ASSESSMENT OF THE SCHOOL HEALTH SERVICE IN ADDIS ABABA DURING 1985/86 SCHOOL YEAR

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TABLE OF CONTENTS

LIST OF TABLES

ABSTRACT

This study is an assessment of the school health service in Addis Ababa which has been operating for the last 45 years. Fifty-seven school clinics serving a student population of 197,181 were selected according to set criteria. These school clinics were visited, medical records and reports for the 1985/86 school year reviewed, and school health workers interviewed. Major health problems of school children and problems in the delivery of the school health service itself are identified.

Accidents and injuries were found to be the most prevalent health problems of school children with an overall incidence rate of about 22%. Over 45% of the reported deaths for which causes were possibly known during the same period were also due to accidents. Other categories of health problems include intestinal parasite, dental problems, skin infections, eye and ear problems and venereal diseases. Available data suggest that most of these problems were consistently occurring over the past 26 years, except for dental caries which has possibly appeared as a new phenomena in recent years.

Comparison of the morbidity patterns between the school population and the general population of Addis Ababa did not show major differences. On the whole, most of the diseases and conditions identified are of the type that can be prevented through general public health measures.

Most of the school clinics have serious problems of space, budget, drugs and manpower. Over 72% of the school clinics surveyed have only one room each and about 85% were staffed by one health worker each. Lack of provision for refresher courses, inadequate supervision and ambulance problems were also reported. School health service activities were found to be incomplete in most of the important activities like periodic medical examination of children, screening for defects and vaccinations. From the findings of this study it can safely be concluded that school health service is a neglected area of service demanding urgent action and therefore, some recommendations are made to help in improving the existing situation.

1. INTRODUCTION

1.1 Statement of the Problem

The health of school children is a matter of special concern everywhere, especially in socialist countries, and therefore, this should be equally acceptable in Ethiopia. The student population has grown tremendously in the past, and continues to grow at an ever increasing rate. On the other hand almost the same number of school health personnel and facilities continued to provide service 45 years after the introduction of the service into the country. This implies that school health service is not being given the attention it deserves. Here lies a problem of serious concern which calls for an appropriate and timely action to protect and promote the health of the increasing number of school children who will be responsible for building the nation.

1.2. Objective of the Study

The study is carried out to obtain some basic information on the school health service in Addis Ababa and the possible problems involved. At the same time, the study is expected to give some general picture of the school health service in the country as a whole. Besides initiating further research in this important area of community health service, the study will be useful in providing a base line data for all efforts that will be made to improve school health service in the future. The year 1985 has been designated as International Youth Year, whose theme was "Peace, Participation, Development". Therefore, it is timely that this study should be devoted to mobilizing resources towards improving the health conditions of school children.

Although school health programs cover wider areas, this study focuses on the school health service component only (ie. schools medical service aspect) for reasons that:

- all school health activities including school health services are important public health programs;
- the provision of appropriate treatment for common diseases and injuries is one of the eight components of Primary Health Care,
- situations in our country dictate that curative services should be provided (eg. intestinal parasitic diseases, eye and skin infections, inuries ... are common conditions in the population).

Therefore, the general objective of the study is to assess the existing school health service in Addis Ababa. The specific areas of interest are:

1.2.1. to identify the major health problems commonly seen in school children during the school year 1985/86.

1.2.2. to identify the types of school health services that are being provided:

1.2.2.1. The periodic medical examination of school children to detect health problems;

1.2.2.2. The provision of treatment for common medical problems;

1.2.2.3. The availability of first aid services in schools;

1.2.2.4. Provision of vaccination services in schools;

1.2.2.5. The inspection of school children for personal hygiene.

1.2.3. To examine the working relationships between the Ministries of Health and Education with respect to supervision, referral, material and technical support in providing the service;

1.2.4. To see the progress being made in providing school health serice during the past several years.

1.2.5. To draw some conclusion and to make some recommendations which might be useful for improving the school health service.

1.3. Literature Review

1.3.1. Historical background

The Ministry of Education introduced school health services around 1941, the same period during which efforts were being undertaken to make secular education a country wide program (1). At the start, about 80 dressers* rendered curative services in clinics opened in urban and some district schools. Some full-time and part-time foreign physicians carried out supervisory activities, but were mostly limited to the major cities of Addis Ababa and Asmara.

The present Schools Medical Service Department (SMSD) was established in 1955, to serve as a national referral center for school clinics throughout the country (2). This center provided outpatient and inpatient services for the few years following its establishment. The inpatient service

*Now renamed health assistants.

was discontinued in 1958, while the outpatient service has been continued to the present.

In 1954 there were 515 schools throughout the country with a student population of about 77,000 which almost doubled by 1956. The number of school health personnel also reached 124 and the annual budget allocated for school health service for 1956 was about Birr 150,000 (1).

The original plan was to assign one dresser for every 150-500 students (2), roughly estimated to be about one health worker per school. Currently, only about 140 health workers are known to be working in this sector, but the number of students in the country is over three million.

The involvement of the Ministry of Health in the delivery of the school health service however, is closely related to the development of the "Basic Health Services" concept in Ethiopia(2). This was further facilitated by the establishment of the Gondar Public Health College in 1954. According to Jager (1), schools in Gondar served as a training field for health officers, community nurses, and sanitarian students. The Gondar graduates have made a significant contribution in introducing and strengthening school health services, especially in schools found near health centers in rural parts of the country. In the past, the school health service used to be one major component of the health center activities, but this is not the case nowadays.

1.3.2. Policy for school health services

According to the existing practice, the Ministry of Education is responsible for providing health services to government schools only (2). Students get free ambulatory medical care both in the clinics, and in the Schools Medical Service Department through referral. The latter serves as a national referral center for school clinics, although for problems requiring high level medical care students are advised to go to the hospitals in Addis Ababa at their own expense or produce a poverty certificate from an authorized institution to get free medical care. Teachers and other school personnel are not entitled to get free school medical service at any level.

1.3.3. Public health significance of the school health program

The school health program is an important public health activity the purpose of which is maintaining and improving the health of school children and personnel. According to Nemir, and A. Creswell (3,4), school health is comprised of three closely related components namely:

a. School Health Service: School Medical Service: consisting of all those activities directly concerned with the current health status of the school child including medical examinations, health appraisal, screening, inspection, emergency care of injuries and sudden illnesses ....

b. Health Instruction: School Health Education: involves formal and planned classroom health teaching designed to prepare students to make proper decisions in health matters throughout life,

c. Healthy school living: School Environmental Health: incorporates factors that affect the physical, mental and social health of the child: the physical plant, equipment, the personnel....., and the practice within the school.

In every society school children constitute an important sector of the population, and when compared to early infancy and the pre-school, school age morbidity and mortality rates are very low (5). Even then, according to Jelliffe (6), the need for an organized school health program remains important for three reasons which include:

a. The school child must be healthy to derive maximum benefit from the educaiton program;
b. School age children provide a unique opportunity for various public health activities like immunization, screening and growth monitoring;
c. School age children provide a young and more receptive audience for health education, and are apparently in a position to influence the general community.

School health service deserves special emphasis in developing countries, where more than half of the world's children live. Infectious diseases, and malnutrition are more prevalent, environmental conditions are generally poor coupled with acute shortage of medical facilities and health manpower. Currently only a small percentage of these children attend schools, but, since the governments give a high priority to

education in their development plans this situation is changing. Yet, oving to resource limitations for many competing programs school health services in developing countries are mostly limited to urban centers (7).

In Ethiopia there has been a dramatic increase in the number of students especially during the last 12 years of the Ethiopian Revolution. Over 3 million children attended primary and secondary schools during the current school year (1985/86). This figure amounts to over 7.2% of the country's general population of 42,019,418 (1984 census). In Addis Ababa alone, according to the data obtained from the Addis Ababa Education Office, 374,224 students attended schools during the same year. Accordingly school children accounted for about 16% of the city's population. Almost all schools in the city operate in shifts and classes are usually over crowded. Sanitary facilities in schools are inadequate and maintenance services are generally poor. Schools are located in the center of the city along the main roads, between residence houses, around business and public centers.

1.3.4. The state of health of school children in Ethiopia

Available information on the state of health of students and school health service as a whole are scanty. Very few studies have been conducted in this area in the past and most of these were purely parasitological surveys done in urban schools. Based on the examination of 468 sample stool specimens from different parts of Addis Ababa, Aklilu Lemma et al reported that about 73% of the samples were found to harbour one or more intestinal

parasites (7). A similar study done in Debre Zeit showed that over 50% of the study samples were infected with one or more intestinal paraistes. About 11 different species of intestinal parasites have been identified during these studies, and ascaris lumbricoides was the most common species in both places.

In 1959 Jager, O.A. (1) gave a brief description of the school health service program and the state of health of school children in Gondar town and indicated that hearing and visual disturbances were common. Trachoma was found in as many as 75% of the school children. Carious teeth and periodental conditions were fairly common. Scabies was found in about a third of the younger pupils. Over 8% of the 1352 school children were reactive for both VDRL and Khan or VDRL alone, with no sex difference seen.

In 1973 Wolde Michael Negussie (2) analyzed the activity reports of the school year 1970/71 from 12 regions and Addis Ababa and found out that gastro-intestinal diseases and intestinal parasites were the leading causes of morbidity in school children. He also gave an account of the historical development, organization and staffing pattern of school health services in Ethiopia.

In 1969 Vukotic, D. (8) reported an incidence rate of 0.15% each for rheumatic and congenital heart diseases in 599 apparently healthy students of Wossen Segede School* in Addis Ababa aged 7-16 years. The heart was clinically normal in 99.7% of the study subjects.

*Now renamed Yekatit 23 primary and junior secondary school.

Based on a health survey done in 1973 in 490 rural elementary school children, Hojer, B et al (9) reported about 10% of the students above 10 years of age had impaired visual acuity. Skin and eye infections were prevalent in 40-60% of the examined students. Over 70% of the school children were found to be free of dental caries despite the poor state of oral hygiene observed in most of the students. About 5 species of intestinal parasites were identified in the stool specimens examined.

In a study of 39 schools done in 1974 in 13 rural provinces covering a total of 431,153 students, Ey, J.(10) reported that intestinal parasites constituted for 74% of the illnesses ranking first among the list of 10 diseases. About 28% of the schools surveyed, nevertheless, had water in the compound and 97% had latrines of which only about 55% were used regularly. Reasons for nonuse included lack of running water for flushing and lack of maintenance in which case latrines were not functional. In others latrines were functional but were not used.

In 1979 a joint committee (11) reported that school health services in the country suffered from problems related to rapidly growing student population, limited budget and increasing cost of drugs, shortage of school health personnel and focus on curative services only. It was further stated that, as a result of these factors the majority of school chidren especially in the rural areas of the country lacked provision even for simple first aid care.

The national workshop on school health program organized by the National Children's Commission in 1985 (12) assessed the current situation of the school health services in the country and recommended possible ways of improving the situation through more and direct involvement of the Ministries of Health and Education.

1.3.5. Organization and administration of school health services

According to information gathered through surveys and conferences organized by international agencies (13,14), the patterns of practice and administrative arrangements of school health services varied considerably among countries. In most cases however, the responsibility of school health services at the national level fall under the Ministry of Health, Ministry of Education or both. For example, in Germany, Italy, Tunisia, Egypt, Jordan, Democratic Yemen, the Ministry of Health is responsible. In Beligium, France, Algeria, Saudi Arabia.... school health service is the responsibility of the Ministry of Education, and of the two ministries in Cyprus and some others.

In Ethiopia the overall responsibility of school health service is that of the Ministry of Education (1,2) with some technical support from the Ministry of Health. The specific areas of cooperation that have been proposed by the two Ministries were as follows (2):

National level:

- Production of school health teaching materials
- Training program and certification of school dressers .

- Summer workshop for school dressers
- Development of school curriculum to include health subjects

Regional leve:

- The regional medical officer and school health authorities work together to safe-guard the health of school children
- The medical staff to coordinate its school health program with the existing program of the school health personnel.

Local leve:

- Sanitarians make regular inspection of the schools
- Health center staff coordinate its school health program with the existing program of the school health personnel

Another important area of agreement was the establishment of a national committee that would be responsible for the formulation of plans and policies for school health service. But how much of these proposals have been put into effect is not evaluated.

School dispensaries are the front-line service units in most North African and Mediterranean countries while some have established specialized clinics for school children who suffer from tuberculosis, heart diseases, hearing defects etc. Egypt has two special hospitals for school children while Saudi Arabia has one special hospital (14). In the USSR children's hospitals and polyclinics are the standard establishments for curative and

preventive services (13). The polyclinics provide all types of medical service to all children upto the age of 15 years. School doctors visit schools to examine and treat school children and to advise on hygiene of school premises, and are also involved in school health education activities. In Ethiopia school clinics provide school health services wherever they exist and in the absence of such services, the general health services are the only source of care.

Whatever situation may exist, especially within the limitations of resources and other competing programs as is the case in developing countries, Jelliffee suggests the following guidelines for organizing an effective school health program (15).

1. Giving high priority to school health program
2. Setting up of a central coordinating committee
3. Assigning a specially trained doctor to direct and implement the school health program
4. Emphasis on the training of teachers in health matters, especially first aid at all levels and hence in the education of children
5. Improve regular medical inspection of children
6. Giving better attention to the provision of school meals in one form or another.
7. Expanding school immunization program
8. Creation of a healthy school environment
9. Improving the participation of parents in improving their chidren's health.

1.3.6. The Ten Year Plan and School Health Services

The Ten Year Health Sector Plan which is closely in line with the principles of Primary Health Care has given a fair coverage to school health services with defined strategies and targets (16) indicating:

- that all new school entrants will undergo medical screening for communicable diseases, hearing and vision defects, and will get the necessary follow-up vaccinations ;
- that first aid posts will be organized in all schools;
- that school health policy will be formulated for plan implementation.

On the other hand, the 10 year Education Sector Plan has not mentioned school health services except for a brief statement that health problems were among some of the problems encountered in the areas of higher education (17). Effort made to get clarification on this issue was not very successful. However, there are indications that school health services will not continue to be the responsibility of the Ministry of Education alone (18). According to the same source an expert committee is currently working on how to organize and improve school health services in the future.

2. MATERIALS AND METHODS

There are 225 primary , junior and senior secondary schools in Addis Ababa. Based on the records of the Schools Medical Service Department and of the Addis Ababa Education Office, the two institutions responsible for the delivery of school health services in Addis Ababa, 57 government schools were identified to have some kind of school health services (for definition see appendix, p 53). All the 57 school clinics in these schools which are rendering school health services are taken for this study.

An official letter was written from the Department of Community Health to Addis Ababa Education Office and through it, to all schools to be included in the study to get their permission and cooperation for the study. Other institutions were also approached for similar assistance, especially for the necessary manpower and transport. A special questionnaire was prepared for the study (see appendix pp 54-60) and pretested before use.

The interviewers were selected from the Addis Ababa Health Service Department and trained for this purpose. The one day training was followed by a practical experience during pretesting the questionnaire the following day carried out in six school clinics (10% of those studied). This helped not only to familiarize the interviewers with the work to be done but also to estimate the time the interview takes and to make the necessary adjustments.

The sources and methods used for collecting information included:

2.1. health workers incharge of the school clinics were interviewed using the prepared questionnaire survey form. When there were more than one of such staff in one clinic the senior one was interviewed.

2.2. Morbidity data were obtained by reviewing medical records and reports of the school clinics and the School Medical Service Department for the 1985/86 school year.

2.3. Observation of certain physical settings were made by the interviewers. Inter-observer variations were controlled through training and use of similar methods.

Data collection was done by five trained nurses, with each interviewer assigned to twelve school clinics. The interviewers conducted the interview and collected all the necessary information by visiting each clinic. In cases of failure during the first attempt for the interview repeat visits were made through arrangements with the school directors. Supervision of the whole work has been done by the investigator himself who has also participated in the interview.

The collected data was compiled and the findings were compared with previous works done on school health service in Addis Ababa and other parts of the country to see developments over the years, and with the morbidity data for the city's general population to look for differences and similarities in the morbidity patterns (1,2,7,8,9,11,19). To some extent data on school health services from other developing countries were used with regard to standard of school health facilities, staffing and types of services rendered (14). Also, discussions have been conducted by the investigator with some responsible persons in the Schools Medical Service Department and in Ministries of Education and Health.

3. RESULTS

The 225 schools in Addis Ababa are classified into six categories on the basis of ownership (for definition see appendix on(p 53) . A total of 374,224 students attended these schools during 1985/86 school year*. Of these 230,745 students (62%) attended the 75 government schools in the city while the rest were distributed throughout the 150 schools in the other categories (Table 1).

The 57 schools included in this study covered 76% of the government schools and 25% of all the schools in Addis Ababa. A total of 197,181 students attended these schools during the same year. This was about 85% of that of the government schools and 53% of all the students in the city (Table 2). The male to female ratio was 0.9:1.

3.1. Common Causes of Morbidity in School Chidren

Analysis of medical records of the 57 school clinics showed that a total of about 255,732 patient visits were made during 1985,86 school year. The average daily attendance was about 22 patients per clinic and the per capita clinic visit was 1.3. The ten categories of diseases reported by the school clinics and that were responsible for about 69% of all the clinic visits are shown in table 3.

Incidence rates were calculated for three disease categories in two groups of students, these are primary school children aged 7-12 years and senior secondary school students aged 14-18 years as shown in table 4. The diferences in the calculated incidence rates were statistically significant (X^2 = $P < 0.01$) in each case. Accordingly accidents and injuries and skin infections were found to occur more frequently among the primary school children, while dental problems

*1985/86 school year constituted of 202 school days.

Table 1. Distribution of all Schools in Addis Ababa by Ownership and Number of Students, 1985/86

Ser No.	Ownership*	No. of Schools	%	Number of Students	%
1	Government Schools	75	33.3	230,745	61.7
2	Public "	118	52.4	122,390	32.7
3	Mission "	18	8.0	13,871	3.7
4	Community "	10	4.4	4,774	1.2
5	Church "	2	0.9	1,864	0.5
6	Others	2	0.9	600	0.2
	Total	225	100.0	374,224	100.0

Source: Addis Ababa Education Office (1985/86)

* For definitions refer appendix.

Table 2. Distribution of the Schools Studied by Academic Level and Number of Students, 1985/86.

Ser No.	Academic Level	No. of Schools	%	Number of Students	%
1	Primary Schools	10	17.5	17,995	9.1
2	Junior Secondary Schools	9	15.8	19,809	10.1
3	Senior " "	12	21.1	49,542	25.1
4	Combined*	26	45.6	109,835	55.7
	Total	57	100.0	197,181	100.0

*Combined - two or more levels of schools under one school administration. Accordingly the following combinations were found:

Primary and junior secondary schools	16	(62%)
Junior and senior " "	6	(23%)
All the three combined	4	(15%)

Table 3. Ten Leading Causes of Morbidity in School Children in Addis Ababa, 1985/86

Ser No.	Reported causes of clinic visits	Number of Cases	%
	All visits	255,732	100.0
1	Accidents & injuries	44,687	77.5 (17.5)
2	Headaches	42,846	16.8
3	Upper respiratory tract infections	22,564	8.8
4	Infections of the skin and subcutaneous tissues	16,965	6.6
5	Abdominal discomforts	15,098	5.9
6	Eye infections	10,764	4.2
7	Gastro-entritis	9,435	3.7
8	Gastritis	7,240	2.8
9	Tonsilitis	3,254	1.3
10	Dental problems	2,731	1.1

Note: For practical purposes school clinic diagnosis is considered as primary or first aid level diagnosis.

Source: School clinics medical records (1985/86)

Table 4. Occurence of Three Disease Categories in Primary and Senior Secondary School Students in Addis Ababa, 1985/86.

No of students in each school	No. of Cases Reported from 10 purely primary schools			No. of students in each school	No. of cases reported from 12 purely senior secondary schools		
	Accidents & injuries	Skin infections	Dental Problems		Accidents & injuries	Skin infections	Dental problems
1304	1198	185	117	2209	84	42	17
2484	964	28	9	3298	58	21	-
1040	111	86	-	5117	-	-	-
2560	1082	143	31	514	440	-	284
2099	700	176	-	2337	100	34	-
1870	2296	1452	-	2794	97	150	32
1600	200	100	-	4281	61	61	-
1392	282	244	71	5383	656	227	-
1472	706	138	-	7146	1180	882	856
1974	278	258	-	6329	2374	291	490
				5114	1515	618	-
				544	76	-	-
Total 17935	7747	2783	228	49542	6595	2405	1429
(Mean)	774.7	278.3	22.8		549.6	200.5	119.1
(SD)	38.9	27.8	10.0		40.6	27.1	24.8

Note: The spaces indicated (-) do not show total absence of the conditions but means that the condition were not reported among the ten leading causes of morbidity.

Source: School clininc medical records (1985/86)

were more common among the senior secondary school children. Students belonging to the junior secondary and combined schools were not included here because they were mixed population or intermediate age groups.

Even though these diseases were diagnosed in the seriously ill and referred patients, it should be noted that causes of morbidity in school children were taken from the medical records of the Schools Medical Service Department for the same period to get a more refined picture. The 10 diseases diagnosed in 11,347 referred patients from Addis Ababa are shown in table 5. These diseases were respondible for about 91% of all the visits to the Schools Medical Service Department.

Intestinal parasites constituted 28.1% of the diagnoses made at the Schools Medical Service Department. Nine species of intestinal parasites were identified by simple laboratory methods (Table 6). Ascaris lumbricoides was the dominating species and multiple parasitic infections were also common conditions.

Comparison of the ten leading causes of morbidity in school children during three different school year periods, showed that intestinal parasites, respiratory tract infections, skin diseases, accidental injuries, and venereal diseases occured consistently during the past 26 years (Table 7). Infectious diseases like typhoid, typhus and infectious hepatitis were not in the list of the 10 diseases during the last two periods. Dental caries, however, has possibly appeared as a major problem in the school population during the last decade.

Table 5. Ten Leading Causes of Morbidity in Patients Referred to the Schools Medical Service Department from Addis Ababa 1985/86

Ser No.	Diagnosis	No. of Cases	%
	All visits	11,347	100.0
1	Intestinal parasites	3,183	28.1
2	Dental caries & other conditions of the teeth and gums	2,583	22.8
3	Bronchitis	1,540	13.6
4	Infections of the skin and subcutaneous tissues	1,479	13.1
5	Otitis media	552	4.9
6	Pharangitis and tonsilitis	390	3.4
7	Accidental injuries	243	2.1
8	Conjuctivitis	175	1.5
9	Venereal diseases	111	1.0
10	Disoptics	90	0.8

Source: Schools Medical Service Department 1985/86

Table 6. The Most Prevalent Species of Intestinal Parasites Seen in School Children in Addis Ababa 1985/86.

Ser No.	Diagnosis	No. of Cases	%
	All intestinal parasites	3,183	100.0
1	Ascariasis	1,283	40.3
2	Amoebiasis	922	28.9
3	Giardiasis	543	17.1
4	Trichuriasis	207	6.5
5	Hymenolepiasis	91	2.9
6	Taeniasis	63	2.0
7	Strongylodiasis	40	1.3
8	Hookworm	28	0.8
9	Entrobiasis	8	0.3

Source: Schools Medical Service Department 1985/86

Table 7. Leading Causes of Morbidity in School Children According to Diagnosis Made at the Schools Medical Service Department During Three Different Periods.

Ser No	Diagnosis 1959/60	Number of patients	Diagnosis 1970/71	Number of patients	%	Diagnosis 1985/86	Number of patients	%
	All visits	-	All visits	20,992	100	All visits	11,347	100.0
1	Intestinal parasites & other diseases of GIT	8755	same	9,005	49.9	same	3,222	28.4
2	Diseases of the respiratory tract	2650	same	4,639	22.1	Dental caries & other periodental conditions	2,568	22.6
3	Skin diseases	2100	same	4,093	19.5	Diseases of the respiratory tract	2,032	17.9
4	Communicable diseases*	1830	Eye diseases	1,616	7.7	Skin diseases	1,479	13.1
5	Accidental injuries	460	-	-	-	Otitis media	552	4.9
6	Venereal diseases	460	-	-	-	Accidental injuries	243	2.1
7	Nervous & Mental disorders	120	-	-	-	Venereal diseases	111	1.0

*Communicable diseases in this context included typhoid, typhus and infectious hepatitis

Sources: Schools Medical Service Department 1959/60

Woldemichael Negussie, 1973 (2)

Note: These years were used only because data were available.

Further comparison of leading causes of outpatient morbidity for the general population and school population of Addis Ababa showed similarity in some of the conditions. However, accidental injuries and venereal diseases at least were not in the ten top diseases for the general population, whereas these were important features in the school population (Table 8). As a whole, compared to other problems like distance of schools and lack of transport, illnesses were not reported as major causes of absenteeism from schools.

3.2. Mortality in School Children

A total of 52 deaths were reported during the school year of 1985/86 in 27(47%) of the schools surveyed. Of the 52 deaths reported, 27 deaths (52%) occurred in males and the remaining 25(48%) in females. Causes of deaths were reported only for 24(46%) of the deaths. The list of the ten reported causes of death is shown in table 9. Accidents were responsible for over 45% of the deaths.

3.3. Staff for School Health Service

The usual pattern of staffing is one health worker for each school, and sometimes the student population is also considered. Among the schools surveyed, high schools were mostly staffed by one nurse and a health assistant each. All in all there were 66 school health workers during 1985/86 in the 57 school clinics surveyed. This included 12 nurses (18%), 39 trained health assistants and 15 practical health assistants (23%) as shown in table 10.

Table 8. Comparison of Leading Causes of Outpatient Morbidity Between the General and School Populations of Addis Ababa

Ser No	General Population 1983/84*	No. of patients	%	School Population 1985/86**	No of patients	%
	All visits	617,641	100.0	All visits	11347	100.0
1	Eye diseases including trachoma	40,040	6.5	Intestinal parasitas	3183	28.1
2	Dysentries and gastroenteritis	29,952	4.8	Dental caries & other conditions of the teeth & gums	2588	22.8
3	Otitis media & other ear conditions	28,406	4.6	Bronchitis	1540	13.6
4	Intestinal parasites	27,917	4.5	Skin & subcutaneous tissue infections	1479	13.1
5	Dental caries and other conditions of the teeth and gums	24,263	3.9	Otitis media	552	4.9
6	Acute upper respiratory tract infect.	17,534	2.8	Pharangitis and tonsilitis	390	3.4
7	Gastritis and Duodenitis	16,389	2.7	Accidental injuries	243	2.1
8	Skin & subcutaneous tissue infect.	14,981	2.4	Eye infections	175	1.5
9	Pneumonias all types	14.625	2.3	Venereal diseases	111	1.0
10	Bronchitis	12.207	2.2	Disoptics	90	0.8

Source: Comprehensive Health Service Directory, Tir, 1986 (19)

**Source: Schools Medical Service Department 1985/86.

Note: There are differences in the ages of the two populations and the years of diagnosis used in this table. This was done due to unavailability of data and hoping that major morbidity change had not occurred during this short time.

Table 9. Reported Causes of Deaths Among School Children in Addis Ababa 1985/86

Ser No.	Reported Causes	No. of deaths	%
	All deaths causes reported	24	100.0
1	Accidents	11	45.8
2	Pneumonias	2	8.3
3	Sucides	2	8.3
4	Abortions	2	8.3
5	Acute diarrheal diseases	2	8.3
6	Tuberculosis	1	4.2
7	Intestinal obstruction	1	4.2
8	Heart-failure	1	4.2
9	Infectious hepatitis	1	4.2
10	Fever of unknown origin	1	4.2
	Total	24	100.0

Source - School Clinics and Record Offices (1985/86).

Note: Reliability of these data is questionable due to lack of supporting evidences.

Of the school clinics surveyed 9(16%) were staffed by two health workers each, while the remaining 48(84%) were one-man clinics. On the whole, there was little effort made by way of preparing refresher courses for the school health personnel as only 12 health workers (18%) had the chance of participating in some sort of on the job training at least once during their long service years (Table 10).

The health worker-to-student ratio for Addis Ababa for the 1985/86 school year was about 1:3000 (Table 11). The proportion grew three-fold between school years 1971/72 and 1985/86 as shown in table 11.

3.4. Budget for School Health Service

Budget allocated for drugs and equipment for Addis Ababa school clinics is directly transferred to the account of the School Medical Service Department for the purchase and delivery of these supplies to the school clinics. Drugs are distributed on a monthly basis, school health workers from the various clinics collect their monthly supplies according to set schedules. There is no standard list for drugs, the general practice is that very few drugs for first aid use are provided. Antibiotics are not allowed to be in use by school clinic staff according to the existing guideline of the School Medical Service Department.

The staff of school clinics do not participate in preparing budget for their clinics, and do not know their share of the annual allocated budget. There is no allocation for other expenses (ie transport cleaning and washing....) and school clinics have to depend on their respective school administration for such expenses.

Table 10. Staff in the School Clinics in Addis Ababa by Type, Number and Participation in Refresher Courses, 1985/86

Type	Number	%	Average years of service	Reported participation in Refresher Courses			
				Yes	%	No	
Nurses	12	18.2	11.8	2	16.7	10	83.3
Trained H/Assistants	39	59.1	22.6	8	20.5	31	79
Practical H/Assistants	15	22.7	18.2	2	13.4	13	86.6
Total	66	100.0	19.7	12	18.2	54	81.8

Table 11. Ratio of School Health Personnel to Students During Four Different School Years

School Year	Geographic Area	No. of Students in all types of schools	No of Students in government schools only*	%	No of health personnel**	Health Worker to student ratio in gov. schools
	Addis Ababa		72,907		66	1:104
1971/72	Other regions		509,912		112	1:4552
	Total	830,680	582,819	68.5	178	1:3274
	Addis Ababa		158,006		76	1:2079
1978/79	Other regions		957,691		102	1:9546
	Total	1,422.491	1.131.697	79.5	178	1:6357
	Addis Ababa	-	-		75	-
1981/82	Other regions	-	-		64	-
	Total	2,861,491	2,507.726	87.6	140	1:17,912
	Addis Ababa		230,745		78	1:2,958
1985/86	Other regions		2,464.088		43	1:57,304
	Total	3,005.105	2,694.833	89.6	121	1:22,227

Note: 1. These years were used only because data were available
2. Schools Medical Service Department Health Workers are Counted for Addis Ababa

Source: *Ethiopia Statistical Abstract (20).
**Woldemichael Negussie (2), Joint Committee Report (11)

Over 85% of the annually allocated budget for school health services in Addis Ababa is used for salaries, and only the remaining 14% is used for drugs and equipment (Table 12). The overall budget increase between 1978/79 and 1985/86 fiscal years was only 16%, while the increase in the number of students for the same period was 46%. The per capita allocated budget for 1985/86 was Birr 1.14 and of this only 0.17 cents (14% of 1.14) was spent for drugs while the rest was used for staff salary.

3.5. Facilities for School Health Services

All except two of the school clinics surveyed have access to most utilities like water, toilet, telephone and electricity (Table 13). It was also found out 35% of the school clinics depended on the Red Cross for ambulance services, although 7% had access to ambulance service from the School Medical Service Department (Table 14). Others used some alternative sources like school vehicle, taxi etc. Almost 21% of the school clinics surveyed were not able to indicate their possible sources of ambulance service in cases of emergency.

3.6. Activities of the School Clinics

Most clinic activities focused on curative services, and much less on preventive activities. Only 11(19%) of the school clinics surveyed had work schedules,which included activities like examination and treatment, toilet and compound sanitation inspection, inspection of school children for personal hygiene. Other important activities like periodic medical examination of school children, screening for defects of hearing and vision, vaccinations are not included. School canteen

Table 12. Budget for School Health Services During Three Different Fiscal Years

Fiscal Year	Different Areas of Service	For salary (Birr)	%	For drugs and equip. (Birr)	%	Total Annual allocated budget	% For different areas	Per capita annual budget
	Schools Med.Ser. Dept.	-	-	-	-	-	-	
1967/68*	Addis Ababa	93,660	75.4	30.846	24.7	124.506	42.9	0.40
	Other regions	139.329	84.2	26,122	15.8	165,451	57.1	3.30
	Total	232,989	80.4	56,968	19.7	289,957	100.0	0.79
	School Med. Ser. Dept.	39,180	100.0	-	-	39,180	6.6	-
1978/79**	Addis Ababa	201.720	89.0	24,907	11.0	226,627	38.1	1.43
	Other regions	232,384	69.2	96,363	28.0	328,747	55.3	0.34
	Total	479,284	79.8	121,269	20.2	594,554	100.0	0.52
	School Med. Ser. Dept.	75,790	100.0	-	-	75.790	11.3	-
1985/86	Addis Ababa	225,060	85.6	37,739	14.4	262,799	39.9	1.14
	Other regions	162,032	50.3	159,996	49.7	322,028	48.8	0.13
	Total	461,882	70.0	197,735	30.0	659,617	100.0	0.24

Note: These years were used only because data were available.

Sources: *Woldemichael Negussie (2)
**Joint Committee Report (11)

Table 13. Availability of Utilities in the School Clinics in Addis Ababa 1985/86.

Type	Available = 55				Not available = 2	
	Incide the clinic	%	Inside the compound	%	No	%
Tap water	32	56.1	23	40.4	2	3.5
Telephone	1	1.8	56	98.2	-	-
Toilet	2	3.5	53	93.0	2	3.5
Electricity	57	100.0	-	-	-	-

Table 14. Utilization of Ambulance or Other Transport Services in Cases of Emergencies 1985/86

Ser No.	Sources of Ambulance Service	No of clinics that reported use	%
1	Red cross ambulance	20	35.1
2	School vehicles	9	15.8
3	Taxi	8	14.0
4	Schools Medical Service Department ambulance	4	7.0
5	Personally arranged cars	3	5.3
6	Higher UDA'S car (Keftegna)	1	1.8
7	Not indicated	12	21.0
	T o t a l	57	100.0

services are provided mostly in the junior and senior secondary schools and less for the needy primary school students (Table 15).

3.7. Referral System in School Health Service

There is a clear procedure for referring patients within the existing school health service system. The routine practice is that all patients, who need further medical care are referred to the School Medical Service Department by the school clinics, except in rare emergency conditions that need direct transfer of patients to hospitals for proper care.

The Schools Medical Service Department is staffed with a school physician (GP), a dentist, 3 nurses and another 7 medical staff. It is also equipped with X-ray and basic laboratory facilities. Over 90% of the referred patients that attend this center are from within Addis Ababa. The rest come from the nearby Awrajas of Shoa. During the current school year there were 7477 referrals from Addis Ababa school clinics, and 5854(75%) have been received with feedbacks. According to the views of the school clinics staff these numbers could have been higher if proper records were kept, all referred patients returned the referral cards on time. Beyond the School Medical Service Department, referral of patients is mostly left to the decision of the parents of sch children after being informed of the situations.

3.8. Recording and Reporting

Common register books are used for recording daily clinical activities in all the school clinics. School clinics are expected to report

Table 15. Preventive and Promotive Health Activities Carriedout by the School Clinics in Addis Ababa 1985/86

Ser No.	Type of Activity	No. of clinics that reported			
		Yes	%	No	%
1	Periodic medical examination of school children	-	-	57	100.0
2	Screening for vision problems	-	-	57	100.0
3	Screening for hearing problems	-	-	57	100.0
4	Screening for dental problems	-	-	57	100.0
5	School vaccination	-	-	57	100.0
6	School canteen services	33	57.9	24	42.1
7	Inspection of school children for personal hygiene	44	77.2	13	22.8
8	Health education outside formal class instructions	21	36.8	36	63.2
9	First aid services	57	100.0	-	-
10	Other evironmental health activities	12	21.1	45	78.9

Note: School canteen service is not necessarily a clinic activity, but included here only because it is a health related service.

twice a year only. There is no standard form for reporting. A list of ten or more diseases seen during a six months period is passed to Addis Ababa Education Office from each clinic. No other health activities are included in the reports. The Schools Medical Service Department does not receive any of these reports.

3.9. Cooperation between the Ministries of Health and Education in providing School Health Service

On the basis of the nature of the service itself, and the joint proposals made in the past (2), it is believed that both Ministries have important roles to play in the promotion of the health of school children. In attemtping to assess the level of cooperation that exists between these Ministries at the practical service unit level, questions indicating the areas of possible involvement were included in the questionnaire (see appendix p 53). But all the 57 school clinics (100%) responded "NO", meaning that there was not any known involvement of the Ministry of Health in delivering school health service in Addis Ababa. More or less similar views exist at higher levels both at the Schools Medical Service Department and in the Ministry of Education.

3.10. Problems of the School Health Service in Addis Ababa

Most of the problems reported are chronic. The list of the main problems reported as existing by the school clinics is shown in table 16. Some health workers have tried to present their problems to the school administration and get them discussed and possibly solved. In fact, very few have succeeded in getting some money for buying additional drugs and equipment. In 28 schools (49%) some sort of discussions have been conducted on school health service at least once during the year. These discussions were either in staff meetings or by school health committees.

Table 16. Problems Reported as Existing in School Health Service in Addis Ababa 1985/86

Ser. No.	Type of problem	No. of clinics that reported			
		Yes	%	No	%
1	Shortage of drugs & equipment	45	79.0	12	21.0
2	Shortage of staff	33	57.9	24	42.1
3	Transport problem (ambulance)	21	36.8	36	63.2
4	Shortage of supplies for washing and cleaning	14	24.6	43	75.4
5	Problem of utilities	14	24.6	43	75.4
6	Lack of supervision, support and training	13	22.8	44	77.2
7	Space not available or enough	8	14.0	49	86.0

Note: It is possible that one clinic might have reported more than one problem.

4. DISCUSSION

Children are the most important resources of a nation, therefore, everything possible should be done to promote their healthy development which among other things has a direct influence on their educational performances. Schools are likely to expose students to an increased risk of infectious diseases, accidents and hazardous environmental conditions which interfere with their development unless special and appropriate preventive and curative measures are taken in time. In developing countries, the need for such special measures is very high because of the lack of health services even for the general population in the face of high disease prevalence. School health services are among the important and necessary measures needed for the protection and promotion of children's health. Even though, school children can not be seen separated from the general population they are part of some characteristics peculiar to them necessitate the establishment of school health services based on critical assessment of their health needs and available resources.

Like in any other developing country the school age population of Ethiopia constitutes about a third of the population. Of this a highly increasing number of children attend school every year. However, this situation has not been met with a paralleled development in school health services so as to enable to protect and promote the health of school children. Almost the same condition that existed around the begining of the establishment of the service are seen today. When

compared to the achievements made in the areas of education and national health service developments over the same period of time one can really see how much school health service has been neglected in the past.

This study concerned with the assessment of school health service in Addis Ababa, covered 57 government schools that have some sort of school health service (Table 2). School clinics are the front line health units in the school health service setup. The Schools Medical Service Department serves as a national referral center for school clinics although it is mostly limited to Addis Ababa. The 57 school clinics delivered health service to about 85% of the student population in the government schools. Analysis of the medical records and reports from these institutions for the school year 1985/86 helped to identify some of the important health problems seen in school children as shown in Table 3. It is to be noted that the need for more systematic school health surveys to come up with more elaborate and conclusive findings cannot be over emphasized. Hence, these findings have to be interpreted cautiously as the quality of these data depends very much on the diagnostic skill of the school health workers and the availability of reliable diagnostic facilities in the schools.

Accidents and injuries were found to be the leading causes of morbidity with an overall incidence rate of 22.6%. Accidents also accounted for over 45% of the reported deaths in school children during the same period (Table 9). However, the exact causes of these accidents and where they took place could not be known from the available data and is therefore, difficult to conclude that all these accidents occurred within the schools.

In Ethiopia, data on childhood accidents are very limited and mostly hospital based. A retrospective study of 343 accidental injury cases admitted to the Ethio-Swedish Paediatric Hospital during 1968-71 by Fisseha Tekle Wolde (21), showed burns, motor vehicle accidents and accidental falls to be the three major causes of accidents in childhood. Of these admissions mostly from Addis Ababa, motor vehicle accidents accounted for 27% of the cases and mostly occurred in the age group of 5-14 years with a cause specific mortality rate of 7.5%. Accidental falls occurred mostly in the lower age groups 1-9 years and accounted for 18.6% of the cases with mortality rate of 3%. All in all accidents accounted for 5% of all the hospital admissions. However, it was not possible to know how many of these cases were students.

During 1983/84 motor vehicle accidents accounted for about 1.3% of all the hospital admissions (30,188) and were one of the ten leading causes of hospitalization in Addis Ababa (19). Accidents besides costing lives, leave many disabled and maimed. Trauma related to traffic, work, sports, or physical assault are the commonest causes of disabilities in adolescence (22). Schools are ideal places to teach about prevention of accidents and well organized school health services are necessary for minimizing risks when accidents do occur.

Headaches were the second major category of health problems reported by the school clinics (Table 3). Such a common occurrence of headaches, apart from being associated with some other organic disease, might also be due to special stress conditions to which school children

are subjected during their transitional period of adolescence. Unless the nature of these headaches is properly understood and students properly trained on how to cope with them in a healthy way these can lead to emotional and physical disorders with serious consequences (22).

Intestinal parasitic diseases were also major categories of diseases frequently seen in school children in Addis Ababa. According to the findings of this study it was unlikely that schools are the sources of infections, as about 96% of the schools surveyed have reported availability of latrines which were hopefully used by all the school population. Lack of improvement in the prevalence of intestinal parasites in schools in Addis Ababa is therefore, likely to be due to the poor sanitary conditions around play grounds and homes of school children.

Intestinal parasites of about nine species accounted for over 28% of the diagnoses that have been made at the school Medical Service Department during 1985/86 school year in students referred from Addis Ababa (Table 5). Ascaris lumbricoides was the most common species seen with Entamoeba histolytica coming next. These findings are comparable to the 11 species of intestinal parasites, previously reported in school chidren in Addis Ababa (7). Similarly, about 12 species of intestinal parasites have been reported in pre-school children in Addis Ababa (23). Ascaris lumbricoides was the dominating species in both students.

Even though it is difficult to establish the role of schools in the transmission of intestinal parasites, school health services however,

can play a major role in interruption of the transmission through proper health education, provision of treatment for cases, improving compound sanitation and supervision of cleanliness and proper use of latrines.

Dental caries and other periodental conditions were found to be major health problems in school children constituting for 23% of the diagnosis made at the Schools Medical Service Department (Table 5). Higher prevalence rate was seen in senior secondary school students when compared to primary school children. It seems that dental problems are newly appearing problems as this was not reported in earlier records examined (Table 6). Dental problems also appeared as a major cause of morbidity in the general population of Addis.Ababa (19). The most likely reason is change in dietary pattern mostly in such urban centers where more sweets and refined carbohydrates are taken, and the overall poor state of oral hygiene.

Yayehyrad Kitaw et al (1982) reported an overall Decayed, Missed and Filled teeth (DMF) rate of 53% in a 232 selected sample of high school and university students who participated in the Development Through Campaign 1976-77 (24). These findings, in view of the longstanding belief that Ethiopians have very healthy teeth are quite alarming. The latest available global epidemiological data shows worsening trends in the prevalence of dental caries especially in most developing countries although improvement is seen for most of the industrialized countries (25,26). DMF indices of 0.2 in 1958 and 1.5 in 1975 have been specifically reported for Ethiopia at the age of 12 years which shows an increasing

trend of the problem. Schools will be one of the ideal places for intervention measures to control this situtation. Such activities involve education of school children to help them develop healthy behaviour, screening for dental problems in school children and providing proper dental services.

Skin infections mostly scabiasis are always reported as important health problems in the school population. These are also reported to be common features in the general population of Addis Ababa and other regions (19). This implies that the standard of personal hygiene both in the school children and the general population is very low. These conditions can be controlled at least in the school popualtion if proper health education on personal hygiene and adequate treatments are given on time and proper inspection of children in schools is done regularly.

Even though the full extent of the problem is difficult to determine because of the stigma attached to these diseases and the tendency to hide them and, therefore, to avoid seeking treatment for them, venereal diseases are still being reported as common conditions in the school population in Addis Ababa (Table 5). The most frequently seen are cases of gonorrhea, chancroid and lymphogranuloma venerum. Venereal diseases were not at least in the ten major causes of outpatient morbidity for the general population of Addis Ababa (Table 8). This calls for the provision of screening and treatment services and health education efforts in schools. Eye and ear problems were also common conditions seen in school children and are likely to interfere with their learning abilities (Table 5).

Services being provided at the Schools Medical Service Department do not include such specialities like opthalmology and student counselling.

On the whole the morbidity patterns in the school population of Addis Ababa are fairly comparable to morbidity patterns of school children reported from East Africa (27), and India that indicated infectious diseases, intestinal parasites, diseases of eye, ear and skin and dental caries as common health problems of the school children (28).

Most of the diseases seen in the school population in Addis Ababa, are mostly preventable conditions, but continue to be major health problems. Apart from their being reflections of the existing poor socio-economic conditions of the country, the persistence of such problems indicate lack of emphasis for simple public health activities both in the schools and in the community. This may also reflect the deficiency in the health education efforts especially in schools.

Even though not very well documented, analysis of the data collected during the survey has also indicated that pneumonias, abortions and sucides were next only to accidents as causes of deaths in school children, each constituting for 8% of the deaths for which causes were known (Table 9). Especially deaths from abortions could be higher according to information from hospitals. Therefore until more effective alternative solutions are found to these problems, sex education and counselling services in schools deserve special emphasis to prevent most of these deaths.

This study also showed that some of the most important activities like medical check-up of school children, screening for hearing, visual defects

and dental problems, and vaccination are not at all practiced (Table 15). Most of the existing clinics lack space, drugs, budget and staff. Over 72% of the school clinics surveyed had only one room each and about 85% were staffed by only one health worker each and some of them are practical health assistants.

Assuming that distribution of staff was fair, the ratio of health personnel to students for Addis Ababa was 1:3000 during 1985/86 school year (Table 11). This, compared to the ratio of 1:57,000 for other regions and the national average of 1:22,000, is relatively better, but is far less than the initially set standard of assigning one health worker for every 150 to 500 students or even one nurse and one or two health assistants for about 5000 students (29). The present figures are far below the standard of staffing school health units in some of the North African countries. For example, in Egypt the national standard for staffing is one nurse for 1,500 students or one nurse per school, and in Libya one nurse for 2,000 students (14). These targets have been met by 1974 in both countries*.

The method used for recording was found to be unsatisfactory. The use of common register books may be economical but does not allow proper recording of individual health information so as to allow follow-up of individual cases if and when the need arises. Schools do register absentees but the information is incomplete especially with regard

*Request has been sent in writing to the WHO Regional Office for Africa (AFRO) to get reference materials on school health service standardised for neighbouring African countries, but no reply has been received so far.

to the causes of absenteeism. Reporting was done less frequently and the reports were not properly acted upon. The difference in the languages used for recording and reporting creates inconvenience for conducting such studies.

Cooperation between the Ministries of Education and Health in the delivery of school health services was not that strong. The Ministry of Education seems to be more concerned with the health education aspect and gives less emphasis to school health services. The Ministry of Health however, is not directly involved in providing school health services. This is probably due to lack of clear policy and guideline for school health service and the existing poor organization. Both ministries do see the need for an organized school health service but do not work as closely as expected to improve the situation.

School health service is indespensable in view of the existing health problems and under developed health service system in the country. However, findings of this study suggest that shortage of manpower, budget, lack of supervision, support and coordinating are among the major problems that hinder the development of school health service.

This study has faced some financial and time constraints. Lack of properly recorded data and reference materials on school health service specially from developing countries were rather acute. Inspite of these problems every effort has been made to get it completed in time.

5. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

The history of school health service in Ethiopia under the responsibility of the Ministry of Education dates back to a period of over 45 years. Involvement of the Ministry of Health in the delivery of school health service in more recent years was mostly related to the development of the "basic health service" concept and opening of the Gondar College of Public Health. Several areas of cooperation have been proposed between the two ministries in order to strengthen the school health service in the past but there are no documents that show how much of these have been implemented. The current state of the school health service however, clearly shows that not enough emphasis has been given to it.

The study has attempted to assess the existing school health service in Addis Ababa, and at the same time the general picture in the country as a whole. Common health problems of school children in Addis Ababa have been identified. Included in this list are accidental injuries, intestinal parasites, dental problems, skin and respiratory tract infections and venereal diseases. Though not fully exhaustive the most common causes of death in school children have been reported to be accidents pneumonia, sucide and abortion .... . Most of the diseases and deaths are of the type that can be prevented through simple and effective public health intervention methods like proper health education and environmental sanitation. However, the fact that most of these conditions are commonly and persistently seen in the school popualtion shows that not enough attention is given to such activities.

School children are exposed to most of the health problems of the community to which they belong and higher risks of infectious diseases, accidents, and hazardous environmental conditions while in schools. School children must be medically fit and alert to benefit from their education. A well organized school health service plays an important role in the protection and prevention of the health of school children. In view of the existing poor organization, the school health service in Addis Ababa is unlikely to fulfill these expectations. The problems involved are diverse and chronic. Therefore, much remains to be studied in the area of school health to come-up with clear picture of the problems and possible solutions to improve the situation.

5.2. Recommendations

Based on the findings of this study, on the nature of the school health service in Addis Ababa, and the problems involved the following recommendations are made. Some of the recommendations are general issues that need to be handled at the national level, while the rest are more specific to the situation in Addis Ababa.

5.2.1. General Recommendations -

5.2.1.1. Formulation of a school health service policy is a pre-requisite for planning and guiding any effort to improve school health service. The policy must clearly indicate the responsibilities to be assigned to or shared by all concerned agencies, especially that of the Ministry of Health and the Ministry of Education with regard to school health.

5.2.1.2. A minimum feasible standard is needed for establishing school clinics, staffing pattern and service to be provided at the different levels of service units including the School Medical Service Department.

5.2.1.3. Improvement is required in the allocation of resources for school health service in proportion to the school population.

5.2.1.4. Recognizing and strengthening the structure of school health services is of utmost importance.

5.2.1.5. The establishment of a national coordinating committe is vital for strengthening the loose working relationship between all concerned agencies in the delivery of school health service, especially between the Ministry of Health and Ministry of Education.

5.2.1.6. School health service is an important aspect of community health service. Therefore, communities need to be encouraged to actively participate in all endeavours to improve school health service.

5.2.2. Specific recommendations

5.2.2.1. The Schools Medical Service Department need to be strengthened and better organized to provide the necessary guidance and supervision. Services at this center shall include additional specialities like opthalmology and student counselling.

5.2.2.2. Organizing a mobile health team which will visit the schools in Addis Ababa to conduct such activities like:

- periodic medical examination of school children
- screening for hearing, vision.... defects
- vaccination
- inspection of school premises and also participation in health education activities.... will be vital both in increasing service coverage and improving quality of the service. This will require employing few medical and public health staff while the remaining team members (nurses, health assistants...) can safely be moblized from the existing staff. The team has to work very closely with existing health service facilities (hospitals, health centers and health stations).

5.2.2.3. Conducting short-term training programs (refresher courses) will be useful in re-orienting and motivating the school health staff. Similarly organizing seminars on school health at the regional level (Addis Ababa) with the involvement of all concerned government institutions, mass organizations and related agencies will play on important role in creating the necessary awareness of the situation and possibly finding ways and means of solving the problems.

5.2.2.4. The on going Red Cross program of training students as first aiders needs to be further strengthened, giving priority for schools without school health service

5.2.2.5. Generation of additional funds needed to improve health service may be possible along with the existing system of collecting book fees.

Eg. If a fixed sum of Birr 0.50 per student is collected annually each school in Addis Ababa with an average student population of about 3000 will have about Birr 1500 to be used for school health service in addition to what will be provided from the central level.

5.2.2.6. Health education efforts, especially in schools need to focus on major health problems of school children.

5.2.2.7. Creation of a safe and healthy environment in schools and around homes will be the main solution for the general improvement in the health of school children and the community as a whole. Health workers, the youth and urban dwellers association, mass and educational media workers will have a major role to play in educating and mobilizing the population for such activities to bring about general improvements.

APPENDIX I.

DEFINITIONS

Government schools: are those schools operated by the Ministries of Education, Health, Agriculture, Transportation and Communications, Addis Ababa University and its branches etc.. However, for the purpose of the study the term strictly applies to schools operated by the Ministry of Education only (20).

Public Schools: are schools operated by the population of localities in which they are found and which are financed by student fees with or without assistance from the government. All public school were private before 1975 (20).

Mission Schools: are schools operated by religious missions with or without assistance from the government (20).

Church Schools: are schools maintained and operated by the Ethiopian orthodox church. Most of these schools teach reading, writing, and religion but some allow the Ministry of Education curriculum. In this case the data refers to the latter (20).

Community Schools: are schools operated by foreign communities (eg. Indian, German.... etc.) and some allow the curriculum of the Ministry of Education (20).

Other Schools: are schools operated by prisons and public welfare institutions.

School Health Service: is operationally defined as "the availability of a school health unit with some basic drugs and equipment and a permanently assigned school health worker currently delivering health service" (20).

APPENDIX II

SCHOOL HEALTH SERVICE SURVEY FORM

ADDIS ABABA 1985/86 School Year

PART ONE GENERAL INFORMATION

1. Name of the School _____

2. Location: Zone _____ Higher _____ Kebele _____
   Telephone _____

3. Type of School. Indicate by putting "X" mark.
   3.1. Primary _____
   3.2. Junior Secondary _____
   3.3. Senior " _____
   3.4. Combined (which ones) _____

4. Number of students currently attending the school (all shifts included except night classes).

Male	Female	Total
_____	_____	_____

PART TWO INFORMATION ON SCHOOL HEALTH SERVICE

Indicate by putting X mark in the appropriate space

1. Policy of getting school medical service

	Free	Paying
1.1. For students	_____	_____

1.2. If paying, specify amount and conditions _____

_____

_____

2. School Health Unit

2.1. No. of rooms available: One ___ Two ___ Three or more ___

2.2. Availability of utilities.

	Yes	No	Remark
2.2.1 Water			
2.2.2 Electricity			
2.2.3 Telephone			
2.2.4 Ambulance (vehicle)			
2.2.5 Toilet or latrine			
2.2.6 Others (specify)			

3. Health Personnel

Type	No.	Yrs. of Service	Any Refresher Courses		Specify No. of Times		
			Yes	No.	1	2	3
3.1. Nurse							
3.2. H/A trained							
3.3. H/A Practical							
3.4. Others(specify)							

4. Activities of the School Clinic

4.1. Is there a work schedule ? Yes _____ No _____

4.2. If yes, what activities are included(specify) _____

_____

_____

4.3. Clinical Service :

4.3.1. Average no. of students seen daily _____

4.4. Preventive and Promotive health activities being performed by school clinics.

Types of activity	Yes	No	If possible specify Frequency
4.4.1. Screening for vision	___	___	_____
4.4.2. Screening for hearing problems	___	___	_____
4.4.3. Screening for dental problems	___	___	_____
4.4.4. Health inspection (personal hygiene)	___	___	_____
4.4.5. School Meal-canteen service	___	___	_____
4.4.6. Vaccination/BCG DPT	___	___	_____
4.4.7. Health Education (Excluding formal class instruction)	___	___	_____
4.4.8. First Aid Service	___	___	_____
4.4.9. Others (specify)	___	___	_____

_____

_____

5. The ten top common causes of illness during the 1985/86 School Year (Based on Records)

Types of Illness	No. of cases seen
5.1. _____	_____
5.2. _____	_____
5.3. _____	_____
5.4. _____	_____
5.5. _____	_____
5.6. _____	_____
5.7. _____	_____
5.8 _____	_____
5.9 _____	_____
5.10. _____	_____

6. Any deaths registered during the same year (1985/86 S.Y) Yes No

___ ___

6.1. If yes how many ? Male _____ Female ____ Total _____

6.2. Are causes known ? Yes ____ No ____

6.3. If yes, state the possible causes for each death.

_____

_____

_____

_____

7. Is illness a major cause of absenteeism from school: Yes___ No___

If yes, mention the magnitude _____

_____

8. Referral policy ? Yes NO

8.1. Is there a referral policy ? ----- -----

8.2. If yes, cases referred to: _____ _____

8.2.1 Schools Medical Service Department _____ _____

8.2.2 Directly to other health institution_____ _____

8.2.3 Other methods (specify) _____

_____ _____

_____

8.2.4 No of referrals during the Academic Year 1978 E.C._____

8.2.5 No of " received with feed-back _____

8.2.6 No of " " from other institutions_____

9. Recording

9.1. Is there a system for recording ? Yes ____ NO ____

9.2. If yes, indicate the methods

9.3. Use of individual students health records: Yes ____ NO____

9.4. Use of common register books Yes ____ NO____

9.5. Other methods (specify) _____

_____

_____

10. Reporting Yes NO

10.1. Is reporting compulsary ? ____ ____

10.2. If yes, where are reports sent to ? ____ ____

10.2.1 Schools Medical Service Department ____ ____

10.2.2 Zone and/or regional education office ____ ____

10.2.3 Other institutions (specify) _____

_____

_____

10.3. Is there a standard reporting form? Yes ____ NO ____

10.3.1 If yes, mention the contents _____

_____

_____

10.4. Frequency of reporting Yes NO

10.4.1 Monthly ____ ____

10.4.2 Quarterly ____ ____

10.4.3 Biannually ____ ____

10.4.4 Annually ____ ____

11. Budget for school health service

11.1. Total amount requested for the year _____

11.2. Total amount allocated for the year _____

11.2.1 Salary " _____

11.2.2 Drugs & equipment " _____

11.2.3 Other supplies " _____

11.2.4 If any unused budget (specify) _____

_____

_____

12. Is the Ministry of Health involved in the school health service ?

Yes ____ NO ____

12.1 If yes, in which of the following areas ? Yes NO

12.1.1 Technical supervision _____ _____

12.1.2 Referesher courses for school health staff _____ _____

12.1.3 Health Education & demonstration (Class or Mass) _____ _____

12.1.4 School vaccination _____ _____

12.1.5 Epidemic control _____ _____

12.1.6 Delivery of supplies(medical/teaching)_____ _____

12.1.7 Others (specify) _____

_____

_____

13. Drugs and equipment: Yes NO

13.1. Is there a standard list _____ _____

13.2. If yes, is it strictly followed _____ _____

13.3. Do problems exist in this area _____ _____

13.4. If yes, specify _____

_____

_____

14. Has school health service ever been discussed as an issue in this school ? Yes _____ NO _____

14.1. If yes, how exactly ?

14.2. 14.1.1 By staff _____ _____

14 14.1.2 By students _____ _____

14.1.3 Others(specify) _____

_____

_____

15. Mention some outstanding problems existing in school health service.

_____

_____

_____

_____

_____

_____

16. Any other comment about the service _____

_____

_____

Name of Respondent

_____

Name and Sig. of Interviewer

_____

Date of Interview _____

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D E C L A R A T I O N

I, the undersigned declare that this THESIS is my original work and has not been presented for a degree in any university. All sources of materials used in the thesis have been duly acknowledged.

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