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HEALTH CARE FACILITIES FOR ADOLESCENT GIRLS IN KASTURBA GANDHI BALIKA VIDALAYA (KGBV) OF ASSAM

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ABSTRACT

The adolescent girls of the Kasturba Gandhi Balika Vidalaya (KGBV) need access to information and services related to nutrition, reproductive health, family planning, and general health. The girls need to be taught the ways to keep their bodies clean to avoid any type of infection. As the girls are growing faster at this periods of time than at any time after their first year of life therefore nutritious food should be provided to the girls of KGBV. **Methods**: The state of Assam in India was selected for the present study. Multi stage sampling design was adopted for the study. The sampling units at different stages were State, District and Kasturba Gandhi Balika Vidyalayas (KGBVs). The six districts namely Dibrugarh, Sibsagar, Lakhimpur Nagoan, Kamrup and Barpeta District were selected purposively for the study. To elicit information from the sample, an interview schedule was developed. The collected data was organized, coded, consolidated and tabulated by using Microsoft excel sheet and analyzed systematically. The preliminary analytical devices expressed in frequency and percentage was used to assess the health care facilities provided in KGBV. **Conclusion**: The study indicates that although the food staffs are regularly provided to the girls of KGBV but more nutritious foods are to be incorporated in the diet. The health check up camps is to be organized in convergence with health department in a regular interval.

KEYWORDS: Health, care, Facilities, Adolescent, Kasturba Gandhi Balika Vidyalayas.

INTRODUCTION

In a country like India, adolescent girls face serious health problems due to socio-economic, environmental conditions, nutrition and gender discrimination. A vast majority of girls in India are suffering from either general or specific morbidities (Balasubramaniam 2005)[1]. Adolescent girls are particularly vulnerable to malnutrition because they are growing faster than at any time after their first year of life. They need protein, iron and other micronutrients to support the adolescent growth spurt and meet the body's increased demand for iron during menstruation. Diet and health are synonymous with the well-being of an individual. In absence of proper and adequate nutrition, a person can develop several developmental malformations. Many research studies (Bahl et al. 1994)[2]; (Jain 1999)[3] and (Babitha 2003)[4] have documented that malnutrition affects body growth and development, especially during the crucial period of adolescence. Many Indian studies have pointed out that iron requirements increase during adolescence, especially in developing countries because of infections, diseases and parasitic infestations that cause iron loss, and because of low bioavailability of iron from diets. Girls in low income communities have typically been reported to have Hb (hemoglobin) levels less than 10g/L and low iron status negatively affects their body functions (Brabin and Brabin 1992)[5]; (Kanani et al.1997)[6]. Adolescent girls need access to information and services related to nutrition, reproductive health, family planning, and general health. The program can

reach girls through a variety of avenues, including schools, work places, marriage registration system, and youth oriented health programs. Schools can be a key part of helping adolescent girls become healthy adults. Teaching girls to use their knowledge of nutrition when preparing and handling food can also improve their health and that of their families .Research shows that promoting female education and literacy can improve nutrition and encourage females to seek regular health care. Ensuring that adolescent girls receive enough food, iron and foliate supplements, iron and iodine-fortified foods, as well as helping them delay their first pregnancy and protect themselves from sexually transmitted infections and other diseases, and help girl become healthy women. Keeping this background in mind the present study was conducted with the specific objective to see the health care facilities available for the adolescent drop out girls who were brought back to the residential school system in Kasturba Gandhi Balika Vidalaya (KGBV) of Assam after constant effort.

MATERIALS AND METHODS

The state of Assam in India was selected for the present study. The researcher had taken permission from state programme officer and collected the data initially from the State Mission Office of Sarba Siksha office of KGBV component Assam. After getting the details the researcher had collected all the phone numbers of District Mission Coordinator (DMC) and District Programme Officers (alternative schooling) DPO (AS). This had helped the researcher to go and visit the KGBVs of the districts which were located at the interior places of the rural areas. In the present study purposive sampling technique was used. In all the nine KGBVs of the selected districts, 9 no's of wardens and caretakers and all the full time staff and teachers who were present on the day of data collection were interviewed and focus group discussion was held to study the health care facilities of the adolescent girls of KGBVs under SSA.

Multi stage sampling design was adopted for the study. The sampling units at different stages were State, District and Kasturba Gandhi Balika Vidyalayas (KGBVs). Out of total 16 numbers of districts with KGBVs the six districts (Figure 1) namely Dibrugarh, Sibsagar, Lakhimpur Nagoan, Kamrup and Barpeta District were selected purposively for the study. The main reason for selection of the study areas was to study the KGBV's of Upper Assam, Middle Assam and Lower Assam to fulfill the criteria of representation of entire scenario of Assam.

Assam (16 Districts)

(Dhemaji, Darrang, Dibrugarh, Karbi Anglong, Nalbari, NC Hills, Sibsagar, Tinsukia, Dhubri, Barpeta, Kamrup, Lakhimpur, Sonitpur, Nagaon, Kokrajhar and Bongaigaon).

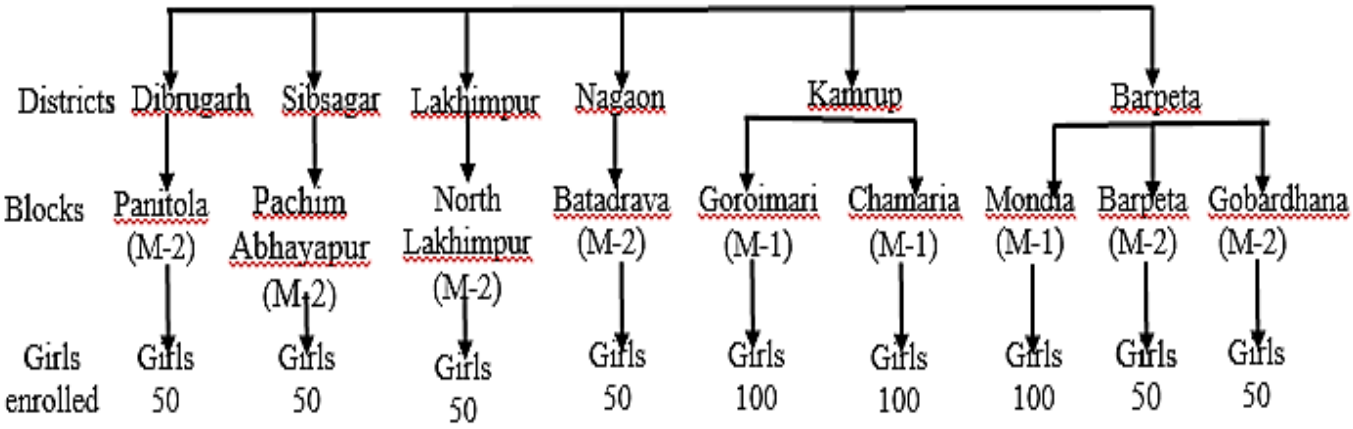

Figure 1. Sampling Design

(M-2 means model 2 and it comprise 50 children and M-1 means model1 and it comprise 100 children)

To elicit information from the sample, an interview schedule was developed. A self structured interview scheduled was prepared. Both qualitative and quantitative methods were employed to get data from the field for primary data collection. Qualitative methods were mainly used to capture a holistic understanding of policy implementation and qualitative methods enable to focus on process rather than the outcomes (Merriam, 1998)[7]. The data were mainly collected by the method of focus group discussion and in depth personal interview. The collected data was organized, coded, consolidated and tabulated by using micro soft excel sheet and analyzed systematically. The preliminary analytical devices expressed in frequency and percentage was used to assess the health care facilities provided in KGBV.

RESULTS

Table 1. Distribution of response on health care facilities

Health care facilities	**Frequency (nos of KGBV is 9) N=9**	**Percentage (%)**
1) Doctors and physician come for visit		
No	9	100
2) Health camp for girls in KGBV		
Yes	2	22.22
No	7	77.77
3) Medicines in stock for emergencies		
Yes	9	100
4) Maintain health record in KGBV		
Yes	4	44.44
No	5	55.55
5) Fund in the account of KGBV for girls medical purpose		
Yes	9	100
6) Girls provided iron and folic acid		
Yes	5	55.55
No	4	44.44

Food stuff provided daily in the KGBV

Table 2 Distribution of responses on providing milk and milk products in KGBV

Sl. No.	**Milk and milk products**	**No. of day**	**No. of serving**	**Total serving**	**Frequency (N=9)**	**Percentage (%)**
1	Milk					
	Yes	1	1	1day in a month	1	11.11
	No	8	0	0	8	88.88
2	Curd					
	Yes	1	1	1day in a month	1	11.11
	No	8	0	0	8	88.88
3	Paneer					
	Yes	1	1	1day in a month	1	11.11
	No	8	0	0	8	88.88

4	Health drinks Yes No	 4 5	 1 0	 1day in a month 0	 4 5	 44.44 55.55
5	Ghee & butter No	 9	 0	 0	 9	 100

Table 3 Distribution of response on providing non vegetarian food in KGBV

Sl. No.	Food stuff	Yes	No	No of days	No. of serving	Total serving	Frequency (N=9)	Percentage (%)
1.	Meat	9	0	1 day in a week	1	1	9	100
2.	Fish	9	0	1 day in a week	1	1	9	100
3.	Egg	9	0	1day in a week	1	1	9	100

Table 4. Distribution of responses on providing cereals and pulses in KGBV

Sl. No.	Food stuff	Yes	No	No. of days	No. of serving	Total serving	Frequency (N=9)	Percentage (%)
1	Rice	9	0	7 days in a week	3	21	9	100
2.	Roti	2	7	1 day in a month	1	1	2	22.22
3.	Pulses	9	0	7 days in a week	2	14	9	100

Table 5. Distribution of responses on providing vegetables and soya beans in KGBV

Sl. No.	Food stuff	Yes	No	No. of days	No. of serving	Total serving	Frequency (N=9)	Percentage (%)
1	Vegetables	9	0	7 days in a week in 8 KGBV 3 days in 1 KGBV	2 times in 6 KGBV 3 times in 3 KGBV	12 9	9 0	100 0
2	Green leafy vegetables	8	1	2 days in a week in 6 KGBV 1 day in a week in 2 KGBV	1 time in 8 KGBV -	8 -	8 1	88.88 11.11
3.	Soya beans	9	0	2 days in 5 KGBV 3 days in 3 KGBV	2 time in 5 KGBV 1 time in 4 KGBV	10 4	9 0	100 0

Table 6. Distribution of the responses on providing snacks and fruit in KGBV

Sl. No.	Snack and fruit	Yes	No	No. of days	No. of serving	Total serving	Frequency (N=9)	Percentage (%)
1	Tea	9	0	7 days in 8 KGBVs 2 days in 1 KGBV	2 times in 7 KGBVs 1 time in 2 KGBVs	14 2	9 0	100 0
2	Bread	0	9	0	0	0	0	0
3	Biscuit	9	0	7 days in 8 KGBVs 2 days in 1 KGBV	2 times in 6 KGBVs 2 times in 3 KGBVs	12 6	9 0	100 0
4	Sweet	1	8	1 in a month	1	1	1	11.11
5	Fruit	1	8	1 in a month	1	1	1	11.11
6	Juice	0	0	0	0	0	0	0

Table 7. Distribution of responses on providing knowledge of reproduction health for girls in KGBV

Reproductive health	Frequency (N=9)	Percentage (%)
1) Student receive knowledge on reproductive health		
Yes	7	77.77
No	2	22.22
2) Sources of information	(N=8)	
Teachers	6	75
Peer group	1	12.5
Matron	1	12.5

Table 8 Distribution of responses on providing sanitary napkin in the KGBV

Sanitary napkin	Frequency (N=9)	Percentage (%)
Sanitary napkins provide in KGBV		
Yes	9	100

Table 9 Distribution of responses on different aspects related to health

Sl. No.	Aspect on health	Frequency (N=9)	Percentage (%)
1	Girls trained regarding maintenance of health and hygiene		
	Yes	9	100
2	Regularly do exercises	(N=9)	Percentage (%)
	Yes	5	55.55
	No	4	44.44

3	Regularly do yoga Yes No	(N=9) 6 3	Percentage (%) 66.66 33.33
4	Regularly do meditation Yes No	(N=9) 8 1	Percentage (%) 88.88 11.11
5	Toiletry materials regularly supplied to the girl Yes No	(N=9 8 1	Percentage (%) 88.88 11.11

DISCUSSION

From the Table 1 it can be revealed that the doctors and physicians do not come and visit the girls in the KGBVs for regular health checkup. This also reflects that no convergence was developed with local Primary Health Centers (PHC) to build a linkage for regular health check by local PHC doctors. Jain (2008)[8] eminent gynecologist and social activist stated that the health situation of children particularly girls is a matter of concern. She cited anemia as a major health issue affecting girls. Every nine out of ten adolescent girls in the country were suffering from this menace. Although there is a commitment by the Government to meet young people's sexual and reproductive health (National Policy 2000)[9] the health needs of adolescent has not been implemented seriously by either the government or municipal authority, or voluntary agencies as having any priority. Neither doctor or nurses nor the teacher have given much thought or attention to the health needs of the adolescent (Watsa 2004)[10].

The table also reflects that only 22.22 per cent had organized health camp for the girls, where they were provided free medicines and iron tablets. Most of the girls who come to KGBVs complained of having headaches, stomach ache and nausea. It was possibly because of low hemoglobin levels and due to worm. This needs proper medical treatment so that the health can be rectified and the girls do not leave the hostel due to severe illness. The KGBV authority should take the initiative to organize health checkup camps in an interval of every four to six months to monitor the health of the girls and their development.

Hundred per cent of the respondents also expressed that they have medicines in stock for minor illness such as vomiting, headache, stomach problem, nausea, fever, etc. As discussed with the wardens it has come to notice that for most of the KGBVs the nearest hospital is more than five to seven kms. In most of the cases the bus services and small vehicles were available once in two hours and sometime the availability of appropriate mode of transport or sometime any means of transport was also a question after certain hour of the day. In many KGBVs, due to remote location, bad road condition and to avoid the risk they keep some medicines in stock to give the initial first aid treatment to the girls.

Table 1 also revealed that health records were maintained in only 44.44 per cent of the KGBVs and in these KGBVs the records were found to be updated regularly. The records of the girls' health were maintained. Such registers were very important for keeping the details of the girls in the KGBVs. All the KGBVs should try to maintain and update it regularly. 100 per cent of the respondents also expressed that they have fund in the account of KGBVs for medical purpose but it was found that no specific guideline and norms were followed in the KGBVs for purchase of medicines.

From the findings presented, it was also felt that KGBVs should have a direct linkage with PHC and community health centers and an effective ambulance service need to be introduced at village level for handling emergencies. More autonomy and

freedom should be given to the KGBVs with regard to expenditure on health and hygiene. In the long run professional bodies like Indian Medical Association and Gynaecological Association may be involved for regular health check up at KGBVs. Since anemia and malnutrition amongst these girls are rampant, steps should be taken for increasing the hemoglobin level in them. The health of girls in the KGBVs was an important area of concern and budgetary provision were found to be inadequate in this regard.

55.55 per cent revealed that iron and folic acid were provided to the girls of KGBVs in convergence with block PHC. Adolescent anemia is a long standing public health problem in India. Anemia is caused by iron deficiency. Due to poor dietary intake of iron and high rate of worm infestation in these girls, they are at high risk of anemia. Deficiency of iron is further aggravated with due to accelerated growth, body mass building, onset of menstruation and also due to the problem of adolescent pregnancy and conception.

Weekly supplementation of 100 mg elemental iron and 500 μg folic acid (IFA) is effective in decreasing incidence and prevalence of anemia in adolescents. Ministry of Health and Family Welfare has launched the Weekly Iron and Folic Acid Supplementation (WIFS) program for school-going adolescent girls and boys and for out-of-school adolescent girls. Therefore, all the KGBVs should take the initiative to build a good relationship with the local PHC and take the benefit.

The Table 2 depicts that milk and milk products such as curd and paneer were provided only once in a month and the serving were also once. Moreover it can also be observed from the table that dairy products were provided only in one KGBV i.e. Gohardhana of Barpeta. The absence of milk and milk products in the regular menu is a serious issue at KGBVs. Adolescence is a time of the most rapid growth for girls. Eating enough calories is necessary to meet the needs of a fast growing teen. Most teen age girls need between 1400 and 2400 calories a day. Therefore, drinking six ounce of milk regularly is sufficient to get the required calories, along with the other nutrients present in the milk.

When the warden were asked why milk was not provided in the KGBVs, all of the them expressed that only Rs.30 per child is allotted for food and the maintenance of the girls in a day, therefore with these minimum amount it was not at all possible to provide milk and all the required items for the girls in the KGBVs.

From the table it also revealed that 44.44 per cent provide health drinks in KGBVs and the serving is once in a month. Ideally children should drink plain milk, unless they are malnourished or otherwise deficient (after illness) they do not really need anything added to the milk. If a child won't drink milk at all, then chocolate or malty drinks may be necessary for the children.

Calcium has many important functions in the body of children and adolescent in the development of healthy bone and teeth. Calcium requirement increases dramatically from about the age of eleven years in what is known as the prepubertal growth spurt. A lack of calcium can lead to poor mineralization of bones and density of bones. This generally leads to many problem including permanent bone deformities and disease of the bones such as osteoporosis in later life. Therefore consumption of a glass or 200 ml milk, a match sized (30 gm) piece of low fat cheese and a bowl of (200 gm) yoghurt will go a long way in helping this age group meet their daily calcium requirement.

Table 2 reveals that ghee and butter were not at all provided in the KGBVs for the girls. The wardens of the KGBVs expressed that due to very less budgetary provision the ghee and butter could not be included in the diet of KGBVs.

The Table 3 depicts that meat, fish and egg were provided in all the nine KGBVs once in a week and the serving was only once. As per the financial norms of SSA Rs.750 per child per month is sanctioned towards child maintenance charge and food were served as per the suggested menu. In addition to the students those staff who were at night duty or who comes for early morning duty were also permitted to take meal in the KGBVs within the overall amount allocated toward maintenance charges. The warden and caretaker, during the discussion, have expressed that they cannot serve meat, fish and egg more than one day in a week with the limited amount fixed for food.

From the Table 4 it can be revealed that rice were provided in all the KGBVs for seven days a week for three times a day i.e.100 per cent and followed by roti 22.22 per cent and the serving is only once for one day in a month. Pulses were accompanied with rice in all the KGBVs for seven days a week for 100 per cent and the serving is two times. From the findings it can be revealed that as the numbers of girls were more, that is fifty to hundred, it was not possible to make rotis during the breakfast hours by two numbers of cooks. Generally rice were provided more in KGBVs as the preparation time required is less and the girls mostly belongs to rural and tribal areas where they were habituated in having rice more than other things.

As rice was provided every day, therefore along with rice pulses was provided two times in the form of daal at the lunch and dinner. In the morning rice was mostly accompanied with vegetables.

From the Table 5, it was revealed that 100 per cent provides vegetables in the KGBVs but the days varies i.e. seven days in eight KGBVs and three days in one KGBVs. The availability of vegetables in almost all the KGBVs (like potatoes, onion, brinjal, gourd, cabbages, etc.) ensure varieties in diet and a probability of wholesome meal for the growing girls at KGBVs. Food was available in most of the KGBVs and the quality was also consumable.

From the table it was also revealed that 88.88 per cent provide green leafy vegetables in the KGBVs. The days varies as two days a week in six KGBVs and one day a week in two KGBVs and the serving is once in all the eight KGBVs. Green leafy vegetables are rich source of pro vitamin A, vitamin C, folic acid and minerals like calcium, iron, phosphorus, sodium and potassium. It has been estimated that 100 gm of tropical leafy vegetables can provide 60-140 mg of ascorbic acid, 100 mg of folic acid, 4-7 mg iron and 200-400 mg of calcium (Saxena, 1999)[11]. Green leafy vegetables in our country are known to be the most inexpensive source of several vital nutrients. Leafy vegetables were appreciative because they not only supply the protective nutrients and add variety to a monotonous diet, but also have an alternative taste, pleasing appearance and aroma. Adolescent is one of the most nutritionally stress period of life. The requirement for iron increases during the adolescent period for girls due to rapid growth and blood loss during menstruation. Green leafy vegetables, rich in nutritive value, are the cheapest of all the vegetables within the reach of poor man (Rao *et al.,* 1980)[12].

Table 5 also reveals that 100 per cent provide soya bean in the KGBVs, two times in five KGBVs and one time in four KGBVs. Soya beans offers a number of nutritional benefits. In addition to being an excellent source of protein and essential amino acids, they are also low in saturated fat, free of cholesterol and high in unsaturated fat. Soya intake during childhood and adolescent is associated with as much as a 60 per cent lower risk of breast cancer in later stage of life. Soya food can supply key nutrients for children and adolescent and can offer health benefit due to their favorable nutrient profile.

From Table 6, it can be revealed that 100 per cent expressed that tea was provided in the KGBVs. Tea was usually served with biscuit, i.e 100 per cent expressed that biscuit was provided to the girls. In eight numbers of KGBVs, biscuit was provided for seven days a week and in one KGBV biscuit was provided for two days a week. In most of the KGBVs very light snacks were provided to the girls at the morning and evening time. Usually a cup of red tea with a biscuit was provided either in morning or evening or sometime without biscuits.

From the findings it is revealed that 11.11 per cent provide sweets in the KGBVs only for one day in a month and the other KGBVs do not provide sweets at all. Since girls at this growing stage love to taste varieties, therefore the menu should be planned as such that sweets should also be incorporated twice in a week along with different varieties of snacks for the girls.

Fruits and juices were not provided in the KGBVs. From the table it can be revealed that only 11.11 per cent provide fruits for the girls during the self defense class for one day in a month and some time twice. One day in a month is not at all sufficient for adolescent girls. A diet high in fruits and vegetable are important for optimal growth in girls, weight management and

prevention of chronic diseases such as diabetes, heart disease and some cancer. Eating a diet that include a colorful varieties of vegetables and fruits provide a wide range of valuable nutrients that is important for the health.

The availability of food is there in almost every KGBV, but its quality is a subjective matter. There is a lack of variety in most of the cases and fruits were absent from the menu in almost all the KGBVs. This is a serious issue that needs to be addressed. The KGBV management and teachers need to review nutritional status of the students and promote healthier diet through a well-planned menu. In general adolescent girls are the worst suffers of the ravages of various forms of malnutrition because of their increased nutritional needs and low social power. Nutritional deficiencies have far reaching consequences especially in adolescent girls. If their nutritional needs are not met, they are likely to give birth to undernourished children, thus transmitting under nutrition to future generation. Equally shortage of iron and folic acid and vitamin tablets were also observed in several KGBVs. Therefore, a close linkage with the health department for health care and supply of necessary nutritional supplement requires an urgent need.

Apart from all the above-mentioned food stuff provided in the KGBVs, 44.44 per cent provide puffed rice, potato bhujia, payasam, and vermicelli once in a month during snacks time. Food allowance must be increased to increase the quality and quantity of food for the girls at KGBVs.

Results of Table 7 indicates that 77.77 per cent of the girls received knowledge on reproductive health in the KGBVs and the sources were teachers 75 per cent, peer group 12.5 per cent and matron 12.5 per cent. The table therefore reveals that the teachers have understood the importance of reproductive health of the girls and accordingly tried to create awareness among the girls. Knowledge of reproductive health among the school girls and teachers should be stressed. It is very important to educate girls regarding their own health related issues to enable them to make informed choices. Issues on sexuality, gay, lesbian, reproductive health of adolescents and early pregnancy should be discussed in the KGBVs. Rao (1988)[13] revealed that there has been an increasing realization of the necessity for imparting education on sex including reproductive health of adolescent, psychologist and educationist strongly feel that sex education form an integral part of the regular school curriculum..

Data presented in Table 8 reveals that 100 per cent of respondents expressed that sanitary napkin were regularly provided to the girls at the KGBVs. But in some KGBVs they informed that pads were supplied for only the first two days of the periods Moreover only two numbers of pads were provided to the girls for change but it was not sufficient to maintain hygiene for the girls who have heavy flow, therefore they use old clothes. Proper disposal and cleaning of the clothes is also an area of concern in the KGBVs.

But in spite of the provision of fund for sanitary napkins it was observed that sufficient amount of sanitary napkins were not provided and most of them had to use old clothes during those days.

The teachers of KGBVs should emphasis on cleaning and grooming of the girls at KGBVs. Girls should be encouraged to use sanitary napkins and also explain them how it helps to prevent various infections and diseases. They should be informed to convince their friends and other young women in the family to use napkins to maintain hygiene once they go back to their home from KGBV

It is evident from the data presented in Table 9, that 100 per cent of the girls in the KGBVs were well trained regarding maintenance of health and hygiene. Other than academics, health and hygiene was the prime focus of KGBVs. Teachers along with the warden take the initiative to train the girls on different aspects of care and maintenance of health issues.

As per KGBV guideline, health cards should be maintained for each girl. Health check up should be the regular activity in the schools. Adolescent health awareness inputs are to be provided by the external agencies in convergence with NHRM, different NGOs working in health sectors by the support of the State Government, etc. Although the guideline was provided to improve the health status of the girls of KGBVs but no such

initiative was found to be taken by any of the KGBVs taken under the study.

It can also be revealed from Table 9 that 55.55 per cent of the girls regularly do exercise, 66.66 per cent do yoga and 88.88 per cent of the children do meditation. Training in yoga was also an important feature in the KGBVs. Through yoga training girls learn meditation, pranayam, asan, etc. which build up their sense of value, discipline and morality. The KGBV learners begin their day with physical exercise and yoga followed by assembly.

Result presented in Table 9 also reveals that 88.88 per cent expressed that toiletry materials were supplied to the girls. During data collection it was also observed by the researcher that many things were available in most of the KGBVs such as oil, paste, shampoo, soap, detergent, etc. But the process of distribution varies from one KGBV to the other. The norms and provisions of the KGBV programme were differently interpreted in different KGBVs.

CONCLUSION

The study indicates that although the food staffs are regularly provided to the girls of KGBV but more nutritious food such as milk, fruits and green leafy vegetables are to be included in the diet for the girls as they are in their growing stage. The health checkup camps are to be organized in convergence with health department and in the long run professional bodies like Indian Medical Association and Gynaecological Association may be involved for regular health checkup at KGBVs. Since anemia and malnutrition amongst these girls are rampant, steps should be taken for increasing the hemoglobin level in them. The health of girls in the KGBVs is an important area of concern.

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