

## Occupational Health Hazards and Care Provision of Employees in Nepal Telecom, Kathmandu District of Nepal

*Bhandari TR<sup>a</sup> and Adhikari RK<sup>b</sup>*

### Abstract

<b>Introduction</b>	Occupational Health is an emerging discipline of public health. The occupational health and care provision have been considered as an integral part of employees' health in the working places. The working environment may create the adverse effects to the health status of the employees during their employment or after their termination. The major occupational health hazards are known as biological, chemical, mechanical, psychological, and social.
<b>objectives</b>	This study was conducted among the employees of Nepal Telecom in the Kathmandu district, to assess the occupational health hazards and care provision of staffs in Nepal Telecom.
<b>Methods</b>	This is institutional based cross sectional descriptive study. Qualitative as well as quantitative information were collected by using questionnaire and observation checklist. There were employed 494 staffs in the Kathmandu district. From the total staffs, approximately 30 per cent staffs (150 respondents) were randomly selected to study by using stratified sampling technique.
<b>Results</b>	Internal working environment of Nepal Telecom was as expected as good, 64.00 per cent respondents were satisfied with the internal environment of Nepal Telecom and 22.00 per cent respondents had perceived it good. 56 per cent respondents replied that there was no unsatisfactory health care provision for occupational health hazards in Nepal Telecom. There were common problems of chemical, biological and mechanical hazards.
<b>Conclusion</b>	The employees of Nepal Telecom were adversely affected by some common occupational health hazards such as mechanical, chemical, biological and so on, so Nepal Telecom should improve internal working environment and should supply essential protective measures to all staffs who are involving indoor as well as outdoor activities in their assigned duties. The health insurance scheme and others health facilities should be accessible to all the employees.
<b>Key words</b>	Occupational health, Health hazards, Biological hazards, Chemical hazards, Mechanical hazards, Care provision etc.

### Introduction

Occupational Health is an emerging discipline of public health. The occupational health and care provision have been considered as an integral part of employees' health in the working places. It has been accepted as an entire part of human health, occupation and dignity. Occupation health concept has not matured and practiced in developing countries as expected it should be extended. Due to the poor attention, lack of proper planning and policies formation and no expertise in this field, the scope of occupational health is lining below the expected

standards. In developing world, occupational health is taken less important aspect of industrial and factory acts, as well as management gives less priority for the occupational needs of the workers.

To date, health is considered as physical wellbeing of human health but there ignored other important dimensions such as mental, social, psychological, emotional and so on which are inseparable parts of health. Many definitions of health have been evolved out with respect to its development. The

**Corresponding Authors:** Tulsi Ram Bhandari, **E-mail:** [Tulsib2004@yahoo.com](mailto:Tulsib2004@yahoo.com) / [Bhndari.tulsi@gmail.com](mailto:Bhndari.tulsi@gmail.com) , <sup>a</sup>Faculty of Health and Medical Sciences, Allahabad Agricultural institute Deemed University, India; <sup>b</sup>Central Department of Health, Population And Physical Education, Tribhuvan University Kathmandu, Nepal.

widely accepted definition of health is that which was given by World Health Organization in the preamble of its constitution, is –

*“Health is a state of complete physical, mental and social wellbeing and not merely the absence of disease and infirmity” (WHO-1948)*

This is widely accepted definition of health, even though it emphasized on physical, mental and social aspects of health only. It is necessary to include the other dimensions of human health in the amendment of its constitution in future.

Occupational health concerns health status and required needs for the employees in his occupation and occupational environment. Before 1950s it was taken as a sum of external conditions and influences which prevailed at the place of work and which have compoment on the health of the working condition. Such environment which deteriorates or affects or may affect the health of employees is known as the occupational health hazards. The occupational health hazards may create the adverse effects to the health status of the employees during their employment or after their termination.

In Nepal, at first the Civil Servant Act-2013 B.S. had addressed the legal and scientific provision in the field of occupational health which was formulated after the restoration of democracy in Nepal. After the enacting of Civil Servant Act – 2013, the gradual developments were made in the field of occupational health such as: Labour Act-2048, Civil Servant Act – 2056 and its amendment -2059 etc.

Nepal Telecom, the former Nepal Telecommunication Cooperation is one of the largest cooperation having more than six thousands staffs. The telephone service was started as “Akashbani Sewa” in the period of Rana resume and it was converted to Telecommunication Department in 2016 B.S., later it also converted into Nepal Communication Committee in 2026 B.S. This committee was changed to Nepal

Telecommunication Corporation in 2032 B.S. To implement the government policies of liberalization and privatization the corporation had been converted into *Nepal Doorsanchar Company Limited (Nepal Telecom)* since 22<sup>nd</sup> Magh 2061 (Nepal Gazette 26<sup>th</sup> Chaitra 2060). The Nepal Telecom was established under the government’s company Act-2053. It has own rules and regulation as autonomous body. The telecommunication is a fully technical field so there transpires close relationship between technology and human resources although there may subsist higher risk for human beings. So this study has intended to find out the major occupational health hazards of this field. Likewise prevention, control and rehabilitation are the major concerned areas of this study so this study was intended to find out occupational health hazards and care provision of employees in Nepal Telecom.

## Materials and Methods

This was institutional based cross sectional descriptive study. Qualitative as well as quantitative information are collected and analyzed in this study. There were employed 494 staffs in the Kathmandu district. From the total staffs, approximately 30 per cent (150 respondents) staffs were randomly selected by using stratified sampling technique. The total staffs were divided into two strata: officer level and assistant level. The information was collected by using questionnaire and observation checklist which were accomplished with open and close ended questions. Before collecting the information, permission was taken from Telecom Authority and verbal consent was taken from respondents. The data were analyzed by manually and interpreted with the help of simple mathematical tools.

## Results

### 1. Demographic Characteristics of Respondents:

Age, sex and destination of the respondents are shown as follows:

**Table 1: Demographic Characteristics of Respondents**

SN	Age Group	Sex of respondents		Destination of respondents	
		Male	Female	officer	Non-officer
1	18-28	21.33	10.00	4.67	26.67
2	29-38	26.00	10.67	3.33	33.33
3	39-48	13.33	6.00	2.66	16.67
4	48-58	12.00	0.67	0.67	12.00
Total		72.66	27.33	11.33	88.67

The above table shows that 72.66 per cent male staffs were employed under the telecom Nepal in Kathmandu district. The proportion of officers and non-officers staffs was approximately 1:8.

## 2. Distribution of Respondents by Nature of Jobs:

The work of the respondents was divided into three major areas: indoor, outdoor and both. The details distribution of the work is given below:

**Table 2: Distribution of Respondents by Nature of Works**

SN	Nature of work	No of Respondents	Per cent
1	Indoor	56	37.33
2	Outdoor	67	44.67
3	Both	27	18.00
Total		150	100

The table-2 indicates that 44.67 per cent employees were involved in outdoor work which was more health hazardous than indoor work. 18.00 per cent technical manpower was involved as both indoor and outdoor workers.

## 3. Response of Respondents towards Internal Environment:

Under the internal environment there may come heat, light, cold, ventilation, works with various machines and other equipments. Regarding the internal conditions, response of the respondents is presented as follows:

**Table 3: Perception of Respondents towards Internal Environment\***

SN	Internal environmental conditions	No. of Respondents	Per cent
1	Poor	21	14.00
2	Satisfactory	96	64.00
3	Good	33	22.00
Total		150	100.00

\* Information and grading were based on the perception of the employees.

The table-3 shows that 64.00 per cent respondents were satisfied with the internal environment of the Nepal Telecom.

## 4. Major Occupational Health Hazards:

Protection of employees' health by minimizing the different types of health hazards in their occupation is the prime responsibility of the employers. The major occupational hazards and response of the employees are presented as follows:

**Table 4: Major Occupational Health Hazards**

SN	Types of hazards	No. of respondents	Per cent
1	Body ache/fatigue	69	46.01
2	Accidental injuries	37	24.66
3	Electric shock	34	22.66
4	Others minor injuries	10	6.67
Total		150	100.00

From the above figures, it is seen that approximately 48 per cent employees were suffered from accidental injuries and electric shock. 46 per cent employees felt the problems of body ache and fatigue.

## 5. Common Chemical Health Hazards:

Different forms of chemicals such as solid, liquid and gases affect to employees. These chemicals enter into the human body by inhalation, ingestion and application. The common chemical hazards were as follows:

**Table 5: Common Chemical Health Hazards**

SN	Types of chemicals	No. of respondents	Per cent
1	Gaseous	52	34.66
2	Dust/solid	49	32.67
3	Liquid	12	8.00
4	mixed	37	24.67
Total		150	100.00

The above table shows that 34.66 per cent respondents were facing gaseous chemicals problems and 32.67 per cent were suffered from chemical dust.

### 6. Biological Hazards

Biology refers to science of living beings so biological health hazard means that hazard created by living organisms such as bacteria, virus, fungus, protozoa etc. Due to poor hygienic and unhealthy practices of the employees there may occur many problems of

communicable as well as non-communicable diseases. Safe drinking water, hygienic canteen facilities, separate sanitary latrine for male and female, proper disposal of waste materials and drainage system and so on are the basic requirements for employees at work places.

#### 6.1. Availability of Drinking Water

Perception of respondents regarding provision of safe drinking water and their daily practices are shown as follows:

**Table 6: Availability of Drinking Water**

SN	Types of available Drinking water	No. of Respondents	Per cent
1	Tap/pipe water	24	16.00
2	Filtered water	12	8.00
3	Boiled water	31	20.67
4	Mineral water	83	55.33
Total		150	100.00

The table-6 shows, there was available safe drinking water for 84 per cent employees.

### 7. Common Mechanical Health Hazards

The usage of machines and equipments is an advantageous aspect of human life, but there is not absence of risk to human beings. The mechanical

health hazards depend upon the competency of employees and nature of the machines. But to minimize the health hazards and accidents during works, the Telecom should provide essential protective measures and basic trainings to the employees. Types of mechanical hazards and perception of the employees are given as follows:

**Table 7: Types of mechanical Health Hazards**

SN	Types of hazards	No. of respondents	per cent
1	Accidents/Injuries	47	31.33
2	Radiation hazards	21	14.00
3	Eye and ear problems	59	39.33
4	Others	23	15.34
Total		150	100.00

Table-7 indicates that all employees of Nepal Telecom had more or less mechanical health hazards during their work but 39.33 per cent employees were affected from eye and ear problems. Likewise, frequency of accidents and injuries was in second position.

#### Available Facilities and Care Provision in Nepal Telecom

The perception of Nepal Telecom staffs towards their available occupational health facilities and care provision was as follows:

**Table 8: Available Facilities and Care Provision Regarding Occupational Health**

SN	Facilities and care provision	Perception of respondents					
		Yes		No		Total	
		No	Per cent	No	Per cent	No	Per cent
1	Sufficient pre-entry trainings	15	10.00	135	90.00	150	100.00
2	Availability of 1 protective measures	99	66.00	51	34.00	150	100.00
3	Provision of first aid and emergency care	12	8.00	138	92.00	150	100.00
4	Medical treatment facilities	79	52.67	71	47.33	150	100.00
5	Periodical in-service examination	63	42.00	87	58.00	150	100.00
6	Health insurance	150	100.00	0	0.00	150	100.00
7	Disable leave and gratuity	127	84.67	23	15.33	150	100.00

### Discussion and recommendation

By processing of the collected data, some valuable information has drawn out. Sharing of female employees in Nepal telecom was only 27.33 per cent and 73.67 per cent of respondents were male in Kathmandu. Among them 11.33 per cent were officers and 88.67 per cent were non-officers, the ratio of female and male staffs was approximately 1:3 and 44.67 per cent technical staffs were involved at outdoor work, 37.33 per cent were involved at indoor activities and remaining 18 per cent staffs were involved in both indoor and out door works. The involvement of officer level female staffs was very few in the Nepal Telecom.

Internal working environment of Nepal Telecom was as expected as good, so great emphasis should be given to maintain and for further improvement of the internal working condition. 64.00 per cent respondents were satisfied with the internal environment of Nepal Telecom and 22.00 per cent respondents had perceived it good. It indicates that provided facilities to staffs were based on their requirements.

In Nepal Telecom, there was available safe drinking water for 84.00 per cent employees. It was seem satisfactory and appreciable effort to prevent the employees from biological occupation health hazards. But 16.00 per cent employees were compelled to drink tap water so the access of safe drinking water should be extended to all staffs.

56.00 per cent respondents replied that there was no satisfactory health care provision of mechanical health hazards in the Nepal Telecom. There were common problems of chemical hazards. 334.66 per cent respondents were facing gaseous chemicals problems and 32.67 per cent were suffered from chemical dust. Likewise, the problems of solid and liquid and mixed chemicals also existed among the employees. 62.67 per cent employees were satisfied from the available care provision against chemical occupational health

hazards. The large numbers of employees were suffered from the problem of storage and disposal methods of used chemicals. These were the preventable problems, so management should be responsible to minimize such occupational chemical hazards.

48.00 per cent employees were suffered from accidental injuries and electric shock, 46.00 per cent employees had felt the problems of body ache and fatigue that may be effect of excessive exposed with electromagnetic radiation. These were also the preventable health hazards so Nepal Telecom should provide protective measures and basic as well as refresher trainings to all staffs.

The Nepal Telecom authority provided safe drinking water facility to the more than 80 per cent staffs but there was need to improve hygienic canteen facilities in the most of offices of Nepal Telecom in Kathmandu. The relationship among colleagues was found satisfactory but there were reported some gaps between supervisors and workers. It is essential to minimize the gaps among staffs for effective communication in Nepal Telecom. Only 79.00 per cent employees were informed with available all types of medical facilities, so it should be extended to all staffs of Nepal Telecom. The perception of employees towards availability of protective measures, medical treatment facilities, health insurance and disable leave and gratuity facilities were satisfactory but there was need to improve in pre-entry trainings, provision of first aid and emergency care and periodical in-service examination. The available facilities and health care provision should enhance the health status and work efficiency of employees.

### Acknowledgement

We would like to express our hearty thanks to all staffs of Nepal Telecom for their kind cooperation and valuable contributions. Likewise, we extend our

thanks to Central Department of Health, Population and Physical Education, Tribhuvan University, Kirtipur Kathmandu for academic support and guidance.

### References

1. Dickson K. A Historical View of Occupational Health and Safety, Proceeding of Workshop Held In Singapore, 23-26 Jan. 1995 and in Bridgetown Barbados, 6-9 Dec.
2. HMG, Civil Service by Law -2056. Kathmandu: *Ministry of Law and Justice*, Law Book Management Board, Babarmahal
3. HMG(2054), Civil Service Act-2054, Kathmandu: Ministry of Law And Justice, *Law Book Management Board Babarmahal*
4. HMG, Report of the Advisory Task Force On Employees Career Development-2056, kathmandu
5. HMG, Report of the Task Force of Civil Service Welfare and Benefit Study -2053, Kathmandu
6. HMG(2055), *Pay Commission Report-2055*, Kathmandu
7. ILO Encyclopedia of Occupational health And Safety, 1930; Vol. 2 Geneva: ILO Office
8. ILO Encyclopedia of occupational Health and Safety, 1999; Vol. 3, Geneva : ILO Office
9. ILO The Universal Declaration of Human Right and ILO Standard, Geneva: 1965; ILO Office
10. NTC, Nepal Doorsanchar BIGat Ra Bartaman Nepal, Kathmandu: 2056; *Telecom Training Centre Babarmahal*
11. NTC, Nepal Telecommunication Corporation By-Law, Kathmandu: 2059; *Nepal Telecommunication Corporation*
12. NTC, Management Information System, Ashadh-2061, Nepal Doorsanchar Company Limited Park k. (1997), Preventive and Social Medicine, India: Prem Nagar M/S Banarasi Pas Bhanot-1167