SUMMARY

Introduction

Nepal is a small and landlocked country, which lies between two huge countries India and China. It occupies an area of 147,181 sq. km. and physically it is divided into the Himalaya mountain region, hilly region and Terai region. The total population of Nepal is about 2.32 million and the population growth rate is 2.27 percent per annum according to 2001 population census. The life expectancy of Nepali people is 56 years and literacy rate of Nepal is 48 percent at the end of Eight Year Plan, 1996/1997. The major health problems of Nepal are rapid population growth, unsanitary environment, malnutrition, communicable diseases, high maternal and child death rate, lack of drinking water, drug abuse, etc.

Health, one of the most important aspects of human life, is considered as a basic fundamental human right and social goal. It is a prerequisite and an integral part of the development of the human beings. It is a dynamic quality of life and self-actualisation with the feeling of well being in body and mind, and noticeable qualities in external and internal body for adapting and optimum functioning physically, mentally, emotionally and socially in the existing environment. It can be gained from the combined efforts of the individual, family, community and national as well as global institutions with co-ordinated functioning of the interrelated sectors.

The school going age is especially learning and developing period of life. In this period health and education are inseparable because one cannot enhance one in the absence of the other. Schools have the responsibility for providing appropriate environment to the students for learning, growing and developing in the school hours. In order for the schools to meet these responsibilities, they have to incorporate and carry out different health activities in their programmes.
School health programme (SHP) is combined procedures and activities launched by the school for protecting and promoting students' and school personnel's health through the health service, healthful living, health instruction and school and community co-operation or relationship. School Health Education Programme (SHEP) is not complete and purposeful until it results in behavioural modification, develops desirable attitudes and capacity for good decisions in the students, and creates healthful environment and provides facilities for protection and promotion of students' health. As such, the environment of the school needs to be favourable. It means healthful living, health services, and school and community co-operation programmes should be included in the school apart from health instruction. They all support the health education process as well as the total education programme. SHP and SHEP are used synonymously to school health activities by many writers and health educationists. Hence SHEP and SHP are used interchangeably in this study. In the present study, only four components i.e. health instruction, health service, healthful living and school-community co-operation are included.

In the history of School Health Education (SHE), hygiene education was included in an integrated form along with physical education and some other subjects. Health and physical education (HPE) was realised as a necessity in schools when recruiters were found unfit for selection in the military service. But in most of the cases the necessity of SHE was realized for preventing communicable and non-communicable diseases, maintaining health and supporting total education programme. Since the early 1950s, WHO has recognised the importance of promoting health through school and WHO's Health Education and Health Promotion Unit (HEP) began steady efforts to enhance school health related activities in 1990. Many networks and alliances were started for the development of health promoting schools on regional basis. In 1995, WHO Global School Health Initiative was launched to mobilise and strengthen health promotion and education activities at the local, national, regional and global levels for the development of 'Health Promoting Schools'.

After the dawn of democracy (1950), health education was endorsed as hygiene at the primary level, and hygiene and physiology at the lower secondary
schools in Nepal. Before implementing National Education System Plan (NESP) in 1971, health instruction was basically taken up as rote learning. Health services were poor in schools and healthful environment was lacking. In the process of implementing NESP in 1971, health education became a compulsory subject from grade I to X. But the revision of curriculum continued time and again, the position of health education also varied. In the curriculum revision of 1981, health education was made a separate optional subject of 100 marks at the secondary level. In the curriculum revision of 1999, a new paper i.e. health, population and environment has been made compulsory apart from the optional paper HPE. But other components of SHEP are not compulsory in the schools.

The main components of SHEP have not been uniform at all times. Sometimes it was categorised into seven, sometimes four, sometimes three and presently it has eight components. But the main theme and coverage of various areas of components are not so much different. The categorisation and presentation methods are somewhat different. Only four components i.e. health instruction, health services, healthful living and school-community co-operation are included in the present scheme representing all the essential aspects of school health practices. These four components have their separate identities, but they are all very much interrelated and interdependent and so, SHEP needs to be launched in a comprehensive, co-ordinated and an organised form. The main aim of SHEP is to protect, maintain and promote the health of students in the present and enable them to take intellectual decisions and plan and implement health behaviours for that purpose in their future life also. It intends to develop the potentiality of students in achieving total school education and it also proposes to protect and maintain the health of teachers and the other staff.

**Emergence and Statement of the Problem**

There is no regulatory provision of SHEP at the government level under the education act in Nepal. Some INGOs, or other agencies as well as schools have attempted to launch different activities on their own initiative along with the classroom health instruction. They have been practising various activities separately, in various situations and in different sectors and parts of the country. Moreover the activities are not run comprehensively. For planning and implementing a
comprehensive SHEP, feasibility study was essential and a programme model was needed. The proposed programme has to be acceptable and affordable for school and community. Considering all these factors, the present study was undertaken and a model of SHEP prepared with suggestions for implementation and following up.

The problem under study may be stated as follows:

"Effectiveness of Health Education Programme in the Secondary Schools of Nepal: A proposed Model."

Objectives of the Study

The following were the objectives of the Study:

1. To assess the existing conditions of health instruction, health services, healthful living and school-community co-operation, and their management in the schools of Kathmandu Valley.

2. To find out the various problems in schools concerning health education programme.

3. To analyse the views of various personnel associated with School Health Education Programme (SHEP) along with those of the students.

4. To compare the school health practices adopted by the government schools with those of the private schools.

5. To develop an appropriate model of School Health Education Programme for the schools of Nepal.

Delimitations of the Study

1. The data was collected only from secondary schools of Kathmandu Valley (Kathmandu, Bhaktapur and Lalitpur Districts) where health education was offered as an optional subject and the classes were run from grade I to X in both the government and the private schools.

2. The student and their parent respondents were taken only from grade tenth.
Methodology

Design of the Study

The present investigation being evaluative in nature, the design of the study involved the use of descriptive survey method. Separate questionnaires relating to SHEP were developed locally for filling up by the students, the parents, the health teachers and the headmasters from 52 secondary schools which had offered health education as an optional subject. The investigator himself filled up an observation form. The opinions were also collected from planners and administrators from education, health and curriculum development sectors.

Sampling Procedure

The purposive, stratified random and incidental sampling procedures were followed for the study. Three districts of Kathmandu Valley were chosen as the area for the collection of data. The schools where health education was offered as an optional subject at the secondary level were included for the selection of the sample. In the process of sampling, the total schools that offered health instruction at the secondary level were stratified into government schools of urban and rural areas, as also the private schools from these areas in Kathmandu, Bhaktapur and Lalitpur districts. The sample schools were selected randomly representing each stratum. Thus 52 schools (24%) out of the total number of 221 secondary schools offering health as a education subject were chosen from each of the areas.

As for the students' and parents' sampling, 384 students out of 1771 of grade X and 194 parents of the same grade students in equal proportions from the private and the government schools were selected. Similarly, 52 senior health teachers and 52 headmasters were included as respondents from the respective schools. Besides these, 12 respondents including one planner, one director and three district administrators each from education and health sectors and one director and one subject specialist from Curriculum Development Centre (CDC) were also taken as respondents.
Development of Tools for Data Gathering

For the development of tools, the investigator consulted the earlier researches, and evaluation scales of SHP (from related books). An opinion of the experts in the area of study and its various aspects was another source of finalisation of the items selected. The suitability and content relatedness of the items selected was got thoroughly examined by them. Separate questionnaires for the students, the parents, the health teachers, the headmasters and the planners & administrators for education, health and curriculum development sectors were prepared. An observation form was also developed for check-listing the physical facilities and physical environment of the schools selected for the study.

The questions were of both kinds, restricted or closed-form type and open-ended or unrestricted. Some of the questions involved only ranking of the suggested responses or listing of a number of answers in accordance with the data planned to be collected. Some items of the questionnaires were common for more than one group of respondents. The questionnaires for students and parents were translated into Nepali language. These were pre-tested in some schools for checking the practicability of administration.

Data Gathering Procedure

The investigator himself visited the District Education Office (DEO) with a request letter for permission to gather data from schools and getting the questionnaire filled up by the District Education Officer himself. Similarly, all sampled the schools were visited along with the recommendation letter of DEO and request letters. The head masters, health teachers, students and parents of selected number of schools were requested to fill up the questionnaires. The concerned planners and administrators were also contacted personally for this purpose.

Analysis and Statistical Treatment of the Data

The data obtained from the government and the private schools were tallied separately at first and then combined. Similarly, the frequencies were converted into percentages for the two groups of schools separately as well as for the total schools. Then the significance of differences in percentages (t-ratio) for two and three category
responses between the government and the private schools and the chi-square test among the frequencies of scaling with three category responses between the two types of schools were got computed. For items with multi-category responses, only the ranking of the responses was done. The responses of planners and administrators were compiled separately in terms of frequencies and percentages only and statistical computations in their case were not thought necessary.

Findings

From the data analysis and interpretation the findings are derived as follows:

Health Instruction

1. Students, parents and headmasters gave more priority to health education in schools. This was evident from the fact of time allotment for health instruction as recommended by Curriculum Development Centre (CDC) being followed adequately. The respondents from the government schools gave more preference to health education than those of the private school respondents.

2. From amongst the HETs, 55.77 percent were not satisfied with the existing secondary level health education curriculum. They complained of inadequate and shallow subject matters and no revision of curriculum according to time and situation. The government school health teachers were more dissatisfied than those of the private schools. But the respondents from CDC did not indicate any specific flaw in health education curriculum.

3. There was a representative from the Faculty of Education in the health and physical education (HPE) Subject Committee of CDC, HMG for co-ordination between the school and teacher education curriculum.

4. The CDC, HMG had developed curriculum and textbooks for all levels and but teachers’ guidebook was prepared only for the lower secondary level of health education in the existing curriculum as resource material.
5. Majority of the schools (75%) had school library but most of them had no separate library room. The books and resource materials related to health education in the school library were inadequate.

6. Most of the HETs used health education books and some of them used magazines and different textbooks as resource materials for teaching. Other resource materials like electric media, teachers’ guide etc. were used by a very small percentage of the teachers. There was significant difference between the private and government school teachers in using resource materials.

7. More than half (52%) of HETs claimed that they adopted incidental type of teaching and 88.54 percent of students reported of obtaining health education from outside classroom too i.e. informal and incidental type of health instructions were used in schools. The government school teachers used significantly more of such type of instruction than the private school teachers.

8. About 90 percent of HETs reported consulting other subject teachers for the topics related to health. Similarly 93.23 percent of all the students reported having obtained health-related education from other subjects, too, which indicates the inclusion of an integrated and correlated health instruction mutually in the schools.

9. All the HETs denied imparting health education without preparation. But 48 percent of them reported that they made only mental preparation for teaching. Other preparations used were notes making, lesson plane and unit plans, the last being used by a majority of them.

10. About 77 percent of schools had science lab, which could be used as instructional centre also for the purpose of health instruction. Private schools were seen to have more of instructional materials than in the government schools. But they were being used minimally.
11. Of the total parent respondents, 46.39 percent said that health knowledge of their children had remarkably improved from health learning and 47.42 percent of them reported it as being 'tolerable'.

12. With regard to the behaviour modification of students from health learning, about one third of the students and their parents were satisfied with a positive change in students' health behaviour. But majority of the respondents were only partially satisfied in this respect.

13. Nearly 50 percent of the students had complaints against classroom health instruction and their main complaints were no use of instructional materials, irregular teaching, teachers being partial and ineffective teaching. There were significant differences between the responses of private and the government school students. But HETs' major problems were lack of appropriate resource and instructional materials.

14. The academic qualification of almost all the teachers, teaching health education was either bachelor or masters' degree. But most of them did not have health education as their major subject. Nonetheless two third of them had more than five years teaching experiences.

15. The highest percentage of HETs focussed on practice based health instruction. Other focussing points were giving sufficient knowledge, daily life health practices, preparation for examination etc. There was a significant difference between the private and the government schools on focussing health instruction especially in giving sufficient knowledge (preferred by private HETs) and daily life health practices (preferred by the government HETs).

16. The HETs participated in and performed various activities related to health in schools apart from the health instruction in the classroom. They generally organized cleanliness programme, provided first aid treatment and sports and games, organized extra-curricular activities (ECA), etc. Besides, they were also involved in health counselling and appraisal health service, etc.
Health Services

17. Most of the headmasters agreed that the schools should have the responsibility for protection and promotion of students' health. About one third of them, however, accepted it as partial responsibility. But all the planners and administrators from education, health and curriculum development sectors opined that health and education sectors were equally responsible for students’ health. But majority of the parents were not ready to assign total responsibility to the school.

18. About 50 percent of the parents reported giving emphasis on students’ health and only 20 percent of them reported obtaining information about children’s health problems from schools. Only 11.34 percent of parents claimed that their children were affected by communicable diseases through the school.

19. The responses of students and HETs about the availability of appraisal health services in schools were different. Greater percentage of health teachers as compared to students claimed of having various health services in their schools. Many service items were found more in the private schools than in the government schools.

20. As for the availability of preventive and remedial health services, first aid treatment was available in most of the schools. Next available services, which were reported by less than 50 percent of the respondents were health counselling, referral system and safety measures. Most of the services were more available in private schools than in the government schools. All groups of respondents expressed unanimously the need of health services in the school.

21. About the need and the possibility of various health services in schools, periodic health examination and first aid were the most preferred services. But in other cases, the priority order amongst HET and student respondents was different. The HETs prioritised health observation by teachers, health recording and health counselling, and the students prioritized health clinic and follow-up system. The
private schools were slightly more positive than the government schools in this respect, too.

22. Observation of health facilities in schools showed that first aid kit was found in almost all the schools and health clinic was found in a negligible number of schools. The weighing machine was seen in majority of the schools and Snellen chart and height measuring stands were available in some schools only.

23. Many schools (44%) had no separate budget for health services. Some (21%) schools had less than N. Rs. 10,000/-, some had N. Rs. 10,000/- to 24,000/- and only a few schools had more of budgetary provision for health services. The private schools were considerably better than the government schools in this respect.

24. As per the reports of the headmasters, students' fees, schools' own fund and donations from other agencies comprised the major sources percentage of contributions being 69.23, 15.38 and 7.69, respectively.

25. As regards responsibilities of health service management in the school, 65.38 percent headmasters pointed to health teachers and 55.77 percent to headmasters themselves. Other administrative staff, medical staff and SMC were suggested by a very small percentage of headmasters.

26. About 80 percent of the headmasters agreed to the creating or hiring of the posts of medical/ paramedical staffs from schools' budget for better health services. The private school headmasters were much more positive than the government schools' in this regard. Similarly, majority of the planners/ administrators from education sector also agreed to the possibility of engaging medical/ paramedical staff in schools.

27. The planners/ administrators from health sector reported providing different health services through health sectors in schools, such as providing T.T. (Titanus Toxide)
injection to 14 years or older girls, and health education on contemporary issues through health posts.

Healthful Living

28. One half of the schools (50%) were situated on sub-road side and 25 percent away from the road and 25 percent on the main roadside. As for the density of the inhabitants, 42.31 percent schools were situated in moderately crowded areas, 34.31 percent in quieter and 23.08 percent in heavily crowded areas.

29. As for the ownership of school buildings 67.31 percent schools owned them, and 38.46 and 5.77 percent had rented and religious buildings, respectively. Similarly, the playgrounds were also either rented or the public places were used by many schools that did not have their own playgrounds. Larger number of the private schools had rented building and rented playgrounds.

30. From amongst the total sampled schools, a great majority had new buildings either totally or some new blocks and 28.85 percent of schools were found having old buildings. But a small percentage of the schools had dilapidated buildings also. More buildings were concrete roofing, sizeable number of building had zinc plate roofing and a negligible number of buildings had tile roofing.

31. The land covered by the school area or compound was inadequate. Out of 52 schools, 36.54 percent had less than three Ropanies land including the school building, 34.62 percent had three to five Ropanies and 19.23 percent had adequate or more than five Ropanies land. (1 Ropani = 5476 sq.ft.).

32. Amongst the total number of schools, 44.23, 36.54 and 15.38 percent had adequate garden/plantations, small garden/a few plants and none of them, respectively. Similarly, 42.3, 25.08 and 19.23 percent of schools respectively maintained the garden/lawn/plantation generally, maintained well and not maintained the garden/plantation.
33. With regard to the lighting and ventilation system as well as seating arrangement in the classroom, the highest percentage of the students answered in ‘good’ and a sizeable percentage as ‘tolerable’. In the case of furniture and blackboard, majority of them reported to be good and a sizable percentage of them pointed out different drawbacks. The condition of furniture was better in the private schools and the lighting and ventilation system was somewhat better in the government schools. But on the whole, general condition of the classrooms was tolerable.

34. The rating by students and HETs on drinking water facility in the schools different. The drinking water facility in the schools ranged from being adequate to tolerable. The mode of supply of water was of all kinds but parents pointed out that water problem in the schools was there. The filter system was limited only to the a few private schools.

35. The toilet facility was reported as being inadequate. Quite high percentage of parents reported that there was toilet problem in the school. There were more toilet facilities in private schools than in the government schools.

36. The general cleanliness of the classroom, the total school compound and the toilets were found tolerable. The cleanliness was better in the private schools than in the government schools. About the dirty toilets, forty percent of HETs pointed out the improper use of toilets as the major cause and other causes shown were scarcity of water, non-availability of sweeper and defects in the construction of toilets.

37. As regards the sanitation management, majority of the headmasters were satisfied with it in their schools. The respondents of private schools were significantly more satisfied than the government schools in respect of this facility. But in the case of drainage system the government schools were found comparatively better than the private schools.

38. The highest percentage of the headmasters reported that they supervised the physical environment in schools and were the most responsible persons for the
management of it. They also reported that all the teachers, HETs, SMC and administrative staff supervised the physical environment in schools, respectively, after them.

39. With regard to tiffin (lunch), the practices were being followed. More of the private school students carried tiffin from home than the government school students. The government school students usually bought food more from shops outside the school or went home for lunch. But all of them felt that tiffin carrying from home was ideal.

40. With regard to total school environment, the mixed responses were found from parents. But in the case of facing health problems due to poor school condition, 21.65 percent of the parents reported so and 28.35 percent said 'no'. Fifty percent of parents had not noticed on it. The private schools were seen having more healthful environment than the government schools.

41. Almost all the HETs claimed that they emphasized either fully or to some extent creating of mentally or psychologically healthful environment in their respective schools. But they could not give adequate examples of emphasis having given to it. The highest percentage of headmasters expressed that it was the equal responsibility of all the teachers and health teachers.

42. As regards sports and games facilities in the school, the health teachers claimed of having more sports and games facilities than reported by the students. Volleyball, physical training, badminton, running, table tennis and football were available sports/games facilities in majority of the schools.

43. For the adequacy of sports and games facilities, the students and parents had some complaints of being inadequate. Of the total students, 30.47 percent reported having chance to play sports and games from time to time, 29.17 percent of students complained of 'no chances' and 40.36 percent of students as scanty.
44. Almost all the parents wanted that their children should take part in extra-curricular activities (ECA) while most of them thought that there were inadequate ECA in schools for their children.

45. There was some contradiction between the responses of students and headmasters on ECA. More of the headmasters claimed of organizing ECA either each week or according to operation calendar in their schools, whereas only one third of the students reported having ECA regularly.

46. A part from the sports and games competitions quiz contents, debate, poem composition, essay writing, dance, song, spelling contest were organised in more of the schools. The private schools organized more of ECA than in the government schools.

47. As regards the total number of headmasters 38.46 percent did not mention any budget for ECA. About the same percent of schools had the budget of less than N. Rs. 25,000/-, remaining percentage of schools had more of budgets for ECA.

48. Regarding the interrelationships between students and students, students and teachers, teachers and teachers, and school and community, it was found that these were good according to HETs and student respondents. The relationship between school and community was not so good when compared to other relationships. But on the whole the responses for most of the relationships were 'good', some were 'tolerable' and only a few were 'poor'.

49. As for major problems in HSL, the students’ and parents’ ranking of problems were different. The students felt that lack of sports facilities and playgrounds, disturbance by outsiders, no maintenance of furniture and slimy & muddy pathways/ play grounds (in this order) were the major problems.

School and Community Cooperation

50. Majority of the parents did not agree with the need of home visits by the teachers when the students had special health or other problems. The remaining 44.33
percent of them considered the need of home visits favourably. But 77.15 percent of teachers claimed that they did that as and when needed.

51. Generally, students' parents did not regularly visit children's schools. Only 22.17 percent of the total number of parents did that and most of the parents visited school sometimes or whenever the school called them.

52. About 74 percent of students' parents accepted that they were responsible for improving health facilities in the schools. Generally, majority of the parents paid extra-charges for sports/games, first aid treatment, stool testing, development of physical facilities and health examination etc. The private school students or parents paid significantly more for various items apart from the monthly fee than the students or their parents in the government schools.

53. The health planner and administrator respondents accepted 'school as health promoting centre and students as agents of change'. Similarly, almost all the students responded positively to participate voluntarily in the school and community activities. The government school students were significantly more positive than the private school students in this respect.

54. In respect of improvement of relationships between school and parents/community, most of the headmasters said that they celebrated Parents' Day. Other activities reported by greater number of headmasters were participation in community health programmes and mass rallies for health awareness programme. But nearly 50 percent parents reported that there was no practice of observing Parents' Day in schools. They all expressed the need of Parents-Teachers Association (PTA) as well as Parents' Day. The HETs also endorsed the need for these two.

55. According to HETs' responses, the cleanliness programme in schools, health awareness programme in community, health service programme in the school, development of physical facilities, cleanliness programme in community, holding
of talks & discussions etc. are possible joint programmes by the schools and community.

56. Many of the respondents from amongst the planners and administers said that community could provide physical facilities & financial support and also participate in health education programmes in the school. Moral support, help in maintaining healthful environment, helping in children’s learning process and identifying their health problems are other forms of support that community can lend the school in the health education programme.

57. As for support from various organizations or agencies, about 67 percent headmaster reported obtaining it, in some cases full and others partial support. The NGOs, INGOs, parents and community members, local elected committees as VDC, municipality and DDC, and government health sectors as health post and sub-health post were the major supporting agencies in health related programmes in the schools. The government schools got more co-operations from community or other agencies than the private schools.

Need and Development of SHEP

58. As regards, the necessity of SHEP, all the respondent groups were positive and they felt the need of SHEP and its various components for the promotion of students’ health and prevention of disease. The parents also agreed to pay more fees for improving health facilities in the school. The HETs and headmasters were ready to launch the programme. According to planners and administrators, SHEP was necessary to bring awareness in school, home and community, to protect and promote students’ health, to help total education programme, to provide effective health education and to minimise health problems amongst students and others.

59. As for various prerequisites for SHEP, the foremost and basic requirements mentioned by them were consciousness amongst teachers, parents and students, training and orientation for teachers/ staff, support of community and parents, clear plans and policies of the government, and commitment of SMC members, headmasters and teachers. Favourable environment for procuring support from
different sectors, sufficient budget, posts of HET in schools etc. were other essentials for launching an organized SHEP.

60. There were no concrete plans and policies of the government for SHEP according to planners and administrators from education, health and curriculum development sectors except some peripheral activities in health sector, course revision of health education. Health education through the regular school curriculum ECA as well as sports and games were already there in educational practices. There were some prerequisites already for establishing new schools related to health; viz. provision of water, toilets, playgrounds, appropriate classrooms etc. There has been mentioned slightly about the parasite control, eyes and ears care through school health programme at the primary school level in Ninth Plan, 1997-2002. But nobody pointed it out.

61. HETs and planners/administrators differed slightly in their ranking of objectives of SHEP. But both they gave first priority to the objectives related to health education, after then healthful living and health services.

62. The executive committee to carry out the SHEP, was proposed to coordination committee representing from amongst the headmaster, medical personnel, parents, SMC, students, teachers, health institution, and senior health teacher etc.

63. In connection with involving the manpower apart from the regular staff for SHEP, the headmasters gave first and second priorities to voluntary service by health, medical and paramedical personnel, and different voluntary organizations whereas the planners/administrators gave first and second priorities for government health sectors as health post, sub-health post etc., and voluntary service of medical and other health personnel.

64. With respect to fund raising for SHEP, the headmasters and planners/administrators gave priority variously. But their collective opinions for fund raising were fees from students, grant from DEO, donations from community
members and other agencies, funding by INGOs & NGOs, grant from local development committees etc.

65. The planners' and administrators' suggestions for launching the SHEP were: (a) Clear-cut objectives, well organized programme and appropriate guidelines should be developed; (b) The government should be requested to allocate the budget for SHEP; (c) Provision should be made about SHEP in education act; (d) The pilot programme should be launched in selected schools; (e) The students' health problems should be found out first for giving emphasis to them in the programme; and (f) Local health agencies should be involved for monitoring the programme and lending technical know-how.

CONCLUSIONS

From the foregoing findings and discussion it can be concluded that health education is the most important subject in schools because it has been attached maximum importance by different groups of respondents. The government school students paid greater attention to health instruction than the private school students. The health education teachers (HETs) felt some deficiencies in the existing secondary school health curriculum. Mainly the health education textbooks of government schools had shortage of adequate material and had shallow subject matter. The CDC had not developed adequate resource materials. Adequate resource materials or reference books of health education were not available adequately in the school library. The instructional materials were found to be insufficient in most of the schools and even the available ones were seldom used in many of the schools. Not using instructional materials and teachers' absenteeism were the major problems of health instruction in the schools.

The operation calendar existed in most of the schools. Most of the HETs claimed that they prepared unit plan and lesson plan. But nearly 50 percent of health teachers prepared their lessons only mentally, which was not reliable. The use of various forms of instruction i.e. planned, incidental, and correlated and integrated was satisfactory. The parents and students were generally satisfied with the learning of
health education even though behaviour modification of the students was not found satisfactory. Most of the health teachers were qualified academically and were experienced in teaching but most of them had not specialised in health education, which indicates the weakness in health education. Greater number of HETs focused on developing positive health attitude, practice based education and giving sufficient knowledge. They were more involved in organising various health activities apart from the classroom health instruction.

Even though most of the headmasters agreed that school was responsible for the protection and promotion of students’ health, planners/ administrators reported that both the education and health sectors of HMG were equally responsible for it. School health service was the weakest component in the school health practices. But the parents did not expect much from the school although the students were dissatisfied in this respect. Regarding the available health services, HETs claimed of providing more services than reported by the students. Health services i.e. first aid treatment and stool & blood group testing were provided in most of the schools. The periodical health examination, health observation by teachers, health counselling, referral services and safety measures were also provided in a sizable number of schools. Other services were available in a small number of schools. On an average, health services were more available in the private schools than in the government schools.

There were no budgetary provisions for health services in many schools (44%). The schools that reported budget for health services had an average N. Rs. 17945/-.. The income source for health services was the students’ fee in most of the schools. The budget was also much more in the private schools than in the government schools. The headmasters reported that HETs and headmasters themselves generally did the management of health services in the school. The planners and administrators from health sector also reported providing some health services in schools in the rural areas through the health posts.
Higher percentage of respondents observed that most of the services were needed and it was possible to provide them in schools. The periodic health examination and first aid treatment were the more preferred health services. The students voted for clinic with medical/paramedical service in the second position, which was the last preference of the health teachers whereas health teachers gave preferences more for stool & blood group testing, health counselling, safety measures etc. The headmasters and planners/administrators from education sector expressed their views on probability of hiring the medical/paramedical staff to launch health service in the school.

More schools were situated in moderately crowded areas and it will supposedly be more crowded in future. There was no other option either to control disturbances in school by appropriate physical planning or shift the school to other peaceful areas. Most of the rented buildings that were constructed for residential purposes and a few dilapidated schools had problems of lighting, ventilation, accidents, narrowness etc. Generally, school sites and school buildings were not so bad. No availability of land for extension and inadequate or congested school compound was the main problem as well as the cause of inadequacy in maintaining environmental sanitation, garden and plantation, organizing various ECA and providing sports and games facilities in the school.

The highest percentage of the responses as 'good' in ventilation, lighting, furniture, blackboard and seating arrangement reveals the fact that the physical condition of the classroom was somewhat good. But the size of the classrooms was small as per the number of students in many schools. A comparison between two groups of schools showed that the furniture was found better in the private schools, and the ventilation and lighting system were better in the government schools.

Even though most of the schools had tap water with storage water tank and majority of the HETs responded as good, the water facility was not so satisfactory. The parent respondents also indicated that the water problem was a major problem in the school. Only some of the private schools had provision of filter. Considering the toilet facility, it was also found to be inadequate. A high percentage of parents also
complained of this problem. The condition of cleanliness in the classrooms, and that of school compounds were found to be tolerable. Improper use and scarcity of water were more responsible for dirty toilets. Majority of the headmasters were satisfied with the sanitation management of the schools. The major problems in this were the lack of funds and inadequate space.

Majority of the students bought lunch from the shops outside the school that was not good. Other practices were carrying tiffin from home, going home for lunch, eating in school canteen etc. Significantly more of the private school students carried tiffin from home and ate lunch in school canteen than the government school students. But both the private and government school students as well as parents felt that a good practice was to carry tiffin from home.

Almost all HETs emphasized on mentally or psychologically healthful environment in schools in various ways. But many of them were unable to give adequate supporting evidences of it. The headmasters expressed the view that teachers, headmasters and health teachers were responsible for creating mentally healthful environment in the school.

Most of the students and parents had complaints of inadequate sports and games facilities and ECA in the schools. Similarly, two third of the headmasters claimed that the school organized regularly ECA in schools, whereas only one third of the students corroborated this contention. Many schools did not mention budget for ECA. An average budget for ECA was N. Rs. 27,750/- in a school. The condition of private schools was better in ECA including sports/games than that of the government schools.

The parents responded positively and negatively in equal proportion on healthful environment in schools. But some parents complained that their children faced health problems due to poor environment in schools. Others reported not having witnessed such cases. Major problems relating to HSL were lack of sports facilities and playgrounds, inadequate water facility, problems related to toilets, disturbance
from outsiders, slimy and muddy pathways/ playgrounds etc. The private schools had more healthful environment than the government schools.

The relationship between the parents and school was found positive even though most of the parents did not make regular visits to their children's schools. To make the parents feel involved the headmasters claimed of observing Parents' Day, participating in community health programmes and organizing mass rallies for health awareness and some others. But many parents disagreed with the headmasters' claims. They rather emphasised the need for celebrating Parents' Day and forming PTA. Students also showed interest in voluntary service in the community health programmes.

Two third of the headmasters reported that their schools obtained co-operation from different supporting agencies either satisfactorily or to some extent. They obtained cooperation generally from NGOs, INGOs, parents and community, local elected bodies and government health sectors. But the activities undertaken by the school for the community and support from various organization/ agencies for schools were seen to be inadequate.

All the respondents had positive views about SHEP and the students and parents were interested as well as ready to make reasonable amount of contribution to it. So were the school personnel and planners/ administrators. But no concrete plans and policies for SHEP at the government level have yet been observed. Some prerequisites related to HSL and to be fulfilled while establishing new schools and compulsory health instruction from grades I to VIII existed.

The results show that organized SHEP can be run in secondary schools of Kathmandu Valley and many other accessible districts of Nepal. But it requires awareness amongst the teachers, parents and the students of the programme. Further, clear plan and policies of the government, training and orientation of teachers/ staff, support from community and parents, commitment of SMCs, headmaster and teachers, supporting environment from different sectors and adequate budgetary provisions are needed for the purpose. The planners and administrators have also
given such like suggestions for launching organized SHEP. Besides, they have also suggested for preparing clear-cut guidelines of SHEP, making provision in the education act; and launching a pilot programme in the selected schools.

As for the objectives of SHEP, majority of the respondent, preferred that related to health instruction than the other component. Other objectives were also considered relevant and important.

For executing and evaluating SHEP, SHEP co-ordination committee was recommended. The recommended members for the proposed committee in order of preference were headmaster, representative from medical personnel and parents, SMC and students, teachers, health institutions, senior HETs etc. The senior health teacher and representative of local VDC or Ward Committee should not be avoided in the co-ordination committee even though they were the last in order of priority.

For resource mobilization, headmasters and planners/administrators showed the probability of involving volunteer services by health, medical and paramedical personnel, government health sectors, voluntary health organizations, internship programme from health institutions, and SMC members and social workers. In respect of fund raising, fees from students, the grant from government sector, collecting the donations from different sectors, funding by INGOs/NGOs, grant from local elected bodies and fund raising by organizing joint programmes with other agencies were suggested. In the case of funding from INGOs, most of the planners and administrators opined that the government should take initiative for it.

In the end, it can be said that the existing HEP of the secondary schools of Kathmandu Valley is not fully satisfactory. The condition of school health instruction is somewhat all right, but the condition of school health service is very weak and the healthful school living is also not satisfactory. The activities for school and community co-operation are inadequate. Most of the respondents are positive about launching organized SHEP and resources can be mobilized. The private schools can initiate it if they provide training, orientation, advocacy, parental support and guidance for the launching of the programme. Other supporting policies need to be
developed from government level for launching SHEP in government schools besides those mentioned for private schools. It needs co-ordinating, monitoring, and supporting networks amongst various sectors. All school health related programmes carried out with the support of different agencies should be integrated. The teachers, the members of SMC, students, parents, community members as well as concerned health, education and social welfare sectors need to be informed and made conscious about comprehensive SHEP and once they get interested in the whole programme, they can be most effective in making it a success.

RECOMMENDATIONS

The present study on the effectiveness of SHEP is a broad field and it has tough slightly its components and sub-components. The data were collected only from three districts of Kathmandu Valley. However, it covered some rural area as well as hilly areas of the districts. From the research findings and gained experiences, the investigator has realized the need to do some more studies which are recommended as follows:

1. A study should be launched in regard to curriculum of school health education for its improvement according to the need and interests of school children and their parents as well as the community.

2. The same types of research study should be undertaken in primary schools where programmes relating to various aspects of SHEP are run by Basic and Primary Education Project or other agencies comparing it with non-programmed schools.

3. Feasibility studies should be launched separately in Himalayan and Terai regions because these are vastly different by geographically and socio-culturally from the sampled area of the present study.

4. A standard norm of evaluation scale should be developed in SHEP for the schools of Nepal covering different levels and types of schools that can help maintain the status of school health in different types of schools.
5. The recommended norms for classroom size, number of toilets, the kind of furniture, classroom management, playground, co-curricular activities etc. are not uniform in all the countries and the geographical regions. Therefore, a general norm for all these should be developed.

6. Morbidity survey of different diseases and other risky health behaviours of school children should be launched for finding out their major and minor health problems.

7. A comparative study of the impact on health behaviours of the students, in the schools with (of whatever kind) and with out SHEP as a long-term outcome evaluation should be undertaken.

8. An impact study of school health education programme in the total school programmes should be carried out.