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ENVIRONMENTAL SANITATION AND HEALTH FACILITIES AVAILABLE IN THE GOVERNMENT, GOVERNMENT AIDED AND PRIVATE HIGH SCHOOLS

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Abstract
In spite of the UN mandate of health for all by 2015 and many governmental programmes related to sanitation and health, High schools in Mysuru Urban area of Karnataka still lack the basic facilities like infrastructure, drinking water, sanitation and health facilities. The study was aimed to assess the environmental sanitation and health facilities available and to compare between governments, aided, and private High schools of Mysuru Urban area of Karnataka. The study was descriptive in nature. The study results show that out of 60 high schools surveyed, only 58.3% (35) had adequate toilet facilities. None of the schools had Hi-tech toilets or separate toilet facilities for children with physical disability. 65% of them did not have proper ventilation, 61.7% schools had poorly maintained toilets, 68.33% had scarcity of water, and 56% did not have any waste disposal mechanism, 56.7% did not have first aid kit and 70% did not have any records of immunization and health camps. A large number of High schools including private, aided and government schools in Mysuru Urban area of Karnataka need basic facilities like infrastructure, drinking water, sanitation and health facilities.

Keywords: Environmental sanitation, Health facilities, Ventilation, Infrastructure, Hygiene, Waste Disposal Mechanism.

Introduction

The United Nations (UN) set a mandate to achieve health for all by the year 2015 through the Millennium Development Goals and it is facing lot of challenges especially in the context of school environment in less developed and developing countries like India. Environmental sanitation in its broad sense understood as the activities aimed at improving maintaining the standard of basic environmental conditions affecting the well-being of people. These conditions include clean and safe water supply, clean and safe ambient air, efficient and safe animal human and industrial waste disposal, protection of food from biological and chemical contaminants and adequate housing in clean and safe surroundings.

Many studies in this area have shown that school sanitation remains one of the most important settings for children's development yet it is given less attention. Schools worldwide still face the issue of environmental sanitation facilities such as inadequate classrooms in terms of space, air, quality, teaching resources etc. Inadequate water supply and poor or lack of sanitation facilities including waste disposal mechanism and recycling programmes are also considered as important elements in this regard (Shendell, Barnett & Boese, 2004).

Poor air quality both inside and outside the school due to various kinds of pollution by vehicles and factories in urban area affects the school children in terms of spread of air borne diseases. It is said that children spend most of their time in schools from morning till evening; it is estimated that around 35-40 hours per week is spent by the children in and around school facilities impacts the health of children greatly. Very less importance is given to this issue of environmental sanitation and health facilities in schools.

According to one of the studies conducted by UNICEF in the year 1998, Environmental sanitation and health facilities in schools are an important public health issue. A survey among the school children in various parts of India has revealed the cause for the ailments among children; the study revealed that about half of the ailments among children are related to insanitary conditions in schools and lack of personal hygiene (UNICEF, 1998). To bring solution to this issue, essential environmental sanitation and health facilities are required in the schools. To provide regular health check-ups and activities related to environmental sanitation, in 1960, the Government of India has set up a committee on school health which is known as Renuka Ray Committee (1960). The report of Renuka Ray Committee (1961) provides guidelines and recommendations for the content and the appropriate impartation of health education at various stages of schooling (Park, K. 2009).

In spite of Renuka Ray Committee (1961) recommendation to cater to the needs of school children through health education. Even after more than five decades of the Renuka Ray Committee's recommendation, School hygiene and health education programmes have not been implemented by the schools completely (Maira & Gur, 2010). Most of the Government and Aided

schools do not have adequate toilet facilities, proper water supply, no sinks for hand washing inside and outside the toilets or no soap for hand washing etc.

Providing healthy environment and a conducive place for learning is the sign of an efficient and effective education system. Study also revealed that, good health facilities in schools reduce absenteeism and dropout rates and increases children's academic performance. There are challenges in providing basic facilities in schools. It is said that the school authorities also face lot of challenges in providing the necessary environmental services due to lack of funds. Other challenges also include lack of interest by the students in activities related to environmental sanitation and health facilities. Low morale of the teachers who have less or no interest in the environmental sanitation education programmes has encumbered the objective of achieving a good and sound environmental sanitation and health programmes in schools (Adara, 1997).

Effects of inadequate environmental sanitation and health facilities on Children

A cause for spread of diseases: Children spend most of their time in schools, and the health and well-being of the children are determined by the quality of environmental sanitation and health facilities in the schools. Due to unsanitary conditions, lack of proper space, infrastructure, inadequate ventilation and toilets facilities, children are prone to get infected of various air and water borne diseases in schools (UNICEF, 2010).

Well being: Environmental Sanitation at schools is connected with the wellbeing of the children. Poor or lack of adequate sanitation and water facilities affects the children's well-being (WHO, 2015). The word sanitation refers to the maintenance of hygienic conditions, through services such as garbage collection and waste water disposal (WHO, 2015). Sanitation means the necessary measures taken for improving and protecting health and well –being of the people. According to Ninad (2014), Sanitation is any system that promotes proper disposal of human and animal wastes, use of toilet and avoiding open space defecation. Thus, improper human and animal waste disposal mechanism and use of insanitary toilet facilities in schools affect the overall well-being of children.

Malnutrition and Productivity: A poor sanitation facility impedes the health of children. According to an article published by Live Mint, "The Great Indian Sanitation Crisis," by Jaychandran, says that a data has been released by the National Sample Survey Office (NSSO), from a survey conducted in 2012, says that, Poor sanitation impedes the health of children. It also leads to increase in number of malnutrition rates and affects their productivity. The Deficit in sanitation facilities in India has led to loss of weight in children. The study also talks about the high rates of mal nutrition among children and poor health of women in India which may lead to a very high proportion of low birth weight babies (Jayachandran, 2012). Thus, the study shows that there is a deficit in sanitation and health facilities in Indian context which has led to high rates of malnutrition which in turn has direct impact on the productivity of the children in general.

Mental health and Psychological Health: Due to the negligence of sanitation facilities in schools since long time has contributed to high levels of sickness, psychological stress and depression, due to which children lack interest in studies, irregular in attending classes, and which may hinder students' performance both in academics and co-curricular activities. Sometimes students drop out of the school, especially girls, due to lack or paucity of proper toilet facilities in the schools. They even undergo psychological stress due to lack of privacy during their menstrual cycle, lack of privacy may further lead to eve teasing by male students , harassment, fear, etc.

One of the studies by Naidu, *et.al*, (2008), opines that, there will be a substantial increase in the number of people with mental illness in the coming decades. The research also shows that there is an increased mental disorder among the young adults. It is said that, about 50-75% of the mental disorders began during the youth. Secondly, there is a substantial increase in the geriatric population having mental health problems, as the life expectancy is increasing. Thirdly, social factors are said to be the risk factors for causing change in the rate of depression in all age groups. Besides depression, anxiety and stress are also affecting children.

With this background, this study is conducted to understand the real status of the school environmental sanitation and health facilities in high schools of Mysuru urban area of Karnataka state. It also looks into basic necessities like, school infrastructure, access to water, sanitation and health related facilities at schools and a comparison between government, aided and private schools in an urban area are made to understand the quality of life and performance of the students in the schools. A proper school environment, infrastructure, nutrition, sanitation and health facilities will enhance the scholastic performance level of the children. Thus, school environment, structure, nutrition and health facilities should be given utmost importance for the holistic development of children.

Objectives of the study

- To study the profile of the Schools in Mysore Urban area of Karnataka.
- To assess environmental sanitation in the high schools.
- To assess the health facilities in the high schools.
- To compare environmental sanitation and health facilities among government, aided and private schools.

Methodology

The schools selected for the study was based on random sampling to ensure that equal representation is given to all the three types of school. There were around 557 high schools in Mysuru Urban area of Karnataka. Only 60 high schools in the wards of Chamaraja, Krishnaraja and Narasimha wards were selected for the study through simple random sampling technique. Every 10th school in the list was selected and a semi –structured interview guide was used.

Results and Discussion

Profile of Schools

Socio –demographic profile of the schools was collected under the sub headings: Name of the school, address or location, name of the head master/mistress, type of school, classification of school, number of male and female teachers, number of male and female student population was collected to understand the schools in detail. The classification is taken to present the condition of the school because it plays a vital role in determining the facilities. Out of the total 60 high schools selected in the Mysuru Urban area of Karnataka for the study, 20 (33.3%) were government schools, 20 (33.3%) were private and 20(33.3%) were Government aided Schools.

Type of Toilets

Unimproved sanitary, toilet facility in schools may lead to spread of various kinds of air borne and vector borne diseases (Swaroop *et.al*, 2012). Inadequate urinal and latrines without unimproved sanitary facility may lead to physical and mental stress especially for adolescent girls (Swaroop *et.al*, 2012). Among 60 schools, 58.3 %(35) of the schools have flush toilets and 41.7 %(25) of the schools had pit latrines with slab. None of the schools had separate toilet facility to accommodate children with physical disability. None of the schools had Hi-tech toilet facilities for children. The type and number of toilets for both boys and girls impacts the health and hygiene of the students (Maira & Gur, 2010). Limited access to resources and services from water, to latrines to waste disposal mechanisms represents important barriers to learning and practicing new hygiene behaviours (US Aid, 2006).

Table 1: Comparison of Type of toilets

Type of Toilets	**Classification of the School**			**Total**
	Private	Government	Aided	
Flush Toilets	17	10	12	39
Pit Latrines with slabs	3	10	8	21
Total	20	20	20	60

In table 1, it is inferred that the private schools have improvised toilet facilities compared to Aided and Government schools. 85% (17) private schools have flush toilets available, 50 %(10) government and 60 %(12) aided.

Ventilation

Type of ventilation is one of the very important health determinants. Improper or inadequate ventilation in the classrooms and toilets leads to spread of many kinds of diseases faster. Children are more vulnerable as they spend major chunk of their time in schools. As the study says that, Diseases spread faster where many children gather for many hours a day in cramped spaces with limited ventilation, unsanitary conditions, no hand washing facilities or soap and toilets in poor repair (UNICEF, 2010).

Type of Ventilation

Ventilation has relation with schools cleanliness (Maira & Gur, 2010). Ventilation in the school toilets is an essential factor to keep the school sanitation facilities healthy and hygienic. Among 60 schools, 65% (39) schools did not have any ventilation blocks, where as 30% (18) schools had small cement blocks and 5% (3) schools had small windows for

ventilation in the toilets. Proper ventilation plays a pivotal role in maintaining the toilets clean and hygienic, giving no room for spread of disease through unsanitary conditions.

Table 2: Comparison of type of ventilation.

Type of Ventilation	Classification of the School			Total
	Private	Government	Aided	
No Ventilating blocks	17	10	12	39
Ventilation blocks available	3	7	8	18
Small windows	0	3	0	3
Total	20	20	20	60

There is a lack of ventilation facilities in the private schools compared to aided and government schools. In the above table 2: 85 %(17) private schools did not have good ventilation facility, 50% (10) of government schools and 60% of the aided schools had no good ventilation facilities. Proper ventilation is important for children in the school to lead a healthy life as children spend around 7-8 hours per day in schools. Availability of Clean air and the ventilation is very much necessary for the children in schools for good health.

Condition of the Toilet

To make attending school attractive to the children it must have an environment of good quality characterized by various aspects which includes gender sensitive, inclusive and cleanliness of toilets (Baliga & Sulakshana, 2013). Condition of toilets is another variable under the heading sanitation to check various aspects of the cleanliness of the school environment. Cleanliness of the toilet is one of the very essential component or determinant of health. The study results show that out of the 60 schools in Mysuru Urban area of Karnataka, 38.3%(23) School toilets were in good condition, 20%(12) schools were fair, 8.3%(5) was in poor condition, 15% (9) were in very poor condition, 15%(9) schools needed complete reconstruction and 2 schools required new construction of toilets as the toilets were not in a usable condition.

Table 3: Comparison of Condition of Toilets

Condition of toilets	Classification of the School			Total
	Private	Government	Aided	
Good	20	1	2	23
Fair	0	7	5	12
Poor condition	0	0	5	5
Very poor condition	0	3	6	9
Complete reconstruction	0	7	2	9
New toilet blocks required	0	2	0	2
Total	20	20	20	60

There is a drastic variation in the condition of toilets when compared between Private, Government and Aided schools. The above table 3: shows that private schools 100% (20) have better and well maintained toilets than the other two categories of schools. 60 %(12) of the Government schools, 35 %(7) of the toilets are in good condition and rest 40% (8) and 65 %(13) are in not usable condition, which needs attention by the school authorities in providence and maintenance.

Source of Water

Source of water is one of the major determinants of health. To ensure that the schools are clean, hygienic and safe for children to have conducive learning atmosphere water is an essential component. Among various risk factors modes of water supply and quality of drinking water is associated with Diarrheal cases (Nguendo & Blaise, 2010). Contaminated drinking water poses health risks to children, pure drinking water is necessary for a healthy life (Swaroop et.al 2012). So the source of water is important in determining the status of health. Contaminated water may lead spread of many diseases; lack of water in toilets, lack of pure and safe drinking water may cause lot of health risks to children, thus modes of water supply plays a role in determining the health of children in schools.

Source of Drinking Water

Majority of the schools that is 68.33% (41) have only one source of water. Source of water plays a pivotal role, water source and supply has contributed to many issues in the studies related to health and hygiene of the schools. The study shows that

out of 60 schools, 11 schools had water from bore well, 1 from hand pump, 13 from tanks, 2 schools purchase water, 13 schools get water from Panchayat, 14 schools has from two source, 6 schools have more than three source of water but the frequency and sufficiency of getting water is big question mark as most of the schools under government and aided lack adequate water supply due to which the toilets are in bad condition. Other aspects like means of water storage, location of drinking water, cleanliness of the place was also observed to check the spread of water borne diseases.

Table 4: Comparison of Source of water

Source of water facility in the school	Classification of the School			Total
	Private	Government	Aided	
Bore well	0	9	2	11
Hand pumps	0	1	0	1
Tank	0	9	4	13
Purchase	1	0	1	2
Panchayat	0	0	13	13
Bore well and Tank	1	0	0	1
Tank and Panchayat	12	1	0	13
Bore well, tank and Panchayat	6	0	0	6
Total	20	20	20	60

Source of water for drinking and other sanitary purpose is important. Inadequate water and improper channels leads to spread of many vector borne diseases like diarrhea, cholera etc. it is very essential to trace the source of drinking water to find the health status of the children. In the above table 4: It is evident that 60% of the private schools had more than one source of water, whereas only 45% of the Government schools had at least one source and 65% of the Aided schools had one source of water that is through Panchayat. It was observed that there was irregularity in supply of water to schools from Panchayat water supply.

Waste Disposal Mechanism

Waste disposal mechanism plays a vital role in keeping the school surroundings clean and hygienic. The type of waste disposal adopted by the schools differs from school to schools according their affordability. Environmental sanitation means proper disposal of human and animal waste, which is given least importance in many of the schools which may lead to unhygienic environment. Good drainage systems, stagnant water condition, proper water disposal system is an indicator for school environment and sanitation (Maira & Gur, A., 2010). The study results show that most of the schools do not have proper waste disposal mechanism. 56% that is (34) of the schools do not have waste disposal dustbins in schools especially in girls toilet, as per the SSHE mandate, 15%(9) dispose it in toilet receptacle, only 16.7%(10) schools have separate bins inside and outside toilet for waste disposal , other 11.7%(7) schools throw the waste outside the school building on road.

Comparison of Waste disposal mechanism

Proper water disposal system is an indicator for school environment and sanitation (Maira, J.P. and Gur, A., 2010). Majority 56.7% (34) of the schools do not have any kind of waste disposal mechanism whereas only few schools have some kind of waste disposal system. Only 35% (7) Private schools have separate dustbins placed inside and outside the toilet, where as 15% (3) of government and 10%(2) aided schools have dustbins as waste disposal mechanism in schools.

Conclusion

Comparatively private schools had better facilities than government and aided schools. It is evident from the study that the schools in Mysuru Urban area of Karnataka lack basic needed infrastructure and health facilities in schools for children to be healthy and hygienic, lack of these basic requirements may impact in their physical, mental and scholastic performance. Thus, it is very essential for the school authorities to ensure that the schools in Mysuru Urban area of Karnataka has good and conducive environmental sanitation and health facilities available in the schools to make school a haven for overall development of children.

The school environment, and teachers and staff working there, play a pivotal role in child development. If environmental programmes and services are neglected by governments and other stakeholders, children may face public health hazards, such as being at risk of contracting various diseases by being exposed to various substances in air, water, food, and soil. An

effective planning and monitoring of the programmes in schools should address the hygiene and sanitation problems by keeping the school environment clean. The programmes should ensure that the children are provided with the basic sanitation facilities at schools so that children are healthy and able to learn in a good environment to reduce absenteeism and dropouts and to increase scholastic performance of the children. The programmes should also provide space to practice healthy life style which children can communicate it to their families, neighborhood. The school authorities should ensure that the school infrastructure, water, sanitation and health facilities by setting standards to create schools as child friendly schools for holistic development.

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