over-wrapping makes fever worse, and it can make breathing more difficult.

4. Watch for signs of pneumonia - the most important home care advice is to watch for signs of pneumonia. Mothers should quickly bring a child to the health center whenever the child develops any of the following: (see figure - 11).

- chest in drawing,
- breathing becomes faster than usual,
- the child is not able to drink or eat,
- the child has cough and
- the child becomes sicker

ሣል የሳንባ ምች በሽታ ምልክት ሊሆን ይችላል

ቁፋን ምልክታ ዱኩባ ምቺ ሶምባ ታኡ ህንዳንዳአ

Fig. 5 Cough is One of the Symptoms of Pneumonia

የሳንባ ምች በሽታ ተህዋሲትን ያስከትላል

ዱቡብ ምቒ ሶምባ ነኒ ጉባ ፊዱ

Fig. 6 Pneumonia can Cause Fever

የሳንባ በሽታ ምግብ ይከለክላል

ዱቡብ ምቲ ሶምባ ምዳን ናማ ዶዋ

Fig. 7 Pneumonia can Cause Loss of Appetite

የሳንባ ምች በሽታ የተያዘው ህፃን አተነፋፈሱ ፈጣን ይሆናል

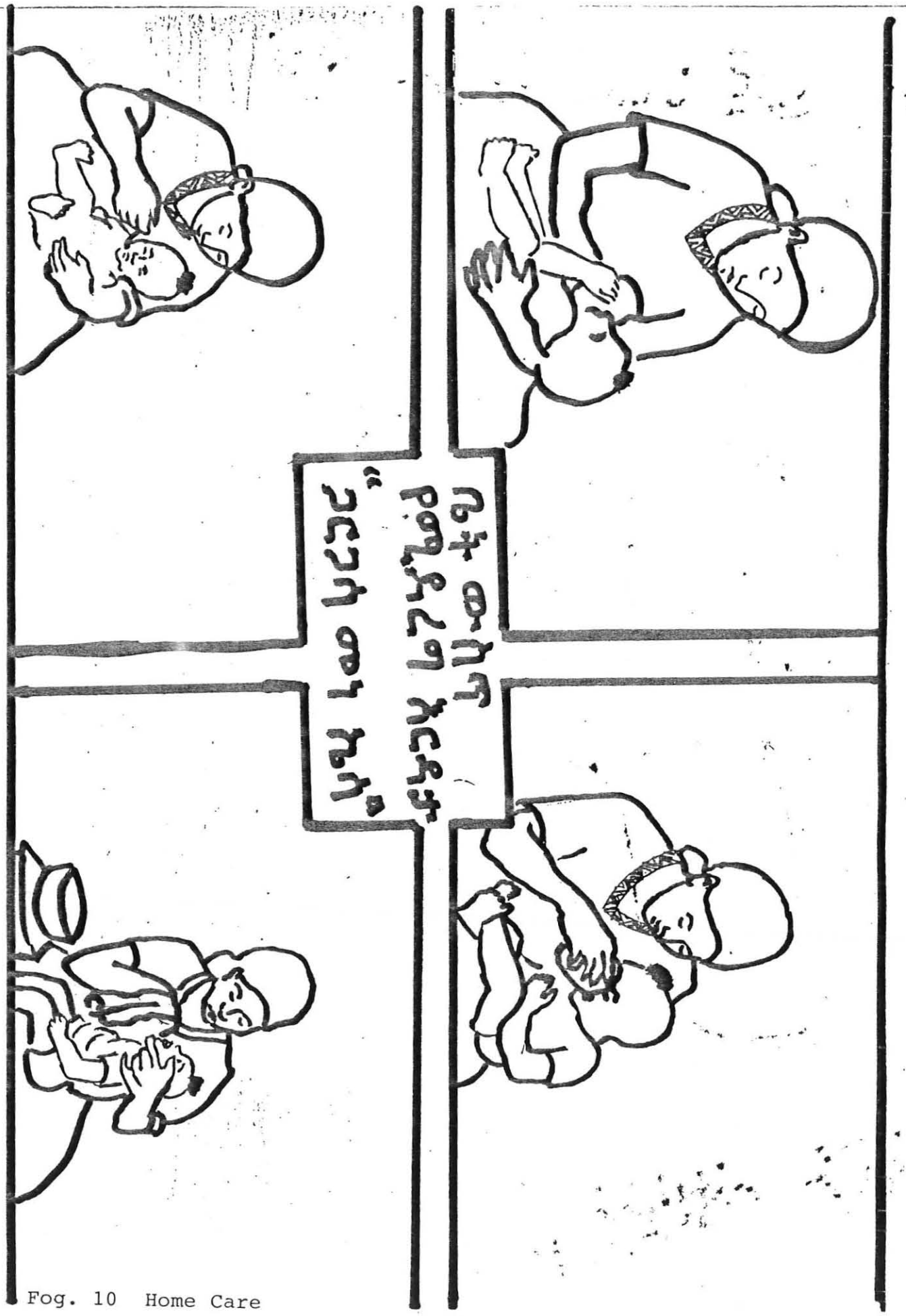
ሙጫን ዱኩባ ምቺ ሶምባን ቀበሜ ዳዳፅ አፋራ ባፋታ

Fig. 8 Difficulty of Breathing is the sign of Pneumonia

መጫን ዱኩባምቺ ሶምባን ቀባጫ የሮ አቱራ ባፉቱ ፍን ላፌ ጭናቻሳ ግዱ ጅሩ ህንደቃ

በሳንባ ምች በሽታ የተጠቃ ህፃን በሚተ ነፍስበት ጊዜ ጠቅን በኩል አጥንቶቹ መካከል ያለው ስጋ ይሰረጉዳል

Fig. 9 Chest in Drawing is one of the severe Signs of Pneumonia



Fog. 10 Home Care

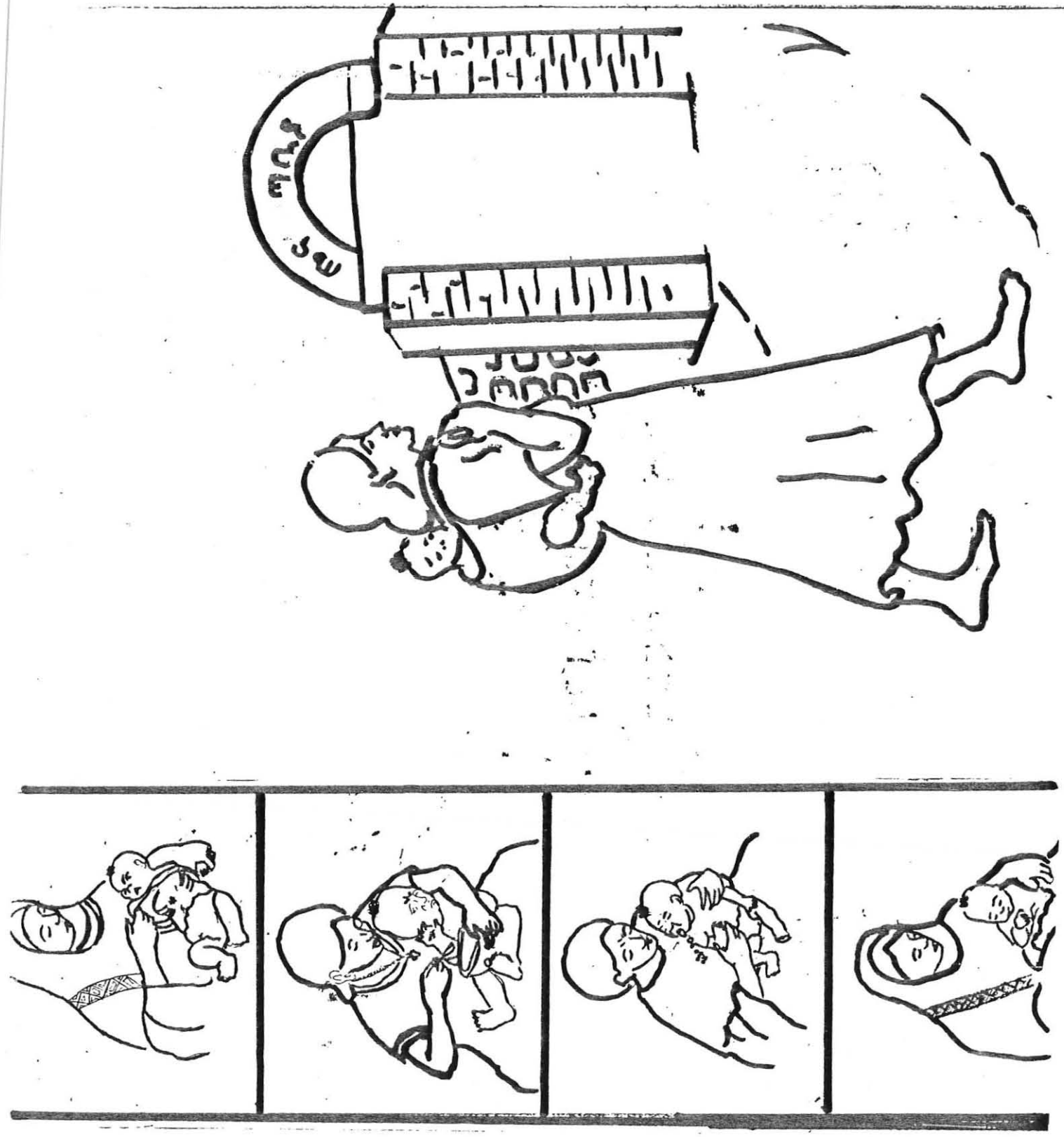


Fig. 11 Take Your Child to a Health Institution When Your Child has Signs of Pneumonia

ዕድሜያቸው ከ 5 ዓመት ባታች በሆኑ ሕፃናት ላይ የእስትንፋስ መተላለፊያ ቧንቧዎች ባሽታን ባተመለካተ እናትን ወይም የአሳዳጊ ያችን ግንዛቤ ለማጻዊ የክትባ ዘጻ ለማወቅ የተዘጋጀ የጥናት ቀጽ 1982 ዓ.ም.

የእናቶችን ወይንም ያሳዳጊዎችን ግንዛቤ ለማጻዊ የክትባ ዘጻ ለማወቅ የተዘጋጀ መጠይቅ ፣

ዕድጫያቸው ከ5 ዓመት ባታች ለሆኑት ሕፃናት እናቶች ወይም አሳዳጊዎች ጥያቄር የሚቀርብ ጥያቄ ፣

1. የቀበሌ ገባረ ማነባረ ስም _____

2. የቤት ቁጥር _____

3. የመለጩ እናት ባይም የአሳዳጊ ስም _____

4. የጣለጩ እናተ ጣይም የአሳዳጊ ዕድሜ ._____

5. ጾታ :_
   1. ሴት
   2. ወንድ

6. ከአምስት ዓመተ ገታች ከሆኑት ልጆች ቃባችሁ ሳለ ይዛተ የሚያጮቅ ልጩ አለ ?
   1. አያን
   2. የለም

7. አያን ካሉ ለምን ያህል ጊዜ ሳለ ነበረው ?
   1. ከአንድ ሣምንት ባታች
   2. ከ1 _ 4 ሣምንት
   3. ከ4 _ ሣምንት በላይ

8. ልጁን ሳለ ይዘት የሚያውቅ ከሆነ ሳሉን ለማስታገስ ምን አደረጉለት?

_____

_____

_____

9. ልጆቹን ሳለ ይዟቸው የጣያውቀ ካሆነ ፣

9.1. ከአንድ ሣምንት በታች ቢያስለቸው ምን ያደርጉለቸዋል?

_____

_____

9.2. ከ1 እስከ 4 ሣምንት ቢያስለቸው ምን ያደርጉለቸዋል?

_____

_____

9.3. ከ4 ሣምንት ገለይ ቢያስለቸው ምን ያደርጉለቸዋል ?

_____

_____

10. ካለምስት ዓመት ገታቸ ከሆኑት ልጆቸ መካከል ትኩሳት ይዘት የጚያውቅ ልጅ አለ ?

1. አንን
2. የለም

11. አንን ካሉ ለምን ያህል ጊዜ ?

1. ለአንድ ቀን
2. ከ2_3 ቀን
3. ከ4_5 ቀን
4. ከ4 ቀን ገለይ

12. ለጭን ትኩሳት ይዞት የሚያውቅ ከሆነ ፐኩላቱን ለመቀነስ ምን አደረጉለት ?

13. ለጀቹን ትኩሳት ይዟቸው የማያውቅ ካሆነ ተኩሳት ቢይዛቸው ምን ያደርጋሉ ?

14. ከአርሶተ ጓመተ ባታቸ ካሆኑት ለጀቸ መካካለ የመተጓፈስ ቸግር አጋጥሞት የሚያውቅ ለጮ አለ ?

1. አዎን
2. የለም

15. አዎን ካሉ ለጮን ያህል ጊዜ ቀየበት ?

1. ካለጉዱ ቀን በታቸ
2. ከ1 _ 2 ቀን
3. ከ2 ቀን ባላይ

16? ለጭን የመተጓፈስ ቸግር ባያዘው ጊዜ ምን አደረጉለተ ?

17. ለጀቹን ማመተጓፈስ ቸግር አጋጥሟቸው የጣያውቅ ከሆነ የመተጓፈስ ቸግር ጊያጋጥማቸው ጉን ያደርጋሉ ?

18. ከልጆች መካከል ብቸኝነት ሰቢያ አገዘፋዘፍት የሚያውቅ ልጅ አለ?

1. አዎን
2. የለም

19. አገዘፋዘፍቸው የሚያውቅ ከሆነ ሁኔታውን ለማስታገስ ዎን አደረጉ?

20. ልጆችን አገዘፋዘፍቸው የጎ ያውቅ ከሆነ ጊያገዘፈዘፉ ቸው ዎን ያደርጋሉ ?

21. ከአቦስት ዓመት ገቻ ከሆኑት ልጆች ውስጥ ሰካከለ ቦኮቦስ ይዘት ሚያውቅ ልጅ አለ ?

1. አዎን
2. የለም

22. ላጋን ጎሉ ገቨታውን ለማስታገስ ዎን አደረጉ ?

23. ልጆችን ትኳትስ ይዟቸው ጎ ያውቅ ከሆነ አሁን ቢይዛቸው ዎን ያደርጋሉ ?

24. ከአምስት ዓመት በታች ከሆኑት ልጆች መካከል የሳንባ ምች በሽታ ይዞት ሚያውቅ ልጅ አለ ?

1. አዎን
2. የለም

25. አዎን ካሉ ባሸታውን ለማስታገስ ምን አደረጉለት ?

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26. ልጆን የሳንባ ምች በሽታ ይዟቸው የማያውቅ ከሆነ አሁን የሳንባ ምች በሽታ ቢይዛቸው ምን ያደርጋሉ ?

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27. ካለፉት ስመት ገታ ከሆኑት ልጆች መካከል ኮሌጣ ቢይዛቸው ምን ያደርጋሉ ?

1. ልብስ ይራርቢ አለበሰ ማለሁ/ ነከነ ገበ የለሁ/
2. ቀለል ያለ ልበስ አልብሽ ጉፋስ እንዲያገኝ አደርጋለሁ::
3. ምንም አላደርግም::

28. ካለፉት ዓመት ባታች ከሆኑት ልጆች መካከል በሚከተሉት በሽታዎች ሳቢያ የመገበ፣ የመጠጠት ፍላጉት የቀነሰ ነበር ?

28.1. ሳል :_ 1. አዎን
2. የለም

28.2. የመተንፈሻ ቸገር :_

1. አዎን
2. የለም

28.3. ተኩላተ :_

1. አዎን
2. የለም

29. ከላይ በተዘረዘሩት ባሸታያቸ ሰቢያ ልጆቸ የሶግብኑ የመጠጥ ፍላጉታቸው ቀንሶ ከነበረ እርስዎ ዶን አደረጉ ?

1. ዶግብኑ መጠጥ መስጠት አቁሙ
2. ዶግብኑ መጠጥ መስጡት ቀጠሉ/በወተርዉ መጠን/
3. ዶግብኑ መጠጥ ከወተርዉ በባለጠ መስጠተ ይቀጥላሉ::

30. ልጁያን ሳል ባያዙው ጊዜ ዶግብ መስጠተ መቀጠል

1. ይፈልጋሉ
2. አይፈልጉም::

31. ልጁያን የመተንፈስ ቸገር በአጋጠመው ጊዜ ዶግብ መስጠት መቀጠል

1. ይፈልጋሉ
2. አይፈልጉም::

32. ልጁያ ቦኩላት ካለው ዶግብ መስጠተ መቀጠል

1. ይፈልጋሉ
2. አይፈልጉም::

33. ለጁያን ሳል ባያዛው ጊዜ ሚሰጡቦን የ ግብ ወይዶ የፈሳሸ ዶጠን

1. መቀነስ ይፈልጋሉ
2. መጪመር ይፈልጋሉ
3. አንደወተርዉ ይቀጥላሉ::

34. ልጁያን የመተንፈስ ቸገር ባጋጠመው ጊዜ የሚሰጡትን የዶግብ ግይዶ የፈሳሸ መጠን :_

1. መቀነስ ይፈልጋሉ
2. መጪመር ይፈልጋሉ
3. አንደወተርዉ ይቀጥላሉ::

35. ልጅዎን ባ፡ቸኮለው ጊዜ የሚሰጡትን የምግብ ወይም የፈሳሽ መጠን

1. መቀነስ ይፈልጋሉ
2. መጨመር ይፈልጋሉ
3. እንደወትሮው ይቀጥላሉ::

36. ልጅዎን ባ ተኮሰው ጊዜ:_

1. ገወፍራም ልብስ መጠቀለል ይፈልጋሉ
2. በቀላል/ባስስ/ ልብስ መጠቀለል ይፈልጋሉ
3. እንደወትሮው ማልበስ ይፈልጋሉ::

37. ልጅዎን ሳል ሲይዘው ምን ማድረግ ይፈልጋሉ ?

1. ሚት ውሀጥ ዕርዳታ
2. ሳአገሻ መድኃኒት
3. የግሕል መድኃኒት አቀቂ
4. ጠበል
5. ሕኪም ቤት
6. ሌላ ይገለጽ_____

38. ልጅዎን የመተንፈስ ችግር ሲያጋጥመው ምን ማድረግ ይፈልጋሉ ?

1. የጊት ውሀጥ ዕርዳታ
2. የአገሻ መድኃኒት
3. የግሕል መድኃኒት አቀቂ
4. ጠበል
5. ሕኪም ቤት
6. ሌላ ይገለጽ _____

39. ልጅዎን ሲያተኩሳው ሥን ሊያዩር ጉለት ይፈልጋሉ ?

1. የቢተ ውሀጥ ዕርዳታ
2. የለበሻ መድኃኒት
3. የግሕል መድኃኒት አቀቂ
4. ጋበል
5. ሕኪም ቤት
6. ሌላ ይገለጽ _____

40. ልጅዎን ሳል ሲይዘው መንስኤው ምንድነው በለው ያስባሉ ?

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41. ልጁቃ የመተንፈስ ችግር ቢያጋጥመው መንስኤው ምንድነው ብለው ያስባሉ ?

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42. ለጁንን ቢያተኩሰው መንስኤው ምንድነው ብለው ያስባሉ ?

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43. ለጁቃን ትክትክ ቢይዘው መንስኤው ምንድነው በለው ያስባሉ ?

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44. ካዚህ ገታች የተዘረዘረትን የባሕታ ምልክትች ባቂም አስጊ ፣ አስጊ ፣ አስጊ ያልሆኑትን ለይተው ይገለፁ ፣

44.1. ሳል :_

1. ባቂም አስጊ
2. አስጊ
3. አስጊ ያልሆነ

44.2. የመተንፈስ ችገር :_

1. ባቂም አስጊ
2. አስጊ
3. አስጊ ያልሆነ

44.3. ትኩሳት :_

1. ባቂም አስጊ
2. አስጊ
3. አስጊ ያልሆነ

45. ካዚህ ባታቸ የቸዘረዘሩትን ጥያቄያቸ በቢያ አስማማለሁ ፣ አስማማለሁ ፣ አልስማማም ፣ ባቢያ አልስማማም በማለተ ይመልሱ::

45.1. የባል መገስኤው ቡጓ ሊሆን ይቸላል ፣

1. ገቢያ አስማማለሁ
2. አስማማለሁ
3. በቢያ አልስማማም
4. አልስማማም

45.2. የመተጓፈስ ቸግር መገስኤው ቡጓ ሊሆን ይቸላል::

1. ባቢያ አስማማለሁ
2. አስማማለሁ
3. ገቢያ አልስማማም
4. አልስማማም

45.3. የትኩረት መገስኤው ቡጓ ሊሆን ይቸላል::

1. ገቢያ ኣስማማለሁ
2. ኣስማማለሁ
3. በቢያ አረስማማም
4. አልስማማም

45.4. መጋፕ ግይያ ልክፍተ የባል መገስኤ ሊሆን ይቸላል::

1. ገቢያ ኣስማማለሁ
2. ኣስማማለሁ
3. ባቢያ አልስማማም
4. ኣልስማማም::

45.5. መጋፕ ግይያ ልክፍተ የተኩረተ ጉገስኤ ሊሆን ይቸላል::

1. ገቢያ ኣስማማለሁ
2. ኣስማማለሁ
3. በቢያ አልስማማም
4. አልስማማም

45.6. መጋፕ ግይያ ልክፍተ የመተጓፈስ ቸግር መገስኤ ሊሆን ይቸላል::

1. ባቢያ አስማማለሁ
2. ኣስማማለሁ
3. ባቢያ አልስማማም
4. አልስማማም

45.7. ከውቃቢ ጋር መጣላተ የባል መገስኤ ሊሆን ይቸላል::

1. ባቢያ አስማማለሁ
2. አስማማለሁ
3. ገቢያ አልስማማም
4. አልስማማም

45.8. ካውቃቪ ጋር መጫሳት የመተጓፈስ ቸገር መጓስኤ ሊሆን ይቸላል::

1. በጭም እስማማለሁ
2. እስማማለሁ
3. ገጭም አልስማማም
4. አልስማማም

45.9. ካውቃቪ ጋር መጫሳት የፐጫተ መጓስኤ ሊሆን ይቸላል::

1. ገጭም እስማማለሁ
2. እስማማለሁ
3. በጭም አልስማማም
4. አልስማማም

45.10. ሳል ባጠበል ይፈወሳል::

1. ገጭም እስማማለሁ
2. እስማማለሁ
3. ገጭም አልስማማም
4. አልስማማም

45.11. የመ ጓፈስ ቸገር ጠበል ይፈውሳል

1. ገጭም እስማማለሁ
2. እስማማለሁ
3. በጭም አልስማማም
4. አልስማማም

45.12. ተጨሳት በጠበል ይፈወሳል::

1. ገጭም እስማማለሁ
2. እስማማለሁ
3. ገጭም አልስማማም
4. አልስማማም

45.13. ጠጓቷይ የሳል ገሸያጎ ይፈውሳል::

1. ገጭም እስማማለሁ
2. እስማማለሁ
3. ገጭም አልስማማም
4. አልስማማም

45.14. ጠጓቷይ የመ ተጓፈስ ቸገርጎ ይፈውሳል::

1. በጭም እስማማለሁ
2. እስማማለሁ
3. ገጭም አልስማማም
4. አልስማማም

45.15. ጦጓቷይ ትጨሳትጎ ሊፈውስ ይቸላል::

1. በጭም እስማማለሁ
2. እስማማለሁ
3. ገጭም አልስማማም
4. አልስማማም

45.16. ሰለ ሕፃ፣ተኀ ሊገድለ ይቸላለ::

1. ባጭም አስማማለሁ
2. አስማማለሁ
3. ባጭም አልስማማም
4. አልስማማም

45.17. ፐኩላፐ ሕፃ፣ተኀ ሊገድለ ይቸላለ::

1. ባጭም አስማማለሁ
2. አስማማለሁ
3. ባጭም አልስማማም
4. አልስማማም

45.18. የመተኀፈስ ቸግር ሕፃ፣ትኀ ሊገድለ ይቸላለ::

1. በጭም አስማማለሁ
2. አስማማለሁ
3. በጭም አልስማማም
4. አልስማማም

45.19. ሰለ የያዛውኀ ልጁ ወደ ሰኪም ቤተ መጡለይ አያስፈልግዎ::

1. ባጭ አስማማለሁ
2. አስማማለሁ
3. ባጭም አልስማማም
4. አልስማማም

45.20. የመተኀፈስ ቸግር የያዛውኀ ልጁ ወደ ሰኪም ቤተ መጡለይ አያስፈልግዎ::

1. ባጭ አስማማለሁ
2. አስማማለሁ
3. ባጭም አልስማማም
4. አልስማማም

45.21. ትኩላት የያዘውኀ ልጁ ጋደ ሰኪም ቤተ መጡለይ አያስፈልግዎ::

1. ባጭ አስማማለሁ
2. አስማማለሁ
3. ባጭም አልስማማም
4. አልስማማም

46. የሳኀላ ቃቸ ገሸታ ኦልስተቸኀ ዒዘርዝሩ ::

_____

_____

_____

የጠያቂው ስም _____

የተጠያቂው ስም _____

47. በልቅ በአሳንጊው መካከል ያለው ዝምድና /ግንኙነት/ ምንድነው?

1. እናት
2. አባት
3. የቤተ አያት
4. የመንፈስ አያት
5. አህተ
6. ወንድም
7. እስስተ
8. አጎት
9. ባደጉ
10. ሌላ ይገለጽ _____

48. የልቅ አሳንጊ እና ቱ ካልሆነች እናትየዋ ምን ሆነች ?

1. ተፋታለች
2. ሞታለች
3. ታማለች
4. ተለያይተዋል
5. ሌላ ይገለጽ

49. የልቅ አሳንጊ እና ቱ ካልሆነች ልቅ ከአሳንጊዋ ጋር ለምን ያህል ጊዜ ቀየ ?

1. ከአንድ ወር በታች
2. ከ1 _ 2 ወር
3. ከ3 _ 5 ወር
4. ከ5_8 ወር
5. ከ9 _ 12 ወር
6. ከ12 ወር በላይ

50. የልጅቱ አያትና ጎረቤቶቿ ይኖራሉ ?

1. አንገ
2. የለም

51. ዘመድ / ባዕረሰብ / ምንድነው ?

1. አማራ
2. ኦሮሞ
3. ሌላ ይገለጽ_____

52. ሃይማኖቷ ምንድነው,?

1. ክርስቲያን/ አር ቶዶክስ/
2. እስላም
3. ሌላ ይገለጽ_____

53. እናት / አሳዳጊዋ/ ሥራዋ ምንድነው ?

1. " የቤት እመቤት
2. ተማሪ
3. ገበሬ
4. የመንግሥት ሠራተኛ
5. መሸታ ቤት "
6. ነጋዴ
7. ሌላ ይገለጽ_____

54. የጌተሰቡ ኃላፊ /አሳዋራው/ሥራቸው ምንድነው ?

1. ገበሬ
2. ነጋዴ
3. የመንግሥት ሠራተኛ
4. ሌላ ይገለጽ _"_____

55. የእናት/ አሳዳጊ/ የተማሀርት ደረጃ ፡

1. " መሃይም
2. ማንባብ አንጂ መፃፍ የማይችል
3. ማንባብ፣ መፃፍ የሚችል
4. ከ1 _ 3ኛ ክፍል
5. ከ4 _ 6ኛ ክፍል
6. ከ7 _ 12ኛ ክፍል
7. ከ12ኛ ክፍል በላይ "

56. የጌተሰቡ ኃላፊ/ የአሳዋራው/ የተማሀርት ደረጃ ፡

1. መሃይም
2. ማንባብ አንጂ መፃፍ የማይችል
3. ማንባብ፣ መፃፍ የሚችል
4. ከ1 _ 3ኛ ክፍል
5. ከ4 _ 6ኛ ክፍል
6. ከ7 _ 12ኛ ክፍል
7. ከ12ኛ ክፍል በላይ "

57. የእናት/ የአሳዳጊ/ የጋብቻ ሁኔታ ፡

1. " ያገባ
2. ያላገባ
3. የተፈታ
4. ባሏ ያረፈባት
5. ሌላ ካለ ይገለጽ_____

58. የህበት ሁኔታ ፡

58.1. የጣሪያቸ ጋዛት

1. የለም
2. አንድ
3. ሁለት
4. ሦስት
5. አራት
6. ከአራት በላይ

58.2. የሳሞቸ ብዛት :_

1. የለም
2. ከ1 _ 4
3. ከ5 _ 8
4. ከ9 _ 12
5. ከ12 በላይ

58.3. ቤተቻ ከዎን ተሰራ ?

1. ከዛር
2. ከቆር ቀር
3. ሌላ ይገለጽ _____

59. ቤቱ ስንት ኮፍል አለው ?

1. አንዱ
2. ሁለት
3. ሦስት
4. አራት
5. ከአራት በላይ

60 ቤተሰቡ እርሀ አካባቢ ለዎን ያህል ጊዜ ቀየ ?

1. ከአንዱ ዓመት ባነቸ
2. በ1 _ 2 ዓመት
3. በ3 _ 4 ዘመ
4. ከፈ ዓመ በላይ

61. ባቱን ጉልጎ ስንተ መስክተ ተከፍተ ይጭላል::

1. ዎንዎ
2. አንዱ
3. ሁለት
4. ሦስት
5. አራት
6. ከአራተ በላይ

62. የተለየ/ ካጌት ጭ/ ግዕዱ ቤተ አለነቸ ?

1. አነን
2. የለም

63. በቃጦሪያ ጌጥ ውስኖ እሰፕ ያነጓሉ ?

1. አያን
2. የለም

64. እሰፕ የሚያነቱ ሀሀነ ጋን ያነጓሉ ?

1. እንዊፕ
2. ከሰለ'
3. እንዊፕ፣ ከሰለ
4. ኩብፕ
5. ሌሳ 'ይገለጽ_____

65. በሊንዱ ቀን ውስጥ ጋን ያህል ጊዜ እሰፕ ያነጓሉ ?

1. ሙሉ ቀን
2. ገማሽ ቀን
3. ጓታ ጋቻ
4. ሌሳ ይገለጽ _____

66. ጓታ ጋታ ጋን ያበራሉ ?

1. ኤለክትሪክ መብራት
2. ኩራዝ
3. ፋኖስ
4. ሌሳ ይገለጽ _____

67. ሳንጠጥ ውኃ ካ ዖት ያገኙሉ?

1. ከቧንቧ
2. ካል ተጠበቀ ጉድጓዱ
3. ካ ተጠበቀ ጉድጓዱ
4. ኀል ተጠበቀ ምንጭ
5. ከ ተጠበቀ ምንጭ
6. የወንዙ ውኃ
7. ሌሳ ይገለጽ_____

68. ቤ ተሰቡ የት ይፀዳዳል ?

1. ውጭ
2. ገጌራ የሚበቁሙ መፀዳጃ ቤት
3. የብቻ መፀዳጃ ቤት
4. ሌሳ ይገለጽ_____

69. ከብ ተቹ ቦመጦሪያ ጌተ ውስጥ/ ካቤ ተሰቡ ጋር/ ይኖራሉ ?

1. አያን
2. የለም

70. ባፕ ጭስጥ ከሚ°ሩፕ ሰዎች መካከል ስንፕ ሰዎች ያጨሱ ?

1. ዶክተ
2. አንጋሩ
3. ሁለፕ
4. ሦስፕ
5. አራፕ
6. ከአ°ስፕ በላይ

71. የሚያጨሱ ካሀነ የሚያጨሱፕ ዕንጋሩነው ?

1. ሲጋራ
2. ፒፓ
3. ፕምባሀ
4. ጋያ
5. ሌላ ይገለጽ_____

72. አባፕ የጭ ሪባለቤፕ/ ሲጋራ ያጨሳሉ ?

1. አያጎ
2. የለዎ

72.1. ነያን ካሉ ገቀን ዕን ያህል ያጨሳሉ ?

_____

73. እናፕ የጭ ጋንዶ አሰቱቺፕ ያጨሳሉ ?

1. አያን
2. የለዎ

73.1. አያን ካሉ ገቀን ነን ያህል ያጨሳሉ ?

_____

74. ገቢቱ ጭስጥ ስንት ሰው ይ°ራል ?

1. ሁለት
2. ሦስፕ
3. አራፕ
4. አ°ስፕ
5. ስ°ንፕ
6. ሰባት
7. ስ°ንፕ
8. ዘጠኝ
9. አሥር
10. ከአሥር ባላይ

75. ባጌጥ ጭስጥ ካሉጥ ሊጇቸ መኸካለ ሰንጥ ለጇቸ ይማራሉ /ጥ/ቤጥ ይሄጻሉ/?

1. የለም
2. አንድ
3. ሁለጥ
4. ሦስጥ
5. አራጥ
6. አምስጥ
7. ስድስጥ
8. ሰባጥ
9. ስምንጥ
10. ዘጠኝ
11. አሥር
12. ከአሥር በላይ

76. የመጨረሻ ልጅዎን ገረገዙ ጊዜ ሕኪም ቤጥ ሄደው ያውቃሉ ?

1. አዎን
2. የለም

77. አዎን ካሉ ሰንጥ ጊዜ ሄዱ ?

1. አንድ ጊዜ
2. ሁለጥ ጊዜ
3. ሦስጥ ጊዜ
4. ካለፈጥ ጊዜ ገላይ

78. የመጨረሻ ልጅዎን ጥን እንዳደረጓጥ ?

1. ማንም
2. ማዋለድ የጀመሰ ሰው
3. ማጥለድ የምጥመለ የለመድ አዋላጅ
4. ሕኪም ጌጥ
5. ሌላ ይገለጽ_____

79. ስንጥ ልድ አለዎጥ ?

1. አንድ
2. ሁለጥ
3. ሦስጥ
4. አራጥ
5. አምስጥ
6. ስድስጥ
7. ሰባጥ
8. ስምንጥ
9. ዘጠኝ
10. አሥር
11. ከአሥር በላይ

80. ባመጫረሻ ልጅቃ፡ ከመጨረሻው በፊፐ ካለው ልጅፃ መካከል የምን ያህል ጊዜ ልዩነፐ አለ?

1. ከለንዱ ዓመፐ በፃቸ
2. ለንዱ ዓመፐ
3. ሁለፐ ዓመፐ
4. ሦስፐ ዓመፐ
5. ከአራፐ ዓመፐ በላይ

81. ፂተሰብፃ ትክክ፡ ከየት ያገኙሊ ?

1. የአገሽ መድኃኒት "አዋዊ
2. ባፌት ፍክፍ የሚደረግ ዕርዳፃ/ራስን ባራስ ወርዳት/
3. ፀበል
4. መድኃኒት ቤፐ
5. የቅለል ፌ፡ ተጠሪ
6. ሱኪፖ ቤፐ "
7. ላላ ይገለጽ _____

82. ባለፈው ለንዱ ጋር ውስፐ ሱኪፖ ፌፐ ሄዷ ያውቃሉ ?

1. አዎን
2. የለም

83. ሱኪፖ ፌፐ ከሄዱ ለምን ሄዱ ?

_____

_____

_____

ካአቦስፐ ዓመፐ ጋ ፃቸ ስላሉ ልጆቸ ቁጢር ጠይቅ

84. ገአቦስፐ ዓመፐ በፃቸ ያሉ ሀፃት ስም ዝርዝር ዕድሜ ጋግሩ ሴፐ

1.
2.
3.
4.
5.

85. ከአያስተ ዓመተ ባታቸው ከህኑት ሕፃናት ውስጥ የመጨረሻው ልጅ ጡጦ ጠባቷል ?

1. አዎን
2. የለም

86. አዎን ካሉ ለስንት ያህል ጊዜ ጠባ ?

1. ካሦስት ወር በታች
2. ከ፱ _ ፩ ወር
3. ከ፯ _ ፱ ወር
4. ከ10 _ 12 ወር
5. ከ12 ወር ባለይ

87. ከአንስተ ዓመተ ባታቸው ጎሎት ህፃናት ውስጥ የመጨረሻው ልጅ ጡጦ ለለ ሮጣሪ ሥጦ ጋ፡ ያወረ ?

1. ካአራቱ ወር ባታቸው
2. ከ4 _ ፩ ወር
3. ከ7 _9 ወር
4. ከ፱ ወር ባለ3

88. አያስተ ዓመተ ባታቸው ካሎት ህፃናት ውስጥ የጎጨረሻው ልጅ ጡጦ ጠበቷል ?

1. አዎን
2. የለም

89. ካአንስት ዓመት ባታቸው ጎሎት ህፃናት ውስጥ የመጨረሻው ልጅ ከተባተ ሰከተጋል ?

1. አዎን
2. የለም

90. አዎን ካሉ ሰገተ ጊዜ ሰከተበ ?

1. አንድ ጊዜ
2. ሁለት ጊዜ
3. ሦስተ ጊዜ
4. አራት ጊዜ
5. አንስተ ጊዜ
6. ካአንስተ ጊዜ በላይ

91. ከአጎበር ዓመት ባያቸው ካሉት ነፍሰ ጡር ውስጥ የመጨረሻው ልጁ ከዘጠኝ ወር ጎጓጕው ባይሰለ ስለተጨነ?

1. አያጓ
2. የለም

92. ከአጎበር ዓመት በያቸው ካሉት ነፍሰ ጡር ውስጥ የመጨረሻው ልጁ ገለፍ የሚሰጥ ካተገኘ ወስጂል ?

1. አያጓ
2. የለም

93. አያጓ ካሉ ስጦ ጊዜ ወሰደ ?

1. አጭር ጊዜ
2. ሁለተ ጊዜ
3. ሦስተ ጊዜ
4. አራተ ጊዜ

94. ከአጎበር ቅመ ሳያቸው ያሉ ነፍሰ ጡር ባጊያጋጥገ ሴተ ውስጥ ስጦ ሰው ያውሩል ?

1. ጎጓው
2. አገጋ
3. ሁለተ
4. ሦስተ
5. አራተ
6. አጋሰተ
7. ሰይጠተ
8. ሰባተ
9. ስጋጉር
10. ከሰጋገተ ገሳይ

95. ከአጎበር ዓመተ ሳያቸው ካሉተ ነፍሰ ጡር ውስጥ የመጨረሻው ልጁ ከዚህ ባያቸው ተከታዘሩት በሽታያቸው ተይዘ ያውቃል ?

95.1. ኩፍኝ 1. አያጓ
2. የለም

95.2. ትክትክ 1. አያጓ
2. የለም

95.3. የሳንባ ምች 1. አያጓ
2. የለም

95.4. ሲተነፍስ ማፈጓ 1. አያጓ
2. የለም

96. ከአቃሰፐ ዓመፐ ባያቸ ካሉት ሕፃነፐ ውሰጥ ባለፈው ሁለፐ ዛዖንፐ ከዚህ ሰበያቸ የተዘረዘረት ሥነልክ ተቸ / ሕመም/ ኖሯቸው ያውቃል ?

1. ሳል
2. ሙተንፈስ ቸግር
3. ፐኩሳፐ
4. ቱሉ ቱሉ መተንፈስ
5. ሲተነፍስ የጉን አጥንቱ መሰርገጭ
6. ሲተነፍስ ጣፈን/ሲር ሲር ጣለት/
7. የዖግበን የመጠጥ ፍላጉት ጣጣት
8. እንቅልፈዖ መሆን
9. ያንዘፈዘፈ ቶል

የተጠያቂው ስዖ _____

የጠያቂው ስዖ _____

ከአዎስት ዓመት በታች ካሉት ሕፃናት ውስጥ ስለታመመው

ልጅ የቀረበ መጠይቅ ፡

1. የቀበሌ ገበሬ ማኅበሩ ስም _____

2. የቤት ቁጥር _____

3. ከ 5 ዓመት ባታች የታመመው ልጅ ስም _____

ዕድሜ _____

ጾታ _____

4. ባለፈው አንድ አመስት ቀን ውስጥ ሕፃኑ የተቸገ / የተቸ/

ያልስቶቸ ነበረ ?

1. ሳል
2. የመተንፈስ ችግር
3. ፖኒሞኒ
4. የሌሎ ቶሌ መተንፈስ
5. ሲተነፍስ የጉሮ አጥንት መሰር ገጋ
6. ሲተነፍስ ክፈገ/ሲር ጊር ክለት/
7. መበሳት፣ መጠት አለመ ቻል
8. ነገቁ ሊረ ያ መሀገ
9. ክገዘፍዘፍ

5. የታመመውን ልጅ ለመርዳት ያገ አደረጉለት ?

_____

_____

_____

6. ለጭ ጡጥ ርብ ት ነው ያደገው ?

1. አያገ
2. የለም

7. አያን ካሉ ለጋን ያህል ጊዜ ጠባ ?

1. ከሦስት ወር በታች
2. ከ4 _6 ወር
3. ከ7 _9 ወር
4. ከ10_12 ወር
5. ከ12 ወር በላይ

8. ልጅ ከጡት ፋሳ ጥንቃቄ ነፃብ ባስገኘ ወረ ጀመረ ?

1. ከአራት ጣር በታች
2. ከ4 _ 6 ወር
3. ከ7 _9 ወር
4. ከ9 ወር በላይ

9. ልጁ ጭመ ጠባቷል ?

1. አንን
2. የለም

10. ልጅ ስትባት ሞትቧል ?

1. አንን
2. የለም

11. አጋን ካሉ ገፃት ጊዜ ስጠብ ?

1. አንዱ ጊዜ
2. ሁለት ጊዜ
3. ሦስተ ጊዜ
4. አራት ጊዜ
5. ከአንስተ ጊዜ በላይ

12. ልጁ ከዛጠኝ ጋር ንፃንፁ በቷለ ስተባ ሞትቧል?

1. አንን
2. የለም

13. ልጅ ባለፍ ሚወሰዱ ስትባ ወስቷል ?

1. አንን
2. የለም

14. አያን ካሉ ለስጣ ጊዜ

1. አንዱ
2. ሁለ
3. ሦስተ
4. አራተ

15. ልጅ ከዚህ በታች የተዘረዘሩትን ባሕሪያቸው ቷል ያውቃል ?

15.1. ኩፍኝ :_ 1. አያውቅም
2. የለም

15.2. ትክትክ :_ 1. አያውቅም
2. የለም

15.3. የሳንባ ምች:_ 1. አያውቅም
2. የለም

15.4. ሲተነፍስ ጉሮሮ 1. አያውቅም
2. የለም

የተጠያቂው ስም _____

የጠያቂው ስም _____

ጳኢማ ስጋ ሽኒ ገዲ ተስነፍ ኡኩጣ ቀዋ አፋራ ቧፈነ
ከንአሳሉ ሀይሊን ዊኒን ጉይፍ ተኒ አበናፍ አጉማ "
ገርገርሳ ፈያ ኢሳን ቀጣን በራፍ ከንቐጳኤ ቀጲ ተኢሳ
በራ ኩማ ኩጳ ሰገለፍ ሰጳተሚ ለማ ::

ሀይሊን ዊኒን ጉይፍ ተኒ አበናፍ አጉማ ገርገሳ ፈያ
ኢሳን ቀጣን ባራፍ ጋፊ ቀጳኤ ፣

I ሀጳፍ ዊኒን ጉይፍ ተታፍ ከዲያቱ

1. መቃ ኣከሴ ገ/ ማነበሪ _____
2. ቁጥሪ መና _____
3. መቃ ሀጳ "መና _____
4. ስጋ _____ "
5. ዲራፍ ዒብር ቱማ _____
6. ኢቛሴ ወጋ ሽኒ ገዲ ቺረን ኬሳ ጳኢመ ኡኒን ቀቢ ከቤኩ ጅራ ?
   1. ኤየን
   2. ለኪ
7. ኤየን ሀጀተን ኡኒን አመም ኢራ ቱረ ?
   1. ቱርቢን ቶከ ገዲ
   2. ቱርቢን ቶከ አመ አፋሪት
   3. ቱርቢን አፋሪ አሊ
8. ሙጢን ኡኒን ዬቀቢ ተኬ ጅራ ተ ኡኒን አከዲኩ ማለጉተኒፍ ?

_____

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_____

9. ኢያሉ ከሰን ሎጎን ቀቢ ሀሊከኒ ዓታኤ ፣

9.1. አመ ቶርባን ቶክ ገዚት አያ ሎጎ ጣለጉተኒፍ ?

_____

_____

_____

9.2. ቶርባን ቶክ አመ አፋሪት አያ ሎጎን ቀቢ ጣለጉተኒፍ ?

_____

_____

_____

9.3. ቶርባን አፋሪ አለ አያ ሎጎን ቀቢ ጣለጉተኒፍ ?

_____

_____

_____

10. ኢያሉ ወን ሸኒ ገዚ ከሰ ደግኒ ጉጎን ቀቢ ከበኩ ሊጎያራ ?

1. ኤየን
2. ለኪ

11. ኤየን ሀደተን ሀሚ ?

1. ቪአ ደብረ ኪሳ
2. ቪአ ሰዚ ዲራ
2. ቪአ ለማ ዲራ
4. ቪአ አፋር አሊ

12. መጣን ከሰን ደግነ ጉጎን ዱቀቢ ያራተ ደግኒ ገጎን አከ ኢቲፉራፍ ጣለጉተኒፍ ?

_____

_____

_____

13. ኢያሉ ካሰን ደግነ ጉጣን ቀቢ ስ ኢጠከነ ዱቀቢ ማለጐተኒፍ ?

14. ኢያሉ ስጋ ሸኒ ገዲ ካሳ አነአፋራ ባፈቸ ቀቢ አበኩ ጀራ ?

1. ኤየን
2. ለኪ

15. ኤየን ሀጀተን ሙጫን ጰኪን ኢያሉን አውም ጰጉብሰተን ?

1. ጉያ ቱከ ገዲ
2. ጉያ ቱከ አመ ለማ
3. ጉያ ለማ አሊ

16. ኢያሉን ጰኪን ሙጫን ካሰን አፋራ ባፈቸ ስጋ ቀቢ ሰን ጣለጐተኒፍ ቋረ ?

17. ኢያሉ ካሰን አዱ አፋራ ባፈቸ ረኪና ሀቀጢተን አማ ሀቀቢ ማለ ጐተኒፍ?

18. ኢያሉ ካሰን ካሰት ደግነ ጉጣን ወኚን ገገብያን ቀቢ ኢገቢካ ?

1. ኤየን
2. ለኪ

19. ገገብያን ሀቀቢ ጀራቱ ማለጐተኒፍ ?

20. ኢያለ ከሰን ገገብያን ቅሸ ከንቤከነ ሀተኣ ገገብያን ሀቁ ማለጉተኒፍ?

21. ኢያለ ወን ሸኒ ገዲ እንጁረን ከሳ ትከትኪን ቀቤ ከቤኩ ኢንጂራ ?

1. ኣየን
2. ለኪ

22. ኣየን ሀጀተን ማለጉተኒፍ ?

23. ትከትኪን ሀቁ ኢንቤከነ አማ ሀቁ ማለጉተኒፍ ?

24. ኢያለ ወን ሸኒ ገዲ ከሳ ዮቲን ሰንባ ከ ቁቤ ቤኩ ጁራ ?

1. ኣየን
2. ለኪ

25. ሙጣን ከሰን ጦቲን ሰንባ ሀቁ ገለጉተኒፍ ?

26. ኢያለ ከሰን ዮቲን ሰንባ ሀቁ ኢንባከነ ዮቲን ሰንባ ሀቁ ማለጉተኒፍ?

27. ወረ ኢያሉ ወጋ ሸኚ ገዲ ደግነ ጉጣን ሀቁ ማለጉተኒፍ ?

1. ወያ ቆን መራ
2. ወያ ሀጲ ኢተ ኡዊሰ ቲሰሰቲ ከና
3. ሀማ ኢንገጭፍ

28. ኢያሉ ወረ ወጋ ሸኚ ገዲ ከሰተ ዒቤ ከናን ናታፍ ጭጋተ ደደበነ ጀሩ?

28.1. ኢያሉ ወረ ወጋ ሸኚ ገዲ ከሰተ በሳ ኡጣቲን ናታፍ ጰጋተ ከንዲደን ጀረን ?

1. ኡየን
2. ለኪ

28.2. ኢያሉን ወጋ ሸነ ገዲ ከሰተ ረክነ አቱራ ባፈቾ ናታፍ ጭጋተ ከንዲደን ጀሩ?

" "

1. ኡየን
2. ለኪ

28.3. ኢያሉን ወረ ወጋ ሸነ ገዲ ኻሰተ ደግነ ጉጣን ናታፍ ጭጋተ ከንዲደን ጀሩ ?

" " ሀ

1. ኡየን
2. ለኪ

29. ኢያሉን ናታን ጭጋቲ ጰ ደደበነ ጀራተኒ

" 1. ናታፍ ጭጋቲ ከኑ ኢንሰተኒ
2. ናታፍ ጭጋቲ ከቆ ኢትፋፍተኒ
3. ናታፍ ጭጋቲ ከጭራ አራ ባይፍተኒ ላተኒፍ

30. ጫጣን ከሰን ኡጣን ለጋ ቀቤ ሚናን ከኑፍ

1. ኢንበርባይኒ
2. ኢንበርባጭ

31. ጫጣን ከሰን አፋራ ባፈቾ ረኪነራ ሀጀራቱ ናታ ኢቲደበሉፍ?

1. ኢንበርባደነ
2. ኢንበርባጭ

32. ሙጫን ከሰን ሀደግነ ጉጎን ቀባተ ሚናን ከኑፍ

1. ኢንበርባደነ
2. ኢንበርባዱ

33. ሙጫን ኡጎን ዪቀባተ ፕት ዪኒን ዱጋቲ

1. ኢትጢነቹ''ኢንበርባደነ
2. ኢቲደቡሉ ኢንበርባደነ
3. ዪኒን አኩመ ፈያ ቀቡቲ ከነተነፍ

34. ሙጫን ከሰን አፋራ ባፈቹ ሀደደቢ ሚናን ከኑ

1. ጢነሉ ኢንበርባደነ
2. ኢትደበሉ ኢንበርባደነ
3. አካ ጹረቲት ከኑፍ በርባደነ

35. ሙጫን ከሰን ደግነ ጉጎን ሀቀቢ ናታፍ ዱጋት

1. ጢነሉ ኢንበርባደነ ''
2. ኢትደበሉ ኢንበርባዩነ
3. አኩመ ጹረቲት ከኑ በርባዩነ

36. ሙጫን ከሰን ደግነ ጉጎን ሀቀባተ

1. ከፈነ ፋርጻጻን መረ ኢንበርባዩነ
2. ከፈነ ሀጺጻን መረ ኢንበርባደነ
3. አኩመ ጹረቲ ኡዊሉ ብርባጻ

37. ሙጫን ከሰን ኡጎን ሀቀባተ ሻለ ጉንፍ በርባደነ ?

1. ገርጋርሰ መነ ከሰ ጉተነፍ
2. ቀርቻ ሀበሻ
3. ነመ ቀርቻ ሀበሻ ቤኩተን ገሰ
4. ጠበለቲን ገሱ በርባጻ
5. ገረ መነ ሸኪሚቲን ገሰ

38. ጫን ካሰን ረኪነ እኛራ ባፈ ቱ ሀኢረ ቱ ግለ ጉዱ በርባደ ነ ?

1. ገርጋርሳ መነ ካሳ ጉተነፍ
2. ቀሪ ቻ ሀባሻ
3. ጠለለቲን ጌሱ በርባዳ
4. ገረ ሙነ ሴኪሚቲን ጌባ

39. ጫን ካሰን ደግ ጉጋን ሀቁቢ ሜለ ገዳፍ ባርባደን ?

1. ገርጋርሳ መነ ካሳ ጉተነፍ
2. ቀሪ ቻ ሀባሻ
3. ነመ ቀሪ ቻ ሀባሻ በኩተን ጌባ
4. ጠለለቲን ጌሱ በርባዳ
5. ገረ ሙነ ሴኪሚቲን ጌባ
6. ከንብራ ሀጅራ ተ አስ ሂዱ ተን?

40. ጫን ካሰን ሀ ኡጋን ቁቢ ሰባቢን ግሊነ ጀተነት ያደን ?

41. ጫን ካሰን ረኪነ ኦረረ ባፈ ቱ ሀ ቁቢ ሰባቢን ግሊን ጀተነት ያደን?

42. ጫን ካሰን ደግነ ጉጋን ሀቁቢ ሰገቢን ግሊን ጀተነት ያደን ?

43. ጫን ካሰን ትስትኪን ሀቁቢ ሰባቢን ግሊነ ጀተነት ያደን ?

44. ጋፊ ከነ ገዲ ፎሩ ባዱ ነመ ሶዳፖሱ ፣ ከ ነመ ሶዳፖሱ ፣ ከ ነማ ሂገሶዳፐስኔ አዳገ ፋደተ ዒሚ ፣

44.1. ኡካ :_

1. ባዱ ከ ነማ ሶዳቸሱ
2. ከ ነማ ሶዳቸሱ
3. ከ ነማ ሂገሶዳፖስኔ

44.2. ረኪነ አፋረ ባፈቾ :_

1. ባዱ ከ ነማ ሶዳፖሱ
2. ከ ነማ ሶዳፖሱ
3. ከ ነማ ሂገሶዳቾስኔ

44.3. ዩግ ነ ጉካ :_

1. ባዱ ከ ነማ ሶዳፖሱ
2. ከ ነማ ሶዳፖሱ
3. ከ ነማ ሂገሶዳፖስኔ

45. ጋፊ ከነ ገዲ ፎሩ ባዱ ነቲ ተሳ ፣ ነቲተሳ ፣ ባዱ ነቲ ሂገተሱ ፣ ነቲ ሂገተሱ ጀዳቲ ዒማ ፣

45.1. ባሳን ኡካ ኢኛ ዑጣ ተኡ ኢገዩንዩአ ?

1. ባዱ ነቲ ተሱ
2. ነቲ ተሳ
3. ባዱ ነቲ ሂገተሱ
4. ነቲ ሂገተሱ

45.2. አፋረ ባፈቾን ረኪን ኢሳ ኢኛ ዑጣ ተኡ ኢገደገዷአ ?

1. ባዱ ነቲ ተሳ
2. ነቲ ተሳ
3. ባዱ ነቲ ሂገተሱ
4. ነቲ ሂገተሱ

45.3. በሳ ደግ ነ ዣን ኢቫ ሀማ ተኡ ሂንደገይስ ?

1. ባዪ ነቲ ተሳ
2. ነቲ ተሳ
3. ባዪ ነቲ ሂንተኡ
4. ነቲ ሂንተኡ

45.4. መጋፍ ሊኪፍቲን ኡጣጳፍ ሰባቢ ተኡ ሂንደገይስ ?

1. ባዪ ነቲ ተሳ
2. ነቲ ተሳ
3. ባዪ ነቲ ሂንተኡ
4. ነቲ ሂንተኡ

45.5. ረኪን አፋረ ባፈኞ መጋፍ ሆኒን ሊኪፍቲ ተኡ ሂንደገይስ ?

1. ባዪ ነቲ ተሳ
2. ነቲ ተሳ
3. ባዪ ነቲ ሂንተኡ
5. ነቲ ሂንተኡ

45.6. ዩግ ነ ዣን ሰባቢን ኢሳ መጋፍ ሆኪን ሊኪፍቱ ተኡ ሂንደገይስ ?

1. ባዪ ነቲ ተሳ
2. ነቲ ተሳ
3. ባዪ ነቲ ሂንተኡ
4. ነቲ ሂንተኡ

45.7. በሳን ኡኻ አያን ወሰ ጋቡ ተኡ ኢንዮገይስ ?

1. ባዪ ነቲ ተሳ
2. ነቲ ተሳ
3. ባዪ ነቲ ሂንተኡ
4. ነቲ ሂንተኡ

45.8. ረኪን አፋረ ባፈኞ አያን ተወለደቡ ተኡ ሂንደገይስ ?

1. ባዪ ነቲ ተሳ
2. ነቲ ተሳ
3. ባዪ ነቲ ሂንተኡ
4. ነቲ ሂንተኡ

45.9. ደግ ነ ዣን አያን ኮን ወለደቤ ተኡ ሂንደገይስ ?

1. ባዪ ነቲ ተሳ
2. ነቲ ተሳ
3. ባዪ ነቲ ሂንተኡ
4. ነቲ ሂንተኡ

45.10. ጠበሊ ኡጎ ሂፈይሣ ?

1. ባዪ ነቲ ተሳ
2. ነቲ ተሳ
3. ባዪ ነቲ ሂጎተሱ
4. ነቲ ሂጎተሱ

45.11. ጠበሊ አፋረ ባፈቾ ከጎደይቤ ሂጎፈይሣ ?

1. ባዪ ነቲ ተሳ
2. ነቲ ተሳ
3. ባዪ ነቲ ሂጎተሱ
4. ነቲ ሂጎተሱ

45.12. ጠበሊ ደግነ ጉጎ ሂጎፈይሣ ?

1. ባዪ ነቲ ተሳ
2. ነቲ ተሳ
3. ባዪ ነቲ ሂጎተሱ
4. ነቲ ሂጎተሱ

45.13. ጠጎቷይኒ ኡጎ ፈይሱ ሂጎይጎይአ ?

1. ባዪ ነቲ ተሳ
2. ነቲ ተሳ
3. ባዪ ነቲ ሂጎተሱ
4. ነቲ ሂጎተሱ

45.14. ጠጎቷይኒ አፋረ ባፈቾ ከጎደይቤ ኢጎፈይሣ ?

1. ባዪ ነቲ ተሳ
2. ነቲ ተሳ
3. ባዪ ነቲ ሂጎተሱ
4. ነቲ ሂጎተሱ

45.15. ጠጎቷይኒ ደግነ ጉጎ ከጎቀቤ ፈይሱ ኢጎይጎይአ ?

1. ባዪ ነቲ ተሳ
2. ነቲ ተሳ
3. ባዪ ነቲ ሂጎተሱ
4. ነቲ ሂጎተሱ

45.16. ኡጎጎ ጳኢማ አቖሱ ሂጎይጎይአ ?

1. ባዪ ነቲ ተሳ
2. ነቲ ተሳ
3. ባዪ ነቲ ሂጎተሱ
4. ነቲ ሂጎተሱ

45.17. ደግነ ጉጎጎ ጳኢማ አቖሱ ሂጎይጎይአ ?

1. ባዪ ነቲ ተሳ
2. ነቲ ተሳ
3. ባዪ ነቲ ሂጎተሱ
4. ነቲ ሂጎተሱ

45.18. ረኪነ አፉረ ባረቹ ጳአሙ ለጓሱ ሂንደንደአ ?

1. ባዪ ነቲ ቱሳ
2. ነቲ ቱሳ
3. ባዪ ነቲ ሂን ቱሱ
4. ነቲ ሂን ቱሱ

45.19. መጫ ኡግን ቀጌ ገረ ሙነ ሱኪር ጌሱ ኢንበርባቸሱ ?

1. ገዪ ነቲ ቱሳ
2. ነቲ ቱሳ
3. ባዪ ነቲ ሂን ቱሱ
4. ነቲ ሂን ቱሱ

45.20. መጫ ረኪነ ቀጌ ገረ ሙነ ሱኪር ጌሱ ኢንገርባቸሱ ?

1. ባዪ ነቲ ቱሳ
2. ነቲ ቱሳ
3. ባዪ ነቲ ሂን ቱሱ
4. ነቲ ሂን ቱሱ

45.21. መጫ ደግነ ጉንን ጫጌ ገረ ሙነ ሱኪሪ ጌሱ ኢንበርባቸሱ ?

1. ባዪ ነቲ ቱሳ
2. ነቲ ቱሳ
3. ባዪ ነቲ ሂን ቱሱ
4. ነቲ ሂን ቱሱ

46. ጂን ዎቺ ሶዎባ ዙንቀጌ ሚሲን ኢሳ ማሊኒ ?

_____

_____

_____

47. ፍርማን ኢጆሰፃፍ ጉድኑ ተታ ኤቱ ጀኣን ማሊነ ?

1. ሀፃ
2. አበ
3. አከያ
4. አካከዩ
5. አቦሰቲ
6. አቦሰሰ
7. አፃፃ
8. ኤጉማ
9. ጉዲፌቻ
10. ካንቢራ ሀጅራቱ ጋ

48. ጉዲስተን ሀደ ዱተኡጊተን ሃቲ ማረታአነ ?

1. ወሶሊካነ
2. ኢንዱአነ
3. አፃን ጳመነ
4. ኢንሕኩ
5. አንቢራ ሀጅራቱ ሂማ _____

49. ካንጉዲሱ ነመ ቢራ ሀተአነ ወርን አመቦ ርጅን ቲሪ ?

1. ሺአ ቶከ ገዲ
2. ሺአ 1_2 11/12
3. ሺአ 3_5 11/12
4. ሺአ 6_8 11/12
5. ሺአ 9_12

50. አስያወን ኢጆሰ ተረስነ ጀኣ ?

1. ኤየን
2. ለኪ

51. ሰኚ ኳሰን ማሊነ ?

1. ሲፃማ
2. አሮሞ
3. ከንቢራ ሀጅራቱ _____

52. ሃይማኖቲን ኳሰን ማሊነ ?

1. ክርስቲያን
2. እስላማ
3. ከንቢራ ሀጅራቱ _____

53. ሀፃ ዊኒን ጉዲፍቱን ሀኚን ኢሳነ ማሊነ ?

1. ሀደ, መና
2. በረቱ
3. ቀተ ቡላ
4. ሀጅ መንገሥቲ
5. መነ መሸታ
6. ነጋፃ
7. ከንቢራ ሀጅራቱ _____

54. አባወራን ከሰን ሀኚን ኢሳኒ ግሊኒ ?

1. ቀተ ቡሳ
2. ነጋዳ
3. ሀኚ መንግሥቲ
4. ከንቢራ ሀጁራተ ዅሚ_____

55. ከን ሀዳ ሀኪን ከንጉዲፍቱ ክፍሊ ደረኛ አጮዎ ?

1. መሦይሚ
2. አ ነበቡ መሰ ፀፋ ኢንደዐሉ
3. አ ነበቡፍ ፀፋ ነንደደአ
4. 1_3
5. 4_6
6. 7_12
7. 12

56. አባ መናኪሰን ክፍሊ ጣቃ ?

1. መሦይሚ
2. አ ነበቡ መሰ ፀፋ ኢንዐደሉ
3. አ ነበቡፍ ፀፋ ነንደደአ
4. 1_3
5. 4_6
6. 7_12
7. 12

57. መነ ፋዳፍ ሄረመ

1. ከንፋዳ
2. ከ ኒን ሄረዎኔ
3. ከንወለ ሄከን
4. ከቂርሳ ኢሺ ኢራ ዳኤ
5. ከንቢራ ሀጁራተ ዅሚ_____

58. ቀቤፕ አባመና ፣

58.1. ባይነ ቀተ ዬታ ፣

1. ኢንጁሩ
2. ቶክ
3. ለማ
4. ሰዲ
5. አፋር
6. አፋር አሌ

58.2. ሎን አመም ቁብደኒ ?

1. ኢንፎሩ
2. 1_4
3. 5_8
4. 9_12
5. ኩደለማ አሊ

58.3. መን ማሊዳን ኢቻረጣ ?

1. ዊታ
2. ቅር ቅሮ
3. ከንቢራ ሀይራተ

59. መን ኩታ ጣቃ ቁባ ?

1. ቶክ
2. ለማ
3. ሰዲ
4. አፋር
5. አፈር አሊ

60. ቤተሰብን በኬ ከነት አመም ታአኒ ?

1. አጋ ቶክ ገዲ
2. አጋ ቶክ አመ ለማ
3. አጋ ሰዲ አመ አረሪቲ
4. አጋ አፋር አሊ

61. ጉያ መስክቲ ጣቀት በኑ አሳ ?

1. ሀማ
2. ቶክ
3. ለማ
4. ሰዲ
5. አፋር
6. አፈር አሊ

62. ማይጣቲ ኮበት ቁብዱ ?

1. ኤየን
2. ለኪ

63. ማድጓቲ አጻ ቀብይኒ ? መነት ኢትገለተኒት አብይ ቦቤስቱ ?

1. ኤየን
2. ለኪ

64. ማለ ቦቤስተኒ ?

1. ቖራን
2. ከሰሳ
3. ቖራንፍ ከሰሳ
4. ኮቦታ
5. ከንቢራ ሀጅራተ

65. ጉያ ቱክ ኬሰተ አብጻ አመም ቦቤስተኒ ?

1. ጉያ ጉቱ
2. ጉያ ጠለካ
3. ገለገሳ ብቻ
4. ከንቢራ ሀጅራተ

66. ገለገሳ ከንኢብስተኒ ማሊኒ ?

1. ኮረንቲ
2. ኩራዝ
3. ፋኖስ
4. ከጎቢራ ሀጅራተ

67. ቢሻን ጵጋቲ ኤሳ አርገተን ?

1. ቢንቢ
2. ቦሉ ኢንኤገምነ
3. ቦሉ ኤገማ
4. ቡር ቃ ኢንኤገምነ
5. ቡር ቃ ኤገማ
6. ቢሻን ለጋ
7. ከንቢይ ሀጅራተ

68. በከ ሰገራ ኢቲታቸን ቀብጹ ?

1. አለት
2. በከቱከት መነ ፊጢኒ ቀብጹ
3. ኮጣት መነሰገራ ቀብጹ
4. ከንቢራ ሀጅራተ

69. - ሀሪን መነ ኬሰተ ኢሲን ወቺን ኢንገሉ?

1. ኤየን
2. ለኪ

70. መነ ኬሰ ከንጂራተን ነምን ጉዳ ነመ ሚቀቱ ቱምቦ ጡጣ ?

1. ሀማ
2. ቶከ
3. ለማ
4. ሰዲ
5. አፉር
6. ሸን ኦሌ

71. ከንጡጠን ሀተኤ ግለ-ቡጡን ?

1. ሲጋራ
2. ፒፓ
3. ተምቦ
4. ጋያ
5. ከንቢራ ሀጅራተ ሂሚ

72. አቧን ወራ ኬሰን ተምቦ ኢንቡቡ ?

1. ኤየን
2. ለኪ

72.1. ቱ ጡጠን ጉያ ቶከ ኬሳ አጠም ጡጠን ?

73. ሀቲ ሀኪን ጉዲፍ ቱን ሙጣን ተግቦ ኢንጡጠነ ?

1. ኤየን
2. ለኪ

73.1. ቱ ጡጠን ጉያ ቶከ ኬሳ አጠም ቡቡ ?

74. መነ ኬሰተ ነመ ሚቃቱ ጅራ ?

1. ለመ
2. ሰዲ
3. አፋር
4. ሸን
5. ጅኣ
6. ቶርባ
7. አፉር
8. ሰገለ
9. ኩደን
10. ኩዲን ኦሌ

75. መነ ከሰን ከሳ ኢፓሉ ጣቃቱ ተገራ ?

1. ኢንፎሩ
2. ቶከ
3. ለመ
4. ሰዲ
5. አፋር
6. ሸን
7. ኛአ
8. ቱርባ
9. ሰዳት
10. ሰገለ
11. ኩደን
12. ኩደን አሌ

76. ሙጫ ቦዳ ኡለቸፍ ተን መነ ሰኪሚ ደቀተኒ ቤከቱ ?

1. ኣየን
2. ለኪ

77. ሀ ደቅጠን ተኤ ጊዘ ጣቃ ደቀተኒ ?

1. ጊዘ ቶከ
2. ጊዘ ለመ
3. ጊዘ ሰዲ
4. ሲዲ አመ አፋር

78. ሙጫ ቦዳ ዳቸኒ ከነ ኤኚቱ አሲን ዳቢሴ ?

1. ነሙ
2. ነመ ከንዳቿሱ ከን ኢቤከነ
3. ዳኚስቱ አንቤከቱ
4. በርመተ ዳቿሰ ሀንቀበጹ
5. መነ ሰኪሚቲ
6. ከንቢራ ሀፎራተ

79. ኢፓሉ ጣቃ ቀበጹ ?

1. ቶከ
2. ለመ
3. ሰዲ
4. አፋር
5. ሸን
6. ኛአ
7. ቱርባ
8. ሰዳት
9. ሰገለ
10. ኩደን
11. ኩደን አሌ

80. መጫ ቦዳ ጅሃፍ ከንሲጹራ ጅሃ ኣጹ ወለደብራ አከምቱ ጅራ ?

1. ኦጋ ቶከ ገዲ
2. ኦጋ ቶከ
3. ኦጋ ለማ
4. ኦጋ ሰዲ
5. ኦጋ ሰዲ ኦሊ

81. ቤተሰብን ኬቸን ኣካጮና ኤሳ ለርገቶኒ ?

1. ወረ ቶርቻ ¨ነበሸ ቤኩ
2. ኦፋማፍ ኦፍገርጋራ
3. ጠበሳ
4. መነ ሳርቻ
5. ቁበሴቲ ወረ ፈያፍ ነጋ
6. መነ ሹኪሚ

82. ጂኦ ደብረ ኬሰተ መነ ሹኪሚት ደቅተኒ ቤከቱ ?

1. ኤየን
2. ለኪ

83. መነ ሹኪሚ ሆ ጳምተኒ ማለ ጉጎፍ ጳምተን ?

_____

_____

II ኢጀሴ ወጋ ሸኜ ገዲ ረቲ ገፊ ዲያቱ ፣

84. መቃ ኢጀሴ ወጋ ሸኜ ገዲ ከገጁሩ	ወጋ	ዲራ	ጹርባ
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

85. ኢጀሴ ወጋ ሸን ገዲ ለን ቦዳ ጀለቱ ሀርመ ሆዳ ጅራ ?

1. ኤየን
2. ለኪ

86. ዴ ሀዳ ጅራ ተ አመም ሀዳ ?

1. ቺአ ሰዲ ገዲ
2. ቺአ አፋር አመ ቺአ ቺአ
3. ቺአ ተርበ አመ ሰገልቲ
4. ቺአ ኩደን አመ ኩደ ለማት
5. ቺአ ኩደ ለጣ አሊ

87. ሙጣን ቦዳ ደለቲን ሀርመ መሌ ቀን ፕታ ኢትዩበሉ ሀም ጀመር ተኒ ?

1. ቺአ አፋር ገዲ
2. ቺአ አፋር አመ ቺአ
3. ቺአ ተርባ አመ ሰገለ
4. ቺአ ሰገለ አሊ

88. ሙጣን ቦደረት ዩለቲን ጡጠ ሀዳ ጅራ ?

1. ኤየን
2. ለኪ

89. ሙጣን ቦደረት ደለቲን ክትባታ ካተጣ ጅራ ?

1. ኤየን
2. ለኪ

90. ኤየን ሀጀተን ጊዛ ጣቃ ካተጠ ?

1. ጊዛ ተክ
2. ጊዛ ለመ
3. ጊዛ ሰዲ
4. ጊዛ አፋር
5. ጊዛ ሸን
6. ሸን አሊ

91. ሙጣን ቦዳ ደለቲን ቺአ ሰገለ ቦዳ ካተጨ ጅራ ?

1. ኤየን
2. ለኪ

92. ሙጣን ቦዳ ክትባታ አፋኒን ሊቂሶስኒ ፋደታ ጅራ ?

1. ኤየን
2. ለኪ

93. ...ቅ ፋደቱ ተኣ ጊዘ ማ᎓ቃ ፈደቱ ?

1. ጊዘ ቶከ
2. ጊዘ ለመ
3. ጊዘ ሰዪ
4. ጊዘ አፋር

94. መነ ኪሳ ከገ᎓ረ ኒ ኢ᎓ሶ ወጋ ሸኚ ገዲ መሶ ነ᎓ኒ ጫቃቱ ወቒን መነ ኪሰት ቡሳ ?

1. ሀ᎓ቱ
2. ቶከ
3. ለመ
4. ሰዪ
5. አፋር
6. ሸን
7. ቒነ
8. ቶ᎓ባ
9. ሰዳት
10. ሰዳት አሌ

95. መጣን ቦዳ ከና ገዲ ᎓ሩ ዲቤ ከነ ኪሳ ቁቤ ቤካ ?

95.1. ግፍ'ራ :_
1. ኤየን
2. ለኪ

95.2. ትከትኪ :_
1. ኤየን
2. ለኪ

95.3. ᎓ቺ ሰንባ :_
1. ኤየን
2. ለኪ

95.4. ኪንሲሊቀሳ :_
1. ኤየን
2. ለኪ

96. ዳኢመ ወጋ ሸኚ ገዲ ከገ᎓ረ ኒ ቶ᎓ባን ለጣን ደብረ ኪሰት ጹኽቤ ቤካ ?

1. ኡካ
2. አፋረ ባፈቶ ደ᎓ቡ
3. ደግነ ጉጣ
4. ደፌ ደፌ አፋረ ባፈታ
5. ዱ አፋረ ባፈቱ ለፈን ቒነ ቻ ኪሳ ሲነ
6. ኢሲሊቀሳ
7. ፕታኹ ጵጋቲ ደዋ
8. እ.ሪባ ኢቲባይሳ
9. ኢንገገብሳ

" "

መቃ ጋፈ ተ᎓ቱ _____

መቃ ጋፈ ቱ _____

ኢጀሰ ጦን ሽኚ ገዲ ጀረን ካሰን ጭ ጵኩብሰሜ ገፊ ዲያቱ ፣

1. መቃ ቀብሰ ገ/ ግኅብሪ _____

2. ቀጥሪ መኅ _____

3. መቃ ጭ"ሂብሜ _____ ወን _____ዲራቱ ጵገር ቅ_____

4. ጳኢማ አን ሽኒ ገዲ ካንጀረን ቶርንን ለጭን ደብረ ካሰ ጵኩ ገኪ ?

1. ኡካ
2. አሩረ ባፈቱ ደጋቡ
3. ፀግኑ ጉን
4. ደፌ ፀፌ አሩረ ባረታ
5. ፍ አረረ ባረቱ ለረን ርኅታ ካሰ
ሳን
"
6. ኢንሲሊቅሰ
7. ፕታቱ ጵገቲ ጋና
8. ኢሪባ ኢትባይሰ
9. ኢንገገብሰ

5. ጭ ጵኩብሰሜ ገርገርባ ኢኅ ግልጉተኒቱ ?

_____

_____

_____

6. ጭጣን ሀርማ ሀጴት ጉደቱ ?

1. ኡየን
2. ለኪ

7. ጹ ሀጴ ጀራቱ አመም ሀጴ ?

1. ቺአ ሰጲ ገዲ
2. ቺአ አፋር አመ ቺአ ቺአ
3. ቺአ ቶርባ አመ ሰገሊ
4. ጀአ ኩደን አመ ኩደ ለማ
5. ኩደ ለማ ኡሌ

8. ሙጣን ሀርማ ሙሉ ሮን ጉታ ኢቲ ደገሉ ሀዮ ጀመር ተኒፍ ?

1. ቺስ አፋር ገዲ"
2. ቺስ አፈሪ ካመ ቺስ ጀኦ
3. ቺስ ተርባ አመ ሰገሊ
4. ቺስ ሰገሊ አሊ

9. ሙጣን ጡጠ ህዳ ጊራ ?

1. ኤየን
2. ለኪ

10. ሙጣን ክትባታ ኣተጣማ ጊራ ?

1. ኤየን
2. ለኪ

11. ኤየን ሀ ጀተኒ ጊዘ አመዮ ?

1. ቶክ
2. ለመ
3. ሰዲ
4. አፈር
5. ሽኒ
6. ሽን አሊ

12. ሙጣን ቺስ ሰገሊቲ ካትባታ ኣተጣማ ጊራ ?

1. ኤየን
2. ለኪ

13. ሙጣን ክትባታ አፋኒን ሊቂምበን ፋይታ ?

1. ኤየን
2. ለኪ

14. ኤየን ሀ ጀተን ጊዘ ዒታ ?

1. ቶክ
2. ለመ
3. ሰዲ
4. አፋር

15. መሻገ ዚስ ከፉ ገዲ ፎሩ ጭክ ገካ ?

15.1. ገፍራ :_ 1. አየን
2. ለኪ

15.2. ትከትኪ :_ 1. አየን
2. ለኪ

15.3. ቃፎ ሰዎስ :_ 1. አየን
2. ለኪ

15.4. ኢገሲሰቀሰ :_ 1. አየን
2. ለኪ

ሙቃ ገፈተም ቱ _____

ጦቃ ገፈ ቱ _____

DECLARATION

I, the undersigned, declare that this thesis is my original work and has not been presented for a degree in this or any other University, and that all sources of material used for the thesis have been duly acknowledged.

Name Saba Wolde Michael M.D.

Signature Saba

Place Addis Ababa University

Date of Submission March 1990

This thesis has been submitted for examination with our approval as University Advisor(s).

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Advisor

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Advisor

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