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# A comparative study of school health services in South India

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**Abstract**
**Background:** India is home to 47.3 crore children (0–18 years) comprising 39 percent of the country's total population. Sickness is a major cause of school absenteeism and scholastic backwardness.
**Objectives**
1. To find out availability and implementation of school health related services in urban and rural area of Tirupati.
2. To compare availability and implementation of health related services between rural and urban government schools of Tirupati.

**Materials and Methods:** This Cross sectional study was conducted in Schools of Rural Field Practice Area and in urban area of South India during June to September 2019. The information collected on various attributes of health services availability and implementation was compared between the two areas.
**Results:** Medical examination of students was never done in 4 government schools in rural area. First aid kit was available in 15 (93.75%) urban government schools but was not fully equipped. Teachers were not doing morning inspection of students in rural government schools. Yoga facility and students counselling facility was not available in rural government schools. Majority of the schools in urban area are maintaining the school health records. Hand washing facility was available in majority of urban schools.
**Conclusion:** Availability and implementation of most of the school health services were found to be higher in urban government schools compared to government schools in rural area.

**Keywords:** Government schools, school health services, health record, hand washing facility, school health committee

## Introduction

India is home to 47.3 crore children (0–18 years) comprising 39 percent of the country's total population [1] Sickness is a major cause of school absenteeism and scholastic backwardness. It is estimated that every third child has some sign of ill health [2] It has been found that approximately 22% of school children are having diseases/defects/disorders which needs care and out of these 5% of students need referral services [3] The common morbidities found are nutritional deficiencies, dental, visual and hearing problems, respiratory infections, skin conditions, locomotor disabilities and congenital heart and other problems. The fact is that most of these conditions are preventable or avoidable and curable especially in early stages [2]

Since 2002, school health policies and strategies aimed at preventive health education, specifically health of pupils and providing regular health checkups, have become a national priority. Although the National Rural Health Mission (NRHM) launched the inter-sectoral school health programme in 1996-97, only a few states are implementing the scheme. The objectives of SHP are to enhance health awareness and skill building among school children through healthy environment, disease prevention and health promotion, and recognizing the child as a change agent in the family. Key challenges include the coverage of health problems, nutrition and health education in the school curriculum, health screening through regular check- ups and early detection, provision of relevant medical and health service, cost of school health referral system, training of teachers to handle minor health needs, and integration of meditation, yoga, and healthy cultural practices into the school curriculum [4] Although a universally accepted definition of the term "school health services" has not been

adopted, the School Health Policies and Programs Study (SHPPS) has described school Health referral system, training of teachers to handle minor health needs, and integration of meditation, yoga, and healthy cultural practices into the school curriculum [4] Although a universally accepted definition of the term "school health services" has not been adopted, the School Health Policies and Programs Study (SHPPS) has described school health services as a "coordinated system that ensures a continuum of care from school to home to community health care provider and back." The goals and program elements of school health services vary at the state, community, school district, and individual school levels. Some of the factors that contribute to these variations include student needs, community resources for health care, available funding, local preference, leadership for providers of school health services, and the view of health services held by school administrators and other key decision makers in the school systems [5]

It is an admitted fact that the children are the future of the Nation. If the children are healthy, the Nation is bound to be strong. In the light of these observations, it was felt that the school health services should be developed as an integral part of the health care delivery system. Benefit of school health is that the school child acts as a transmission agent i.e., it acts as a change agent by transmitting the desired message to members of his family and community [3]

**Objectives**

1. To find out health related services in schools in urban and rural area of Tirupati.
2. To compare health related activities/services between rural govt. schools and urban govt. schools of Tirupati.

## Materials and Methods

**Study Design**

This was a descriptive cross-sectional and comparative study of rural and urban government schools in south India.

**Study period:** June– September 2019.

**Study setting**

Study was done in government Schools of Rural Field Practice Area and also in urban area of Tirupati. There are 16 primary and secondary government schools in rural field practice area. Also for study purpose, equal number of schools ie. 16 government schools were selected from urban area, Tirupati from the list which was obtained from Mandal Education Officer, urban. For this, simple random technique was followed after making list of all the schools.

**Data collection**

Survey was completed by interviewing the head master or other teachers of the schools and inspection of various health related facilities within each school by the researchers. Using an pre-structured format, information was collected on health attributes like or Health related services in schools like medical examination (Health check –up) of students, frequency of it, availability of facilities like yoga classes, counselling facility, school health committee etc., whether teachers are maintaining any health records of students, also whether they are doing daily morning inspection of students, hand washing facility etc.

**Statistical Analysis**

Data were entered in the Microsoft Excel sheet and was analyzed using the statistical package SPSS version 23.00. Data presented as proportions while Chi-square test was used to find out the association. $P<0.05$ was considered statistically significant.

**Ethical Clearance and Permission**

Approval was obtained from the Ethical Committee of the institute. A prior permission from the school Head Master was obtained in both the areas, rural as well as urban area. Confidentiality of the school identity was ensured to them.

## Results

As shown in Table No 1, 16 Schools were from rural area and 16 were from urban area. All were government schools.

In this study, it was observed that Medical examination (Health check –up) of students was never done or organized in 4 government schools in rural area while in urban schools, medical examination is a regular activity either once in a year or once in 6 months.

In this study, as depicted in table No 2, it was found that first aid kit was available in 15 (93.75.%) urban government schools but it was found that in all these schools, first aid kit was not fully equipped. In case of rural area, in majority of schools ie. 11 (68.75%) first aid kits were not available.

As depicted in table No 2, it was observed that teachers were not doing morning inspection of students in rural government schools while in most of the urban school's teachers said they are doing morning inspection of students.

It was observed that students counselling facility was not available in all the surveyed schools in both the areas but Yoga facility was available in half of the urban government schools ie.8 (50%) and they were implementing it.

In this study, it was found that majority of the schools in urban area, i.e. 14 (87.5%) are maintaining the school health records like master register, height and weight record and the Cumulative Health Record Card provided by the Education Department while in rural schools, health records were not maintained in majority of schools 13(81.25%).

In this study, none of the schools had School health committee in rural area but in urban govt schools, half of the schools 8 (50%) had School health committees to deal with crisis medical situations.

As depicted in Table No.2, hand washing facility was available in majority of urban schools ie. 15(93.75%) while in rural schools, facility was available only in 11(68.75%).But soap for hand washing was not available in any of the surveyed government schools in urban as well as rural area.

All the surveyed schools in rural as well as urban area do not have cooking facility. It was found that these schools get cooked/ prepared food from ISKCON organization. There was no separate room for mid-day meals.

**Table 1:** Distribution of schools in rural and urban area.

| School | | Frequency | Percent (%) |
|---|---|---|---|
| | Rural | 16 | (50%) |
| | Urban | 16 | (50%) |
| | Total | 32 | 100 |

**Table 2:** Health related services in government schools.

| School health service | Attribute | Rural | Urban | P value |
|---|---|---|---|---|
| Medical examination of students | Once a year | 09 (56.25%) | 07 (43.75%) | 0.242 ns |
| | Once in 6 months | 03(18.75%) | 09 (56.25%) | |
| | Never | 04 (25%) | 0 (0%) | |
| First Aid Box | Yes | 05 (31.25%) | 15 (93.75%) | <0.0001 s |
| | No | 11 (68.75%) | 01 (6.25%) | |
| Morning inspection by teacher | Yes | 0 (0%) | 13 (81.25%) | <0.0001 s |
| | No | 16 (100%) | 03 (18.75%) | |
| Yoga facility/ Exercises. | Yes | 02 (12.5%) | 08 (50%) | 0.022 s |
| | No | 14 (87.5%) | 08 (50%) | |
| Counselling facility for students | Yes | 0 (0%) | 0 (0%) | |
| | No | 16 (100%) | 16 (100%) | |
| Maintenance of Health records | Yes | 03 (18. 75%) | 14 (87.5%) | <0.0001 s |
| | No | 13 (81.25%) | 02 (12.5%) | |
| School Health Committee | Yes | 0(0%) | 08 (50%) | 0.001 s |
| | No | 16 (100%) | 08 (50%) | |
| Hand washing facilities | Yes | 11 (68.75%) | 15 (93.75%) | 0.07 ns |
| | No | 05 (31.25%) | 01 (6.25%) | |
| Availability of soap for hand washing. | Yes | 0(0%) | 0 (0%) | |
| | No | 16 (100%) | 16 (100%) | |
| s- Significant, ns -non-significant. | | | | |

## Discussion

School health services are designed to provide comprehensive health care, such as preventive, promotive and curative services. [6] Health appraisal consists of periodical medical examinations, starting from the time of admission. Initial examination must be thorough and should consist of correct history, thorough physical examination, anthropometric examination, and routine laboratory examinations and the findings are recorded in the "school health record." [6]

In this study, it was observed that Medical examination(Health check –up) of students was never done or organized in 4 government schools in rural area while in urban schools, medical examination is a regular activity either once in a year or once in a 6 months. In rural area, in 4 government schools, medical examination of students was never done or organized, but other 12 schools medical examination was done periodically by ANM working in that particular area and not by doctor. Students in this rural area have easy access to primary health care. Separate health room or clinic is not there in any of the schools which is required for to provide routine administration of medications, immunization, health checkup and screening.

It was found that first aid kit was available in 15(93.75%) urban government schools but in all these schools first aid kit was not fully equipped. While in rural area, majority of schools 11 (68.75%) had no first aid kits. Similarly a Joseph N *et al*. [7] found in their study that although 29(96.7%) schools had a first aid kit, only in 2 (6.7%) schools private it was well equipped. Also Joseph N *et al*. [7] revealed that, regarding dealing with any medical emergencies most schools were poorly prepared in terms of presence of trained personnel and fully equipped first aid kits.

As per the school health program, emergency care will be provided by the teachers to the children who become injured or sick in the school premises, such as injuries, fractures, unconsciousness, fits, vomiting, and diarrhea, etc. [6] As per school health programme, school teacher will carry out daily morning inspection of children by looking for the signs of illness such as dull face, runny nose, flushes face, red and watery eyes in students. [6]

In present study, it was observed that teachers were not doing morning inspection of students in rural government schools while in most of the urban schools teachers said they are doing morning inspection of students. On the contrary to this, study by Joseph N *et al*. [7] revealed that teachers in most schools practiced daily morning inspection which helps in early detection of any ailments among children.

In this study, it was found that Yoga facility was not there in rural schools, while in urban schools it was there in half of the schools i.e.8 (50%). According to Khalsa *et al*. [8], a yoga program might help children recover their self-esteem and confidence, restore their mental health, promote positive attitudes, improve concentration, and reduce stress and anxiety. Unfortunately, traditional curricula focus primarily on intellectual development, and schools have progressively been losing the capacity to adopt health-focused programs. Students must be healthy in order to learn, and academic accomplishment has been shown to be related to health status. All young people today face significant stresses in their lives [9]

Bhola P *et al*. [10] reviewed 23 school-based studies (1978–2002) reflected a prevalence of 3.23%–36.50% across disorders such as enuresis, mental retardation (MR), externalizing disorders (eg.conduct disorder/attention-deficit/hyperactivity disorder. All children face some or the other, major or minor mental health problems during the age group of 6–17 years.

School Teachers serve as a health counsellor for children regarding their personal hygienic habits, Posture and encourage them to develop good health practices.[11] In this study, it was observed that students counselling facility was not available in all the surveyed school. Similarly a study by Joseph N *et al*. [7] observed that very few schools had counsellors. Role of counsellors has become vital in urban schools nowadays considering the problems like juvenile delinquency, maladjustments, drug addictions, stress related to poor academic performance and choice of career among students [7]

A cumulative record is maintained for every student. It gives cumulative information about the name, age, sex, date of birth, parent's name, address, past health status, present health status and the services provided. This record is useful in evaluation of school health program [6] In present study, it was found that majority of the schools in urban area 14 (87.5%) are maintaining the school health records like master register, height and weight record and the Cumulative Health Record Card provided by the education department while in rural schools, health records were not maintained in 13(81.25%) schools.

School health committee (1961) in India recommended the formation of school health committees at the village level, block level, district level, state level and national level. These committees should mobilize community resources and make the School health programme continuous and self-supporting [12]. In this study, none of the schools had School health committee in rural area but in urban govt schools, half of the schools 8 (50%) had School health committees to deal with crisis medical situations.

It was found that majority of the schools in urban area 14 (87.5%) are maintaining the school health records like master register, height and weight record and the cumulative health record card provided by the Education Department while in majority of rural government schools 13 (81.25%), health records were not maintained.

Handwashing with soap before the government-supplied Mid-day Meal (MDM) is important because children are the most energetic, enthusiastic and open to new ideas and change.[13] Also to meet the SDG criteria for a basic hygiene service schools must have a handwashing facility with water and soap. [14]

In present study, hand washing facility was available in majority of urban schools ie.15 (93.75%) than rural schools 11(68.75%). Soap for hand washing was not available in any of the surveyed government schools in urban as well as rural area. A study conducted by Majra J P *et al.* [15] observed that hand washing facilities were pitiable in most of the schools, only two (10%) of the schools were having adequate hand washing points with soap. A survey done in UP [16] found that 30% of schools do not have hand washing facilities. Scarcity of adequate handwashing facilities in most schools in rural area prevents children from adopting proper hygienic behavior and thwarts health promotion efforts. [17]

The Mid-Day Meal which is a government flagship programme operational in all schools across India serves nearly 110 million children in 1.3 million primary and upper primary schools [18]. Mid-day meal scheme is implemented in government and aided schools, it was observed that this scheme is implemented in all the surveyed schools but only one primary school in rural area had a separate room for serving food. All the surveyed schools in rural as well as urban area do not have cooking facility. Also it was found that these schools get prepared food from ISKCON organization. Similarly, Joseph N *et al.* [7] in their study, with respect to midday meal scheme, observed that meals were prepared only in 3(18.7%) schools which were all aided. Among the other schools (4 government and 9 aided) food was prepared by outside caterers. One (25%) government and 6 (50%) aided schools had no dining hall for serving mid-day meals. Routine screening of school pupils for common morbidities like nutritional deficiencies, dental, visual and hearing problems, respiratory infections, skin conditions, locomotor disabilities and congenital heart and other problem was not done in any of the schools in urban or rural area. But it was found that immunization of students is a routine service in schools in both the areas.

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## Conclusion

Availability and implementation of most of the school health services were found to be slightly higher in urban govt. schools compared to government schools in rural area. Screening of students through health check-up for common morbidities for early detection and treatment should be done regularly as it is one of the most cost-effective public health measures.

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