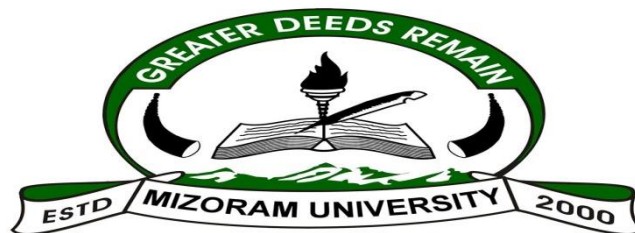


**DISSEMINATION OF HEALTHCARE INFORMATION IN ZORAM  
MEDICAL COLLEGE (ZMC): A CASE STUDY**

**A THESIS SUBMITTED IN PARTIAL  
FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF MASTER OF  
PHILOSOPHY**

**LIANHMINGTHANGI HNAMTE**

**MZU REGN. NO. 1600625  
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**DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE  
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SCIENCE**

**AUGUST, 2020**

**DISSEMINATION OF HEALTHCARE INFORMATION IN ZORAM  
MEDICAL COLLEGE (ZMC) A CASE STUDY**

**BY**

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**Submitted**

**In partial fulfilment of the requirement of the degree of the Master of  
Philosophy in Library and Information Science of Mizoram University,  
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### **CERTIFICATE**

This is to certify that the thesis entitled “Dissemination of Healthcare information in Zoram Medical College (ZMC): A case study” submitted by Lianhmingthangi Hnamte for the award of the Degree of Master of Philosophy in Library and Information Science is carried out under my supervision and incorporates the students bona-fide research and this has not been submitted for award of any degree in this or any other university or institute of learning.

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Year: 2020

### **DECLARATION**

I, Lianhmingthangi Hnamte, hereby declare that the subject matter of this thesis is the record of work done by me, that the contents of this thesis did not form basis of the award of any previous degree to me or to do the best of my knowledge to anybody else, and that the thesis has not been submitted by me for any research degree in any other university / Institute

This is being submitted to the Mizoram University for the Degree of Master of Philosophy in Library & Information Science.

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---

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

APL	-Above Poverty Line
AB-PMJAY	-Ayushman Bharat PradhanMantri Jan ArogyaYojana
AMC	-Adverse Drug Reaction Monitoring Centre
BPL	-Below Poverty Line
CAPD	-Continuous Ambulatory Peritoneal Dialysis
CHC	-Community Health Centre
CRC	-Colorectal Cancer
D.Net	-Development Network
EPI	-Expanded Program on Immunization
GDP	-Gross Domestic Product
HIS	-Health Information System
HCA	-Hierarchical Cluster Analyses
HIMS	-Hospital Information Management System
HAMTMC	-Houston Academy of Medicine-Texas Medical Centre Library
HPL	-Houston Public Library
ICMR	-Indian Council of Medical Research
ICT	-Information & Communication Technology
ICU	-Intensive Care Unit
IPD	-In-Patient Department
IDSP	-Integrated Disease Surveillance Programme
JSSK	-Janani Shishu Suraksha Karyakaram
JSY	-Jarani SurakshaYojana
ICHTO	-Iran Cultural Heritage, Handicrafts and Tourism Organisation
LC	-Local Council



MoHSS	-Ministry of Health and Social Services
MSHCS	-Mizoram State Health Care Scheme
NSSO	-National Sample Survey Office
NHM	-National Health Mission
NIC	-National Informatics Centre
NIDDCP	-National Iodine Deficiency Disorders Control Programme
NLEP	-National Leprosy Eradication Programme
NMHP	-National Mental Health Programme
NOHP	-National Oral Health Programme
NPCBVI	-National Programme for Control of Blindness & Visual Impairment
NPCB	-National Programme for Control of Blindness
NPHCE	-National Programme for the Healthcare of the Elderly
NPCDCS	-National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke
NPPCD	-National Programme for Prevention and Control of Deafness
NPPCF	-National Programme for Prevention and Control of Fluorosis
NRHM	-National Rural Health Mission
NTCP	-National Tobacco Control Programme
NUHM	-National Urban Health Mission
NVBDCP	-National Vector Borne Disease Control Programme
NCD	-Non-Communicable Disease
OT	-Operation Theatres
ENT	-Oto-Rhino-Laryngology
OPD	-Out-Patient Department

PBCR	-Population Based Cancer Registry
PCA	-Principal Component Analyses
PMSMA	-Pradhan Mantri Surakshit Matritva Abhiyan
PHC	-Primary Health Centre
QR	-Quick Response
RFID	-Radio Frequency Identification
RSBY	-Rashtriya Swasthya BimaYojana
RCH	-Reproductive Child Health
RNTCP	-Revised National Tuberculosis Control Programme
SDG	-Sustainable Development Goals
SC	-Sub - Centre
SECC	-Socio Economic Caste Census
TRI	-Technology Readiness Index
UHC	-Universal Health Coverage
UHS	-University Health Services
VC	-Village Council
WHO	-World Health Organisation
YMA	-Young Mizo Association
ZMC	-Zoram Medical College

## CHAPTER 1

### INTRODUCTION

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#### 1.1 INTRODUCTION

Healthcare is an important factor that determines the development of the country. Health, as defined by the World Health Organisation (WHO) is “a state of complete physical, mental, and social well-being and not merely the absence of diseases or infirmity”. It assumes a specific and fundamental role in the aspect of the state administration. Article 47 of the Indian Constitution indicates the accountability of the government to envisage the promotion of health standards for every Indian citizen. The Bhore Committee Report held under the chairmanship of Sir Joseph Bhore in 1946 agreed to focus on efficient healthcare delivery services among the rural residents and emphasize public participation inclining to social orientation in healthcare services. It is noteworthy that the first five-year plan in 1952 intervenes in the systematic execution of healthcare planning in India and thus accelerates the significance of healthcare for community development. The availability of health-related information should be very adequate to improve health conditions and reducing the mortality rate. Kreps (2005) states that “*Health information is essential in health care and health promotion because it provides both direction and rationale for guiding strategic health behaviours, treatments, and decisions*”. This further depicts the broad range of health and its vast coverage.

Due to the diversity and irregular health care information, there is a dismal position of health status in India. World Health Organisation defines a satisfactory healthcare system as a combination of good financing mechanisms, qualified and adequately-paid workforce, good facilities, and access to authentic information for decision making. It was estimated that approximately 5.8 million deaths every year in India were due to stroke, cancer, diabetes, and heart and lung disease. This means that 1 in every 4 people has a risk of dying from Non-Communicable Disease (NCD). India has around 3.2 crore people living below the national poverty line lacking their funds for healthcare expenses. It was estimated that 70% of the entire expenditure on healthcare was paid by either the government or insurance company.

The government expenditure on healthcare stands at just 1.28% of Gross Domestic Product (GDP) which is also very insufficient to counterpart the public health needs. Hence, as it has been rightly proclaimed that prevention is better than cure, the preventive measures have to be widely disseminated through various channels to aware the population.

Man is a growing animal that exposes its growth in terms of physical and mental (mind). Just like food is the basic source of physical growth, the human mind relied upon the availability of information and developed the following information accumulation. Many people are born with a good intuitive ability and instinct but instinct alone cannot be very sufficient in a certain task. From olden times, before the intervention of modern technology, the prevalence of information is quite visible. The mode of its interpretation is however conventional. Many cultures have their indigenous knowledge that they have acquired through experiences. That knowledge was transmitted from one another and passes through the generation and thus become valuable information. The universe of knowledge is infinite and thus it is impossible to acquire all the knowledge at a single time. However, human beings tend to seek information based on their needs. Maslow has proposed a theory of hierarchical needs on different bases such as physiological, safety, love/belonging, esteem, and self-actualization. Likewise, information is acquired on the deficit area of knowledge to compensate for the need.

Healthcare Information is a very important matter of concern for every country. As the world has witnessed several developments in the field of healthcare, there is also a notable shift in addressing a priority towards healthcare initiatives. There is increasing awareness of promoting health issues through various schemes undertaken by the government of India. For this reason, several healthcare projects have been brought up from the Central Government where the implementation of such project has been mostly undertaken by the hospital. Despite all the efforts given by the Central Government on healthcare, the actual success depends on how the mission finds its target group. Does it reach the beneficiaries? Does the information circulation go efficiently? How the information broadcasting is done to aware the masses. All these possible queries can pop up to ensure the success of the mission itself. Therefore, information dissemination is essential to maximize information

utility. Collins dictionary online (2019), defines dissemination as “*To disseminate information or knowledge means to distribute it so that it reaches many people or organizations*”. Information should be circulated judiciously to aware its users about the benefits and disadvantages of any project at an initial stage and to enable them to identify implications and thus facilitate them to generate more ideas and build perspectives. Colledge (2008) states that “Health literacy is the ability to obtain, understands, act on, and communicate health information. A health literate individual can obtain and use the information needed to make everyday health decisions”.

## **1.2 SIGNIFICANCE AND SCOPE OF THE STUDY**

Health information is a significant matter of concern and the health sector also assumes a pivotal role around the globe. It is not wrong to say that the health of every individual is largely depended on the cooperation of healthcare providers and the people. Healthcare information can either be successful or fail based on the extent of its availability when needed or the range of coverage to the vulnerable section. Hence, information dissemination in healthcare is a distinctive complement for health development. Marriott, Palmer & Lelliott (2000) states “*that communicating health information to all those that might need it, and in a way that is relevant to their task should include recognition of the characteristics of the individuals, or groups of individuals, who need to be made aware; the channels through which they can be reached; the message they need to receive; and influential factors that may be operating in their professional environment*”. Health information acquired from different sources that were relied upon by the public can have an immense impact on the quality of healthcare.

In viewing today’s context, both the central government and state government have initiated several healthcare programs, health insurance, and healthcare schemes that are essential for the people and require public awareness. Such programs and schemes are generally implemented in various hospitals including Zoram Medical College (ZMC) Hospitals. The core intention of the study revolves around the effectiveness of health utilization through various information channels and the extent of awareness. It is very often that information is disseminated to enable further circulation and to maximize the information widespread to the fullest extent. Recent

trends such as consumer movement, women's rights, self-care, cost containment, informed consent, national health insurance, malpractice claims, and the problems of chronic illness, etc. have expanded the interest and catalyzed to amplify the demand for health information.

The scope of the study is confined to the healthcare program under the National Health Mission (NHM) undertaken by the Zoram Medical College and the health insurance schemes accessible in the hospital. A study is intended to know the extent of awareness about the various health programs implemented under the NHM and the most frequently used channels for acquiring such information.

### **1.3 REVIEW OF LITERATURE**

The Review of Literature plays an intrinsic role in research investigation. It provides an essential contribution for framing research study on the relevant topics. It is an integral part of exposing different summaries of research and critical evaluation for the attainment of values from the existing studies. Literature review apprehends contradictions in findings or evidence and it is an important aspect of research significance. In the context of healthcare information dissemination, many studies have been undertaken in a variety of forms. Many articles, annual reports, handbooks, books, and conference volumes have been published in this field.

The present reviewed literature is thematically categorized into three and is arranged according to the ascending chronological order. The themes are listed below:

- a) Information Dissemination
- b) Healthcare
- c) Health Information

#### **1.3.1 Information Dissemination**

For achieving high efficiency of information dissemination in the existing internet and analysis for overlay-based information dissemination systems, Riabov (2004) made a proposal in his research where he develops a new algorithm that entails problems optimization of all spanning trees that can cause optimal delay and

throughput subjects associated with constraints. The study involves algorithm description through internet overlay networks but applicable for optimization of performance in several information networks where nodes degrees cannot surpass present maximum commanded by real-world constraints. Amid digital information era where internet spread across all parts of the world, all popular communication technologies such as email and the web are generated using a point-to-point exchange data with only single destination mode carried by a network protocols family called TCP/IP. However, applications like web seminars, video conferences, or online stock trading systems require the same data streaming for several destinations. For that case, the network was pushing data streams from a source node to a set of subscribers. Hence the enhancing utilization and intervention of this application made the broadband Internet connections to a great progression and resulted in efficient group interaction.

Chachhar (2012) analysed the influence of television for agricultural information dissemination among the general public. His findings conclude television is the best medium for the development of the agricultural sector and public view of agricultural-related information as the majority of each respondent seems to have owned a television by them. He also highlighted that in today's context the media has a huge impact on disseminating and retrieving information. He further suggests that the government should take initiative steps in tailoring appropriate content of agricultural-related programs on the television for the general public specifically for illiterate farmers.

For acquiring optimal information provision and effective dissemination, Teymouri (2012) undertakes a study on Iran tourism with the help of a structured system and professional procedure. As information service in the realm of tourism assumes a basic pivotal role, many considerations were given on different spectrums socially, politically, economically, and naturally. The study has found that there was a significant gap in information provision and dissemination system underlies in the current context and optimal situations. A prior step forward for commencing the total rectification was to secure revision and amendment in the existing components of information services in the sector of Iran tourism both at the national and international levels. A necessary suggestion was indicated for forming some other

significant components that haven't been done before. Therefore, it was recommended that a technical task-force within the Marketing and Advertising Bureau of Iran Cultural Heritage, Handicrafts, and Tourism Organization (ICHTO) who works for coordination of varied activities into an organized and systematic network are extremely needed for envisaging the desired information services in the sector.

Akanda & Roknuzzaman (2013) indicate the significance of acquiring the right information at the right time for encountering hurdles and problems. A study was emphasized on the significance of the Development Research Network (D.Net), a non-governmental platform that enables the free flow of information communication. The research was conducted among the rural community of Bangladesh. A study concluded that ninety percent of the rural population in Bangladesh are more or less satisfied with the programs and services provided by D. Net. It was also identified that some obstacles were due to lack of skilled man-power, inappropriate technological support, and power distortion. Hence, efficient infrastructure, governmental support, incorporation of Information Communication Technology (ICT), and technological literacy is recommended for the effective functioning of the services in enhancing information access.

An investigative study was made by Adegun & Issac (2014) through the survey method to identify the indicative impact of information dissemination in decision making among the secondary schools of Oyo State. The study exposes that the school principal and department heads have the highest frequency of disseminating information while the decision making was highly determined by the coordination and participation of all teachers. Thus, it shows a positive relationship between decision making and information dissemination. While at the same time, a certain variation was seen in the information dissemination and decision making among schools of rural and urban residents but no difference was found on account of the duration of teacher's work experience for information dissemination and decision making. A recommendation was made to exterminate all forms of narrow disrupter that obscure information dissemination and decision making and should settle for the appropriate action. For that reason, the participation of all teachers in decision making regardless of the experience and location of the school is important



and the government should equip all schools with equal infrastructure that can enhance information dissemination despite all locations.

Shonhe (2017) indicates in his paper the inherent nature of information providers and refer to it as the institution whose sole aim was to create and disseminate information for public use. This may include libraries, archives, and other record centres. The mandatory task of information professionals is information or document management in the entire lifecycle; hence, while some information is continuously generated and updated daily, some information is discarded or weeded out at the same time. Information generation, storage, management, and exposure for retrieval have been done in multiple forms to enable information repositories as an entrance for knowledge and culture. It was stated that the librarian is endorsed with services that envisage the right information at the right time in the right place by employing the right techniques.

For determining the efficiency of mobile technology for library services and enabling mobile information dissemination, Shonhe & Jain (2017) have undertaken an impact study through literature review and basic online study on the associated theme. The sampling method was also applied based on the Technology Readiness Index (TRI) to evaluate the findings of their study. It was stated that technological advancement brings about the extensive use of mobile technology that can work quickly in a wireless data network. Mobile devices facilitate information approaches with many benefits such as durable connectivity that works 24/7 and envisage self-services with no boundaries inaccessibility and time. With the assistance of mobile technology, many libraries services such as SMS alert service, mobile collections, mobile reference, mobile OPAC, library virtual, Quick Response (QR), and Personal Space/My Library were highlighted. The study finds that many users accept mobile technology as their skills and a positive disposition for handling mobile devices. At the same time, there are also some respondents against this technology who are cautious with the after-effects such as privatization of personal data and location identification. A recommendation was made to equipped Botswana libraries with more encouraging changes and implementation of quality structures that are desirable for coping with the 21<sup>st</sup>-century library and that will eventually encounter the expectation of the community who are not the denial of innovations.

### **1.3.2 Healthcare**

Jawahar (2007) describes the whole scenario of the health status of India. It was stated that from the olden times, India is a country identified as possessing a wealthy heritage in medical and health sciences. The mode of the ancient medical system is a kind of holistic method where the history in healthcare revolves from the Vedic period (5000 BCE). In one Vedas, a god of medicine emerged as described in the Dhanwanthari. The Ayurveda is also revealed to have existed from the Atharvaveda, one of the four Vedas where the Ayurveda philosophy was compiled by Chakra, and the surgical ability was articulated by Sushruta, the father of Indian surgery. The prominent hospitals in India were also constructed back through the reign of Ashoka during 273-232 BCE. There is also a medical institute based on Indian medical practices in the Universities of Taxila and Nalanda. When India attains independence in the year 1947, numerous changes has occupied the whole scenario of the health sector. But puzzling circumstances also came along with it that obstruct several visions such as increasing population density, low socio-economic status, and a lower rate of literacy which act as an indicator of health deterioration. Although India has made a remarkable journey forward in lifting health standards, still many issues such as raising budgetary resources in the health sector, application of information technology for appropriate health data management, and retrieval for utilization nationally and globally should be considered. The continuous efforts to manage the country's population and the political desire towards the achievement of millennium development goals in health will bring light to the health scenario.

Reddy (2011) indicate that the health of the Indian citizen should be at the dominant concern in the public policy to sustain the augmentative economic turning point and to value the fundamental right of equal health care for all Indian citizen. The author proposed the creation of Integrated National Health System in India which will enable the provision of universal health insurance, setting up a self-standing organization for envisaging accountable and credible healthcare practices and enhancing qualified personnel for expansion of human resources, coordination, and decentralization of health services by restructuring the current health governance and strengthening people's health status through health legislation. The central role of the paper is to emphasize equipment of the public health system for effective provision of primary health care in contributing promotion, curative and preventive

health services in India and to upgrade health quality with the most cost-effective expenses on health care and to inculcate integration of private sector in the national health care system. In the process of fulfilling the urge to call for action in determining achievement of health care for all Indian by 2020, the stakeholders in the government, civilian and private sector needs to come forth with dialogue and consensus in implementing actions needed to be done.

Rao et.al (2011) stated that India has encountered an acute shortage of human resources in healthcare. Lack of qualified and trained workers for health services is the dominating obstacle for progressive healthcare and the condense placement of workforce in the urban areas has resulted in the overall slow progress in healthcare. Dispersing the healthcare workers in rural areas, isolated villages and underserved places is one challenging factor. The consequences of poor governance in the health sector can be highlighted in several aspects. In India, there have been many times where patients were taken care of by unqualified workers due to lack of allopathic doctors and nurses. Even nurses were not entitled much authority and there are still insufficient resources for the provision of training courses. It was also stated that full concern is not given to the medical education and community health needs of the public, the fast-changing privatization of health and medical education has also face implications in qualitative governance. The author suggests some issues that the government is responsible to address. The initiation of comprehensive national policy is significant for enhancing human resources and the attainment of universal health care in India. In this regard, the government can plan a proper special package either monetary or non-monetary incentives to those health professionals or health workers designated in the rural areas or isolated places. Such policy will have an impact on supporting task-shifting and mainstreaming health practitioners such as Ayurveda, Homeopathy, and other Indian medicine doctors to work in such areas while obtaining innovative steps for supplementing human resources for health. Overall, additional investments will be demanded to envisage qualitative medical, nursing, and public health education in the country.

Lalmalsawmzauva (2013) undertake a study on the distribution of healthcare facilities in Mizoram. Mizoram surrounded by an irregular topography has witnessed a slow-motion of healthcare development. It was the Christian missionaries who

initiated all healthcare facilities in the land which was later transferred to the public sector. The emphasis was given to the spatial disparities of healthcare ranging from sub Centre to the hospital that is examined both horizontally and vertically across the state. Meanwhile, the urban areas have undergone a speedy development in enhancing private hospitals. It was also seen that due to the early establishment of healthcare facilities into the North than that of the South and population inequity, the northern part of Mizoram is better in healthcare services and infrastructure. The study reveals that in all spheres of simple assessment and based on facilities and mere health care establishment, the health centres are not sufficient enough. However, it is noticeable that out of every other detrimental aspect or factor, urbanization in the state is one prime factor leading to the complex situation.

Panda & Gite (2018) discussed in his paper about healthcare innovations. As we are living in the information age where new technology and innovation has governed every aspect of life including healthcare, there are increasing detection of new diseases every day and therefore new procedure are demanded to tackle such diseases. Healthcare innovations do not limit to the disease identification only but rather developing artificial intelligence or other forms of robotics. As predicted by the WHO, the geriatric populace which refers to the all-time growth will be inflicted by the year 2050 in which it was estimated that one in every five people will attain the age 60 or more. The elder population relied upon the working population in terms of health, finance, and social issues. It was recommended that appropriate tackling of the health domain should be initiated in adopting new innovative models, the imposition of new ideas technology which will lead to the exponential rise in the elderly.

Zodinpuii (2018) mentions in her thesis the basic meaning of health and the importance of primary health care delivery in Aizawl. Health was interpreted as valuable assets that are accountable as resource advancement towards a richer and fuller life of the citizens. Healthcare was defined as a sector that comprises a wide area of services ranging from health information and education with the process of disease prevention, early diagnosis, treatment, and rehabilitation. The role of Primary Health Care (PHC) was indicated as the backbone of all health service delivery. India is one of the first countries that commenced primary healthcare services. Before the

adoption of Alma-Ata of 1978, the primary healthcare model has been adopted which laid a foundation that lack of financial resources should not prevent people from acquiring healthcare services. Primary health delivery in Aizawl was broadly categorized into the east and west. There are 41 sub-centres in Aizawl West and 55 sub-centre in the east; and there are 33 Sub-Centre Clinics in west and 35 in the east. It plays a pivotal role in decentralizing health services and thus resulted in the reduction of morbidity and mortality through the services. The study shows that the infrastructure of sub-centres in Aizawl lacks sufficiency and majority buildings accommodated were not owned by the government.

### **1.3.3 Healthcare Information**

Eakin (1980) studies the need for consumer health information delivery and assessed how health information is procured and where does the public turn in seeking health information. The concept of health information was presented as one factor which does not only imply diseases or illness but encompass a broad factor relating to the physical and mental well-being of the individual. For this purpose, a survey was conducted in The Houston Academy of Medicine-Texas Medical Centre Library (HAMTMC) and Houston Public Library (HPL). The transparency of social, environmental, and economic factors for both health access and health care for positive outcomes are inclusive in the domain of health information. He suggests the necessity of librarian's cooperation with health professionals and other health organizations for effective delivery of consumer health information, bibliographic control development, and quality standards and resources and program evaluation.

Edejer (2000) in his article "Disseminating health information in developing countries: the role of the internet" portrays knowledge as goods available for the global public that have no restriction for its usage and that does not diminish after used by an individual. The inherent capacity for harnessing ICT was explored for disseminating information and describes the availability of access to technology in developing countries. However, the assurance of accurate and relevant content of information despite the trending technology is also being discussed. Medline was used as a key source for searching for information for this paper along with the information provided by informants working in international health research. A suggestive measure for information generation and policymaking was recommended

to be more interactive and beneficial with support from the internet. The intrusion of Information Communication Technology (ICT) enables the distribution of such goods more effortlessly. The inconsistency of health information available on the internet and the limitation on the relevance of research in the developing country was also pointed out. He suggested a way forward change could be achieved through full interactivity on the internet that will subsequently transform information into useful knowledge.

Marriott, Palmer &Lelliott (2000) specify dissemination as an important factor for effective healthcare services. A framework for dissemination strategy was outlined that includes recognition of personal or group of people to whom the awareness is required, the various channels for disseminating information to the beneficiaries, and certain factors contributing to the achievement of awareness through dissemination. This includes several categories such as (a) the environment in which information movement or transfer occurs, (b) the information's audience, and (c) the message which entails the actual content of the information were indicated as a major effective flow for information dissemination.

Coomarasamy et.al (2001) opined that health research is significant for improving patients care however there is insufficiency in disseminating strategies of research findings which has been causing a substantial obstruction in research. It has been observed that clinical medical journals are not quite effective in meeting the need for information and unable to connect the gap between clinical research and practice. The reason behind this is that some clinically-oriented journals fail to impart information that would encourage practitioners to modify or alternate practice. Medical journals can acquire implementation by substituting focus and adjustment of contents. For this purpose, the inclusion of pre-appraised evidence summaries and clinical bottom-lines in publication can be a useful strategy, and giving priority to systematic reviews and accurate evaluation is also important for research potentiality. The clinical journals should envisage researchers to think about the utility of their findings by considering the potential users or application and that whether the provided information will generate useful strategies to work, cost-effectiveness, consequences, and potential barriers to implementation. Hence, medical journals publisher should take necessary action to cooperate with the

scattered medical information about clinical trials and innovation of electronic media for quick access, and linking information in medical journals should be capitalized so that relevant and valid information would reflect a paradigm shift in medical journals.

Mathiharan (2003) highlights the transparency of the Indian Constitution in guaranteeing everyone's right to the highest attainable standard of physical and mental health. The Right to Life enshrined in Article 21 comprehend protection of health which further sustains the state's obligation to provide and maintain health facilities.

Stephens, Rimal, Rajiv & Flora (2004) examine to what extent the community organizations act as a viable channel for the dissemination of health information. Based on Putnam's findings, organizations can serve two major functions in health campaigns: instrumental (e.g., providing material support) and affinity (social support). Membership in community organizations explains greater variance in health outcomes than that explained by general media use, demographic indicators, and health media use. Implications for health campaigns are discussed.

Agarwal & Sangar (2005) discuss issues about the health conditions of the urban poor, present status of services, challenges, and suggests options for National Rural Health Mission (NRHM) to bridge the large gap. Efforts to improve the conditions of urban poor necessitate strengthening national policy and fiscal mandate, augmenting and strengthening the urban health delivery system, coordinating among multiple stakeholders, involving the private sector, strengthening municipal functioning, and building community capacities. National Rural Health Mission should be broadened to National Public Health Mission.

Kreps (2005) identifies the digital divide as a significant disparity in access and abilities to use health information for underserved population and at-risk audiences. An effort to reduce health disparities by bridging the digital divide can help to empower the provision of health information to enable health care decisions, seek the best possible health care, and enhance their quality of life. These projects attempt to enhance understanding of why barriers to information and knowledge

exist, and the data collected from these pilot projects can be effectively used to reach better health care decisions and adoption of recommended health behaviors.

Nandan (2005) emphasizes the involvement of cluster community-based mobilizes from each cluster community group that would serve as a means to generate awareness and mobilize the communities for improving various health & nutrition care services thus creating demand for services and increased need-based response leading to quality convergent services.

Satpathy (2005) reveals that despite the considerable expansion of the health care system in India, a measurable area of health infrastructure should be envisaged for further improvement following the key standards prescribed in the Indian Public Health Standards that would subsequently upgrade the quality of health care delivery. Measurement of performance based on a standard suited to the requirement of the system will thus improve the quality of services uniformly and will eventually decrease the problem of access, acceptability, lack of community involvement and accountability, etc.

Watts & Ibegbulam (2006) carried out a preliminary investigation regarding access to electronic healthcare information in developing countries, given the focus on the circumstances in the Medical Library, College of Medicine, University of Nigeria. Lack of adequate ICT infrastructure hinders access to electronic healthcare information resources and the lack of physical access to ICT is a more pressing problem than the availability of online health information resources. Providing relevant information to healthcare professionals and the provision of affordable physical access are both significant for enabling electronic healthcare information.

Raban, Dandona & Dandona (2009) undertake a review of the essential health-related information for the provision of quality health of the population. An overview was made on important health-related information that includes all those matters concerning the health of the individuals such as census, mortality and birth rate, health facility and infrastructure, surveillance and response systems; household surveys; health information management, etc. It was highlighted that there was an insignificant availability of information with issues related to non-communicable



diseases and injuries. As India is facing an intense epidemiological transition, a significant gap was seen in the proportions of disease burden. While the public health sector provides efficient information concerning the pattern of health care seeking there are limitations on the availability of information and lack of primary data in the private sector. A suggestion was made to encourage effective information systems to the private sector and district level for further development.

Scanfield, Scanfield & Larson (2010) reviewed Twitter status updates indicating “antibiotics” to assess the occurrence of misunderstanding and to explore the frequency of misuse of antibiotics. Twitter is a platform for social interaction and a micro-blogging service that envisages status updates with a maximum of 140 characters in three forms such as web form, online instant message, and text messages through the phone. This study confirmed that Twitter and other similar services may provide a venue for informal sharing of health information and advice. It was mentioned that Twitter acts as a significant space for informal sharing of health information. The study further suggested that health professionals should have basic relevancy with the social networking services to overcome misuse and misunderstanding of antibiotics, promote positive behavioral change, and disseminate valid information.

Balarajan, et.al. (2011) states that India accounts for genuine inequitable access to achieving health care services. It was estimated that poor people with the greatest need for health care have difficulty in accessing health services and are least likely to have their health needs met than the rich people. Besides, insufficient public financing, lack of a comprehensive method for risk pooling, and high out-of-pocket expenditures because of rising health costs are key factors that affect equity in health financing and financial risk protection. It was suggested that civil society has a great responsibility to empower health reform and promoting health equity.

Fox (2011) report findings based on a telephone survey conducted to identify a variety of ways people get to seek health information and how the knowledge is shared using online social tools. Health professionals are the first choice of consultation for most people with health concerns. But at the same time, social network sites also contribute as a good source of encouragement and a way of

tracking updates about others' health conditions and routines, posting reviews of their medical treatments, and raising awareness about certain health conditions.

For learning how and where the high school students retrieve health information and to understand their attitude towards electronic tools for health information and their degree of trust, Ettel et.al (2012) undertake a study using an anonymous survey on the students of Catholic school. It was highlighted that due to the ease of internet accessibility at home and school as well, the adolescent finds it comfortable to browse health information through the internet. They also have high trust in the information they get from the internet and tend to follow them spontaneously. The underlying problem is that there are limitations to the legitimacy of sources and is difficult to determine the accuracy of sources. Most searches made on the internet by students include Wikipedia where everyone can edit the content. Since it is unreasonable to disturb the busy physician whenever the adolescents have queries or directing them to glance through peer-reviewed literature on biomedicine, the author suggests the creation of asynchronous communication among the physician and students so that reliable information will be generated either directly from the medical practitioner or the physician's approved websites. To enable successful communication, there are also many hurdles that the physician had to undergo; such obstacles include liability, billing, and the assurance of correct diagnosis through online conversation.

Tossy (2014) highlights the intervention of ICT in a healthcare organization and how it integrates healthcare challenges by improving healthcare professionals and practitioners to acquire effective and efficient healthcare services. The purpose of developing the Health Information System (HIS) was to encourage opportunities in sharing and exchanging information and to enhance quality information for better healthcare services. HIS is an important tool that enables decision-makers from different levels to identify optimal health resources and act as a key element for the achievement of health development. He further noted major benefits of HIS implementation in various contexts such as its cost-effectiveness, facilitate the exchange of information, advocate authenticity in healthcare services, reduction of errors in medical records, and ameliorate patient outcomes.

Access to health information through the Internet has widely attracted consumers and healthcare providers as a means for encouraging people to get screened for colorectal cancer (CRC). Chen, Yamanda & Smith (2014) has made a study on the extent of consumer's awareness of CRC screening information that is available on the internet and to establish accurate and reliable health information for the consumer to enable decision making on CRC screening. The data for this study was extracted from the 2003 Health Information National Trends Survey. People aged 55 and above were categorized according to their compliance with suggested CRC screening. The PRECEDE-PROCEDE model was used for evaluation of the impact of the internet for information related to CRC screening. The study found that experience and knowledge of the internet have influenced the utilization of CRC screening as the internet has been highly associated with the reliability and credibility of cancer-related information. It was also suggested that the content of websites about CRC should emphasize the updated information to envisage people to make a wise decision regarding CRC screening.

Angula & Dlodlo (2015) undertake a study on the identification of an efficient and effective way to use mobile technologies for the dissemination of health information among the Namibian population. As the method of health information dissemination is a manual system and scarcely distributed, access to disease information insufficient. The Ministry of Health and Social Services (MoHSS) acts as the major source for the provision of healthcare services to the communities in Namibia. Mobile application as a relevant worldwide usage for adopting healthcare information has also been used for access to information as it does not involve travelling to a long distance. At the same time, it also benefits healthcare service providers owing to the less transportation cost. The design of mobile-based health applications in this research is anticipated to help wider access of health information through mobile technologies where the general information about the disease will enable the communities in their part to handle any kind of disease outbreak. Some attributes of such mobile technology may include its usability, efficiency, user satisfaction, accessibility, speed, and adaptability to the users and providers of healthcare information in Namibian.

Kandadai (2016) undertake a study to determine health information dissemination through Twitter and leverage Twitter network for identification of stakeholder's pattern of optimizing twitter as a tool for facilitating health information communication. The study has a background presumption that Twitter can act as a platform for bridging the gap between innovation and dissemination through leveraging the potentiality of twitter and credited to the promotion of health information in a vast network of potential users. A case study from @SafetyMD was used to provide preliminary evidence and analyze the tweet content which has 1790 followers. User emphasis was applied using the keyword of health information themes to encourage retweets across two sections of re-tweeters that originated from @SafetyMD. The user interest groups were categorized according to the Principal Component Analyses (PCA) and Hierarchical Cluster Analysis (HCA) that constitute of 170 followers selected on a random sample. The user emphasis of keywords remained across levels but decreased by 9.5 percentage points. 12 unique clusters among followers were identified in PCA and HCA within the @SafetyMD Twitter network.

Kaur & Kaur (2018) indicate the information-seeking patterns and searching techniques of the medical practitioners. It was stated that information needs can vary according to the information seekers based on their qualifications and experience. Many factors influence information seeking such as cost, accessibility, and availability. The inclination to e-resources for information gatherings and the purpose and intention for why the information was gathered was also analyzed. The sole purpose was to identify whether the medical practitioners make time to collect information despite their busy schedules especially utilizing the e-resources.

A research conducted by Guite (2019) on the channels of communication of health information among the women residents of Kangpopki town in Manipur analyzed that the impact of informal sources of communication has a higher degree than formal sources in the transmission of health information. Pamphlets and word of mouth were evaluated as the most suitable channels of communicating health information. Mobile phone sms also constitute the most prevalent and preferable form for health information communication. Age and education act as a dominant impact for taking health decisions and the more women are possessed with the higher

independency of income, they have a higher chance of opting for good health outcomes. It was also revealing that Community Health Centre (CHC) was the most trusted health institution in the area so the researcher suggests that health workers should undertake health camps or another form of enhancing good health status. Apart from the health institution, the church is assuming a pivotal role and the researcher further recommend the intrusion of important health announcement in the church service.

Chaudhry et.al (2019) explained that the Healthcare industry is now facing new challenges in information management. A drastic demand for electronic transactions and automation of health records and healthcare delivery has arisen to integrate healthcare experts and clients which will eventually lead to appropriate information management. However, stakeholder's interest has a great impact on the actual benefit of the inclusion of technology in healthcare information over paper mediums. Hence implementation of value derivation and quality improvement of the entire health sector comes from maximum utilization by its stakeholders.

Ottosen, Nandita & Fratta (2019) observe in their paper that amidst the complex information ecosystem, health literacy becomes an important factor across the globe. An initiative taken internationally for health improvement was highlighted by demonstrating examples for partnership among multiple constituencies on health literacy and anticipation was given for the further expansion of opportunities. For this purpose, health literacy and other innovative works undertaken in the developed countries was also discussed. In a developed world, it was found that due to the wealth of information, the information itself is ubiquitous, and thus it is difficult to understand what information sources are reliable. While in the developing world, many barriers such as unavailability of content, cultural taboos, and language barriers may define the lack of health literacy. Hence, for combatting and mitigation of health information crises, the information professionals and librarians must be playing their vital role.

Pirialam (2019) evaluates the impact of education on the health literacy level by targeting diabetic patients with regards to a public library and also determine the relationship between health literacy level, age, and gender of patients. Health

education is an important element for the reduction of treatment cost and for changing the lifestyle of each community and families to gather information for decision making about issues for effective information retrieval, access, and maintaining health. For this reason, the public libraries can implement various steps as it has always been the major centre to access information and are bounded with education and learning in the community. It was also suggested that Politicians who are working with health and health education can utilize the potential facilities of public libraries so that the promotion of health in the society can be achieved properly.

For studying the usage and most trusted source for medical information in Saudi Arabia, Alduraywish et.al (2020) administered 413 questionnaires using a random sampling method and discover that doctors were the most used and trusted source for obtaining medical information while courses and campaigns were found to be the minimal degree of used sources and social media specifically WhatsApp was determined as the least trusted sources. It was suggested that quality information not only in the medical field was highly required and enhancing courses and campaigns by developing well-structured courses and campaigns was highly recommended for simply encountering the need of the individual. It was also further highlighting the need for more research as a quest for why the majority of the participants partially trusted their doctors.

Andrew (n.d.) specifies in his thesis the mode of health information dissemination in Ahmadu Bello University. He stated that the University Health Services (UHS) is the main provider of healthcare services to the staff and students of the institution. He stated that information dissemination requires a strategic effort to provide the right information among the people using the right mechanism at the appropriate time. As information is an important accelerator of health promotion and provides both direction and rationale for health strategy, the World Health Organization has taken initiatives for advocating primary health care in a wider form as it is the cornerstone of the basic healthcare system. For this research, data were gathered through interviews and questionnaires. From the findings, it was suggested that intensifying cooperation between Universal Health System and the library will culture where communication strategies are routinely adapted to match the literacy

levels of unique audiences. It was concluded there was an extensive unwillingness to assemble, analyze, and disseminate the discovered knowledge which leaves the local initiatives to carefully invent their ideas or not done anything at all. This factor can obstruct the advances oriented for quality healthcare delivery and thus lead to a wasteful procedure. The author recommended that the UHS should frequently analyze medical data for the identification of opportunities about effective dissemination and enabling message design.

## **1.4 RESEARCH GAP**

As depicted from the above-reviewed literature, numerous studies have been undertaken on health-related information and information dissemination strategy has been presented in many sources. Despite this, no proper study related to the present study with the proposed population is available to date. The reviewed literature shows that there are still drawbacks in the awareness of healthcare programs that obstruct its utilization to the various extents. This study is intended to fulfill the research gap of the area to enrich the subject by raising progressive health-related information and its dissemination.

## **1.5 RESEARCH DESIGN**

### **1.5.1 Statement of the Problem**

Mizoram is a state with Aizawl as its capital city. The geographical area covers 21,081 sq.km. Myanmar and Bangladesh are the two international borders that hover around Mizoram. It has three inter-state borders such as Assam, Tripura, and Manipur. As per the 2011 census, the population of Mizoram is estimated as 10,97,206. Out of the total population, 5,55,339 were males, and 5,41,867 were females. The rural residents comprised of 5,25,435 and urban residents comprised of 5,71,771. With a literacy rate of 91.33%, Mizoram ranks third as the state with the highest literacy rate in India. Mizoram healthcare has been augmented with the starting of the healthcare delivery system in urban areas such as the primary health centre and wellness hub in its capital city. Presently Mizoram has 11 district hospitals, 12 community health centres, 57 primary health centres, 370 sub-centres, and 78 clinics established in Mizoram. Currently, most of the health programs are vertically carried out by the National Health Mission (NHM) of which under its

broad spectrum consists of preventive, curative, promotive, rehabilitative, and palliative health services.

The constitution of India envisages the right to life as fundamental to all and constrains the government to ensure that every person is entitled to a healthy life. The federal structure of the Indian governmental system encourages the decentralization of powers and administration where the states are obliged to the efficient health care delivery among the state dweller and the central government is reliable for international health agreement, imparting medical knowledge and education, implementation of national disease prevention and control program, food purification by prevention of food mixed with extraneous material and quality control of drug industry. It is a well-known fact that the present status of health status is gloomy in India. Every Indian citizen has a legal right to have access to appropriate, adequate, and affordable health care during his/her life span. An intensity of transformation of the health-care system to promote equity, efficiency, effectiveness, and accountability in the delivery of health care at all stages is on high demand (Reddy et.al 2011). This provokes the stimulation of various integrated health care services by various to provide equitable, affordable, and quality health care services that are accountable and responsive to people's need. However, the deliberate awareness of its existence and availability is essential to make people informed about the advantage and drawbacks tangled on the project. For this reason, the medium or channels employed for information delivery or project circulation for reaching the public assume an important task. Health-related information; unlike other information has a vast and varied target group. Therefore, the range of dissemination of health-related information becomes more multidimensional. Despite the advancement in Information and Communication Technology (ICT) and the intervention of various mass media, somewhere at the corner of the village, there are still ignorant people who needed to get informed about healthcare facilities.

Information dissemination has a crucial role in health care delivery in all spheres. The Central government has adopted many health treaties and programs to envisage the well-functioning of the health system in India. However, the health status of India is still very low. Mizoram is one among the Indian state with a higher rate of Non-Communicable Disease (NCD) prevalence and the highest rate of HIV



infected cases. Hence, health information is one indicative factor to be taken as a solution to spread prevention and precautionary measures. Also, with the higher rate of poor health condition, awareness about the health programs relevant to their disease and the health insurance is of drastic importance. Therefore, a painstaking selection of appropriate channels for disseminating healthcare information to encompass various people and outreach every nook and cranny of the place at a minimum cost with maximum usability is aspired to achieve in this proposal.

### **1.5.2 Objectives of the Study**

Objectives of the study are an important part of any kind of research. The objectives of this study are given below:

- 1) To find out various channels used for dissemination of Healthcare Information in Zoram Medical College.
- 2) To investigate the most frequently use of information channels for disseminating healthcare information.
- 3) To explore the regularity of information to the public.
- 4) To identify the awareness of healthcare programs by the public

### **1.5.3 Research Methodology**

The present study is the outcome of the analytical and case study of the health information dissemination in Zoram Medical College and the extent of health program awareness by the patient. The primary data has been gathered from the questionnaire distributed to the patients admitted in the Zoram Medical College Teaching Hospital along with the personal interaction among the healthcare providers. The total sample size is 181. The secondary data were collected from the articles, journals, and published as well as unpublished works on relevant topics, the publication of the Government of India, Health & Family Welfare and Government of Mizoram, World Health Organisation. The study was designed to examine the efficiency and mode of dissemination of healthcare information in Zoram Medical College. For fulfilling the research objectives, the survey method using a scheduled questionnaire was applied for data collection.

- 1) **Sample size:** The study is confined to the inpatient of State Referral Hospital of Zoram Medical College. The methodology adopted to take sample size

from 304 total beds in State Referral Hospital of Zoram Medical College is determined as below:

Confidence level : 95%  
 Margin of Error : 5%  
 Total Population : 304  
 Sample size needed : 170

Explanation:

Cochran's Formula to determine the sample size is as follow:

$$n_0 = \frac{Z^2 \times P(1 - P)}{c^2}$$

Where:

- c is the desired level of precision (i.e. the margin of error),
- p is the (estimated) proportion of the population which has the attribute in question,
- The Z value is found in Z-table

It is obvious that Z score of 1.96 is 95% which is obtained from Z-table.

Suppose for a large population with inadequate information, we assume that half of the population has the attribute in question which gives us maximum variability. So  $P = 50\% = \frac{50}{100} = 0.5$ . Now let's say we want 95% confidence and at least 5 percent – plus or minus – precision.

$$\begin{aligned} \text{Then, } c &= 5\%(100\% - 95\% = 5\%) \\ &= \frac{5}{100} = 0.05. \end{aligned}$$

A 95% confidence level gives us Z values of 1.96, per the normal tables, so we get

$$\begin{aligned} n_0 &= \frac{Z^2 \times P(1 - P)}{c^2} = \frac{(1.96)^2 \times 0.5(1 - 0.5)}{(0.05)^2} \\ &= \frac{0.9604}{0.0025} = 384.16 = 384(\text{approx.}) \end{aligned}$$

So a random sample of 384 population size should be enough to give us the confidence levels we need.

Cochran's formula is considered especially appropriate in situations with large populations. As the population we're studying is small, we can adjust the sample size by using finite population correction as below:

$$n = \frac{n_0}{1 + \frac{(n_0-1)}{N}}$$

Here  $n_0$  is Cochran's sample size recommendation, N is the population size, and n is the new, adjusted sample size. Since Zoram Medical College/State Referral Hospital, Falkawn is of 304 beds strength. The sample size required for this hospital is:

$$n = \frac{384}{1 + \frac{(384-1)}{304}} = \frac{384}{2.26} = 169.91 = 170(\text{approx.})$$

For 304 beds strength, 170 sample sizes are sufficient which a substantially smaller sample size is.

- 2) **Data Collection:** A survey questionnaire tool was applied for the collection of primary data for the study. A total of 181 questionnaires were administered to those respondents comprised of males and females of varied ages who were admitted to the Zoram Medical College hospital disproportionately to know the relevancy and awareness of the healthcare program and to determine the efficiency of information dissemination of health-related information to the patient public.
- 3) **Data analysis and Interpretation:** The collected data were coded, scrutinized, tabulated, and analyzed through descriptive statistics using IBM SPSS Version 20 and Microsoft Excel.

## 1.6 CHAPTERISATION

The report is presented in six chapters with bibliography and appendix in a separate text. Chapter one is Introduction explaining different terms and issues relating to the topic including significance and scope of the study, review of related literature to draw gap to fill in this study, statement of the problem, research objectives, and methodology. Chapter two is the Dissemination of Information discussing different issues related to the point of Library and Information Science subject. Chapter three is Healthcare in ZMC: An Overview, which presents different aspects of ZMC, different NHM Programmes, functions, and services to the community as a whole. Chapter four is Data Analysis, Interpretation, and Findings. Chapter five is Conclusions and Suggestions which presents from the study. A bibliography is also arranged in the standard format of APA Style Manual 6<sup>th</sup> edition.

## REFERENCES

- Adegun O. A, & Isaac, Y. A. (2014). Information Dissemination and decision making in Secondary Schools in OYO state. *Innovare Journal of Education*, 2(1), 4-7.
- Agarwal, S. & K. Sangar, K. (2005). Need for dedicated focus on Urban Health within National Rural Health Mission. *Indian Journal of Public Health*. 49(3)
- Akanda, A. E., & Roknuzzaman, M. (2013). Rural Information Provision in Bangladesh: A Study on Development Research Network. *Information and Knowledge Management*, 3(10), 64-73.
- Angula, N., & Dlodlo, N. (2017). Mobile Technology for Healthcare Information Dissemination to Low Resource Areas of Namibia. *International Journal of Science and Research (IJSR)*, 6(4), 662-674.
- Alduraywish, S. A. (2020). Sources of Health Information and Their Impacts on Medical Knowledge Perception Among the Saudi Arabian Population: Cross-Sectional Study. *Journal of Medical Internet Research*, 22(3).
- Balarajan, Y., Selvaraj, S., & Subramanian, S. V. (2011). Health care and equity in India. *The Lancet*, 377, 505–15.
- Chachhar, A. R. (2012). Impact of satellite television on agricultural development in Pakistan. *Global Media Journal*, 2(2).
- Chaudhry, B. et.al (2006). Systematic Review: Impact of Health Information Technology on Quality, Efficiency, and Costs of Medical Care. *Annals of Internal Medicine*, 144(10).
- Chen, C. C., Yamada, T., & Smith, J. (2014). An Evaluation of Healthcare Information on the Internet: The Case of Colorectal Cancer Prevention. *International Journal of Environmental Research and Public Health*, 11, 1058-1075 p.
- Coomarasamy, A. (2001). Medical journals and effective dissemination of health research. *Health Information and Libraries Journal*, 18, 183-191.
- Colledge, A. (2008). Health information for patients: time to look beyond patient information leaflets. *Journal of the Royal Society of Medicine*, 101, 447–453.
- Eakin, D., Jackson, S. J., & Hannigan, G. G. (1980). Consumer Health Information: Libraries as Partners. *Bull. Med. Libr. Assoc.*, 68(2), 220-229.
- Edejer, T. T. T. (2000). Information in Practice: Disseminating health information in developing countries: the role of the internet. *BMJ*, 321, 797-800.

- Ettel, G. (2012). How Do Adolescents Access Health Information? And Do They Ask Their Physicians? *The Permanente Journal*, 16(1), 35-38.
- Fox, Susannah (2011). *The Social Life of Health Information*. Washington: Pew Research Centre's Internet and American Life Project
- Guite, Florence (2019). Women Health Information Communication channels in rural areas: a study of Kangpokpi sub-division, Manipur (Doctoral Dissertation, North-Eastern Hill University, Meghalaya).
- Jawahar, S. K. (2007). Healthcare Scenario in India. *ICU Management and Practice*, 6(4), Retrieved from <https://healthmanagement.org/c/icu/issuearticle/healthcare-scenario-in-india>
- Kandadai, V. (2016). Measuring Health Information Dissemination and Identifying Target Interest Communities on Twitter: Methods Development and Case Study of the @ SafetyMD Network. *JMIR Res Protoc*, 5(2), 1-11.
- Kaur, A., & Kaur, S. (2018). Information Seeking Behaviour of Medical Practitioners: A Study of Majha Region of Punjab. *International Journal of Information Dissemination and Technology*, 8(3), 166-169.
- Kreps, G. L. (2005). Disseminating relevant health information to underserved audiences: implications of the Digital Divide Pilot Projects. *J Med Libr Assoc*, 93(4), 68-73.
- Lalmalsawmzauva, K. (2014). Disparities of Healthcare Facility in Mizoram, India. *2014 Asia-Pacific Social Science Conference (APSSC)*. South Korea.
- Marie Zodinpuui (2018). Primary Health Care Delivery Services in Aizawl: Functions & Challenges (MPhil Dissertation, Mizoram University, Mizoram)
- Marriott, S., Palmer, C., & Lelliott, P. (2000). Disseminating healthcare information: getting the message across. *Quality in Health Care*, 9, 58-62.
- Mathiharam, K. (2003). The fundamental right to health care. *Issues in Medical Ethics*, 11(4), 123.
- Nandan, Deoki (2005). National Rural Health Mission – “Rhetoric or Reality”. *Indian Journal of Public Health*. 49(3)
- Ottosen, T., Mani, N. S., & Fratta, M. N. (2019). Health information literacy awareness and capacity building: Present and future. *IFLA*, 45(3), 207-215.
- Pirialam, H. et.al (2019). The importance of public libraries in education for health literacy: A case study on diabetic patients. *IFLA Journal*, 45(3), 216-223.

- Raban, M. Z., Dandona, R., & Dandona, L. (2009). Essential health information available for India in the public domain of the internet. *BMC Public Health*, 9(208), 1-19.
- Rao, M. et.al (2011). Human resources for health in India. *Lancet*, 377, 587-598.
- Reddy, K. S. et.al (2011). India: Towards achievement of universal health care in India by 2020: a call to action. *Lancet*, 377, 760-768.
- Riabov, Anton (2004). Efficient Information Dissemination Systems (Doctoral Dissertation, Columbia University, Columbia)
- Satpathy, S. K. (2005). Indian Public Health Standards (IPHS) for community health centres. *Indian Journal of Public Health*. 49(3), 123-126.
- Scanfield, D., Sacnfield, V., & Larson, E. L. (2010). Dissemination of Health Information through social networks: Twitter and antibiotics. *American Journal of Infection Control*, 38(3)
- Shonhe, L. (2017). A Literature Review of Information Dissemination Techniques in the 21st Century Era. *Library Philosophy and Practice (e-journal)*.
- Stephens, K. K., Rimal, R. N., & Flora, J. A. (2004). Expanding the Reach of Health Campaigns: Community Organizations as Meta-Channels for the Dissemination of Health Information. *Journal of Health Communication*, 9, 97–111 p.
- Tossy, T. (2014). Major Challenges and Constraint of Integrating Health Information systems in African Countries: A Namibian Experience. *International Journal of Information and Communication Technology Research*, 4(7)
- Watts, Chris & Ibegbulam, Ijeoma (2006) Access to electronic healthcare information resources in developing countries: experiences from the Medical Library, College of Medicine, University of Nigeria. *IFLA Journal*.32(1), 54-61.

## CHAPTER 2

### INFORMATION DISSEMINATION

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#### 2.1 INTRODUCTION

This chapter presents several topics such as the literal meaning of information and information sources, the general summary of information dissemination, networks for information dissemination, the various channels for communicating information, and some barriers that incurred to the smooth flowing of information. It also entails healthcare information, health science library, and its indispensable manner in today's context, access to health information, and the role of health information providers or information providers.

The epitome landmark of the information age is the introduction of computers in 1970. Claude E Shannon, a renowned personality identified as the father of Information Theory specifies in his published paper that the binary number viz. ones and zeroes can be quantitatively represented as information encoding series. With time, the United States Department of Defence developed the Internet which was accompanied by the adoption of personal computers and thus eventually explodes the Information Revolution. The Information revolution is equivalently termed as the age which was largely absorbed by the media and digital relevancy. This has resulted in many technological innovations such as the development of fibre optic cables and other speedy microprocessors which hasten the speed of information processing. All the production of the internet such as email, search engine, World Wide Web, and all other interactive platforms has dominated the world World's information flow.

The need for information in the information age is highly intensified. Information needs can be related to the information requirements that were prompted by any plans, task, decision, or any form of idea construction. The information needs may vary and distinct according to the goals of each person. Although there is some general information that is needed by all, it is apparent that all users do not need all information. The availability of information when needed is the utmost form of information utilization. All people have a known and unknown need. The known

need for information may easily be specified and retrieve on a cognitive basis. On the other hand, the unknown need for information is highly dependent on the information providers which when provided or explained only finds its users. Hence the utilization of several information channels that comes along with information age is significant for information dissemination to aware of the unknown and expands the already known information.

## **2.2 INFORMATION**

The term Information is derived from the combination of two words “forma” and “formation”. Both the word represents the idea of creating shape to something or forming the pattern. Information is the organized data that turns into information when collected, processed, illustrated, and disseminated logically to a particular or certain group of people in a communicable form. Information is most commonly identified as organized data that is presented or conveyed to expose the meaning or nature of something. Isazadeh (2004) portrayed information as the most valuable commodity in the present age. Information is a significant resource for both nation’s development and individual progression. Accuracy in information access and possession of correct and relevant information removes hurdles and obstacles encountered by individuals (Akanda & Roknuzzaman, 2013). Hence Information is considered as the backbone of socio-economic development and is one important factor for estimating the progressions of any country. Assessment in terms of the information-rich or information-poor condition is a relevant measuring tool for the country’s development extent. Mchombu (1992) explained that although information is regarded as the backbone of social and economic development in the Third World country, its potentiality and value is still not recognized fully. Therefore, the information facilitator and distributor have an indicative role to enhance exposure to expand awareness. Specifically, in a health-related context, information dissemination is very crucial as its target- groups are comprised of different age groups and varying literacy levels. Also, the methods used for disseminating health information should be done with painstaking selection to considering its effectiveness and accountability inclining to the diversity of the people.

Consequent to the information revolution, new communications technologies, and declining computer costs began to shrink time, distance, and borders. Hence



people resided in the isolated region or from the remotest village can easily get connected to the global store by tapping any gadgets relevant to his access (World Bank, 1999). For this reason, the utilization of such innovation is much more convenient to counterpart uncertainty and obscurity which eventually brings clarification. As information dissemination aims to achieve user's utilization, the widespread improvement and enhancing information utility can be done through the consistent distribution of information and adaptable to a new aspect of changes. Today's context of real-time communication has facilitated information broadcasting and speedy delivery of information and thus enhances information utility to a great extent. The extensive application of Information and Communication Technology (ICT) in every sphere of activity including the health sector such as Health Information System (HIS) has enabled quick delivery of information services. Database Management, Network Infrastructure, and Web Technology that are part of ICT initiatives have facilitated healthcare practices and administration (Tossy, 2014).

## **2.3 INFORMATION SOURCES**

Information sources are the sources or origin from where the information was originated. Information sources can be broadly classified into Documentary and Non-Documentary sources.

### **2.3.1 Documentary Sources**

Documentary sources are those sources that are available in a printed form. This is further divided into three sections, namely, primary sources, secondary sources, and tertiary sources.

- 1) Primary Sources:** Primary sources are those which are the first-hand records or original research works. They include original documents representing original and unfiltered ideas.
  
- 2) Secondary Sources:** This may include all forms of documentary sources that are the products from the primary sources. The information available in secondary sources is usually convenient to use and is most widely used than the primary sources.

- 3) Tertiary Sources:** Tertiary sources of information are those which are the production of both primary and secondary sources. These sources are designed to aid the usage of primary and secondary sources of information.

### **2.3.2 Non-Documentary Sources**

Non-Documentary sources are those which provide information that is not recorded in any form. They are rather live sources and play a substantial role in communication. These sources are further divided into formal and informal sources. Formal sources may include research association, institution, industries, mass media, government departments, universities, etc. Informal sources may consist of colleagues, visitors, attendance at professional meetings, etc.

## **2.4 INFORMATION DISSEMINATION**

Rabin et.al (2008) presented a definition of dissemination as “*an active approach of spreading evidence-based interventions to the target audience via determined channels using planned strategies*”. Dissemination of information entails the distribution of information to the general public undertaken by the government or any other agent who possessed the authority to release information to the public sector. The provision of timely and accurate information to the public sector is the prior aim of information dissemination. Kaur & Kaur (2018) explained that the transformation of raw data into processed data produces information. Information is barely the composition of news, facts, or knowledge. Cambridge Dictionary defines Information as “news, facts or knowledge”. Therefore, Information dissemination implies the furnishing of any context of information to envisage its usability and utilization. Marriott & Lelliott (2000) defines dissemination as a process of making an audience aware and be relevant to any information. The term “Dissemination” literally entails the process of sowing and scattering of principles, ideas, opinions, or any concrete information to impel propagation like seeds. Dissemination means spreading information, knowledge, opinions widely. The word Semin was extracted from the Latin word for seed which determines information to propagate the idea like seeds sown by a farmer.

Devadason & Lingam (1996) point out that the turbulent and changing information environment speeds up the need for research continuity for ensuring and

supplying users information needs to meet their satisfaction and at the same time the information professionals will meet expertise for the future operational management of the information resources. Dissemination of information consists of two modes, either by providing a tool for user access or supplying actual information. Dissemination in the context of communication is to distribute or transmit messages to the public especially news, information, ideas, etc. Any information or news with no mechanism for broadcasting and propagation remains futile. Indeed, the utilization of information occurs only when it reaches the right person at the right time. An information dissemination process is a reciprocal form that requires a matching process. Therefore, the effective implementation of mechanisms for healthcare delivery should be collaborated with the convenience of its target groups by using appropriate media for successful information dissemination.

There can be a variety of options for dissemination and publication of knowledge in the area of healthcare information. At the same time, the selection of methods used for propagation and communication of healthcare information has a huge impact on the accountability from the masses. As the entire public is not just a cluster of educated folks, rather they are a mixture of different range and background. While some are able and literate some others can be illiterate, and while some have sound knowledge and adaptive to internet and communication technology, some others may have a deficiency in that area. Therefore, the extent of interpretation of information cannot be equivalent if it's given in a single method.

Before any form of dissemination approaches, it is important to identify the following element:

- 1) The objective of the content:** Donovan (1995) stated that for planning the communication model, the early phase should explicitly concern the overall goals, objectives, and specific outcomes, the possible occurrence of behavior change objectives that revolves around the communication component. The definition of goals and objectives is an essential element of the effective dissemination of information. The objective should anticipate the target audience and the desired outcome. This apprehends the authorial context that originates from the messages. It includes the major underlying principles embedded in the content and the initial objective that compels its mission to disseminate the information. Madden (2000) opined the authorial context as

any system whether intentionally or otherwise forms a message to enable user derivation. Content includes messages that notify what should be done, who should do it or provides cues about when and where it should be done.

- 2) **Target audience:** Identification of needs is the prior thing to address to disseminate information. Subject identification plays a significant role in dictating the fundamental information needs, thereby facilitating conceptual assessment and determination of the area of interest groups. Depending on the information needs, the information distributor can analyze what form of information is suitable for dissemination and can easily identify what has been a lack in the community or specific target groups. Realization of who needs to know the specific information or who can be the beneficiaries or the advantage groups should be a prime target concern.
  
- 3) **Channels or Vehicles:** By what means information is disseminated to reach the audience. Madden (2000) classify messages according to their level of focus such as Focussed messages that are mostly dealt by information scientist; a highly focussed message that are specific and ambiguity content such as mathematical document; looser message i.e. descriptive works and histories that require reader's experience and loose message that have no trace of obvious interpretation. Hence a means for transmitting the messages are needed to be greatly emphasized for the above clarification.
  
- 4) **Context or Environment:** This context implies the object or matter that surrounds the recipient of information. Who or what might influence their attitude to the message they receive?

McCreadie & Rice (1999) proposed different implications on access to information. The key highlight includes:

- 1) **Information for knowledge acquisition:** Access to information empowers the people politically, socially, economically, and thus enhances decision-making capacity. It has a great impact on both the quality of work-life and life in general.

- 2) **Technology as information representation:** As users acquire access to information through technology, there is a greater demand for technological awareness on the subsequent interaction of technology and its implications. This further arise variations among the technologically illiterate and literate. While gaining access to technology produces competency, experiences, advantages, and navigation for further access, the one who lacks technological access is completely deprived of it. As technology is limitless in terms of boundaries and time, technological mediation should be added to overcome constraints to information access.
- 3) **Information for communication:** Access to information when interpreted as access to communication can result in political and social equity or imbalance. In a social context, access to communication reaffirms a sense of community by ratifying community building and maintenance thereby developing social ties. Hence a social factor assumes an indicative role in the conveyance of information and its processing.
- 4) **Information as goods and commodities:** Information when regarded as a value-added commodity although differed from other materials in the marketplace has a compounding effect on the potentiality of public goods and can act as an ancillary planned and control mechanism in their exchange manner.

## 2.5 NETWORKS FOR INFORMATION DISSEMINATION

The network is an arrangement or structure that is intended for linking a variety of groups or individuals. A network comprised of multiple devices that connects us. It may be a small component that connects two computers or large devices that consist of billions of components. The network may be of a different kind based on their devices, while desktop computers may include a traditional network, some devices such as smartphones, tablets, laptops, televisions, gaming gadgets and other electronic appliances may fall under a category of the modern network. Anna malai (2012) states that Networking envisages sharing information through connected electronic devices. Resources like files, documents, applications, and software are the most widely shared information in networking. The benefits of

networking are that it has a tendency in terms of security, efficiency, manageability, and cost-effectiveness and facilitates collaboration between users in a wide range. Networking also plays a dominant role in transferring data from one place through several technologies such as radio waves and wires.

Rahman (1999) identify some major networks that are commonly used for communication and transmission of media, such as:

- 1) **Twisted Pair Cable:** This type of transmission cable has been used in the telephone line. It has two simple electrical cables that carry small voltage signals. The major advantage of this type of cable is that it is easy to install and cheap but is not appropriate for carrying large traffic due to its limited bandwidth. The transmission speed is 1200 bps only.
- 2) **Co-axial Cable:** This type of cable is made up of a copper substance and has higher bandwidth. It enables multiple accesses and is appropriate for information transmission of higher throughput of data.
- 3) **Telephone line:** This type of communication cable requires a modem in which a computer transmits the modem into the telephone line for enabling the conversion of digital signal into the analogy signals. Hence, these analogy signals are then transmitted through telephone lines to another connected modem of the receiving computers.
- 4) **Optical Fibre Cable:** Optical fibre is commonly used for telecommunication and computer networking due to its flexibility. It is specifically suitable for long-distance communications as the infrared light can be disseminated using the fibre with a lower attenuation other than the electrical cables.
- 5) **Microwave:** Microwave transmission is simple and easy to receive through aerial antennas. The antennas are used to focus signals just like a searchlight concentrates light into a narrow beam. Signals are directly transmitted from a source to its destination.

- 6) **Radio wave:** This is used for communicating and transmission of computers to that inaccessible location. The frequency of this wave has 300 gigahertz (GHz) to its highest and 30 hertz (Hz) at its lowest.
- 7) **Satellite:** Satellites are used to relay the signal around the curve of the Earth that allows communication among the widely diverse geographical sites. It uses a wide range of radio and microwave frequencies.
- 8) **Wireless:** Wireless networks are those which do not require a cable for connection. This type is cost-effective and handy.

## 2.6 METHODS FOR INFORMATION DISSEMINATION

There can be a variety of methods for disseminating information. Such methods can be broadly categorized into two major units: (i) Print or Traditional media and (ii) Electronic media.

### 2.6.1 Print or Traditional Media

1) **Print Mass Media:** Sudha K (2014) express that the advent of electronic media has not entirely surpassed all print media such as newspaper, magazines, and weeklies. It still assumes many advantages until today as it has a great impact on the reader with a comprehensive reporting and analysis. As Newspaper can reach different classes of people, current news can be heard by a large number of people from every hook and corner of the country. With the enhancing number of literacy rates, it can be adopted as a powerful means for disseminating information.

Although modern techniques have greatly revolutionized the mode of transmitting media, some print mass media such as newspapers, magazines, newsletters, and printed journals still occupy a valuable means for communicating information. Newspapers are the most common source for the general people that can be easily delivered to our resident daily and is quite inexpensive. A newsletter is also a publication with one theme that can be used for promotional purposes or any other reason. Magazines provided different segments of articles on various topics such as health, fashion & designing, political ethics, lifestyles, foods, etc. Journals are publications with different periodic intervals with content scholarly articles and

research papers. Publishing information through these agents can enhance the current awareness of the masses and at the same time enable vigilance of updated information.

2) **Libraries:** Ottosen, Nandita & Fratta (2019) says that libraries are a place designed for members of the community to provide a wide range of information and to give assistance from librarians for encouraging life-long learning and skill development. It is also important to note that Public librarians can offer training for identifying reliable and authoritative health information on the Internet, as well as assisting people to have appropriate interaction with their health care providers by raising questions and engaging clear communication techniques with practice and role-play. Libraries are the main repository of all documentary sources such as books, encyclopaedia, dictionaries, handbooks, etc. Propagating information through libraries can be very effective to pupils as they are made openly accessible to users in their search for relevant information. Gisolfi (2014) specifies that “public libraries are busier and more popular with patrons than ever. Today’s library is a place for social interaction as well as quiet reading. It is a community cultural centre, not simply a repository for books. It is a welcoming building with a design focus on transparency, not a series of isolated spaces.”

3) **Displays and Exhibitions:** Display of health-related issues through hoardings or wall painting in the street and public can somehow be a major source of information for many people. This form of the exhibition is a common practice where charts, posters, hoardings, wall paintings can be made available in the public place to catch sight of the people. Thus, this type of information exposition with a pictorial depiction of prior health information can be well understood by most people. The visual appeal could be utilized to attract the mass and is an important method for upgrading health practices, creating an awareness relating to laws and orders, public rights, cleanliness enforcement, medical advertisement, disease prevention, etc.

4) **Workshops/Seminars/Conferences (face-to-face):** Information and knowledge when kept unused or not updated can lead to stagnancy. Medical practitioners are vulnerable persons when it comes to deficiency. Medical Science is



a field that requires constant progression as new innovations and research are occurring at every single pace. Hence shaping the mind of medical practitioners occasionally through workshops, seminars and conferences can be a useful tool for knowledge improvement and skill enhancement. Takayama (as cited by Edwards, n.d) states that conferences and conference proceedings provide more timely means of information transfer than publications. Conferences generally precede the publication. They supplement pre-service and in-service educational efforts. Presenting at a national conference; seminar or workshop can enhance the awareness of the specific program. Seminars facilitate clarification by obtaining a thorough understanding and a precise description of the issues.

**5) Flyers, Guides, Pamphlets, Brochures, and Leaflet, etc.:** Brochures, flyers, guides, pamphlets, leaflets etc. are an important source for disseminating issues and information related to health. Such thing comprised of a single fold or two or more-fold of the sheet that may vary according to the content. The information content is usually in a summarised form and highlighted all the basic things to know for any program or health topic. Creating and distributing program or policy briefs through flyers, guides, pamphlets, brochures, leaflets etc. can give instant information to a specific program or ideology. In this way, it is possible to obtain cost-effective information publicity that includes key information that is easy to handle.

**6) Community Association Meetings:** Information circulation through community association meetings can help in introducing any project or issues to the community. This is one relevant practice in Mizoram where people gather for listening to certain proposed plans or any information from a public speaker to engage them for awareness and learning that are anticipated for suitable outcomes.

**7) Public Service Announcement:** This type of information is oriented for public interest with no cost for its dissemination. This can bring a massive awareness on several issues as it offers campaigns to educate the public in their contribution to social change. In one instance, it has been witnessed that the amount of people who smoke cigarettes has come down dramatically since the 1960s, not only because of legal restrictions but also due to the awareness form the public about its severe health risk.

**8) Door to Door Messages:** This encompasses an activity that has been widely used for sales promotion and campaigning in which the vendor would go to each house to sell their items. Cambridge dictionary online, (2019) defines door to door as “going from one house or building in an area to another”. This is Disseminating information through this medium can be quite effective as it involves interpretation of the project through personal interaction.

**9) Local Information System:** This medium is indeed an initiative taken by the local council or village council leaders as a volunteer as voluntary work to aware of the residents about some important topics. It is a relevant form of information communication to residents. Through this model, information is broadcasted in a local information microphone that is made audible to the entire locality. It is used to give notification to the local people concerning the administrative order from the government or the local council, health subsidiary information, or any specific information.

### **2.6.2 Electronic Media**

**1) Television:** Burzyńska, Binkowska, & Januszewicz (2015) stated that although the internet may appear to have dominated all the media, television is still identified as the most popular source for health information in the global reports. Television is one form of mass media. Mass media encompass all forms of media technologies that have the intention to reach a large audience through mass communication. It is the most credible asset that can reach a vast range of people and the diversified group as well. At the same time, its mass accessibility may have both positive and negative impacts.

Television is an important invention after electricity as it enables the world tour while sitting in the living rooms and provides us a wide knowledge and entertainment in society. It was further pointed out that the invention of the television has enabled the provision of a vast world of knowledge and entertainment and enhances global connection by providing news and information about the on-going in the society and world at a large. Television is the most widely used media for propagating news, information, shows, advertisement to the general public.

Television has been described as the mass entertainer, mass informer, mass persuader, and mass educator to society. Television tends to promote healthcare information through advertising mode and news channels.

**2) Radio:** Radio also act as a distinct medium for communicating health information. The intimation of radio broadcasting began in 1927. Edwards (n.d) states that “Radios with their great flexibility and adaptability wake us up, inform us, and entertain us”. The content of radio stations revolves around music, news, and talk. The radio is the oldest form of electronic media. There are hundreds of thousands of radio stations across the world and advertisements are frequent features on most of these. Healthcare information can be upgraded by hosting a talk show that is propagated on a radio.

**3) Collaborative and multimedia-based technology:** This includes Blogs, Wikis, Instant Messaging, RSS Feeds, Streaming media, Vodcasting, Podcasting, SMS Alert Service, Organisation’s website, etc. Dissemination of information can be done through a platform of collaborative and multimedia-based technology.

**4) Social Network:** Social network is an online platform that enables the creation of a user’s private account or profile and allows interaction with one another. This is the most preferable online platform as it allows transmission of text, audio, video, and image that offers a quick exchange of information. This includes LinkedIn, Email, Facebook, WhatsApp, Instagram, etc. which is the most relevant application frequently used by the general public for sharing and collecting updated information. With the current context of social media and internet prevalence, it was estimated in the latest statistics that more than 50% of the world population uses the internet. Hence, having a reliable source for health information is more likely a pillar for authentic health knowledge among the public (Alduraywish et.al, 2020).Kandadai, V. et.al (2016) studies the optimal use of twitter for spreading health information. Twitter information includes posting short messages not exceeding 140 characters which are usually referred to as tweets. The ability of twitter in bridging the gap between innovation and dissemination by influencing the viral spread of information and communication across wide networks of potential stakeholders was also emphasized.

**5) Video Conferencing:** The advancement in Information and Communication Technology (ICT) has envisaged the virtual mode of conferences to facilitate wider participation and allows the intervention of different correspondents from different places in a meeting through video communication. Video conferencing consumes a much higher bandwidth than the normal video call. On the other hand, Video conferencing has a great convenience for the exchange of information from experts or professionals who are unable to be present physically and thus helps in the wider range of information dissemination.

## **2.7 BARRIERS TO INFORMATION DISSEMINATION**

**1) Language Barriers:** This entails a lack of information spreading due to linguistic variation. It occurs when people from different linguistic backgrounds are cross-communicating. Language is a significant component of communication. The utility of information largely depends on whether the language interpreted is apprehended by the user. As information is created in different languages, one person can't understand all existed languages in the world. It was estimated that there are approximately 6500 dialects in the world where 2000 languages have fewer speakers not exceeding 1000. But it is an undeniable fact that there is a common language with a large number of users such as English languages. Also, certain language translation centres are made available to redress such obstacles. Hence the ability to read and write such a common language is an important role for the user. At the same time, information creators and distributors should ensure whether the language used is being acknowledged by the target audience.

**2) Technological Barriers:** Gann (2019) highlight that though the lack of skill for participation in the digital world still occurs to several people, there is also a major factor that obscures someone from the purpose of online benefit that may be caused by insufficient motivation, confidence, and trust. With the intervention of technology in medication, many cultures are scared that technology would possibly overtake their own identified medication tools and would make them futile. The perception of technological intrusion in society may also be interpreted in variable ways. While one may regard as a path to improvement, others may perceive it as a factor endangering society. As living in the digital era, much information is stored in

a digital form such as computers, CDs, and other electronic gadgets. Hence the technical understanding is required to get access to such information. This problem may lead to inadequate information and a lack of information.

**3) Cultural Barriers:** It is not wrong to say that personality and behaviour trends are the outcomes of cultural differences. Joynt & Warner (1996) make a statement that “Culture is the pattern of taken-for-granted assumptions about how a given collection of people should think, act and feel as they go about their daily affairs”. The cultural virtues and heritages are often passing down to the next generation and thus become the stereotype of one’s inhabitants. Culture has a great impact on the information dissemination process and at some point, can act as a barrier to its dissemination. Owing to the cultural diversity of India, there are countless practice and beliefs which may differ according to the region. Many inhabitants are convicted of a stern taboo or a social custom which may have an impact on the societal perception of information. What has been accepted in one place may be restricted in another place. Culture, a reflexive entity of society plays an indicative role in determining the success of any form of information. Cultural dimension and other aspects of society can influence.

The interpretation of information is varied according to the cultural differences. What is avoided by one culture may be accepted by another culture? Information dissemination in a diversified culture is not easy as there are people with a different mindset that has been shaped by their ancestors. It is also undeniable that many cultures have specific cures and practices to tackle health problems. Hence the indigenous knowledge is one valuable cultural indication. Hence, all these factors can act as barriers to information dissemination. Pease & Pease (2004) specify a range of noticeable cultural differences that can be seen in the way people:

- i) Greet each other. For instance, kisses, handshakes, or Namaste are a sign of cultural greetings. Hence, we can easily identify which culture they hailed from depending on their greeting’s manner.
- ii) Use gestures. It is well-known fact that some gestures like pointing fingers towards others are a sign of humiliation to some community while it was just an ordinary thing to other communities.

- iii) Use Personal Space. Personal space is a common preference for some western culture while in some south-eastern region it is a habitual thing to mingle with neighbours.

**4) Economic and Political Barriers:** As information becomes a significant part of the economic and political factors that determined the very aspect of growth and development. Political consciousness on information communication has risen to a heightened peak. The assessment of country wise development nowadays has been calculated in terms of Information-rich and Information poor country. Hence information acquisition is a very important tool for economic and political growth and lack of concern can deteriorate the health condition of the community.

## **2.8 HEALTH INFORMATION AND NEEDS OF HEALTHCARE INFORMATION**

Health can be acknowledged as a state of tranquillity in the physical and mental portion. For this purpose, several measures have been performed to keep a balanced the harmonious functionality of health This may include prevention, treatment, diagnosis, rehabilitation, medical equipment, medical reimbursement, or any form of recovery from illness, disease, mental and physical impairment. Information on the other hand is organized data such as news or knowledge given or received that are made to convey in a communicable form. Therefore, Health Information is organized data about the physical, mental, and social well-being of the individual.

Colledge, et.al (2008) opined that Health literacy is an important factor which includes not only abundance in acquiring access to information but indulge in the access to appropriate information to maintain effective healthcare. Engagement with health information acts as a prior condition for wise decision-making and sharing of ideas and undertaking pre-requisite precautions outside the clinical premises. The needs of healthcare information may be enumerated as follows:

- 1) **Create Awareness:** Information when broadcasted inevitably creates awareness for the people. Healthcare information unlike other information demand seeking its target groups to the widest extent. Ignorance in the case

of health relations can be hazardous. Information when disseminated regularly and consistently can evacuate all forms of ignorance.

- 2) **Responsiveness:** An epidemiological disease outbreak is a frequent factor that occurs in a specific place and time. This may have a large or small impact on a small group of people or the entire continent. On account of any outbreak of diseases that can be transmitted virally or through infection or maybe the incidence of chemical exposure or radioactive materials, one needed to know how to take precautions or preventive measures. For this purpose, health information on the method of encountering such prevalence is needed to be integrated through dissemination. The rapid information circulation on the steps of preventive measures for any disease is a pivotal task to avoid the spread of such viral and communicable diseases.
  
- 3) **Improve Knowledge of health factor:** Knowledge improvement on health factors is an equivalent term for health literacy. Health literacy enables individuals to acquire knowledge that will help them to control and maintain their health to the farthest extent. The main objective of Health information is to envisage better care for patients and to enable health equity. Health Information is disseminated to understand the nature and features of certain diseases so that user may acquire basic knowledge of common diseases.
  
- 4) **Cost-Effectiveness:** Medical reimbursement scheme is a governmental scheme that assists all forms of financial obstacles for medical treatment. According to the National Sample Survey Office (NSSO), it was observed 86% of the rural population and 82% of the urban population of India were not covered under any health insurance scheme. This further depicts that the major population in India is not enrolled in the healthcare scheme. At the same time, there are many healthcare schemes provided by the Central government such as Ayushman Bharat – PradhanMantri Jan ArogyaYojana (AB-PMJAY), RashtriyaSwasthyaBimaYojana (RSBY), etc. and also a state-aided scheme that can help in subsidizing many financial constraints. Therefore, the information

- 5) Benefits Medical Practitioner:** Medical Professionals in compliance with updating their knowledge concerning medical ethics and practices utilize many sources of health information through Journals, Conferences, or any relevant media to upgrade their knowledge. Colledge et.al, (2008) states that Health professionals should take an initiative role to provide patient's comprehension for better information, better choices, and better health recognition. Delivery of information following patient's needs and their choice of delivery is an important factor to consider by a health professionals.

## **2.9 HEALTH SCIENCE LIBRARY**

Healthcare and Information are different terms that connote to a different meaning. While Healthcare can be acknowledged as a service rendered for the maintenance and betterment of the physical and mental condition of a person. This may include medical treatment and hospital services, medical reimbursement, diagnoses, rehabilitation, medical equipment, or any form of recovery from illness, disease, mental and physical impairment. On the other hand, Information may imply any organized data such as news or knowledge that are disseminated or received. Hence Healthcare and Information when combined refer to the organized data about the physical, mental and social well-being of the individual.

A Medical library is a library-oriented for assisting all medical practitioners to improve their works by updating or evaluating the current aspect of knowledge. The users may include all medicos and nurses, patients, etc. The Healthcare library has a goal to envisage suitable information materials that are necessary for medical education and research purpose in a medical institution. The main function involves knowledge conservation, capacity building, quality teaching, strengthening research activity, increase publication, and extend service output. Libraries are a reliable alternative body for continuing classroom teaching and enable acquisition of a vast range of knowledge that required for intellectual attainment. The current context of the world has a major inclination towards electronic resources. As the library is an integral part of any medical institution, many medical libraries are providing access to medical journals. Kruesi, Burstein & Tanner (2019) explained that PubMed is an open-access database that covers 29.2 million biomedical literature citations from MEDLINE, life science journals, and online books. The US National Library of



Medicine (NLM) also implements an open access repository biomedical and life sciences in full-text journal literature in 2000. ERMED Consortium is also an important initiative for medical information sharing.

India, despite being the second most populated country assuming 17.7% of the world population compels a wide deploy for the health science information system. The library of medical colleges should acquire several benchmark levels on grounds such as integration of infrastructure to ICT, resource up-gradation, and service facilitation. For this reason, resource sharing and library networking services are embarked as a commencement for wider accessibility of health science information. The cooperation of the Indian Council of Medical Research (ICMR) and National Informatics Centre has created access to the medical database for researchers, students, and faculty; such database may be enumerated as follows:

- 1) **MedIND** (<http://medind.nic.in/index.html>): It is a database designed for quicker access through browsing and searching. This contains full-text articles with peer-reviewed of Indian biomedical publication that includes 40 Indian Journals of biomedicine.
- 2) **IndMED** (<http://medind.nic.in/imvw/>): This is a bibliographic database that covers various prominent peer-reviewed national biomedical journals that contain approximately 78 journals. The database is oriented for all medical practitioners, students, and researchers for facilitating access to Indian biomedical literature.
- 3) **OpenMED@NIC** (<http://openmed.nic.in/>): This is an archive containing medical and allied sciences which are made freely accessible. Full authority is given to the author for uploading their scientific research and technical documents. Registration is required for the new users where the User ID can be obtained through the OpenMED@NIC system. But for the case of searching or viewing through the documents, registration is not required.
- 4) **Union Catalogue of Biomedical Serials in India National Informatics Centre (NIC)**: It acts as a facilitator of users in retrieving documents through the Union Catalogue of Biomedical Serials in India (<http://uncat.nic.in/>). The

database provides a tool for identification of Serials collection among the prominent medical libraries within the country. A total of 188 major library holdings have been complied with for locating journals. The database is also open access providing free accessibility to all interest users.

## **2.10 HEALTHCARE INFORMATION SYSTEM IN THE PRESENT ERA: 21<sup>ST</sup> CENTURY**

The third topic of the 2030 Agenda of Sustainable Development Goals (SDG) ensures healthy living and promotion of well-being for all at all ages. On this ground, the SDG has a target to achieve several principles such as universal access to healthcare information and education, equity of healthcare services, reproductive healthcare, family planning, national health strategies and programs, the achievement of financial health support and essential medicines and vaccines for all, reduction of the epidemic, communicable and non-communicable diseases, termination of preventable neonatal and maternal mortality rate and reduction of pollutants and contamination that can be hazardous to life. Hence, the Information society has brought a rapid technological proliferation that is increasingly adapted to comply with the healthcare domain. The inclination of public health towards information society and its attributes can assist in the achievement of the SDG to a great extent.

Information in the context of Information Society has been identified as compatible economic resources for effective societal and governmental innovation. Information Society also encourages the general public to be consistent in using information for exercising personal rights and responsibilities. Therefore, information transparency and communication become essential in determining public health. The Union Health Minister indicates India's effort in healthcare promotion in the 72<sup>nd</sup> Session of the World Health Organisation (WHO) Regional Committee for South-East Asia (SEA) held in New Delhi and highlight that the Government has fast-tracked policy initiatives to achieve core tenets of Universal Health Coverage (UHC) and to enable India to become disease-free and global excellence in healthcare. For ensuring the need for healthy nutrition, the Government observed this month in September as "PoshanMaah" meaning "Nutrition Month".

As living in the information era, information becomes an indispensable commodity. In one way, the growth and survival chance in the age of information explosion without possessing information is very rare due to the dynamic world and increasing competition. Specifically, in the medical field, the information should be delivered timely and must be relevant and effective as it encompasses a vast and deep-rooted content. Hence medical practitioners need to acquire the latest updates, latest research developments, diagnostic techniques, new tools, etc. to a global extent (Kaur& Kaur,2018).

In today's era of ICT dominated context, a wide and rapid expansion of medical informatics is undoubtedly visible. Many developments of information system specifically created for physicians and healthcare professionals have been witnessed in the 21<sup>st</sup> century. Some consumers' and patients' communication systems have also been evolved. Consumer health informatics is a significant branch of medical informatics that evaluates the needs of consumer's information; identify and propose methods and eventually integrates models and consumers' preferences into medical information systems. Hence Consumer informatics stands at the apex of paving the way for efficient healthcare in the information era.

A new phase of the challenge has risen with the digital inclusion on health information Patients are provided with apps that can help in decision-making and healthcare navigation. Electronic transaction facilitates appointment bookings and archival of medical records. It also allows remote consultation either through Skype or any other electronic communication medium. While digital health information empowers the digitally connected patient and offers a great opportunity in access to health queries, there are also people around the other half who are offline and have a greater demand for health information due to health burden (Gann, 2019). Hence, health literacy is a prerequisite for successful health information dissemination in the digital era. (Ottosen, Mani & Fratta, 2019) explain that the widespread extent of health information can both be beneficial and burden for health consumers as the availability of internet access in a variety of media platforms opens up a multitude of information regardless of its accuracy and reliability. On this account, low health literacy can get a higher risk of death and hospitalization. Health information is a specific one, unlike other information that effects life and death matter. Painstaking

dissemination is essential and at the same time should be circulated in a manner that reaches out to all the people to increase awareness.

## **2.11 ACCESS TO HEALTH INFORMATION AND ROLE OF HEALTH INFORMATION PROFESSIONALS/ INFORMATION PROVIDERS**

Colledge et.al, (2008) point out that information provision inclined to the provision of a reliable source of information and to further encourage a follow-up consultation if necessary. Health literate persons to actively participate in healthcare require optimal access to health information. However, health literacy is not just the awareness about necessary health information but the imposition of such information for engaging decisions and exercising choice. The area with low health literacy indicates a need for improvement on the part of the responsibility of health professionals concerning the patient's acknowledgment and a need for a proper forum of health-related information. Patients or public empowerment in access to health information is a prerequisite for reducing the heightened burden on health information comprehension. Eakin, Jackson & Hannigan (1980) also stated the role of the academic library for attaining public health science services by enabling networks for envisaging public access in the process of retrieving health-related information. Apart from this, there can be other exclusive alternatives such as the creation of space dedicated for health related collection so that public or general audience may easily access all sources pamphlets, booklets and other materials for developing their own contemplate of knowledge and design public program of services in the health matters.

Providing access to health information is a crucial role for storing, analyzing, and preservation of all forms of sources for the provision of quality patient care. Health professionals also have their respective roles in numerous and varied settings. Healthcare delivery is the dominant role by working on disease classification and research on treatments for obtaining quality clinical ventures and spreading awareness of standardized financial and legal practice in healthcare. Health professionals should ensure the mitigation of all forms of obstacles in approaching health information by issuing the right information when demand. For this reason, the maintenance of appropriate data decency, security, and confidentiality are important. Owing to the implementation of various technological initiatives, health

professionals can adopt electronic data for maintenance and managing such healthcare services. Therefore, the health professional's roles in strengthening and facilitating public access to health information by protecting the patient's records and security through electronic data should be highly emphasized.

## **2.12 CONCLUSION**

As information needs can vary according to the demand, there is a great need for an efficient information response system on some important concerns. In the context of health information, and intensifying information provision for the public is highly desirable. The channels employed for information dissemination should be wisely chosen to reach out to the right user at the right time. Although there is an increasing extension of mobile technology and other electronic gadget stimulating the conventional lifestyle, there is also some reason why it is not possible to pace with the digital implications due to the inequality of literacy. As the user of health information ranges from infants to aged persons, a painstaking selection of its method of dissemination is required. As stated above, effective information dissemination should commence with an awareness of the target audience and certainty of objectives so that the appropriate application of tools for information dissemination will be easily identified. For example, if the health program is a concern with mental health, then the information provided should aware that since the majority of mental illness usually hailed from youth, then the mode of such program dissemination should through some relevant media used by the youth such as social media, television, and books. Likewise, for the program on the elderly health program, some tools such as television, brochures, or leaflets, or maybe word of mouth can be effective for the target users. The responsibility of the information provided is at the highest peak for deciding the right choice of medium for successful communication. Meanwhile with the ephemerality and transience of traditional medium and the enhancing intervention of technology, personal adaptation on digital literacy is highly recommended for effective health information flow. As health is an important aspect of livelihood, priority should be given for envisaging structured systems and infrastructure development for health information dissemination. All utilization of means and effective channels for wider dissemination and maximization of beneficiaries should be committed for successful information dissemination. It is a well-known fact that health is an important accelerator of well-

being economically and socially owing to the sufficiency of national wealth. And Information dissemination engaged all strategic performance extension for connecting individuals, groups, and communities with accurate information given at the right time through the appropriate medium.

## RERERENCES

- Akanda, A. E., & Roknuzzaman, M. (2013). Rural Information Provision in Bangladesh: A Study on Development Research Network. *Information and Knowledge Management*, 3(10), 64-73.
- Alduraywish, S. A. ( 2020 ). Sources of Health Information and Their Impacts on Medical Knowledge Perception Among the Saudi Arabian Population: Cross-Sectional Study. *Journal of Medical Internet Research*, 22(3).
- Anna Malai, Saravanan (2012). Introduction to Networking. Retrieved from ResearchGate
- Burzyńska, J., Binkowska-Bury, M., &Januszewicz, P. (2015).Television as a source of information on health and illness – review of benefits and problems. *Progress in Health Sciences*, 5, 174-184.
- Colledge, A. et.al (2008). Health information for patients: time to look beyond patient information leaflets. *Journal of the Royal Society of Medicine*, 101, 447–453.
- Devadason, F., & Lingam, P. P. (1996). A Methodology for the Identification of Information Needs of Users. *62nd IFLA General Conference* . IFLA.
- Donovan, R. J. (1995). Steps In Planning and Developing Health Communication Campaigns: A Comment on CDC's Framework for Health Communication. *110(2)*, 215-217.
- Gann, B. (2019). Transforming lives: Combating digital health inequality. *IFLA Journal*, 45(3), 187-198.
- Gisolfi, P. (2014). Up Close: Designing 21st-century libraries - Library by design. Retrieved from: <http://lj.libraryjournal.com/2014/06/buildings/lbd/upclose-designing-21st-centurylibraries-library-by-design-spring-2014/>
- Isazadeh, A. (2004). Information Society: Concepts and Definitions. *WSEAS Transactions on Systems*, 6.
- Joynt, P & Warner, M (1996).Managing Cross Cultures. London: International Thomson Business Press.
- Kandadai, V. (2016). Measuring Health Information Dissemination and Identifying Target Interest Communities on Twitter: Methods Development and Case Study of the @SafetyMD Network. *JMIR Res Protoc*, 5(2), 1-11.
- Kaur, A., & Kaur, S. (2018). Information Seeking Behaviour of Medical Practitioners: A Study of Majha Region of Punjab. *International Journal of Information Dissemination and Technology*, 8(3), 166-169.

- Kruesi, L. M., Burstein, F. V., & Tanner, K. J. (2019). With open science gaining traction, do we need an Australasia PubMed Central (PMC)? A qualitative investigation. *PLoS ONE*, *14*(2). Retrieved from <https://doi.org/10.1371/journal.pone.0212843>
- Madden, A. (2000). A definition of information. *Aslib Proceedings* (pp. 343-349). London: JFS.
- Marriott, S., Palmer, C., & Lelliott, P. (2000). Disseminating healthcare information: getting the message across. *Quality in Health Care*, *9*, 58-62.
- McCreadie, M., & Rice, R. E. (1999). Trends in analysing access to information. Part II. Unique and integrating conceptualization. *Information Processing & Management* (pp. 77-99). Elsevier Science.
- Mchombu, K. (2003). Information Dissemination for Development: an impact study. *Information Development*, *19*(2), 111-126.
- Rahman M. D., Mostafizur (1999). Role of documentation centres in communication and dissemination of scientific and technological ideas in Bangladesh (Doctoral Dissertation North-Eastern Hill University, Meghalaya, India) Retrieved from <http://hdl.handle.net/10603/250229>
- Ottosen, T., Mani, N. S., & Fratta, M. N. (2019). Health information literacy awareness and capacity building: Present and future. *IFLA*, *45*(3), 207-215.
- Pease, B., & Pease, A. (2004). *The Definitive Book of Body Language*. Australia: Pease International.
- Rabin, B. A., et.al. (2008). A Glossary for Dissemination and Implementation Research in Health. *Journal of Public Health Management and Practice*, *14*(2), 117-123.
- Tossy, T. (2014). Major Challenges and Constraint of Integrating Health Information Systems in African Countries: A Namibian Experience. *International Journal of Information and Communication Technology Research*, *4*(7).
- World Bank (1999). *World Development Report*. New York: Oxford University Press.



## CHAPTER 3

### HEALTHCARE IN ZORAM MEDICAL COLLEGE: AN OVERVIEW

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#### 3.1 INTRODUCTION

This chapter entails a brief description of the health and healthcare system. It highlights a broad aspect of Healthcare services, Healthcare Programmes like National Health Mission (NHM) and the essential feature of Hospital Information Management System (HIMS). It also includes Health Insurance Schemes in Mizoram and highlights several healthcare services undertaken in Zoram Medical College (ZMC).

Healthcare is a progressive service initiated by the nation-state government to bring forward efficient public health. A healthy life provokes a meaningful life. Maintaining health to the positive practices through the right information and precautionary measures taken effectively is much worthy instead of waiting for symptoms to appear or till we become sick. The health status may be determined by the health information accessibility to a large extent. Failure to communication and inability to interpret the problem can cause various problems on health status. ZMC is a referral hospital which is regarded as capable to receive all intensive patients sends from other regional hospitals. The empowerment of people to access required information on health and provision of the curative, preventive and comprehensive healthcare system is the pivotal role of the hospital.

#### 3.2 HEALTH

World Health Organisation (WHO) defines health as “a state of complete physical and mental well-being”. The aspect of health is confined to many influences that are concerned with both mental and physical behaviour. Health is an important factor that life itself relied upon. Life without good health is worthless indeed. We all are aware that the traditional needs of human beings include all basic needs of life such as food, water, shelter and clothing. However, in today’s context, the modern needs of life are extended to the need for healthcare, education and sanitation. As healthcare is attaining one prime needs of the individual, India is also witnessing

some major changes in extending healthcare provision to every citizen. Balarajan, Selvaraj& Subramanian (2011) identify that the substantial variation in access to healthcare was due to insufficient financial assistance, lack of comprehensive means for risk pooling and hike of health cost and expenditure which are all detrimental to health equity. For this reason, India has started several healthcare programs and implements various healthcare scheme to subsidize health problems. Article 47 of the Indian Constitution indicates the accountability of the government to envisage the promotion of health standard for every Indian citizen. To render effective healthcare services, several programmes such as the National Health Mission (NHM) and National Urban Health Mission (NRHM) has been implemented. Also, as part of the subsidisation of hospitalisation expenses, many healthcare supports schemes have been undertaken by the government of India.

A healthy life is an important element that contributes to the development of population well-being and economic sufficiency. Healthcare is the determining factor for the physical and mental accuracy level. The Government of India has regarded healthcare as a prior sector for promotion of revenues and enhance employment. Healthcare encompasses hospitals, medical diagnosis, clinical treatment, health insurance and medical equipment for the provision of the mental and physical well-being of the population. Nagabhushana, R (2017) describes that the availability of healthcare determines the quality of one's life and the prospect for survival. Health is a fundamental power of human life span in which the longevity of life depends on the durability of health itself. Healthcare is an inevitable commodity of health which provides support to the functionality of health.

### **3.3 HEALTHCARE**

Healthcare implies a vast range of health provision ranging from healthcare information dissemination either through education or raising awareness to the public, disease prevention, reduction of mortality, improvement of health quality and to facilitate financial support through medical reimbursement. Kavita, S (2008) mentioned in his thesis that healthcare is regarded as an investment where the benefits can be seen in the health status. Hence the demand for healthcare arises from the basic necessity to sustain life. The government have a high responsibility to

promote health standards and improve the quality of living of its citizens. The accessibility of healthcare is entrusted on how it is made available to the people.

The essential indicator for acknowledgement of health care policy and its flow chart greatly relied upon the efficiency of health infrastructure. The provision of open access to health care is one significant goal of national and global governance initiatives. The third topic of the Sustainable Development Goals (SDG) indicates the endorsement of Good Health and Well-Being for all. This further enhances health infrastructure to a greater realm and to extend greater role in the reduction of mortality rate, eradication of disease prevalence and to empower healthcare and its treatment.

Healthcare delivery systems consist of two major components viz. Public and Private sector in which the following figure demonstrates the hierarchy of its functionality.

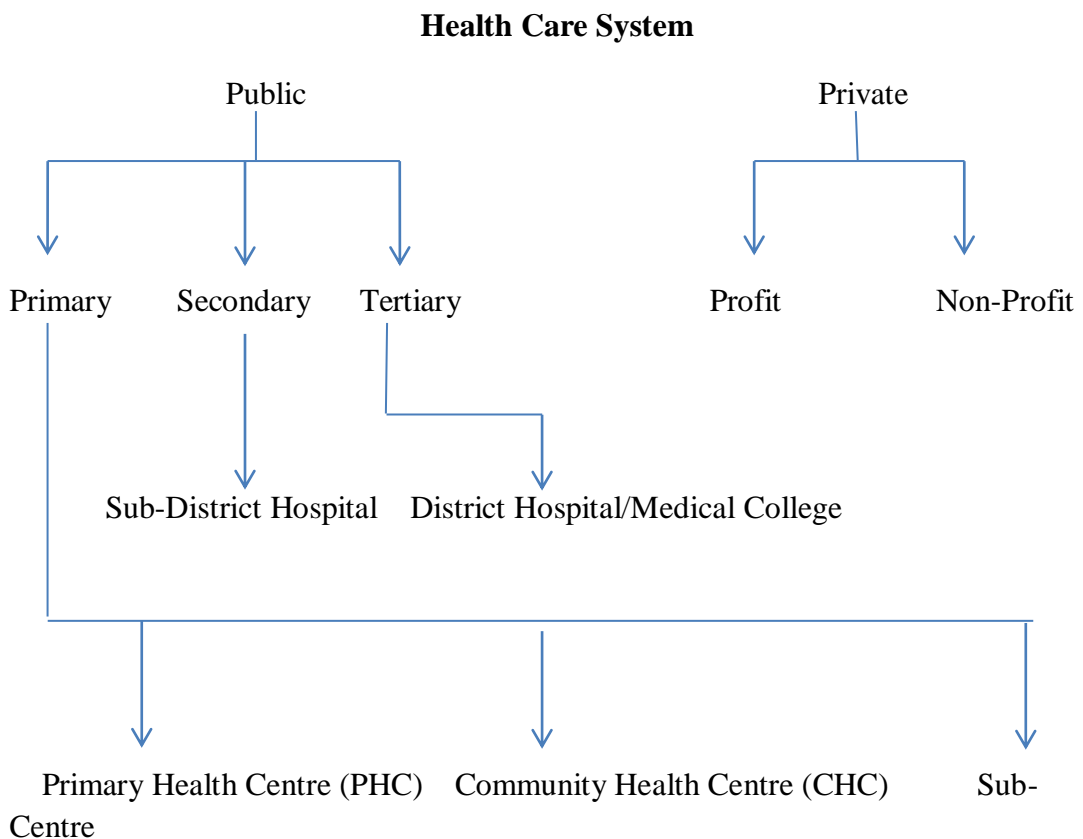


Fig. 3.1: Flow of Health Care System

### **3.4. HEALTHCARE IN MIZORAM**

Mizoram being one of the seven sisters of the north-eastern part of India is a hilly region overlaid by rivers and mountain slope. The entire area of Mizoram is estimated to be approximately 21,087 square kilometres with the capital city situated in Aizawl. The evolution of healthcare in Mizoram is one remarkable story that appraise the indigenous people to a great extent. The dispensaries and primary health centres begin only after the intervention of British missionary in early 1980. The attainment of statehood in 1987 induced the expansion of healthcare services. Hence the inception of healthcare in Mizoram was pioneered by the Christian missionaries who are later enlarged by the state government, working side by side (Lalmalsawmzauva, 2013). As stated earlier, the Christian missionaries implant a notable contribution in developing hygienic healthcare services among the Mizo people. Compelled by the heightened demand for healthcare services, it was Dr Peter Fraser who undertook the medical initiatives by positioning the health centre in several places. Before the advent of British Missionary in Mizoram, the native people have a stern superstitious belief that their lives were subjugated by the spirit so that whenever they get caught with the ailment, they would have to make appeasement in a form of sacrifices. At the same time, the indigenous knowledge on treatment of simple diseases such as extraction of jungle plants for healing wound and sores, application of salts on external burns, use of hot ginger, soda, and water for colds and stomach relief, external application of fats of animals for treating respiratory diseases and rheumatism, drinking of animals' bile for treating diarrhoea and cholera, etc. has been adopted as an alternative cures since long (Zarjoliana, 2005).

Presently there are 12 government-aided hospitals and around 20 private hospitals in Mizoram. According to the 2011 census, Mizoram population was estimated at 1,091,014. The health department of Mizoram is divided into two directorates i.e. Directorate of Hospital and Medical Education and Directorate of Health Services. The health departments have instituted several health centres such as Community Health Centres (CHC), Primary Health Centres (PHC) and Sub – Centres (SC). Hospitals and Health Care Centres in Mizoram were shown in the table below:

Table 3.1: Non-Government Hospitals (Private Hospitals) in Mizoram

<i>Sl No.</i>	<i>Name of Hospitals</i>	<i>No. of beds</i>
1	Presbyterian Hospital, Durtlang	355
2	Christian Hospital, Serkawn	100
3	Greenwood Hospital, Bawngkawn	87
4	Adventist Hospital, Seventh Day Tlang	50
5	Nazareth Hospital, Chaltlang	40
6	Bethesda Hospital, Bawngkawn	70
7	Aizawl Hospital & Research Centre, Mission Veng	145
8	Vaivenga Hospital & Research Centre, Dawrpui	19
9	Grace Nursing Home, Electric Veng	32
10	New Life Hospital, Chanmari	43
11	Maraland Gospel Centenary Hospital, Saiha	70
12	Lairam Christian Medical Centre, Lawngtlai	50
13	Alpha Hospital, Kulikawn	27
14	Med-Aim Adventist Hospital, Champhai	22
15	BN Hospital, Kulikawn	46
16	Nazareth Nursing Home, Tumpui, Kolasib	20
17	Hope Hospital, Lunglei	35
18	Faith Hospital, Lunglei	40
19	D M Hospital, Champhail	30
20	Bethany Hospital, Mission Veng	50
	Total	1331

*Source: Economic Survey Mizoram 2017-18*

Table 3.2: Health Centres in Mizoram (2015-16)

<i>Sl No</i>	<i>Particulars</i>	<i>Nos</i>	<i>Beds</i>
1	Community Health Centres (CHC)	12	360
2	Primary Health Centres (PHC)	57	570
3	Sub-Centres	372	-

*Source: Statistical Handbook, Mizoram 2016*

Table 3.3: Government Hospitals in Mizoram

<i>Sl No</i>	<i>Name of hospitals</i>	<i>No of beds</i>
1	Civil Hospital, Aizawl	257
2	Kulikawn Hospital, Aizawl	50
3	District Hospital, Lunglei	120
4	District Hospital, Champhai	60
5	District Hospital, Serchhip	60
6	District Hospital, Saiha	45
7	District Hospital, Kolasib	60
8	District Hospital, Mamit	30
9	District Hospital, Lawngtlai	30
10	Referral Hospital (including TB Hospital)	193
11	Mizoram State Cancer Hospital	50
12	Tlabung Sub Divisional Hospital	30
	Total	951

*Source: Economic Survey Mizoram 2017-18*

### **3.5 HEALTHCARE PROGRAMMES IN MIZORAM**

The Ministry of Health and Family Welfare is the main provider of healthcare services in India. The Government has initiated several distinct programs to improve the health-care system across India to acquire affordable and accessible health-care to its citizens. National Health Mission aims to provide all aspects of healthcare entitlements that include both primary and secondary healthcare services. It is an important initiative undertaken by the government of India to elevate health care services in the country. It aims to provide equitable, affordable and quality health care services that are accountable and responsive to people's need.

#### **3.5.1 National Health Mission**

The National Health Mission (NHM) subsumes the National Rural Health Mission (NRHM) and the National Urban Health Mission (NUHM) under its component. The NHM aims to achieve equilibrium universal access to quality and affordable healthcare services that would meet the people's need. The significant function of the mission includes strengthening of Health system in rural and urban areas.

The National Rural Health Mission (NRHM) was launched on the 12<sup>th</sup> April 2005 and has become a prominent activity of the government in the health sector. It has a provision to bring effective health care to the rural population, especially the disadvantaged groups including women and children, by improving access, enabling community ownership and demand for services, strengthening public health systems for efficient delivery, enhancing equity and accountability, and promoting decentralization. The core strategies of NRHM include decentralized health planning and management at village and district level. Accredited Social Health Activist (ASHA) is playing a pivotal role in facilitating access to health services and imparts to reinforce public health service delivery.

National Urban Health Mission (NUHM) was launched on 1<sup>st</sup> May 2013 by the approval of Union Cabinet as a sub-mission under an overarching National Health Mission (NHM) to provide a premium health condition to the urban poor particularly the slum dwellers and other disadvantaged sections by providing equitable access to primary healthcare services. Presently the following project under National Health Mission is being carried out under the Mizoram government of health sector:

**1) Integrated Disease Surveillance Programme (IDSP):** IDSP is a surveillance scheme that is implemented to monitor disease trends for early detection and quick responding of any disease outbreak, identification of causes and initiation of precautionary measures. The main function of the IDSP includes data collection on disease and analysis reports from every district which was done weekly so that timely and effective public health response is made available. The major aim of the IDSP is to ensure that every subordinate state has undertaken an effective control over communicable public health threats (Ministry of Health and Family Welfare, 2020)

**2) Expanded Program on Immunization (EPI):** Immunization Programme is an important initiative for the protection of children from a life-threatening condition that is preventable. EPI was introduced in 1978 in India as a key procedure that is performed to provide vaccination to prevent seven vaccine-preventable diseases i.e. Diphtheria, Pertussis, Tetanus, Polio, Measles, severe kind of Childhood

Tuberculosis and Hepatitis B, Haemophilia's influenza type b (Hib) and Diarrhoea. In Mizoram, the EPI has two focus viz. pregnant women against tetanus and children below 1 year against the EPI listed diseases. Apart from this, Polio prevention vaccination was also given to every child under 5 years. Such vaccination was undertaken through various healthcare networks (Ministry of Health and Family Welfare, 2020).

**3) National Leprosy Eradication Programme (NLEP):** In Mizoram, the leprosy case detection was actively undertaken in various parts of the state. Various awareness programs at different parts of the State have contributed to the alleviation of stigma and discrimination of people affected with Leprosy. The State Leprosy Officer is also an active participant in various local TV talk shows and radio talk shows to talk about Leprosy and to create more awareness among the masses.

The State of Mizoram is lucky in showing no stigma and discrimination of Leprosy patients in the State and also the leprosy case is quite rare and almost non-existent as compared to the other States of India. The State Govt. is very compassionate towards cured Leprosy patients regarding their rehabilitation and is currently employing nine (9) cured Leprosy patients under the State Government on Muster-roll basis in different districts of the State under Health Department (National Health Mission Mizoram, 2019).

**4) National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS):** NPCDCS was launched on 4<sup>th</sup> February 2014 in Mizoram to provide support for diagnosis and cost-effective treatment and to give aid technically and financially for prevention of non-communicable diseases especially cancer, diabetes, Cardiovascular Diseases. It aims to undertake health promotion through behavior change with the involvement of the community, civil society, community-based organizations, media, etc. by focusing on the following elements.

- a) Promotion of healthy food intake
- b) Promotion of physical exercise
- c) Refrain from tobacco and alcohol.
- d) Stress Management



e) The warning sign of cancer etc. (National Health Mission, 2019)

**5) National Iodine Deficiency Disorders Control Programme (NIDDCP):**

NIDDCP was launched in the year 1987 in Mizoram. As iodine is an indispensable micronutrient for the human body and the deficiency can caused growth retard or mental retardation, this program was an advocate to eradicate iodine deficiency disorder like mental and physical retardation, deaf autism, cretinism, stillbirths, abortions, etc. has an objective to bring the prevalence of IDD to below 5% in the country and to ensure 100% consumption of adequately iodate salt (15ppm) at the household level (National Health Mission Mizoram, 2019).

**6) National Vector Borne Disease Control Programme (NVBDCP):**

NVBDCP is a program launched for prevention and control of six vector-borne diseases (VBDs) i.e. Malaria, Dengue, Lymphatic Filariasis, Kala-azar, Japanese Encephalitis and Chikungunya in India (National Health Mission Mizoram, 2019).

The disease situation in Mizoram can be illustrated as below:

Table 3.4: Disease situation in Mizoram

Year	Malaria Cases	Malaria Deaths	Dengue Cases	Dengue Deaths	Chikungunya Cases	Japanese Encephalitis (JE) Cases	Kala-azar Cases	Lymphatic Filariasis Cases
2012	9883	25	6	NIL	NIL	NIL	NIL	NIL
2013	111408	21	7	NIL	NIL	NIL	NIL	NIL
2014	23105	31	19	NIL	NIL	NIL	NIL	NIL

(Source: National Health Mission, 2019)

**7) Revised National Tuberculosis Control Programme (RNTCP):**

RNTCP was launched in India in 1992 and was implemented in Mizoram in the year 2003 for the control and elimination of TB in the country and to cut the chain of transmission. RNTCP offers compensation to patients who have completed treatment as well as to the voluntary DOT Providers who have diligently ensured that patients are taking regular treatment (National Health Mission, 2019). Sputum Microscopy was used for diagnosis where Mizoram has 34 places to examine sputum. There is one TB hospital

located in Falkawn but only MDR-TB and XDR-TB patients only are allowed to get admission. The RNTCP also encourage patients by awarding them some honorarium for completion of regular treatment (National Health Mission Mizoram, 2019).

**8) National Programme for Control of Blindness (NPCB):** National Programme for Control of Blindness (NPCB) was launched in the year 1976 to achieve a prevalence rate of 0.3% of the population by 2020. The main objectives of the NPCB are:-

- a) To reduce the backlog of blindness through identification and treatment of blind
- b) To provide comprehensive eye care services and quality service delivery by NPCB.
- c) To strengthen and develop human resources for providing eye care services
- d) To enhance awareness on eye care and prevention measures
- e) To secure the participation of voluntary organization/private practitioners in eye care.

(National Health Mission Mizoram, 2019)

**9) National Mental Health Programme (NMHP):** The Government of India implement NMHP in 1982 to address the huge burden of mental disorder. There is also an alarming increase in the evolvement of the incidence and prevalence of the mental disorder. Therefore, NMHP ensures to advocate the availability and accessibility of minimum mental healthcare and to enhance the application of mental health knowledge in general healthcare and social development and to promote participation in the community. (National Health Mission, 2019)

**10) National Tobacco Control Programme (NTCP):** Mizoram is one among the Indian states with a higher degree of tobacco prevalence. According to the Global Adult Tobacco Survey (GATS) in 2009-10; it was found that 72.5% of males and 61.6% of females were consuming tobacco in some form or the other. Several tobacco control initiatives have been undertaken to reduce the high burden of tobacco-related diseases and deaths under this program (National Health Mission Mizoram, 2019). The main aim of the NTCP is to promote public awareness on the

negative effect of tobacco. It inclined to prevent initiation and encourage quitting tobacco among youth.

**11) National Programme for the Healthcare of the Elderly (NPHCE):** The population of elderly persons is rapidly increasing globally. The normal physiological aging process results in a decrease in body stamina as well as immunity. This makes the elderly more prone to diseases and disabilities. Therefore, this program envisages providing a dedicated healthcare system and promotes health curative and rehabilitative services to the elderly for the elderly population (Ministry of Health and Family Welfare, 2020).

**12) National Oral Health Programme (NOHP):** Oral Health is an inherent part of general health. ‘Oral Health’ means being free of chronic mouth and facial pain, oral and throat cancer, oral sores, birth defects such as cleft lip and cleft palate, periodontal (gum) diseases, tooth decay, and tooth loss and other diseases and disorders that affect the mouth and oral cavity (Ministry of Health and Family Welfare, 2020).

**13) National Programme for Prevention and Control of Deafness (NPPCD):** The NPPCD was launched in India, on a pilot basis since August 2006 for the prevention and control of major causes of hearing impairment and deafness. Manpower training and development, capacity building and service provision was given priority to achieve its goals (National Health Mission, 2019)

**14) National Programme for Prevention and Control of Fluorosis (NPPCF):** This programme envisages all people residing in areas of high fluoride content in drinking water. The main objectives include providing awareness about fluorosis and its effect, capacity building in the form of training and manpower support, preventive measures, diagnostic facilities, management and rehabilitation of fluorosis cases (National Health Mission, 2019)

**15) Reproductive Child Health (RCH):** Improving maternal and child health has been one of the top health priorities of the Government of India. Because of this, the RCH was implemented throughout the country on 15<sup>th</sup> October 1997. The second

phase of the RCH program i.e. RCH II was launched on 1<sup>st</sup> April 2005. The main objective of the program was to bring about a change in mainly three critical health indicators i.e. reducing total fertility rate, infant mortality rate and maternal mortality rate to realize the outcomes envisioned in the Millennium Development Goals. RMCH+A approach has been implemented in 2013 to address major causes of mortality among women and children as well as the delays in accessing and utilizing health care and services (National Health Mission, 2019)'

### **3.5.2 Health Management Information System (HMIS)**

Health Management Information System (HMIS) was initiated by the Ministry of Health & Family Welfare, Government of India in the year 2009 as a subordinate data management system under National Rural Health Mission (NHRM). It is a web-based monitoring system under National Health Mission to envisage infusion of policy formulation and data management on portals. It has a high significance in the evaluation and assessment of periodic progress and for determining the value of output and outcome of a course of events and decision-making. It can be briefly comprehended as periodic reporting software for health facilities. The HMIS has strengthened and facilitated local level monitoring; in which all States/UTs were notified to move to “facility-based reporting” from April 2011. In the current context, there are around 672 districts have been reported facility wise data. The data are being represented in a standard format that is made available to various stakeholders in customized reports, factsheets, score-cards etc. The Central/State Government officials have beneficially used the HIMS data for supervision and assessment purpose.

The major benefits of confining the HMIS in the hospital may be enumerated as follows:

- a) Time-Saving: The medical record is an integral feature of hospital functionality. Hence the maintenance of such record through the software can eliminate much time consumption that is done manually.
- b) Improve Patient's Care: The HMIS enables real-time communication to patients with subjects related to routine health check-ups, medication, reminders, and other important notification, etc. It also facilitates all the medicos in their treatment of patient inclining to less paperwork and speedy access to patient's information.

- c) Improved hospital administration: It ensures better management of hospitals owing to the secured data. It also helps in the reduction of cost and improves hospital services.
- d) Quick and coordinated data: The HIMS envisage efficient information integrity about the patient's history and can easily identify prescription that has been done in the past, reduce transcription error and avoid duplication of information entry.

### **3.6 HEALTH INSURANCE SCHEME IN MIZORAM**

The state and central government introduced healthcare reimbursement facilities for various patients to subsidize the hospital treatment cost of the stakeholders. Presently, the Mizoram state operated two types of healthcare schemes such as Ayushman Bharat PradhanMantri Jan ArogyaYojana (AB-PMJAY) and Mizoram State Health Care Scheme (MSHCS).

**1) Ayushman Bharat PradhanMantri Jan ArogyaYojana (AB-PMJAY):** This is a central scheme that provides medical reimbursement through the golden card for one family up to the amount Rs 5, 00,000/- in a year. The coverage of beneficiary under the scheme includes the deprived listed family on the survey held under Socio-Economic Caste Census (SECC), Ministry of Rural Development in 2011, and the holder of Rashtriya Swasthya BimaYojana (RSBY) Smart card in 2018. The member enrolled in this scheme can enjoy medical reimbursement to all government-aided hospitals across India and some private hospitals that have been accepted by the government. As stated earlier, the usability of this scheme requires a Golden card; therefore, such a card is produced from the government hospital and that the beneficiary can collect the golden card from the hospital. At the same time, such golden card creation can also be done during the time of admission to the hospital. The scheme bestowed the cashless medical treatment for members enrolled in the scheme which means that the enrolled members do not necessarily have to make advance payment for medical cost and that the expenses will eventually be redeemed in the later time without exceeding the fixed fund. But this does not include transportation expenses.

**2) Mizoram State Health Care Scheme (MSHCS):** The scheme encourages the provision of medical reimbursement amounting to Rs 2, 00,000 for one family in

a year. This scheme is made applicable for those families who are unable to enjoy the PM-JAY schemes among the Below Poverty Line (BPL), Above Poverty Line (APL) and the government servant's family who are denied of the Government health schemes. This scheme encompasses both the medical expenses inside and outside Mizoram following the notified rate issued by the Mizoram Government. It also envisages the transportation expenses particularly for the patient up to the amount notified by the government. For this transportation billing purpose, tickets or boarding pass has to be demonstrated for claiming the bill. For registration or enrolment for the scheme, Local Council (LC) or Village Council (VC) is responsible for undertaking such necessary measures for registration to the scheme and to notify the period of enrolment among their locality. Health Workers and Young Mizo Association (YMA) were also held responsible for such a thing.

Both Mizoram State Healthcare Scheme and AB-PMJAY are designed for a patient admitted to the hospital i.e. In-Patient Department (IPD). But for some case mentioned below, the Out-Patient Department (OPD) is made available for financial support under the scheme, such as:

- a) Hepatitis B & C (in the Government hospital)
- b) Dialysis
- c) Parenteral Chemotherapy for cancer and other chronic diseases e.g.- Rheumatoid arthritis rituximab infusion etc.)
- d) Refractive Eye Surgery (not less than -4.5)
- e) Laser Therapy for Diabetic Retinopathy
- f) Hemifacial Spasm / Blepharospasm / Cervical Dystonia requiring Therapeutic Botox injection.
- g) Connective Tissue Diseases e.g. SLE, DLE
- h) Lithotripsy
- i) Treatment follow-up (monitoring) of cancer, organ transplant,
- j) Laparoscopic Therapeutic Surgeries (only in Government hospital)
- k) Central Line Insertion
- l) Chronic Heart Failure
- m) Coronary Artery Disease
- n) Pulmonary Hypertension
- o) Herniotomy under GA

- p) Chronic Anal Failure under GA
- q) Circumcision under GA
- r) Diagnostic Laparoscopic examination
- s) Thalassemia and other haematological disorders requiring repeated transfusions/ treatment related to blood disease other than blood cancer
- t) OME for Grommet Insertion under GA
- u) Myringoplasty (adults LA)
- v) Surgery for Cataract, Squint (Adults only), Glaucoma surgery
- w) Laser Procedure for Glaucoma and Posterior capsular opacity
- x) Continuous Ambulatory Peritoneal Dialysis (CAPD) (only in Government hospital)
- y) Arteriovenous (AV) Fistula (only in Government hospital)
- z) BPL family bored with Diabetes who needs an insulin injection

### **3.7 HEALTHCARE IN ZORAM MEDICAL COLLEGE**

Zoram Medical College (ZMC) is the only medical college in Mizoram which has been established in the year 2018 with a view for upgrading the existing State Referral Hospital, Falkawn under the Centrally Sponsored Scheme “Establishment of Medical College attached with existing district/referral hospitals” by the Ministry of Health and Family Welfare (MoHFW) along with 58 other states in the country. The commencement of medical college in Mizoram evolved after many efforts and a long haul. Since 2014, the application has been sent to the Medical Council of India (MCI) for the establishment of medical college and for acquiring a Letter of Permission (LoP) four times. Finally, the college received the LoP on the 25th May 2018 which entitled the intake of 100 seat capacity for MBBS students. Later the college acquired provisional affiliation under the Mizoram University where affiliation has to be renewed every year until it was fully recognised. The formal inauguration of the college was held in 7<sup>th</sup> August 2018. At the initial stage, the college has total seats of 100 MBBS students, out of which, 70 seats were allocated for the state quota, and 15 seats were reserved for all India quota and another 15 seats for NRI (Non-Resident India) candidates. The inspection of the institution from the MCI has been conducted twice every year (Zoram Medical College Annual Report, 2019).

With the augmentative view of future perspective, ZMC aims to achieve excellence in the medical field by the provision of quality education and research. It also aims to cater to quality patient care that is affordable and accessible to all the people of the state and its neighbouring states and countries. There is an on-going infrastructural growth and renovation on the buildings of the college and its teaching hospitals for extension of the existing hospital buildings and quarters. Meantime, there are also several enhancements in terms of procurement of both major and minor equipment under the project for up-gradation of the hospital equipment. Presently, the college is having a staff strength comprised of 72 faculty members, 43 Residents and 422 staff categorised into nursing staff, administrative staff, technical staff and Group D staff. The teaching hospital of ZMC is currently equipped with 300 beds for patients.

ZMC has the following mission that is highly inculcated in their daily works, such a mission may be highlighted as follows (Zoram Medical College Annual Report, 2019):

- 1) To provide comprehensive service in all medical specialties and to serve as a referral health centre for preventive, diagnostic, curative, and rehabilitative care.
- 2) To provide undergraduates with the best theoretical teaching, clinical exposure and training.
- 3) To research in various medical fields giving special importance to the needs of the state.
- 4) To assist the Government of Mizoram in carrying out all responsibilities in the matter of health care as required at the national or state level.

**3.7.1 Academic and Research of ZMC:** The college commenced its teaching activities among the 1<sup>st</sup> Batch of MBBS students comprising of 99 students in total. The seat occupancy consists of various quotas such as 74 seats from the state quota, 11 from All India Quota and 14 from NRI (Non-Resident India). The method of teaching was in the form of didactic lectures, demonstration classes, tutorials and practical, which includes dissection classes for Anatomy. The college has various departments consisting of the following section that includes:

- 1) Pre - Clinical Departments such as Anatomy, Biochemistry, Physiology.



- 2) Para – Clinical Departments such as Pathology, Pharmacology, Microbiology, Community Medicine and Forensic Medicine & Toxicology.
- 3) Clinical Departments such as Anesthesiology, Dentistry, Dermatology, Venereology & Leprosy, General Medicine, General Surgery, Obstetrics & Gynecology, Ophthalmology, Orthopedics, Oto – Rhino – Laryngology (ENT)

The college has also undertaken several research activities through the funding acquired from the Indian Council of Medical Research (ICMR) and has conducted several Workshops organized by a different department. The underlying table includes the various lists of CME/Workshops that have been conducted during 2018-2019 (Zoram Medical College Annual Report, 2019).

Table 3.5: Faculty Development Program in ZMC

<i>Sl.No</i>	<i>Topic</i>	<i>Organizer</i>	<i>Date</i>	<i>Credit hrs awarded</i>
1	Recent Advances in GI Endoscopy and hands-on training on colonoscopy.	General Surgery Department	13 <sup>th</sup> -14 <sup>th</sup> June 2018	6 hrs.
2	Early Intensification of Glycaemic Control in newly diagnosed Type II Diabetes	General Medicine Department	22 <sup>nd</sup> Sept 2018	3 hrs.
3	Non-Alcoholic fatty liver disease	General Medicine Department	13 <sup>th</sup> August 2018	3 hrs.
4	Diabetic Complications	General Medicine Department	8 <sup>th</sup> Nov. 2018	3 hrs.
5	Teneligliptin in Type II Diabetes	General Medicine Department	17 <sup>th</sup> July 2018	3 hrs.
6	Anaesthesia-Life Box Pulse Oximeter Workshop	Anesthesiology Department	15 <sup>th</sup> Dec 2018	3 hrs.
7	Health Systems in India	Community Medicine Department	12 <sup>th</sup> Feb 2019	3 hrs.
8	Universal Health Coverage	Community Medicine Department	19 <sup>th</sup> April 2019	3 hrs.
9	BIG-15 & Bio-entrepreneurship	Biochemistry Dept. in collaboration with IIT-Kanpur	8 <sup>th</sup> May 2019	3 hrs.
10	Palliative Care	Anesthesiology Department	9 <sup>th</sup> May 2019	3 hrs.

Source: ZMC Annual Report, 2019

**3.7.2 Central Library of ZMC:** The Central library of the college is located in the 2<sup>nd</sup>-floor building of the administrative block. It has a book collection of 3063 with 28 International Journals and 43 National Journals. A section of the library is also dedicated for E-Library room where users can have access the leading medical journals both national and international, E-Books and Open access E-Resources. The entire room is under Air-Condition to maintain moderate temperature for the users and also for the preservation of library holdings. The library is automated with Libsys Software and accompanied by K-Smart Radio Frequency Identification (RFID). There are 4 professional staff and 2 multitasking employee running the Library.

**3.7.3 Hospital Services of ZMC:** Patient Care Services are undertaken by various departments through the Out Patient Department (OPD) and In-Patient Department (IPD) in the hospitals. For OPD registration, the patients are specified to register themselves within 9:00 am- 1:00 pm during weekdays and 9:00 am – 12:00 pm on Saturday at the registration counter and the OPD is closed on Sunday. There are also other services such as Intensive Care Unit (ICU), Operation Theatres (OT), laboratories and other diagnostic departments. Emergency services are also made available 24 X 7.

The hospital provides both in-patient and out-patient services. The facility in the hospital also includes:

- 1) Blood Bank
- 2) Central Laboratory
- 3) 20 bedded ICU/ SICU/ NICU
- 4) Radiology – Digital X-ray, Ultrasound
- 5) Operation Theatres – 4 nos.
- 6) CSSD
- 7) Kitchen & Laundry Services

The Indoor Capacity and Bed Distribution in the Hospital may be depicted in the following table:

Table 3.6: No. of Hospital bed in ZMC

Sl. No.	Name of Department	No. of beds
1	Casualty	10
2	Female Medical Ward	32
3	Male Medical Ward	32
4	Maternity	16
5	ENT	9
6	Male Surgical Ward	30
7	Female Surgical Ward	26
8	Eye	8
9	Paediatrics	24
10	Orthopaedics	24
11	ICU	7
12	Gynaecology	22
13	Dental	4
14	MDRTB	10
15	NICU	4
	Total	258

Source: ZMC Annual Report 2019

**3.7.4 Health Insurance of ZMC:** The RSBY/PMJAY unit is located on the first-floor building of the hospital. Presently, the PMJAY scheme has been specifically undertaken for medical reimbursement since October 2018. The following chart depicts the average usage of PMJAY by the patient for the year 2019.

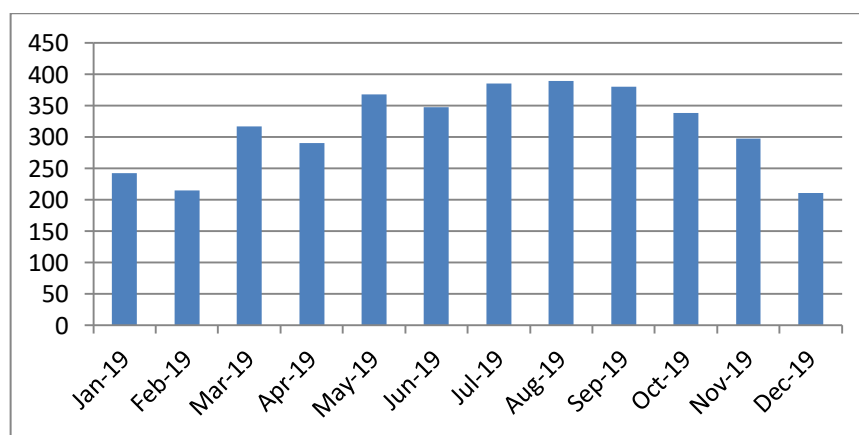


Fig. 3.2: PMJAY Registration at ZMC in 2019

**3.7.5 National Health Programmes in ZMC:** The various department of the college teaching hospital has carried out several health programmes implemented by the Central Government which may be enumerated as follows:

- a) Medical Officer-in-Charge Sentinel Site Hospital, Falkawn under Infectious Disease Surveillance Programme (ISDP) by the Department of Pathology.
- b) Population-Based Cancer Registry (PBCR) by the Department of Pathology.
- c) Pharmacovigilance Programme of India by the Department of Pharmacology. Presently the department is identified as the AMC (Adverse Drug Reaction Monitoring Centre) by the Indian Pharmacopoeia Commission.
- d) National Viral Hepatitis Control Program by the Department of Microbiology. This program envisages the free of cost hepatitis testing in the department.
- e) Celebration of National health programme such as PMMVY (PradhanMantriMatruVandhanaYojana)-PoshanaPakwada, World TB Day, World Health Day has been conducted by the Community Medicine Department.
- f) National Programme for the Palliative Care by the Department of General Medicine
- g) National Viral Hepatitis Control Programme by the Department of General Medicine
- h) PradhanMantriSurakshitMatritvaAbhiyan(PMSMA)
- i) National Population Fortnight and LAQSHYA by the department of Obstetrics & Gynaecology.
- j) NPC BVI (National Programme for Control of Blindness & Visual Impairment) by the Department of Ophthalmology.
- k) NPPCD) National Programme for Prevention and Control of Deafness by the department of Oto-Rhino-Laryngology (ENT)
- l) JSSK, Pulse Polio, Universal Immunization Programme, and RNTCP (Revised National Tobacco Control Programme by the Department of Paediatrics.

### **3.8 CONCLUSION**

Healthcare encompasses a broad spectrum of health services. As Mizoram has encountered a high rate of cancer disease prevalence, drastic HIV infected rate, and many other health irregularities has frequently distracted the people of the state, it is very important to tackle such things that can cause health deficiency and deterioration. Major concern should be given in the health sector and many more steps have to be taken for the provision of care, support, and treatment. Many countries have an excellent establishment in health policy and schemes, insurance, and legislation of health with an efficient health information system. Integrating a solid foundation for healthy development can help in achieving the Sustainable Development Goals 3 that goal for “Good health and Well-Being”

## REFERENCES

- Balarajan, Y., Selvaraj, S., & Subramanian, S. V. (2011). Health care and equity in India. *The Lancet*, 377, 505–15.
- Government of Mizoram Planning & Programme Implementation Department (Research & Development Branch). *Mizoram Economic Survey 2017 – 18*. Retrieved from <https://planning.mizoram.gov.in/uploads/attachments/e0cb711b1289b16c55c6d4273c3d003c/economic-survey-2017-18.pdf>
- Lalmalsawmzauva, K. C. (2014). Disparities of Healthcare Facility in Mizoram, India. *2014 Asia-Pacific Social Science Conference (APSSC)*. South Korea.
- Kavita, S (2008). An economic analysis of access utilization and cost of maternal healthcare in rural areas of Tamil Nadu (Doctoral Dissertation, Bharathiar University, Coimbatore). Retrieved from <http://hdl.handle.net/10603/102232>
- Ministry of Health and Family Welfare (2020). National Health Mission. Retrieved from <https://nhm.gov.in/index4.php?lang=1&level=0&linkid=445&lid=38>
- National Health Mission Mizoram (2019). Executive Summary. Retrieved from <https://nhmmizoram.org/page?id=2>
- Nagabhushana, R (2017). An evaluation of Yeshasvini Healthcare Scheme a case study in Chamarajanagara district (Doctoral Dissertation, University of Mysore, Mysore). Retrieved from <http://hdl.handle.net/10603/219132>
- Department of Economics & Statistics (2016). *Statistical Handbook Mizoram*. Aizawl: Directorate of Economics & Statistics.
- Zarzoliana (2005). Availability, Utilization, Health Care, Facility, Mizoram, Geographical (Doctoral Dissertation, North-Eastern Hill University, Meghalaya). Retrieved from <http://hdl.handle.net/10603/60708>
- Zoram Medical College Annual Report (2019). *Annual Report 2018-2019*.

## CHAPTER 4

### DATA ANALYSIS, INTERPRETATION AND FINDINGS

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#### **4.1 Introduction**

Data analysis constitutes an indicative role in the research process. Evaluation of health information dissemination pattern is an important factor for determining the present scenario and future aspects of development in the sector. As the study has four major objectives such as identification of public awareness on health programs, channels used for dissemination of Healthcare Information, the most frequently used channels in Zoram Medical College (ZMC) and regularity of healthcare information dissemination. All steps in the research were executed remembering the objectives of the study. There are 304 hospital beds in Zoram Medical College (State Referral Hospital) and the sample size 181, which constitutes 59.54% that is higher than the standard survey system calculation.

The present data analysis is based on the 181 questionnaire responses collected from the patients admitted in the State Referral Hospital of Zoram Medical College which is more than the sample size needed as calculated by the survey system. Hence, all data gathered were tabulated and analysed by SPSS statistical tool and presented either by tables or charts whichever is appropriate to show clarity.

#### **4.2 Respondents Profile**

##### **4.2.1. Respondents by Age group:**

The respondents were categorised into 6 major age groups, such as Below 21, 21-30, 31-40, 41-50, 51-60 and above 60. The collected data shows that 31-40 age group consist of 24.9% comprising the majority respondents, followed by the 21-30 age groups comprised of 24.3%, the age group above 60 consists of 20.4%, the age group 41-50 consist of 14.4%, the age group below 21 consists of 10.5%, and the age group 51-60 consisting of 5.5% being the least respondent. This data is presented in the chart for clarity as below:

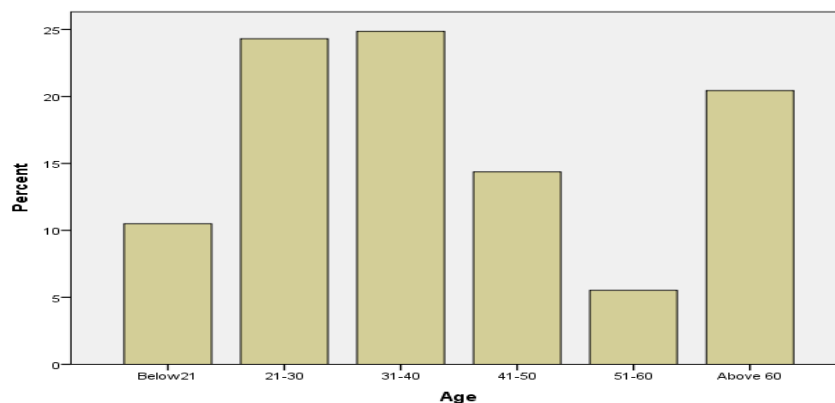


Figure 4.1: Respondents by age group

#### 4.2.2 Respondents by Gender:

Classifying respondents' profile according to their gender is an important parameter for the assessment of the study. The data on the gender profile of the respondents is tabulated in Table below. The table specifies the number and percentage of the respondent according to their gender. While there are 90 (49.7%) of the male respondent, there is 91(50.3%) female respondent. The data of respondents by gender are tabulated as below:

Table 4.1: Respondents by gender

	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Valid Male	90	49.7	49.7	49.7
Valid Female	91	50.3	50.3	100.0
Total	181	100.0	100.0	

*Source: Primary Data*

#### 4.2.3 Gender- Age Cross tabulation:

Out of the respondents of 181 in total, 90 (49.72%) respondents were male and 91(50.28%) respondents were female. Under the age group of below 21, 8(42.10%) respondents were males and 11(57.89%) respondents were females; under the age group of 21-30, 22(50%) were males and 22(50%) were females; the age group under 31-40 comprised of 18(40%) males and 27(60%) females; the age group under 41-50 consist of 15(57.69%) males and 11(42.31%) females; the age group under 51-60 consist of 7(70%) males and 3(30%) females and among the age group



above 60, there are 20(52.05%) males and 17(45.95%) females. It is also shown that there is no much variation in the gender gap among the respondents. This data is presented in the table below:

Table 4.2: Gender and Age Cross-tabulation of the respondents

<i>Gender</i>	<i>Age</i>						<i>Combined</i>
	<i>Below 21</i>	<i>21-30</i>	<i>31-40</i>	<i>41-50</i>	<i>51-60</i>	<i>Above 60</i>	
Male	8 (42.10%)	22 (50%)	18 (40%)	15 (57.69%)	7 (70%)	20 (54.05%)	90 (49.72%)
Female	11 (57.89%)	22 (50%)	27 (60%)	11 (42.31%)	3 (30%)	17 (45.95%)	91 (50.28%)
<b>Total</b>	19	44	45	26	10	37	181

*Source: Primary Data*

#### 4.2.4 Residence of respondents

Categorising the respondents based on their residential background as rural and urban is an important factor due to the reason that rural were disadvantage of information acquisition as compared to the urban residents. Urban residents were often determined as possessing a sound knowledge that would render them to acquire more health information rather than the rural resident. This data is presented in the table below:

Table 4.3: Residence of respondents

	<i>Frequency</i>	<i>Per cent</i>	<i>Valid per cent</i>	<i>Cumulative per cent</i>
Rural	100	55.2	55.2	55.2
Valid Urban	81	44.8	44.8	100.0
Total	181	100.0	100.0	

*Source: Primary Data*

The table above enumerates the respondent's residents based on the rural and urban area. While there is 100(55.2%) rural resident, there are 81(44.8%) urban resident among the respondent.

#### 4.2.5 Educational Qualification

Educational background has a pivotal impact on the individual in receiving or gathering information from different sources. Data of educational qualifications of respondents are presented in the table below:

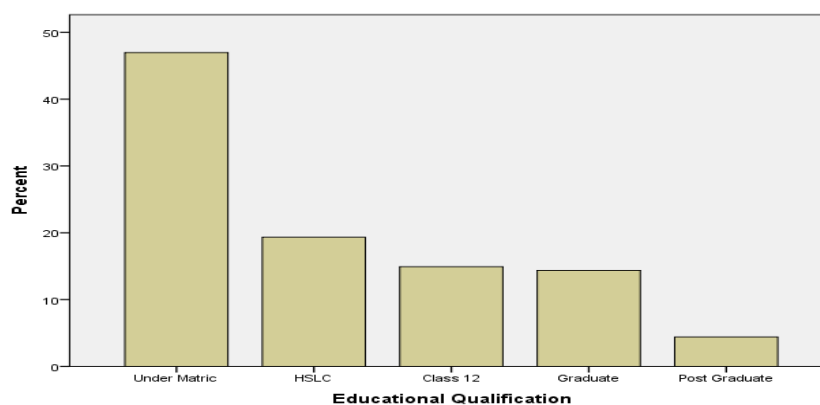


Figure 4.2: Educational Qualifications of respondents

The above charts demonstrate the proportion of respondent's educational qualifications. The under-matric respondents constitute majority comprising 47%, followed by HSLC comprising 19.3%, class 12 level respondents consist of 14.9%, Graduate respondents consist of 14.4% and the Post-graduate respondent constitute the least amounting 4.4%.

#### 4.2.6. Cross-tabulation of Resident - Educational Qualification

The data in the table below displays the proportion of respondent's residents and educational background which has a reasonable impact on acquiring information. The table shows that a total of 85 respondents were Under Matric; 35 respondents have educational qualification till HSLC; 27 respondents studied till Class 12; 26 respondents were Graduates and 6 were Post-Graduate. Out of the total 85 under-matric respondents, 54(63.53%) were rural resident and 31(36.47%) were urban residents; among the total 35 HSLC respondents, 18(51.43%) resided in a rural area and 17(48.57%) resided in an urban area; among the total 27 Class 12 respondents, 15(55.56%) were resided in rural and 12(44.44%) were resided in urban; a total 26 Graduate respondents consist of 11(42.31%) rural residents and 15(57.69%) urban residents and a total 8 Post-Graduate respondents consist of 2(25%) rural residents and 6(75%) urban residents. It was also thus revealing that majority of respondents were Under Matric and Postgraduate respondent comprised the least number.

Table 4.4: Age and educational qualifications of respondents

Residence	Educational Qualification					Combined
	Under Matric	HSLC	Class 12	Graduate	Post Graduate	
Rural	54 (63.53%)	18 (51.43%)	15 (55.56%)	11 (42.31%)	2 (25%)	100 (55.25%)
Urban	31 (36.47%)	17 (48.57%)	12 (44.44%)	15 (57.69%)	6 (75%)	81 (44.75%)
<b>Total</b>	85	35	27	26	8	181

Source: Primary Data

### 4.3 Channels for the dissemination of Healthcare Information in ZMC

#### 4.3.1. Medium used for health information dissemination in ZMC

The underlying figure demonstrates the channels used for disseminating health information in ZMC. This data was obtained through personal interaction from the working staff of ZMC. The figure below shows that information channels such as television, newspaper, social media, radio, pamphlets/brochures were utilised for health information dissemination in ZMC. Whereas Community Association meetings, door to door and local information system were not used for health information dissemination.

#### Medium used for health information dissemination

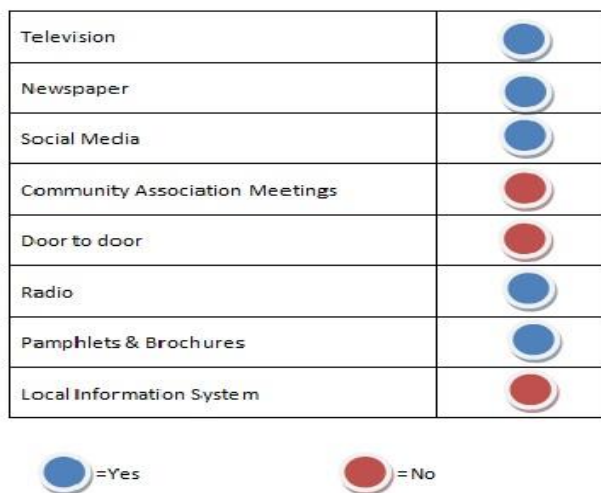


Figure 4. 3: Medium used for health information dissemination in ZMC

### 4.3.2 Source of NHM Information

As shown in the table below, various sources that are possible to carry out health care information were specify to enable identification of the user's source for gaining knowledge about health information.

Table 4.5: Channels for healthcare information

<i>Channels</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Television	100	55.2	55.2	55.2
Newspaper	4	2.2	2.2	57.4
Social Media	33	18.2	18.2	75.6
Community Association Meetings	1	0.6	0.6	76.2
Radio	4	2.2	2.2	78.4
Local Information System	1	0.6	0.6	79.0
Friends	3	1.7	1.7	80.7
Others	35	19.3	19.3	19.3
Total	181	100.0	100.0	100.0

*Source: Primary Data*

From the above table data, it is obvious that Television is the main source of information about acquiring awareness about NHP programmes. Television out of the eight sources occupies 55.2%, followed by social media constituting 18.2% and Newspaper by 2.2%. It is worth to mention here that other than sources mention in the table can be any other sources not available in the questionnaire occupies 19.3%.The Community Association Meeting has the least role in distributing information about the NHM constituting only 1 (0.6%) out of the total responses.

### 4.3.3. Media for communicating Healthcare Information

Media plays an important role in communicating peoples and disseminating information to the public. The following data in the table shows the role of media in this regard:

Table 4.6: Media for communicating Healthcare Information

<i>Media</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Television	84	46.4	46.4	46.4
Newspaper	4	2.2	2.2	48.6
Social Media	81	44.8	44.8	93.4
Door to door messages	3	1.7	1.7	95.0
Radio	3	1.7	1.7	96.7
Pamphlets, Brochures	5	2.8	2.8	99.4
Local Information System	1	0.6	0.6	100.0
Total	181	100.0	100.0	

*Source: Primary Data*

The enumerated table above expose the respondent's information channels in achieving health-related information. Television has acquired the highest frequency comprising 84(46.4%) as most desirable channels for healthcare information dissemination followed by Social Media with 44.8% with Pamphlets/Brochures in the extremely low in the third position as 2.8%. The newspaper obtained 4 (2.2%), Door to door messages secured 3 (1.7%), Radio assumed 3 (1.7%), Pamphlets and Brochures obtained 5 (2.8%) and lastly Local Information System with only 1 (.6%) being the lowest.

#### **4.3.4 Medium of Health Information by Resident**

The demonstrated table below intends to highlight how rural and urban can influence the medium for health information. The data in the table shows that among the rural residence 3% derived health information through friends, 46% utilised television, 2% derived from the newspaper, 17% utilised social media, community association meetings were utilised by 1%, radio was utilised by 3% and local information system was utilised by 1%. At the same time, 27% of the rural residents marked "none" in which their sources maybe some other medium which is not specified in the questionnaire. Among the urban residence, 0% marked friends as a medium for health information, 66.67% utilised television, 2% utilised newspaper,

19.75% derived from social media, 0% utilised from community association meetings, 1.23% derived from radio and 0% utilised from the local information system. At the same time, 9.88% of the urban residents marked “none”.

Table 4.7: Medium of Health Information by Resident

<i>Medium</i>	<i>Resident</i>		<i>Combined</i>
	<i>Rural</i>	<i>Urban</i>	
Friends	3(3%)	0(0%)	3(1.66%)
Television	46(46%)	54(66.67%)	100(55.25%)
Newspaper	2(2%)	2(2.47%)	4(2.21%)
Social Media	17(17%)	16(19.75%)	33(18.23%)
Community Association Meetings	1(1%)	0(0%)	1(0.55%)
Radio	3(3%)	1(1.23%)	4(2.21%)
Local Information System	1(1%)	0(0%)	1(0.55%)
None	27(27%)	8(9.88%)	35(19.34%)
<b>Total</b>	100	81	181

*Source: Primary Data*

In the combination of rural and urban residence, 1.66% derives health information from friends, 55.25% utilised television, 2.21% derives from the newspaper, 18.23% utilised social media, 0.55% derives from community association meetings, 2.21% utilised radio and 0.55% derives from the local information system. Meanwhile, 19.34% marked “none” in which their medium or sources of health information is not included or specified in the questionnaire.

#### **4.3.5 Medium of Health Information by Gender**

Data relating to Mental Health Information by gender is presented in the table below for discussion:

Table 4:8: Medium of Health Information by Gender

<i>Medium</i>	<i>Gender</i>		<i>Combined</i>
	<i>Male</i>	<i>Female</i>	
Friends	1(1.11%)	2(2.20%)	3(1.66%)
Television	50(55.56%)	50(54.95%)	100(55.25%)
Newspaper	4(4.44%)	0(0%)	4(2.21%)
Social Media	17(18.89%)	16(17.58%)	33(18.23%)
Community Association Meetings	1(1.11%)	0(0%)	1(0.55%)
Radio	2(2.22%)	2(2.20%)	4(2.21%)
Local Information System	1(1.11%)	0(0%)	1(0.55%)
None	14(15.56%)	21(23.08%)	35(19.34%)
<b>Total</b>	<b>90</b>	<b>91</b>	<b>181</b>

*Source: Primary Data*

In the combination of both genders, 1.66% derives health information from friends, 55.25% utilised television, 2.21% derives from the newspaper, 18.23% utilised social media, 0.55% derives from community association meetings, 2.21% utilised radio and 0.55% derives from the local information system. Meanwhile, 19.34% marked “none” in which their medium or sources of health information is not included or specified in the questionnaire.

#### **4.3.6 Medium of Health Information by Age**

The table below intends to show how gender has an impact on the information medium. The table depicts that among the male respondents 1.11% acquires health information through Friends, 55.56% acquire health information through television, 4.44% acquire health information through the newspaper, 18.89% of the male respondent attain health information through social media, 1.11% gets health information through community association meeting, 2.22% acquire health information through radio, and 1.11% gets health information through the local information system. Meanwhile, 15.56% of the male respondents marked “none” from the enlisted information medium. Among the female respondents, 2.20% derives health information through friends, 54.95% derives from television,

0%utilised newspaper, 17.58% utilised social media, 0% derives from community association meetings, 2.20% derives from radio and 0% derives from the local information system. At the same time, 23.08% marked “none”.

Table 4.9: Medium of Health Information by Age

Medium	Age						Combined
	Below21	21-30	31-40	41-50	51-60	Above 60	
Friends	0 (0%)	0 (0%)	1 (2.22%)	0 (0%)	1 (10%)	1 (2.70%)	3 (1.65%)
Television	8 (42.11%)	27 (61.36%)	26 (57.78%)	13 (50%)	6 (60%)	20 (54.05%)	100 (55.25%)
Newspaper	0 (0%)	1 (2.27%)	1 (2.22%)	1 (3.85%)	0 (0%)	1 (2.70%)	4 (2.21%)
Social Media	6 (31.58%)	10 (22.73%)	10 (22.22%)	4 (15.38%)	1 (10%)	2 (5.41%)	33 (18.23%)
Community Association Meetings	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (2.70%)	1 (0.55%)
Radio	1 (5.26%)	2 (4.55%)	0 (0%)	0 (0%)	1 (10%)	0 (0%)	4 (2.21%)
Local Information System	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (2.70%)	1 (0.55%)
None	4 (21.05%)	4 (9.09%)	7 (15.56%)	8 (30.77%)	1 (10%)	11 (29.73%)	35 (19.34%)
<b>Total</b>	19	44	45	26	10	37	181

Source: Primary Data

The above table demonstrates the influence of age for information medium. There are 19 respondents in the category of below 21 age group, 44 in the category 21-30 age group, 45 respondents in the category of 31-40 age group, 41-50 age group consist of 26, 51-60 age group comprised of 10 and above 60 age group consist of 37.

Among the respondents Below 21 age groups, 0% uses Friends as a medium for acquiring health information, 42.11% utilise television, 0% utilise newspaper, 31.58% utilise social media, 0% utilise community association meetings, 5.26% utilise radio and 0% utilise local information system. Meanwhile, 21.05% marked “none”. Among the respondents between 21-30 age groups, 0% utilise Friends, 61.36% utilise television, 2.27% utilise newspaper, 22.73% utilise social media, 0% utilise



community association meetings, 4.55% utilise radio and 0% utilise local information system. Meanwhile, 9.09% marked “none”. Among the age group respondents between 31-40, 2.22% utilise Friends, 57.78% utilise television, 2.22% utilise newspaper, 22.22% utilise social media, 0% utilise community association meetings, 0% utilise radio, 0% utilise local information system and 15.56% marked “none”. Among the 41-50 age group respondents, 0% utilise Friends, 50% utilise television, 3.85% utilise newspaper, 15.38% utilise social media, 0% utilise community association meetings, 0% utilise radio, 0% utilise local information system and 30.77% marked “none”. Among the 51-60 age groups respondents, 10% utilise Friends, 60% utilise Television 0% utilise newspaper, 10% utilise social media, 0% utilise Community association meetings, 10% utilise radio, 0% utilise Local information system and 10% marked “none”. Among the respondents above 60, 2.70% utilise Friends, 54.05% utilise Television, 2.70% utilise Newspaper, 5.41% utilise social media, 2.70% utilise community association meetings, 0% utilises Radio, 2.705 utilise Local Information system and 29.73% marked “none” in which their sources/ medium is not specified in the questionnaire.

#### **4.3.7 Medium of Health Information by Educational Qualification**

The demonstrated table below depicts the influence of educational qualification in the information medium. There respondents comprised of 85 in under matric, 35 in HSLC, 27 in Class 12, 26 in Graduate and 8 in Post Graduate. Among the under matric respondents, 3.53% utilise friends, 55.29% utilise television, 2.35% utilise newspaper, 8.23% utilise social media, 0% utilise community association meetings, 2.35% utilise radio, 1.18% utilise local information system and 27.06% marked “none”. Among the HSLC respondents, 0% utilise Friends, 48.57% utilise television, 0% utilise Newspaper, 28.57% utilise Social Media, 0% derives from Community Association Meetings, 2.86% derives from Radio, 0% derives from Local Information System and 20% marked “none”. Among the Class 12 respondents, 0% drives from Friends, 51.85% derives from Television, 3.70% utilise Newspaper, 4.41% utilise social media, 0% derives from Community Association Meetings, 0% attain from Radio, 0% derives from Local Information System and 14.81% marked “none”. Among Graduate respondents, 0% derives from Friends, 65.38% attain from Television, 3.84% derives from Newspaper, 23.08% derives from Social Media, 3.85% utilises Community Association Meetings, 0% utilises

Radio, 0% utilises Local Information System and 3.85% marked “none”. Among the Post Graduate respondents, 0% utilises Friends, 62.5% attain from Television, 0% attains from Newspaper, 25% derives from Social Media, 0% attains from Community Association Meetings, 12.5% derives from Radio, 0% attains from Local Information System and 0% marked “none”.

Table 4.10: Medium of Health Information by Educational Qualification

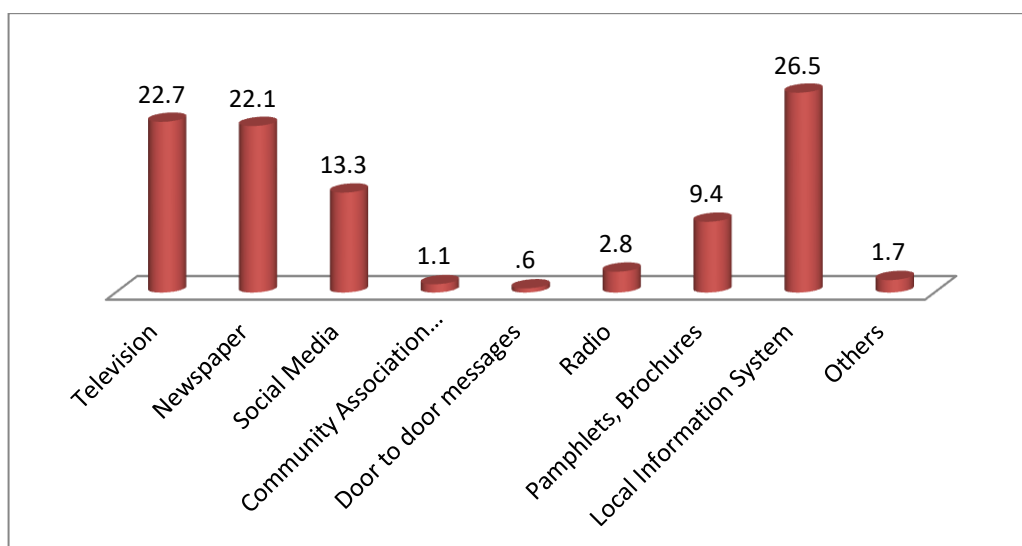
Medium	Educational Qualification					Combined
	Under Matric	HSLC	Class 12	Graduate	Post Graduate	
Friends	3 (3.53%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	3 (1.66%)
Television	47 (55.29%)	17 (48.57%)	14 (51.85%)	17 (65.38%)	5 (62.5%)	100 (55.25%)
Newspaper	2 (2.35%)	0 (0%)	1 (3.70%)	1 (3.84%)	0 (0%)	4 (2.21%)
Social Media	7 (8.23%)	10 (28.57%)	8 (4.41%)	6 (23.08%)	2 (25%)	33 (18.23%)
Community Association Meetings	0 (0%)	0 (0%)	0 (0%)	1 (3.85%)	0 (0%)	1 (0.55%)
Radio	2 (2.35%)	1 (2.86%)	0 (0%)	0 (0%)	1 (12.5%)	4 (2.21%)
Local Information System	1 (1.18%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (0.55%)
None	23 (27.06%)	7 (20%)	4 (14.81%)	1 (3.85%)	0 (0%)	35 (19.34%)
<b>Total</b>	85	35	27	26	8	181

Source: Primary Data

#### 4.3.8. Sources/Channels for Medical Insurance Schemes information

The depicted figure below provides an assessment of the channels where Medical Insurance Schemes was derived. In this case, local information dissemination has acquired the highest percentage assuming 26.5 % of the total responses. The local Information system can be understood as local information broadcasting channels. In Mizoram, every locality or village has one broadcasting system where important notification was announced through the microphone where the speaker was placed in the appropriate place of the local area which will be audible for all local/ village residents. All registration or rectification and other important information related to the healthcare insurance scheme were mostly

announced in the local information system to notify the mass residents. After local information system television follows in the second rank comprising 22.7% opted for channels where medical insurance information was acquired. The health department has hosted a television show several times to comprehend the nature of the scheme itself. The newspaper has assumed third rating frequency consisting of 22.1%. This is so because the government has usually introduced such medical insurance scheme to aware the masses as it is an important factor that aids the poorer citizens. Social Media comes next attaining 13.3% as this media has often been utilized to circulate information in a form of messages. Pamphlets/Brochures have secured 9.4% and also it is important to note that the concerned department has usually created the details or features about the scheme in a form of brochures/pamphlets. Radio has assumed 2.8%, Community Association Meeting has acquired 1.1%, and Door to door message consists of the least sources securing only 0.6%. Some respondents opted “Others” constituting 1.7% of the total responses.



Source: Primary Data

Figure 4.4: Medium of information about Medical Insurance Scheme

#### 4.4. Health Information Regularities

##### 4.4.1. Satisfaction for information accessibility in the hospital.

From the present study, the respondent’s satisfaction was enquired to determine the efficiency of health information dissemination in the Zoram Medical College teaching hospital. The result has shown that 66 (36.5%) were satisfied with the information accessibility provided by the hospital whereas 115 (63.5%) were not satisfied with the information given by the hospital. This data shows that more than

half of the respondents are not satisfied in the ZMC dissemination of information to them. This data is shown in the table below:

Table 4.11: Satisfaction for information accessibility in the hospital

<i>Satisfaction</i>	<i>Frequency</i>	<i>Per cent</i>	<i>Valid Per cent</i>	<i>Cumulative Per cent</i>
Yes	66	36.5	36.5	36.5
No	115	63.5	63.5	100.0
Total	181	100.0	100.0	

*Source: Primary Data*

#### 4.4.2 Medical Insurance Enrolment status

Medical insurance is an important scheme that envisages financial assistance to patients suffering from acute diseases. Presently the state of Mizoram has undertaken two healthcare schemes viz. Mizoram State Healthcare Scheme and PMJAY. Table 4.11 below represent the proportion of respondent's utilisation of medical insurance schemes.

Table 4.12: Medical Insurance registration status

	<i>Frequency</i>	<i>Per cent</i>	<i>Valid Per cent</i>	<i>Cumulative Per cent</i>
Valid Yes	127	70.2	70.2	70.2
No	54	29.8	29.8	100.0
Total	181	100.0	100.0	

*Source: Primary Data*

As shown in the table, the respondents were asked to state whether they have enrolled in any medical insurance scheme or not. Out of the total responses, 127 (70.2%) were enrolled in the medical insurance scheme and the rest of 54 (29.8%) did not enrol to the stated scheme. It is visible that the majority of the respondents were enrolled in the medical insurance scheme facilities and thus clearly exposed the successful services. The respondents who were not registered to medical insurance were not aware of the facility.

#### 4.4.3 Assessment of Regularity of Information Dissemination

Health Information was communicated in different forms using various channels. Some Preventive and Control Programs were disseminated using television, social media such as YouTube, Instagram, WhatsApp, radio, brochures/pamphlets and other channels. The table below stated the respondents' perspectives on the regularity of health information dissemination.

Table 4.13: Regularity of Dissemination of information

	<i>Frequency</i>	<i>Per cent</i>	<i>Valid Per cent</i>	<i>Cumulative Per cent</i>
Valid	Yes	126	69.6	69.6
	No	55	30.4	100.0
	Total	181	100.0	100.0

*Source: Primary Data*

The study shows that 126 respondents i.e. 69.6% finds healthcare information dissemination regular while the rest 55 i.e. 30.4% find irregular. Many health programs under the NHM has initiated the creation of public awareness in a form of advertisement in TV channels or YouTube or by creating accounts in Facebook or Instagram, or by putting up hoardings in public places. The concerned department also cooperated with newspaper or magazines to highlight their programs. Hence, this may be the reason why the majority of respondents find the information dissemination regular.

#### 4.4.4. Frequency of Information dissemination

To realise the regularities or frequency of health information dissemination, the respondent is allowed to give an assessment or rank the frequency of healthcare information dissemination based on their perspectives. The above charts demonstrate that 4(2.2%) stated Weekly, 8(4.4%) stated Monthly, 47 (26%) stated Quarterly, 51(28.2%) stated Half-Yearly, 51(28.2%) stated Yearly and 19 (6%) stated Never with regards to the frequency of healthcare information distribution towards the public. The Half-Yearly and Yearly constitute the same rank and both are the

majority ranks that are mostly chosen as the frequency for healthcare information dissemination.

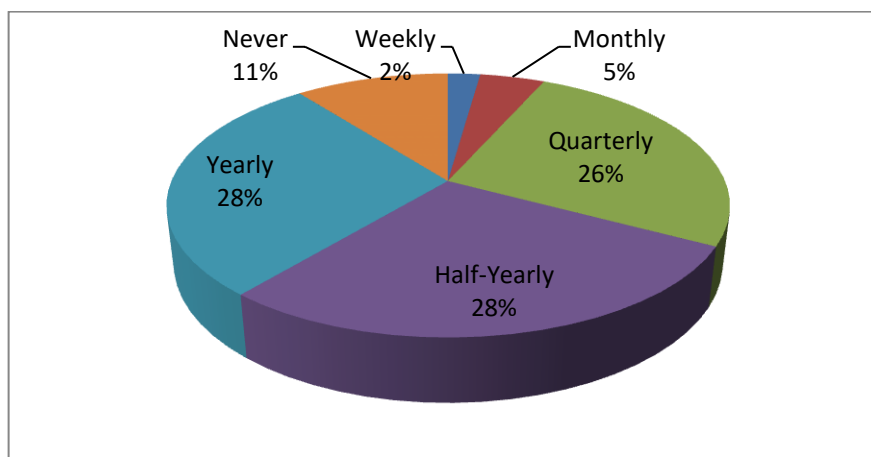


Figure 4.5: Frequency of Dissemination of Health Information

#### 4.5 Identification of Public Awareness on Health Programs

##### 4.5.1 National Health Mission Awareness

The table below presented the frequencies and percentage of the awareness level of National Health Mission (NHM). The NHM is an important health programme to which its subordinate runs in a different spectrum of health services, health programmes and prevention programmes. According to the table, we came to realise that 122(67.4%) people responded “Yes” and 59(32.6%) people responded “No” to the awareness of the NHM. From this result, it was found that majority of the respondent is aware of the NHM.

Table 4.14: Awareness of National Health Mission

	<i>Frequency</i>	<i>Per cent</i>	<i>Valid Per cent</i>	<i>Cumulative Per cent</i>
Yes	122	67.4	67.4	67.4
Valid No	59	32.6	32.6	100.0
Total	181	100.0	100.0	

*Source: Primary Data*

#### 4.5.2. Educational Qualification and National Health Mission Awareness - Cross tabulation

To understand the impact of education on the awareness of the NHM Table 4.6 intends to exhibit that literacy has a great impact on information awareness. The table shows the influence of educational background on the awareness of National Health Mission (NHM). The table depicts that among the under matric respondent, 54.12% are aware whereas 45.88% are not aware of the NHM. Among the HSLC respondent, 71.43% are aware and 28.57% are not aware of the NHM. Among the Class 12 respondent, 70.37% are aware and 29.63% are not aware. Among the Graduate respondent, 92.31% are aware and 7.69% are not aware. Among the Post Graduate respondent, 100% are aware and 0% are not aware. Totally, out of the total 181 respondents, 122 respondents marked 'yes' on the awareness of NHM and the rest 59 marked 'No'. It shows that the awareness level is higher on each educational rank and also shows that the tendency of awareness tends to go high on higher educational rank.

Table 4.15: Cross-tabulation:  
National Health Mission Awareness by Educational Qualifications

<i>Educational Qualifications</i>	<i>National Health Mission Awareness</i>		<i>Total</i>
	<i>Aware</i>	<i>Not Aware</i>	
Under Matric	46(54.12%)	39(45.88%)	85
HSLC	25(71.43%)	10(28.57%)	35
Class 12	19(70.37%)	8(29.63%)	27
Graduate	24(92.31%)	2(7.69%)	26
Post Graduate	8(100%)	0(0.0%)	8
Total	122(67.40%)	59(32.04%)	181

*Source: Primary Data*

#### 4.5.3 Cross-tabulation of Resident - National Health Mission Awareness

Data relating to Cross Tabulation of Resident-National Health Mission Awareness is presented in the table below:

Table 4.16: Cross Tabulation of Resident-National Health Mission Awareness

		<i>National Health Mission Awareness</i>		<i>Total</i>
		<i>Yes</i>	<i>No</i>	
Residence	Rural	62 (62%)	38(38%)	100
	Urban	60 (74.07%)	21(25.93%)	81
Total		122(67.4%)	59(32.6%)	181

*Source: Primary Data*

The above data in the table demonstrates that 100 respondents are resident of the rural area and 81 from the urban area. Out of the total 100 rural residents, 62(62%) are aware of National Health Mission and 38(38%) of them do not aware of the NHM. Among the urban residents, it was found that out of the 81 participants, 60 (74.07%) aware of NHM and 21(25.93%) are not aware of NHM. However, we can identify a slight variation in the percentage of awareness as the table depict that the percentage of awareness in the urban area is higher than that of the rural area. But taken as a whole perspective, 122(67.4%) aware of NHM and 59(32.6%) do not aware of it. The awareness of NHM is more than double of those who do not aware of it.

#### **4.5.4. Awareness on Prevention Programme under National Health Mission**

The demonstrated chart below highlights the frequency of respondent's awareness of the preventive programme under NHM. The Government of India has initiated several health programmes as preventive measures of the community. Some of the programmes specified in the chart are National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDS); National Programme for Prevention and Control of Deafness (NPPCD); National Programme for Prevention and Control of Fluorosis (NPPCF); National Leprosy Eradication Programme (NLEP); Integrated Disease Surveillance Programme (IDSP) and Expanded Program on Immunization (EPI).



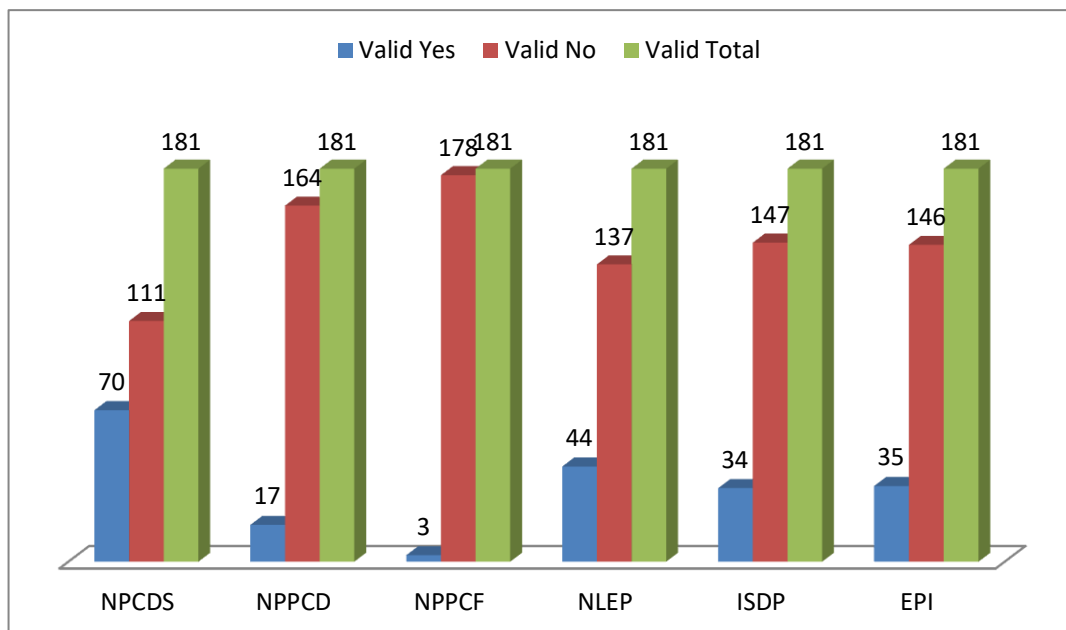


Figure 4.6: Awareness on Prevention Programme under the National Health Mission

As stated in the figure above, the awareness of NPCDS constitutes the highest among all the preventive programmes with 70 (38.67%) respondents followed by NLEP with 44(%) with EPI in the third as 35(%) narrowly followed by ISDP (34%) whereas NPPCF attains the lowest rate of awareness with 3 (1.66%) respondents. Taken as a whole perspective, the awareness level of all these programmes are low not even crossing 50% respondents.

#### 4.5.5. Awareness on Control Programme under National Health Mission

The following figure shows the frequency of the control programme under the NHM known by the respondent. The control programme of NHM taken for this study is Reproductive Child Health (RCH); National Oral Health Programme (NOHP); National Programme for the Healthcare of the Elderly (NPHCE); National Tobacco Control Programme (NTCP); National Mental Health Programme (NMHP); National Programme for Control of Blindness (NPCB); Revised National Tuberculosis Control Programme(RNTCP); National Vector Borne Disease Control Programme (NVBCP) and National Iodine Deficiency Disorders Control Programme (NIDDCP).

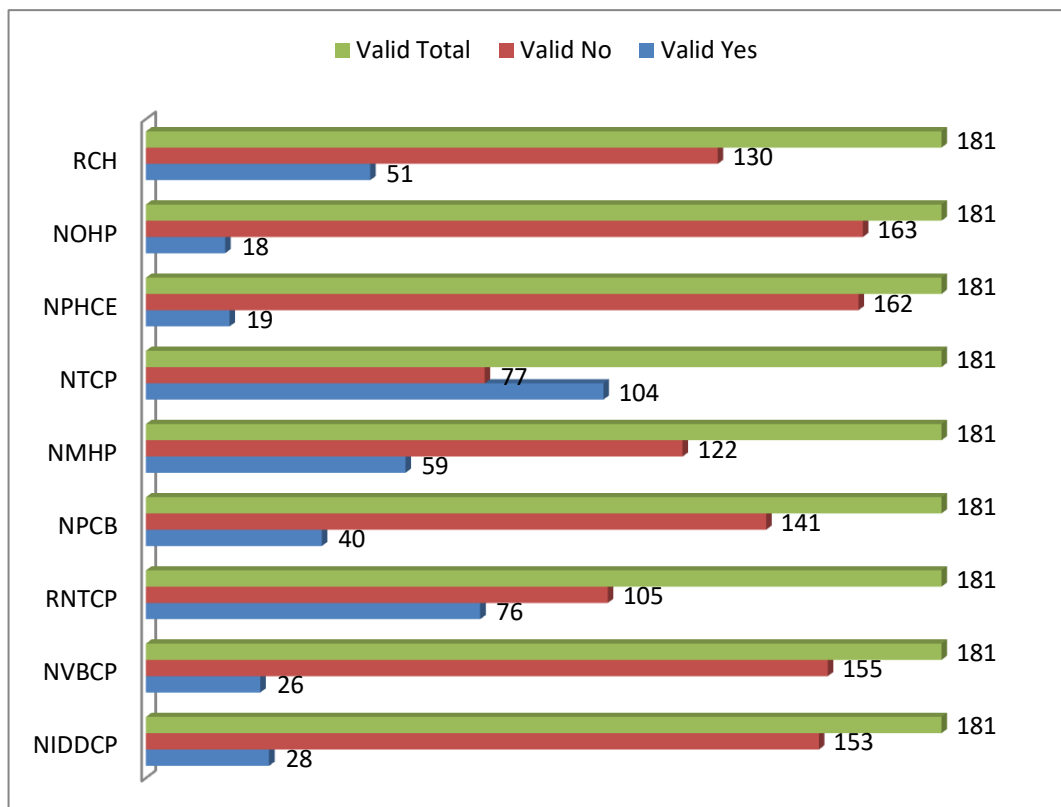


Figure 4.7: Awareness of Control Programme under the National Health Mission

#### 4.5.6 Awareness of NPCDS

The NPCDS stands for National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke. The awareness of NPCDS will be studied from three respondents, such as by gender, by the residence and by educational qualifications.

1) **Awareness of NPCDS by Gender:** The primary data of gender awareness regarding NPCDS is presented in the table below:

Table 4.17: Awareness of NPCDS by Gender

<i>Gender</i>	<i>Prevention Programme Awareness of NPCDS</i>		<i>Total</i>
	<i>Aware</i>	<i>Not Aware</i>	
Male	42(46.67%)	48(53.33%)	90
Female	28(30.77%)	63(69.23%)	91
Total	70(38.68%)	111(61.32%)	181

Source: Primary Data

The above data shows that out of the total 90 male respondents, 46.67% are aware of the NPCDS and 53.33% are not aware. At the same time, out of the total 91 female respondents, 30.77% are aware of the NPCDS and 69.23% are not aware. Totally out of the total respondent, 38.68% are aware of the NPCDS and 61.32% are not aware of the NPCDS.

**2) Awareness of NPCDS by Educational Qualifications:** Study of awareness of NPCDS by educational qualification is conducted through questionnaire and data is presented below in the table.

Table 4.18: Awareness of NPCDS by Educational Qualification

<i>Prevention Programme Awareness of NPCDS</i>		<i>Educational Qualification</i>					<i>Combine</i>
		<i>Under Matric</i>	<i>HSLC</i>	<i>Class 12</i>	<i>Graduate</i>	<i>Post Graduate</i>	
Yes	28 (32.94%)	15 (42.86%)	5 (18.52%)	17 (65.38%)	5 (62.5%)	70 (38.67%)	
No	57 (67.06%)	20 (57.14%)	22 (81.48%)	9 (34.62%)	3 (37.5%)	111 (61.33%)	
<b>Total</b>	85	35	27	26	8	181	

*Source: Primary Data*

The above data shows that among the Under Matric respondent, 32.94% are aware of the NPCDS whereas 67.06% are unaware of it, among the HSLC respondent, 42.86% are aware of the NPCDS whereas 57.14% are unaware of it, among the Class 12 respondent, 18.52% are aware of the NPCDS whereas 81.48% are unaware of it, among the Graduate respondent, 65.38% are aware of the NPCDS whereas 34.62% are unaware of it, among the Post Graduate respondent, 62.5% are aware of the NPCDS whereas 37.5% are unaware of it. Totally out of the total respondent, 38.68% are aware of the NPCDS and 61.32% are not aware of the NPCDS.

**3) Awareness of NPCDS by Residence:** The study is based on the respondents of the sample size and is presented in the table below for interpretation:

Table 4.19: Awareness of NPCDS by Residence

<i>Prevention Programme Awareness of NPCDS</i>	<i>Address</i>		<i>Combined</i>
	<i>Rural</i>	<i>Urban</i>	
Yes	33(33%)	37(45.68%)	70(38.67%)
No	67(67%)	44(54.32%)	111(61.33%)
Total	100	81	181

Source: Primary Data

The table above shows that 33% of the rural respondent is aware of the NPCDS whereas 67% are unaware and 45.68 % urban respondent is aware of the NPCDS whereas 54.32% are unaware. Totally out of the total respondent, 38.68% are aware of the NPCDS and 61.32% are not aware of the NPCDS.

#### 4.5.7 Awareness of NPPCD

The NPPCD stands for National Programme for Prevention and Control of Deafness. The awareness of NPPCD will be studied from three respondents, such as by gender, by the residence and by educational qualifications.

**1) Awareness of NPPCD by Gender:** The collected data from the respondents regarding awareness of NPPCD is presented in the table below:

Table 4.20: Awareness of NPPCD by Gender

<i>Gender</i>	<i>Prevention Programme Awareness of NPPCD</i>		<i>Total</i>
	<i>Aware</i>	<i>Not Aware</i>	
Male	8(8.90%)	82(91.11%)	90(49.73%)
Female	9(9.90%)	82(90.10%)	91(50.27%)
Total	17(9.39%)	164(90.61%)	181

Source: Primary Data

The above table shows that 8.90% of the male respondents are aware of the NPPCD whereas 91.11% of are not aware of the NPPCD. Among the female respondent, 9.90% are aware of the NPPCD whereas 90.10% are not aware. 9.39% of the respondents are aware of the NPPCD whereas 90.61% are not aware of the NPPCD.

**2) Awareness of NPPCD by Residence:** The following data in the table represents the significance of respondent's awareness of NPPCD by residence.

Table 4.21: Awareness of NPPCD by Residence

<i>Prevention Programme Awareness of NPPCD</i>	<i>Address</i>		<i>Combined</i>
	<i>Rural</i>	<i>Urban</i>	
Yes	3(3%)	14(17.28%)	17(9.39%)
No	97(97%)	67(82.72%)	164(90.61%)
Total	100	81	181

*Source: Primary Data*

The table above shows that 3% of the rural respondent is aware of the NPPCD whereas 97% are unaware and 17.28 % urban respondent is aware of the NPPCD whereas 82.72% are unaware. Totally out of the total respondent, 9.39% are aware of the NPPCD and 90.61% are not aware of the NPPCD.

**3) Awareness of NPPCD by Educational Qualifications:** The following data in the table represents the significance of NPPCD awareness by educational qualifications from the respondents.

Table 4.22: Awareness of NPPCD by Educational Qualification

<i>Prevention Programme Awareness of NPPCD</i>	<i>Educational Qualification</i>					<i>Combined</i>
	<i>Under Matric</i>	<i>HSLC</i>	<i>Class 12</i>	<i>Graduate</i>	<i>Post Graduate</i>	
Yes	3 (3.52%)	3 (8.57%)	3 (11.11%)	6 (23.08%)	2 (25%)	17 (9.39%)
No	82 (96.47%)	32 (91.43%)	24 (88.89%)	20 (76.92%)	6 (75%)	164 (90.61%)
Total	85	35	27	26	8	181

*Source: Primary Data*

The above table shows that among the Under Matric respondent, 3.52% are aware of the NPPCD whereas 96.47% are unaware of it, among the HSLC respondent, 8.57% are aware of the NPPCD whereas 91.43% are unaware of it, among the Class 12 respondent, 11.11% are aware of the NPPCD whereas 88.89% are unaware of it, among the Graduate respondent, 23.08% are aware of the NPPCD whereas 76.92% are unaware of it, among the Post Graduate respondent, 25% are

aware of the NPPCD whereas 75% are unaware of it. Totally out of the total respondent, 9.39% are aware of NPPCD and 90.61% are not aware of the NPPCD.

#### 4.5.8 Awareness of NPPCF

The NPPCF stands for National Programme for Prevention and Control of Fluorosis. Study on the awareness of NPPCF will be carried out in three areas, such as by gender, by the residence and by educational qualifications.

**1) Awareness of NPPCF by Gender:** The data of awareness of NPPCF by gender is presented in the table below:

Table 4.23: Awareness of NPPCF by Gender

<i>Gender</i>	<i>Prevention Programme Awareness of NPPCF</i>		<i>Total</i>
	<i>Aware</i>	<i>Not aware</i>	
Male	2(2.22%)	88(97.78%)	90(49.73%)
Female	1(1.10%)	90(98.90%)	91(50.27%)
Total	3(1.66%)	178(98.34%)	181

*Source: Primary Data*

The above table depicts that 2.22% of the male respondent is aware of the NPPCF whereas 97.78% of the male respondent is not aware of the NPPCF. Among the female respondent, 1.10% are aware of the NPPCF whereas 98.90% are not aware. 1.66% of the respondents are aware of the NPPCF whereas 98.34% are not aware.

**2) Awareness of NPPCF by Residence:** The following data in the table shows awareness of NPPCF by the respondents in terms of residence.

Table 4.24: Awareness of NPPCF by Residence

<i>Prevention Programme Awareness of NPPCF</i>	<i>Address</i>		<i>Combined</i>
	<i>Rural</i>	<i>Urban</i>	
Yes	0(0%)	3(3.7%)	3(1.66%)
No	100(100%)	78(96.3%)	178(98.34%)
Total	100	81	181

*Source: Primary Data*

The table above shows that 0% of the rural respondent is aware of the NPPCF whereas 100% are unaware and 3.70 % urban respondent is aware of the NPPCF whereas 96.30% are unaware. Totally out of the total respondent, 1.66% is aware of the NPPCF and 98.34% are not aware of the NPPCF.

**3) Awareness of NPPCF by Educational Qualifications:** The following data in the table shows awareness of NPPCF by the respondents in terms of educational qualifications.

Table 4.25: Awareness of NPPCF by Educational Qualification

<i>Prevention Programme Awareness of NPPCF</i>	<i>Educational Qualification</i>					<i>Combine</i>
	<i>Under Matric</i>	<i>HSLC</i>	<i>Class 12</i>	<i>Graduate</i>	<i>Post Graduate</i>	
Yes	1 (1.18%)	2 (5.71%)	0 (0%)	0 (0%)	0 (0%)	3 (1.66%)
No	84 (98.82%)	33 (94.29%)	27 (100%)	26 (100%)	8 (100%)	178 (98.34%)
Total	85	35	27	26	8	181

*Source: Primary Data*

The above table shows that among the Under Matric respondent, 1.18% are aware of the NPPCF whereas 98.82% are unaware of it, among the HSLC respondent, 5.71% are aware of the NPPCF whereas 94.29% are unaware of it; among the Class 12 respondent, 0% are aware of the NPPCF whereas 100% are unaware of it; among the Graduate respondent, 0% are aware of the NPPCF whereas 100% are unaware of it; among the Post Graduate respondent, 0% are aware of the NPPCF whereas 100% are unaware of it. Totally out of the total respondent, 1.66% is aware of NPPCF and 98.34% are not aware of the NPPCF.

#### **4.5.9 Awareness of NLEP**

The NLEP stands for National Leprosy Eradication Programme. The study will be taken up from three areas, such as by gender, by the residence and by educational qualifications.

**1) Awareness of NLEP by Gender:** The following data in the table shows awareness of NLEP by gender for discussion.

Table 4.26: Awareness of NLEP by Gender-Based

<i>Gender</i>	<i>Prevention Programme Awareness of NLEP</i>		<i>Combined</i>
	<i>Aware</i>	<i>Not Aware</i>	
Male	30(33.33%)	60(66.67%)	90(49.73%)
Female	14(15.38%)	77(84.61%)	91(50.27%)
Total	44(24.31%)	137(75.69%)	181

*Source: Primary Data*

The above table demonstrates that 33.33% of the male respondents were aware of the NLEP whereas 66.67% were not aware. While 15.38% of the female respondents are aware of the NLEP, 84.61% were not aware of the program. When combined, 24.31% of the total respondents are aware of the NLEP whereas 75.69% are not aware.

**2) Awareness of NLEP By Residence:** Data collected from the respondents regarding awareness of NLEP on their residence is presented in the table below:

Table 4.27: Awareness of NLEP by Residence

<i>Prevention Programme Awareness of NLEP</i>	<i>Address</i>		<i>Combined</i>
	<i>Rural</i>	<i>Urban</i>	
Yes	22(22%)	22(27.16%)	44(24.31%)
No	78(78%)	59(72.84%)	137(75.69%)
Total	100	81	181

*Source: Primary Data*

The table above shows that 22% of the rural respondent is aware of the NLEP whereas 78% are unaware and 27.16 % urban respondent is aware of the NLEP whereas 72.84% are unaware. 24.31% of the respondents are aware of the NLEP whereas 75.69% are not aware.

**4) Awareness of NLEP by Educational Qualifications:** Awareness of NLEP by educational qualifications is presented in the table below:



Table 4.28: Awareness of NLEP by Educational Qualification

<i>Prevention Programme Awareness of NLEP</i>	<i>Educational Qualification</i>					<i>Combine</i>
	<i>Under Matric</i>	<i>HSLC</i>	<i>Class 12</i>	<i>Graduate</i>	<i>Post Graduate</i>	
Yes	17 (20%)	7 (20%)	1 (3.70%)	14 (53.85%)	5 (62.5%)	44 (24.31%)
No	68 (80%)	28 (80%)	26 (96.30%)	12 (46.15%)	3 (37.5%)	137 (75.69%)
Total	85	35	27	26	8	181

Source: Primary Data

The above table shows that among the Under Matric respondent, 20% are aware of the NLEP whereas 80% are unaware of it, among the HSLC respondent, 20% are aware of the NLEP whereas 80% are unaware of it; among the Class 12 respondent, 3.70% are aware of the NLEP whereas 96.30% are unaware of it; among the Graduate respondent, 53.85% are aware of the NLEP whereas 46.15% are unaware of it; among the Post Graduate respondent, 62.5% are aware of the NLEP whereas 37.5% are unaware of it. 24.31% of the respondents are aware of the NLEP whereas 75.69% are not aware.

#### 4.5.10 Awareness of IDSP

The IDSP stands for Integrated Disease Surveillance Programme. The awareness of IDSP will be studied from three areas, such as by gender, by the residence and by educational qualifications.

1) **Awareness of IDSP by Gender:** Awareness of IDSP is presented in data as below:

Table 4.29: Awareness of IDSP by Gender

<i>Gender</i>	<i>Prevention Programme Awareness of IDSP</i>		<i>Total</i>
	<i>Aware</i>	<i>Not Aware</i>	
Male	18(20%)	72(80%)	90(49.73%)
Female	16(17.58%)	75(82.42%)	91(50.27%)
Total	34(18.78%)	147(81.22%)	181

Source: Primary Data

Among the male respondents, 20% are aware of the IDSP whereas 80% are not aware. Meanwhile, 17.58% of the female respondents are aware of the IDSP whereas 82.42% of the female respondents are not aware of. 18.78% of the respondents are aware of the IDSP whereas 81.22% are not aware.

**2) Awareness of IDSP by Residence:** The following data in the table presents an awareness of IDSP by residence.

Table 4.30: Awareness of IDSP by Residence

<i>Prevention Programme Awareness of IDSP</i>	<i>Address</i>		<i>Combined</i>
	<i>Rural</i>	<i>Urban</i>	
Yes	13(13%)	21(25.93%)	34(18.78%)
No	87(87%)	60(74.07%)	147(81.22%)
Total	100	81	181

*Source: Primary Data*

The table above shows that 13% of the rural respondent is aware of the IDSP whereas 87% are unaware and 25.93 % urban respondent is aware of the IDSP whereas 74.07% are unaware.18.78% of the respondents are aware of the IDSP whereas 81.22% are not aware.

**3) Awareness of IDSP by Educational Qualifications:** The following data in the table shows awareness of IDSP by educational qualification from the study.

Table 4.31: Awareness of IDSP by Educational Qualification

<i>Prevention Programme Awareness of IDSP</i>	<i>Educational Qualification</i>					<i>Combine</i>
	<i>Under Matric</i>	<i>HSLC</i>	<i>Class 12</i>	<i>Graduate</i>	<i>Post Graduate</i>	
Yes	10 (11.76%)	6 (17.14%)	7 (25.93%)	8 (30.67%)	3 (37.5%)	34 (18.78%)
No	75 (88.24%)	29 (82.86%)	20 (72.07%)	18 (69.23%)	5 (62.5%)	147 (81.22%)
Total	85	35	27	26	8	181

*Source: Primary Data*

The above table shows that among the Under Matric respondent, 11.76% are aware of the IDSP whereas 88.24% are unaware of it, among the HSLC respondent,

17.14% are aware of the NLEP whereas 82.86% are unaware of it, among the Class 12 respondent, 25.93% are aware of the IDSP whereas 72.07% are unaware of it, among the Graduate respondent, 30.67% are aware of the IDSP whereas 69.23% are unaware of it, among the Post Graduate respondent, 37.5% are aware of the IDSP whereas 62.5% are unaware of it. 18.78% of the respondents are aware of the IDSP whereas 81.22% are not aware.

#### 4.5.11 Awareness of EPI

The full form of EPI is Expanded Program on Immunization. The awareness of this important programme will be studied in three angles, such as by gender, by the residence and by educational qualifications.

**1) Awareness of EPI by Gender:** The following data in the table represents responses on the target persons regarding awareness of EPI.

Table 4.32: Awareness of EPI by Gender

<i>Gender</i>	<i>Prevention Programme Awareness of EPI</i>		<i>Total</i>
	<i>Aware</i>	<i>Not Aware</i>	
Male	19(21.11%)	71(78.89%)	90
Female	16(17.58%)	75(82.42%)	91
Total	35(19.34%)	146(80.66%)	181

*Source: Primary Data*

The table shows that among the male respondent, 21.11% are aware of the EPI whereas 78.89% are not aware. Among the female respondent, 17.58% are aware of the EPI whereas 82.42% are not aware. 19.34% of the respondents are aware of the EPI whereas 80.66% are not aware.

**2) Awareness of EPI by Residence:** The following data in the table shows the awareness of EPI by residence.

Table 4.33: Awareness of EPI by Residence

<i>Prevention Programme Awareness of EPI</i>	<i>Address</i>		<i>Combined</i>
	<i>Rural</i>	<i>Urban</i>	
Yes	18(18%)	17(20.99%)	35(19.34%)
No	82(82%)	64(79.01%)	146(80.66%)
Total	100	81	181

Source: Primary Data

The table above shows that 18% of the rural respondent is aware of the EPI whereas 82% are unaware and 20.99 % urban respondent is aware of the EPI whereas 79.01% are unaware.19.34% of the respondents are aware of the EPI whereas 80.66% are not aware.

**3) Awareness of EPI by Educational Qualifications:** The following data in the table shows awareness of EPI by educational qualifications from the respondents.

Table 4.34: Awareness of EPI by Educational Qualification

<i>Prevention Programme Awareness of EPI</i>	<i>Educational Qualification</i>					<i>Combined</i>
	<i>Under Matric</i>	<i>HSLC</i>	<i>Class 12</i>	<i>Graduate</i>	<i>Post Graduate</i>	
Yes	16 (18.82%)	7 (20%)	2 (7.41%)	6 (23.08%)	4 (50%)	35 (19.34%)
No	69 (81.18%)	28 (80%)	25 (92.59%)	20 (76.92%)	4 (50%)	146 (80.66%)
Total	85	35	27	26	8	181

Source: Primary Data

The above table shows that among the Under Matric respondent, 18.82% are aware of the EPI whereas 81.18% are unaware of it, among the HSLC respondent, 20% are aware of the EPI whereas 80% are unaware of it; among the Class 12 respondent, 7.41% are aware of the EPI whereas 92.59% are unaware of it; among the Graduate respondent, 23.08% are aware of the EPI whereas 76.92% are unaware of it; among the Post Graduate respondent, 50% are aware of the EPI whereas EPI % are unaware of it. 19.34% of the respondents are aware of the EPI whereas 80.66% are not aware.

#### 4.5.12 Awareness of NIDDCP

The NIDDCP stands for National Iodine Deficiency Disorders Control Programme. The study on the awareness of NIDDCP will be carried out in three aspects, such as by gender, by the residence and by educational qualifications.

1) **Awareness of NIDDCP by Gender:** Collected data from the respondents regarding awareness of NIDDCP is presented in the table below for interpretation.

Table 4.35: Awareness of NIDDCP by Gender

<i>Gender</i>	<i>Control Programme Awareness of NIDDCP</i>		<i>Total</i>
	<i>Aware</i>	<i>Not Aware</i>	
Male	15(16.67%)	75(83.33%)	90
Female	13(14.29%)	78(85.71%)	91
<i>Combined</i>	28(15.47%)	153(84.53%)	181

*Source: Primary Data*

The above table demonstrates that among the male respondent, 16.67% are aware of the NIDDCP whereas 83.33% are not aware. Among the female respondent, 14.29% are aware of the NIDDCP whereas 85.71% are not aware. Totally, the respondents comprised of 15.47% were aware of the NIDDCP whereas 84.53% were not aware.

2) **Awareness of NIDDCP Awareness of NIDDCP by Residence:** The following data in the table is responses of questionnaires by the respondents regarding their awareness of NIDDCP by residence.

Table 4.36: Awareness of NIDDCP by Residence

<i>Control Programme Awareness of NIDDCP</i>	<i>Address</i>		<i>Combined</i>
	<i>Rural</i>	<i>Urban</i>	
Yes	13(13%)	15(18.52%)	28(15.47%)
No	87(87%)	66(81.48%)	153(84.53%)
Total	100	81	181

*Source: Primary Data*

The table above shows that 13% of rural respondent is aware of the NIDDCP whereas 87% are unaware and 18.52 % urban respondent is aware of the NIDDCP

whereas 81.48% are unaware.15.47% of the respondents are aware of the NIDDCP whereas 84.53% of the respondents are not aware.

**3) Awareness of NIDDCP Awareness of NIDDCP by Educational Qualifications:** The following data shows respondents awareness of NIDDCP by educational qualifications.

Table 4.37: Awareness of NIDDCP by Educational Qualification

<i>Control Programme Awareness of NIDDCP</i>	<i>Educational Qualification</i>					<i>Combined</i>
	<i>Under Matric</i>	<i>HSLC</i>	<i>Class 12</i>	<i>Graduate</i>	<i>Post Graduate</i>	
Yes	12 (14.12%)	6 (17.14%)	3 (11.11%)	5 (19.23%)	2 (25%)	28 (15.47%)
No	73 (85.88%)	29 (82.86%)	24 (88.89%)	21 (80.77%)	6 (75%)	153 (84.53%)
Total	85	35	27	26	8	181

*Source: Primary Data*

The above table shows that among the Under Matric respondent, 14.12% are aware of the NIDDCP whereas 85.88% are unaware of it, among the HSLC respondent, 17.14% are aware of the NIDDCP whereas 82.86% are unaware of it; among the Class 12 respondent, 11.11% are aware of the NIDDCP whereas 88.89% are unaware of it; among the Graduate respondent, 9.23% are aware of the NIDDCP whereas 80.77% are unaware of it; among the Post Graduate respondent, 25% are aware of the NIDDCP whereas 75% are unaware of it. 15.47% of the respondents are aware of the NIDDCP whereas 84.53% of the respondents are not aware.

#### **4.5.13 Awareness of NVBDCP**

The NVBDCP is the abbreviated form of National Vector Borne Disease Control Programme. The awareness programme of NVBDCP will be carried out from three aspects, such as by gender, by the residence and by educational qualifications.

**1) Awareness of NVBDCP by Gender:** Data collected through questionnaires regarding awareness of NVBDCP by gender is tabulated below:

Table 4.38: Awareness of NVBDCP by Gender

<i>Gender</i>	<i>Control Programme Awareness of NVBDCP</i>		<i>Total</i>
	<i>Aware</i>	<i>Not Aware</i>	
Male	17(18.89%)	73(81.11%)	90
Female	9(9.89%)	82(90.11%)	91
<i>Combined</i>	26(14.36%)	155(85.63%)	181

*Source: Primary Data*

The above table depicts that 18.89% of the male respondent is aware of the NVBDCP whereas 81.11% are not aware. Among the female respondent, 9.89% are aware whereas 90.11% are not aware. 14.36% of respondents are aware of the NVBDCP whereas 85.64% of respondents are not aware.

**2) Awareness of NVBDCP by Residence:** The collected data from the respondents regarding awareness of NVBDCP by residence is presented in the table below:

Table 4.39: Awareness of NVBCP by Residence

<i>Control Programme Awareness of NVBDCP</i>	<i>Address</i>		<i>Combined</i>
	<i>Rural</i>	<i>Urban</i>	
Yes	10(10%)	16(19.75%)	26(14.36%)
No	90(90%)	65(80.25%)	155(85.64%)
Total	100	81	181

*Source: Primary Data*

The table above shows that 10% of the rural respondent is aware of the NVBDCP whereas 90% are unaware and 19.75% urban respondent is aware of the NVBDCP whereas 80.25% are unaware. 14.36% of respondents are aware of the NVBDCP whereas 85.64% of respondents are not aware.

**5) Awareness of NVBDCP by Educational Qualifications:** The following data in the table represents primary data collected from the respondents regarding awareness of NVBDCP by educational qualifications.

Table 4.40: Awareness of NVBCP by Educational Qualification

<i>Control Programme Awareness of NVBCP</i>	<i>Educational Qualification</i>					<i>Combined</i>
	<i>Under Matric</i>	<i>HSLC</i>	<i>Class 12</i>	<i>Graduate</i>	<i>Post Graduate</i>	
Yes	9 (10.59%)	3 (8.58%)	3 (11.11%)	9 (34.61%)	2 (25%)	26 (14.36%)
No	76 (89.41%)	32 (91.43%)	24 (88.89%)	17 (65.38%)	6 (75%)	155 (85.64%)
Total	85	35	27	26	8	181

Source: Primary Data

The above table shows that among the Under Matric respondent, 10.59% are aware of the NVBCP whereas 89.41% are unaware of it, among the HSLC respondent, 8.58% are aware of the NVBCP whereas 91.43% are unaware of it, among the Class 12 respondent, 11.11% are aware of the NVBCP whereas 88.89% are unaware of it, among the Graduate respondent, 34.61% are aware of the NVBCP whereas 65.38% are unaware of it, among the Post Graduate respondent, 25% are aware of the NVBCP whereas 75% are unaware of it. 14.36% of respondents are aware of the NVBCP whereas 85.64% of respondents are not aware.

#### 4.5.14 Awareness of RNTCP

The RNTCP stands for Revised National Tuberculosis Control Programme. Study on the awareness of RNTCP will be carried out from three aspects, such as by gender, by the residence and by educational qualifications.

1) **Awareness of RNTCP by Gender:** Data collected from the respondents regarding awareness of RNTCP by gender is presented in the table below:

Table 4.41: Awareness of RNTCP by Gender

<i>Gender</i>	<i>Control Programme Awareness of RNTCP</i>		<i>Total</i>
	<i>Aware</i>	<i>Not Aware</i>	
Male	40(44.44%)	50(55.55%)	90
Female	36(39.56%)	55(60.44%)	91
<i>Combined</i>	76(41.99%)	105(58.01%)	181

Source: Primary Data



The above table depicts that 44.44% of the male respondent is aware of the RNTCP whereas 55.55% of the male respondent is not aware. Among the female respondent, 39.56% are aware of the RNTCP whereas 60.44% are not aware. 41.99% are aware of the RNTCP whereas 58.01% are not aware.

**2) Awareness of RNTCP by Residence:** Data collected from the respondents regarding awareness of RNTCP by residence is presented in the table below:

Table 4.42: Awareness of RNTCP by Residence

<i>Control Programme Awareness of RNTCP</i>	<i>Address</i>		<i>Combined</i>
	<i>Rural</i>	<i>Urban</i>	
Yes	37(37%)	39(48.15%)	76(41.99%)
No	63(63%)	42(51.85%)	105(58.01%)
Total	100	81	181

*Source: Primary Data*

The table above shows that 37% of the rural respondent is aware of the RNTCP whereas 63% are unaware and 48.15% urban respondent is aware of the RNTCP whereas 51.85% are unaware. 41.99% are aware of the RNTCP whereas 58.01% are not aware.

**3) Awareness of RNTCP by Educational Qualifications:** Data collected from the respondents regarding awareness of RNTCP by educational qualifications is presented in the table below:

Table 4.43: Awareness of RNTCP by Educational Qualification

<i>Control Programme Awareness of RNTCP</i>	<i>Educational Qualification</i>					<i>Combined</i>
	<i>Under Matric</i>	<i>HSLC</i>	<i>Class 12</i>	<i>Graduate</i>	<i>Post Graduate</i>	
Yes	31 (36.47)	14 (40%)	11 (40%)	16 (61.34%)	4 (50%)	76 (41.99%)
No	54 (63.53%)	21 (60%)	16 (59.26%)	10 (38.46%)	4 (50%)	105 (58.01%)
Total	85	35	27	26	8	181

*Source: Primary Data*

The above table shows that among the Under Matric respondent, 36.47% are aware of the RNTCP whereas 63.53% are unaware of it, among the HSLC respondent, 40% are aware of the RNTCP whereas 60% are unaware of it, among the Class 12 respondent, 40.74% are aware of the RNTCP whereas 59.26% are unaware of it, among the Graduate respondent, 61.34% are aware of the RNTCP whereas 38.46% are unaware of it, among the Post Graduate respondent, 50% are aware of the RNTCP whereas 50% are unaware of it. 41.99% are aware of the RNTCP whereas 58.01% are not aware.

#### 4.5.15 Awareness of NPCB

The NPCB stands for National Programme for Control of Blindness. Study on the awareness of NPCB will be carried out from three aspects, such as by gender, by the residence and by educational qualifications.

1) **Awareness of NPCB by Gender:** Data collected from the respondents regarding awareness of NPCB by gender is presented in the table below:

Table 4.44: Awareness of NPCB by Gender

<i>Gender</i>	<i>Control Programme Awareness of NPCB</i>		<i>Total</i>
	<i>Aware</i>	<i>Not Aware</i>	
Male	31(34.44%)	59(65.55%)	90
Female	9(9.89%)	82(90.11%)	91
<i>Combined</i>	40(22.10%)	141(77.90%)	181

*Source: Primary Data*

The above table shows that among the male respondent, 34.44% were aware of the NPCB whereas 65.55% were unaware of. The awareness level among the female respondent consist of 9.89% whereas the unawareness level consist of 90.11%. 22.10% of the respondents are aware of the NPCB whereas 77.90% of the total respondents are not aware of.

2) **Awareness of NPCB by Residence:** The collected data from the respondents regarding awareness of NPCB by residence is presented in the table below:

Table 4.45: Awareness of NPCB by Residence

<i>Control Programme Awareness of NPCB</i>	<i>Address</i>		<i>Combined</i>
	<i>Rural</i>	<i>Urban</i>	
Yes	21(21%)	19(23.46%)	40(22.10)
No	79(79%)	62(76.54%)	141(77.90%)
Total	100	81	181

Source: Primary Data

The table above shows that 21% of the rural respondent is aware of the NPCB whereas 79% are unaware and 23.46% urban respondent is aware of the NPCB whereas 76.54% are unaware. 22.10% of the respondents are aware of the NPCB whereas 77.90% of the total respondents are not aware

**3) Awareness of NPCB by Educational Qualifications:** Data collected from the respondents regarding awareness of NPCB by educational qualifications in presented in the table below:

Table 4.46: Awareness of NPCB by Educational Qualifications

<i>Control Programme Awareness of NPCB</i>	<i>Educational Qualification</i>					<i>Combined</i>
	<i>Under Matric</i>	<i>HSLC</i>	<i>Class 12</i>	<i>Graduate</i>	<i>Post Graduate</i>	
Yes	18 (21.18%)	7 (20%)	3 (11.11%)	11 (42.31%)	1 (12.50%)	40 (22.10%)
No	67 (78.82%)	28 (80%)	24 (88.89%)	15 (57.69%)	7 (87.50%)	141 (77.90%)
Total	85	35	27	26	8	181

Source: Primary Data

The above table shows that among the Under Matric respondent, 21.18% are aware of the NPCB whereas 78.82% are unaware of it, among the HSLC respondent, 20% are aware of the NPCB whereas 80% are unaware of it, among the Class 12 respondent, 11.11% are aware of the NPCB whereas 88.89% are unaware of it, among the Graduate respondent, 42.31% are aware of the NPCB whereas 57.69% are unaware of it, among the Post Graduate respondent, 12.50% are aware of the NPCB whereas 87.50% are unaware of it. 22.10% are aware of the NPCB whereas 77.90% are not aware.

#### 4.5.16 Awareness of NMHP

The NMHP stands for National Mental Health Programme. The awareness programme of NMHP will be carried out from three aspects, such as by gender, by the residence and by educational qualifications.

1) **Awareness of NMHP by Gender:** Data collected from the respondents regarding awareness of NMHP by gender is presented in the table below:

Table 4.47: Awareness of NMHP by Gender

<i>Gender</i>	<i>Control Programme Awareness of NMHP</i>		<i>Total</i>
	<i>Aware</i>	<i>Not Aware</i>	
Male	32(35.55%)	58(64.44%)	90
Female	27(29.67%)	64(70.33%)	91
<i>Combined</i>	59(32.60%)	122(67.40%)	181

*Source: Primary Data*

The above data states that 35.55% of the male respondents are aware of the NMHP whereas 64.44% of the male respondents are not aware of the NMHP. Among the female respondent, 29.67% are aware of the stated programme whereas 70.33% are ignorant about the NMHP. Also, 32.60% of the total respondents are aware of the NMHP whereas 67.40% of the total respondent lacks awareness about the NMHP.

2) **Awareness of NMHP by Residence:** The collected data from the respondents regarding awareness of NMHP by residence is presented in the table below:

Table 4.48: Awareness of NMHP by Residence

<i>Control Programme Awareness of NMHP</i>	<i>Address</i>		<i>Combined</i>
	<i>Rural</i>	<i>Urban</i>	
Yes	25(25%)	34(41.97%)	59(32.60%)
No	75(75%)	47(58.02%)	122(67.40%)
Total	100	81	181

*Source: Primary Data*

The table above shows that 25% of the rural respondent is aware of the NMHP whereas 75% are unaware and 41.97% urban respondent is aware of the NMHP whereas 58.02% are unaware. Also, 32.60% of the total respondents are aware of the NMHP whereas 67.40% of the total respondent lacks awareness about the NMHP.

**3) Awareness of NMHP by Educational Qualifications:** Data collected from the respondents regarding awareness of NMHP by educational qualifications is presented in the table below:

Table 4.49: Awareness of NMHP by Educational Qualification Qualifications

<i>Control Programme Awareness of NMHP</i>	<i>Educational Qualification</i>					<i>Combined</i>
	<i>Under Matric</i>	<i>HSLC</i>	<i>Class 12</i>	<i>Graduate</i>	<i>Post Graduate</i>	
Yes	23 (27.06%)	15 (42.86%)	9 (33.33%)	9 (34.62%)	3 (37.50%)	59 (32.60%)
No	62 (72.94%)	20 (57.14%)	18 (66.67%)	17 (65.38%)	5 (62.50%)	122 (67.40%)
Total	85	35	27	26	8	181

*Source: Primary Data*

The above table shows that among the Under Matric respondent, 27.06% are aware of the NMHP whereas 72.94% are unaware of it, among the HSLC respondent, 42.86% are aware of the NMHP whereas 57.14% are unaware of it; among the Class 12 respondent, 33.33% are aware of the NMHP whereas 66.67% are unaware of it; among the Graduate respondent, 34.62% are aware of the NMHP whereas 65.38% are unaware of it; among the Post Graduate respondent, 37.50% are aware of the NMHP whereas 62.50% are unaware of it. Also, 32.60% of the total respondents are aware of the NMHP whereas 67.40% of the total respondent lacks awareness about the NMHP.

#### **4.5.17 Awareness of NTCP**

The NTCP stands for National Tobacco Control Programme. The awareness of NTCP will be studied from three corners, such as by gender, by the residence and by educational qualifications.

**1) Awareness of NTCP by Gender:** Data collected from the respondents regarding awareness of NTCP by gender is presented in the table below:

Table 4.50: Awareness of NTCP by Gender

<i>Gender</i>	<i>Control Programme Awareness of NTCP</i>		<i>Total</i>
	<i>Aware</i>	<i>Not Aware</i>	
Male	58(64.44%)	32(35.55%)	90
Female	46(50.55%)	45(49.45%)	91
<i>Combined</i>	104(57.46%)	77(42.54%)	181

*Source: Primary Data*

The above table states that 64.44% of the male respondents are aware of the NTCP whereas 35.55% of the male respondent lacks awareness about the NTCP. It is also shown that among the female respondents, 50.55% are aware of the NTCP whereas 49.45% are ignorant about the stated programme. 57.46% of the total respondents are aware of the NTCP whereas 42.54% lacks awareness about the stated programme.

**2) Awareness of NTCP by Residence:** The collected data from the respondents regarding awareness of NTCP by residence is presented in the table below:

Table 4.51: Awareness of NTCP by Residence

<i>Control Programme Awareness of NTCP</i>	<i>Address</i>		<i>Combined</i>
	<i>Rural</i>	<i>Urban</i>	
Yes	47(47%)	57(70.37%)	104(57.46%)
No	53(53%)	24(29.63%)	77(42.54%)
<b>Total</b>	100	81	181

*Source: Primary Data*

The table above shows that 47% of the rural respondent is aware of the NTCP whereas 53% are unaware and 70.37% urban respondent is aware of the NTCP whereas 29.63% are unaware. 57.46% of the total respondents are aware of the NTCP whereas 42.54% lacks awareness about the stated programme.

**3) Awareness of NTCP by Educational Qualifications:** Data collected from the respondents regarding awareness of NTCP by educational qualifications is presented in the table below:

Table 4.52: Awareness of NTCP by Educational Qualification

<i>Control Programme Awareness of NTCP</i>	<i>Educational Qualification</i>					<i>Combined</i>
	<i>Under Matric</i>	<i>HSLC</i>	<i>Class 12</i>	<i>Graduate</i>	<i>Post Graduate</i>	
Yes	41 (48.34%)	20 (57.14%)	17 (62.96%)	20 (76.92%)	6 (75%)	104 (57.46%)
No	44 (51.76%)	15 (42.86%)	10 (37.04%)	6 (23.08%)	2 (25%)	77 (42.54%)
Total	85	35	27	26	8	181

*Source: Primary Data*

The above table shows that among the Under Matric respondent, 48.34% are aware of the NTCP whereas 51.76% are unaware of it, among the HSLC respondent, 57.14% are aware of the NTCP whereas 42.86% are unaware of it; among the Class 12 respondent, 62.96% are aware of the NTCP whereas 37.04% are unaware of it; among the Graduate respondent, 76.92% are aware of the NTCP whereas 23.08% are unaware of it; among the Post Graduate respondent, 75% are aware of the NTCP whereas 25% are unaware of it. 57.46% of the total respondents are aware of the NTCP whereas 42.54% lacks awareness about the stated programme.

#### **4.5.18 Awareness of NPHCE**

The NPHCE stands for National Programme for the Healthcare of the Elderly. Study on the awareness of NPHCE will be carried out in three areas, such as by gender, by the residence and by educational qualifications.

**1) Awareness of NPHCE by Gender:** The data of awareness of NPHCE by gender is presented in the table below:

Table 4.53: Awareness of NPHCE by Gender

<i>Gender</i>	<i>Control Programme Awareness of NPHCE</i>		<i>Total</i>
	<i>Aware</i>	<i>Not Aware</i>	
Male	14(15.55%)	76(84.44%)	90
Female	5(5.49%)	86(94.50%)	91
<i>Combined</i>	19(10.50%)	162(89.50%)	181

*Source: Primary Data*

The table demonstrates that among the male respondents 15.55% are aware of the NPHCE whereas 84.44% are not aware of the programme. Among the female respondents, 5.49% are aware of the NPHCE whereas 94.50% are not are of the stated programme. Overall, 10.50% of the total respondents are aware of the NPHCE whereas 89.50% of the total respondents are ignorant of the stated programme.

**2) Awareness of NPHCE Awareness of NIDDCP By Residence:** The following data in the table is responses of questionnaires by the respondents regarding their awareness of NPHCE by residence.

Table 4.54: Awareness of NPHCE by Residence

<i>Control Programme Awareness of NPHCE</i>	<i>Address</i>		<i>Combined</i>
	<i>Rural</i>	<i>Urban</i>	
Yes	9(9%)	10(12.35%)	19(10.50%)
No	91(91%)	71(87.65%)	162(89.50%)
Total	100	81	181

*Source: Primary Data*

The table above shows that 9% of the rural respondent is aware of the NPHCE whereas 91% are unaware and 12.35% urban respondent is aware of the NPHCE whereas 87.65% are unaware. Overall, 10.50% of the total respondents are aware of the NPHCE whereas 89.50% of the total respondents are ignorant of the stated programme.

**3) Awareness of PHCE by Educational Qualifications:** Data collected from the respondents regarding awareness of NPHCE by educational qualifications in presented in the table below:



Table 4.55: Awareness of NPHCE by Educational Qualification

<i>Control Programme Awareness of NPHCE</i>	<i>Educational Qualification</i>					<i>Combined</i>
	<i>Under Matric</i>	<i>HSLC</i>	<i>Class 12</i>	<i>Graduate</i>	<i>Post Graduate</i>	
Yes	11 (12.94%)	4 (11.43%)	1 (3.70%)	3 (11.54%)	0 (0%)	19 (10.50%)
No	74 (87.06%)	31 (88.57%)	26 (96.30%)	23 (88.46%)	8 (100%)	162 (89.50%)
Total	85	35	27	26	8	181

*Source: Primary Data*

The above table shows that among the Under Matric respondent, 12.94% are aware of the NPHCE whereas 87.06% are unaware of it, among the HSLC respondent, 11.43% are aware of the NPHCE whereas 88.57% are unaware of it; among the Class 12 respondent, 3.70% are aware of the NPHCE whereas 96.30% are unaware of it; among the Graduate respondent, 11.54% are aware of the NPHCE whereas 88.46% are unaware of it; among the Post Graduate respondent, 0% are aware of the NPHCE whereas 100% are unaware of it. Overall, 10.50% of the total respondents are aware of the NPHCE whereas 89.50% of the total respondents are ignorant of the stated programme.

#### **4.5.19 Awareness of NOHP**

The full form of NOHP is National Oral Health Programme. The awareness programme of NVBDCP will be carried out from three aspects, such as by gender, by the residence and by educational qualifications.

**1) Awareness of NOHP by Gender:** Data collected through questionnaires regarding awareness of NOHP by gender is tabulated below:

Table 4.56: Awareness of NOHP by Gender

<i>Gender</i>	<i>Control Programme Awareness of NOHP</i>		<i>Total</i>
	<i>Aware</i>	<i>Not Aware</i>	
Male	13(14.44%)	77(85.55%)	90
Female	5(5.49%)	86(94.50%)	91
<i>Combined</i>	18(9.94%)	163(90.05%)	181

*Source: Primary Data*

The depicted table above shows that 14.44% of the male respondents have known about the NOHP whereas 85.55% of the female respondents are not aware of the stated health programme. Among the female respondents, 5.49% are aware of the NOHP whereas 94.50% are not aware of the programme. It is also found that 9.94% of the total respondents are aware of the NOHP whereas 90.05% are not aware of the mentioned programme.

**2) Awareness of NPHCE Awareness of NOHP By Residence:** The following data in the table is responses of questionnaires by the respondents regarding their awareness of NOHP by residence.

Table 4.57: Awareness of NOHP by Residence

<i>Control Programme Awareness of NOHP</i>	<i>Address</i>		<i>Combined</i>
	<i>Rural</i>	<i>Urban</i>	
Yes	7(7%)	11(13.58%)	18(9.94%)
No	93(93%)	70(86.42%)	163(90.05%)
Total	100	81	181

*Source: Primary Data*

The table above shows that 7% of the rural respondent is aware of the NOHP whereas 93% are unaware and 13.58% urban respondent is aware of the NOHP whereas 86.42% are unaware. It is also found that 9.94% of the total respondents are aware of the NOHP whereas 90.05% are not aware of the mentioned programme.

**3) Awareness of NOHP by Educational Qualifications:** Data collected from the respondents regarding awareness of NOHP by educational qualifications in presented in the table below:

Table 4.58: Awareness of NOHP by Educational Qualification

<i>Control Programme Awareness of NOHP</i>	<i>Educational Qualification</i>					<i>Combined</i>
	<i>Under Matric</i>	<i>HSLC</i>	<i>Class 12</i>	<i>Graduate</i>	<i>Post Graduate</i>	
Yes	7 (8.24%)	2 (5.71%)	2 (7.1%)	5 (19.23%)	2 (25%)	18 (9.94%)
No	78 (91.76%)	33 (94.29%)	25 (92.59%)	21 (80.77%)	6 (75%)	163 (90.06%)
Total	85	35	27	26	8	181

Source: Primary Data

The above table shows that among the Under Matric respondent, 8.24% are aware of the NOHP whereas 91.76% are unaware of it, among the HSLC respondent, 5.71% are aware of the NOHP whereas 94.29% are unaware of it; among the Class 12 respondent, 7.1% are aware of the NOHP whereas 92.59% are unaware of it; among the Graduate respondent, 19.23% are aware of the NOHP whereas 80.77% are unaware of it; among the Post Graduate respondent, 25% are aware of the NOHP whereas 75% are unaware of it. It is also found that 9.94% of the total respondents are aware of the NOHP whereas 90.05% are not aware of the mentioned programme.

#### 4.5.20 Awareness of RCH

The RCH stands for Reproductive Child Health. The awareness of RCH will be studied from three areas, such as by gender, by the residence and by educational qualifications.

1) **Awareness of RCH by Gender:** Awareness of IDSP by gender is presented in data as below:

Table 4.59: Awareness of RCH by Gender

<i>Gender</i>	<i>Control Programme Awareness of RCH</i>		<i>Total</i>
	<i>Aware</i>	<i>Not Aware</i>	
Male	27(30%)	63(70%)	90
Female	24(26.37%)	67(73.63%)	91
<i>Combined</i>	51(28.18%)	130(71.82%)	181

Source: Primary Data

The table presented above shows that 30% of the male respondent is aware of the RCH whereas 70% of the male respondents have not known about the RCH. It is also shown that 26.37% of the female respondents are aware of the RCH whereas 73.63% of female respondents are unaware of the RCH. In overall, 28.18% of the total respondents are aware of the RCH whereas 71.82% of the total respondents are unaware of the stated health programme.

**2) Awareness of RCH by Residence:** The collected data from the respondents regarding awareness of RCH by residence is presented in the table below:

Table 4.60: Awareness of RCH by Residence

<i>Control Programme Awareness of RCH</i>	<i>Address</i>		<i>Combined</i>
	<i>Rural</i>	<i>Urban</i>	
Yes	25(25%)	26(32.10%)	51(28.18%)
No	75(75%)	55(67.90%)	130(71.82%)
Total	100	81	181

*Source: Primary Data*

The table above shows that 25% of the rural respondent is aware of the RCH whereas 75% are unaware and 32.10% urban respondent is aware of the RCH whereas 67.90% are unaware. In overall, 28.18% of the total respondents are aware of the RCH whereas 71.82% of the total respondents are unaware of the stated health programme.

**3) Awareness of RCH by Educational Qualifications:** The following data in the table represents primary data collected from the respondents regarding awareness of RCH by educational qualifications.

Table 4.61: Awareness of RCH by Educational Qualification

		<i>Educational Qualification</i>					<i>Combined</i>
		<i>Under Matric</i>	<i>HSLC</i>	<i>Class 12</i>	<i>Graduate</i>	<i>Post Graduate</i>	
<i>Control Programme Awareness of RCH</i>	Yes	20 (23.53%)	14 (40%)	5 (18.52%)	9 (34.62%)	3 (37.50%)	51 (28.18%)
	No	65 (76.47%)	21 (60%)	22 (81.48%)	17 (62.50%)	5 (62.50%)	130 (71.82%)
<b>Total</b>		85	35	27	26	8	181

*Source: Primary Data*

The above table shows that among the Under Matric respondent, 23.53% are aware of the RCH whereas 76.47% are unaware of it, among the HSLC respondent, 40% are aware of the RCH whereas 60% are unaware of it, among the Class 12 respondent, 18.53% are aware of the RCH whereas 81.48% are unaware of it, among the Graduate respondent, 34.62% are aware of the RCH whereas 62.50% are unaware of it, among the Post Graduate respondent, 37.50% are aware of the RCH whereas 62.50% are unaware of it. In overall, 28.18% of the total respondents are aware of the RCH whereas 71.82% of the total respondents re unaware of the stated health programme.

#### **4.6 FINDINGS**

Findings play a significant role in any kinds of research to conclude the study by drawing an outcome of the study. After careful study of the problems from different angles, the scholar draws the following findings and presented according to the research objectives given in Chapter 1.

##### **Objective 1: To find out various channels used for dissemination of Healthcare Information in ZMC**

- 1) The various information channels/medium enlisted in the questionnaire includes Television, Newspaper, Social Media, Community Association Meetings, Radio and Local Information System. Television comprising of 55.2% has acquired the majority source for getting to know about the

National Health Mission (NHM) which is important health programs and services. Social Media comes second consisting of 18.2%. Radio and Newspaper equivalently come in the third position consisting of 2.2%. (See Table 4.5).

- 2) This data was obtained through personal interaction from the working staff of ZMC shows that information channels such as television, newspaper, social media, radio, pamphlets/brochures were utilised for health information dissemination in ZMC. (see Fig 4.3)

**Objective 2: To investigate the most frequently used information channels for disseminating healthcare information.**

- 1) Health Information medium based on residence shown that Television has the highest impact among rural residents consisting of 46%. At the same time, television attains the majority medium among the urban respondents consisting of 66.67%. Social Media comes in the second majority medium in both rural and urban consisting of 17% among the rural and 19.75% among the urban. (See Table 4.7)
- 2) Health Information medium based on genders also shown that television has the highest impact consisting of 55.56% in male and 54.95% in female. Social Media comes second consisting of 18.89% in male and 17.58% in female. Newspaper assume the third major medium among male consisting of 4.44% among male. Friends and Radio attain the third major source among female consisting of 2.20% equally. (See Table 4.8)
- 3) On the assessment of age-based information, medium television is the majority medium of all ages, social media follows and comes after. (See Table 4.9).

**Objective 3: To explore the regularity of information to the public**

- 1) For assessment of health information regularities, user's satisfaction on hospital information accessibility shown that dissatisfaction was greater constituting 63.5% whereas 36.5% were satisfied. At the same time, it was

also analysed that 69.6% finds healthcare information regular and 30.4% finds irregular. (See Table 4.11, Table 4.13). This may reveal that although the hospital did not properly issue the desired information, the entire healthcare sectors taken as a whole are consistent in information dissemination.

- 2) Health Information frequency was assessed based on respondents' perspectives and shown that 28% and 28% of the respondents agreed that the Yearly and Half Yearly are the majority frequency. Meanwhile, 11% still finds that such health information dissemination was never done or never been heard by them. (See Fig. 4.5)
- 3) That majority respondents i.e. 70.2% were registered to medical reimbursement schemes while 29.8% were not registered. This also reveals the consistency of health information on medical insurance schemes. (See Table 4.12).

**Objective 4: To identify the awareness of healthcare programs by the public**

- 1) The study finds that 64.7% of the respondent was aware of the National Health Mission programme whereas 32.64% were unaware. Educational background also has an impact on the awareness in which the higher the educational background is the higher percentage of NHM awareness. Postgraduate with 100% has the highest percentage of awareness of NHM which was followed by Graduate with 92.31% and HSLC with 71.43%. Under Matric has the lowest percentage of awareness with 54.12% being aware. However, the tendency of NHM awareness is all higher among all educational rank. Meanwhile, Table 4.16 shows the residence on rural and urban does not have much impact on the tendency of awareness wherein both the residence shows a higher degree of awareness. (See Table 4.14, Table 4.15, Table 4.6)
- 2) The NPCDS which is one health programs was aware by 38.68% and not aware by 61.32%. On a gender basis, the awareness is lesser constituting 46.67% awareness on male 30.77% awareness on a female. On educational

qualification basis, the awareness is higher among Post Graduate (62.5%) and Graduate (65.38%) whereas the awareness is lesser among Under Matric (32.94%), HSLC (42.86%) and Class 12(18.53%). On the Residence basis, the awareness among both rural and urban is lesser constituting 33% awareness among rural and 45.68% awareness among urban. (See Table 4.17, Table 4.18, Table 4.19)

- 3) The NPPCD which is one health programs was aware by 9.39% and unaware by 90.61%. On a gender basis, the awareness level is lesser constituting only 8.90% awareness among male and 9.90% awareness among female. On residence basis, the awareness is also lesser constituting 3% awareness among rural and 17.28% awareness among urban. On the educational basis, the awareness level is all lesser among all educational rank constituting 3.52% awareness among Under Matric, 8.57% awareness among HSLC, 11.11% awareness among Class 12, 23.08% awareness among Graduate and 25% awareness among Post Graduate. (See Table 4.20, Table 4.21, Table 4.22)
- 4) The NPPCF which is one health programs was aware by 1.66% and unaware by 98.34%. The awareness level on gender basis was much lesser constituting only 2.22% awareness among male and 1.10% awareness among female. The awareness level based on the educational background is all lesser on all educational rank constituting 1.18% awareness among Under Matric, 5.71% awareness among HSLC, 0% awareness among Class 12, 0% awareness among Graduate and 0% awareness among Post Graduate. Based on the residence, the awareness level extremely low constitutes only 0% awareness among rural and 3.70% awareness among urban.(See Table 4.23, Table 4.24, Table 4.25)
- 5) Among the total respondent, 24.31% were aware of the NLEP and 75.69% were unaware. The level of awareness is all lesser on gender basis, resident basis and educational qualification basis. (See Table 4.26, Table 4.27, Table 4.28)



- 6) Out of the total respondent, 18.78% were aware of the IDSP and 81.22% were unaware. The level of awareness is all lesser based on gender, resident and educational qualification. (See Table 4.29, Table 4.30, Table 4.31).
- 7) Out of the total respondent, 19.34% were aware of the EPI and 80.66% were unaware. The level of awareness is lesser on gender and residence basis. On educational qualification basis, Post Graduate level of awareness constitutes 50% which is equivalent to the unawareness level while the rest of the educational rank is lesser on awareness level. (See Table 4.32, Table 4.33, Table 4.34)
- 8) Among the total respondent, the NIDDCP was aware by 15.47% and unaware by 84.53%. The level of awareness based on gender, residence and educational qualification are all lesser than the unawareness level. (See Table 4.35, Table 4.36, Table 4.37)
- 9) Among the total respondent, the NVBCP was aware by 14.36% and unaware by 85.63%. The level of awareness based on gender, residence and educational qualification are all lesser than the unawareness level. (See Table 4.38, Table 4.39, Table 4.40)
- 10) Out of the total respondent, the RNTCP was aware by 41.99% and unaware by 58.01%. The level of awareness on gender and residence basis are both lesser than the awareness level. On the other hand, on educational qualification basis, the Graduate has a higher level of awareness constituting 61.34% and Post Graduate has an equivalent level of awareness constituting 50%. While the rest of the educational rank have a lower level of awareness. (See Table 4.41, Table 4.42, Table 4.43)
- 11) Among the total respondent, the NPCB was aware by 22.10% and unaware by 77.90%. On a gender basis, male awareness constitutes 34.44% and female awareness constitutes 9.89% only. On residences basis, rural residence awareness constitutes 21% and urban residence awareness constitutes 23.46%. On an educational basis, the awareness level is all lesser

on all educational ranks but the Graduate respondents have a little higher awareness constituting 42.31% awareness level. (See Table 4.44, Table 4.45, Table 4.46)

- 12) Among the total respondent, 32.60% were aware of the NOHP and 67.40% were unaware. The level of awareness based on gender, residence and educational qualification are all lesser than the unawareness level. (See Table 4.47, Table 4.48, Table 4.49)
- 13) The NTCP is one among the health programs which is mostly heard by the respondents. The NTCP was aware by 57.46% and unaware by 42.54%. The awareness levels are also higher on the gender basis than the unawareness level constituting 64.44% male awareness and 50.55% female awareness. On residence basis, the awareness level is slightly lower among the rural respondents constituting 47% awareness and the awareness level among urban respondents constitutes 70.37% which is far higher than the unawareness level. On the educational qualification basis, except among the Under Matric respondent, all educational rank has a higher degree of awareness than the unawareness level. (See Table 4.50, Table 4.51, Table 4.52)
- 14) The NPHCE which is one health program was aware by 10.50% and unaware by 89.50%. The level of awareness based on gender, residence and educational qualification are all lesser than the unawareness level. (See Table 4.53, Table 4.54, Table 4.55)
- 15) Among the total respondent, 9.94% were aware of the NOHP and 90.05% were unaware. The level of awareness based on gender, residence and educational qualification are all lesser than the unawareness level. (See Table 4.56, Table 4.57, Table 4.58)
- 16) The RCH which is one health program was aware by 28.18% and unaware by 71.82%. The level of awareness based on gender, residence and educational

qualification are all lesser than the unawareness level. (See Table 4.59, Table 4.60, Table 4.61)

## **CHAPTER 5**

### **SUGGESTIONS AND CONCLUSIONS**

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This chapter is divided into two parts, namely, Conclusion and Suggestions. The conclusion is drawn from the research as a whole and Suggestion is given from the study in general and in particular from the findings giving follow-up actions for the interest of the society.

#### **5.1 CONCLUSION**

Health is an important matter of concern for all that has life. The information for healthy living is a crucial need for keeping up the health status of each individual. Health equity also pertains to the empowerment of citizens into the utilization of health information. The distribution of health information to people at all levels in the information vivid society steered to the health equilibrium society. As an individual is responsible for their health, provision of the right skills and knowledge on the health-related matter to individuals will enable them to make right and sensible decision and exercise necessary precautionary measures to keep a balanced health status. The utilization of different information medium for health information dissemination has a higher degree of positive consequences on the awareness of health programs and services. As many commercial industries have utilized information medium as an accelerator for enhancing publicity, several information channels can be integrated for promoting awareness about health programs and services.

The Zoram Medical College (ZMC) has been selected for the interior study due to the reason that the hospital attached to the medical institution indicates the prosperity and qualitative services that is one of the state's pride. Although the research is based on the extent of awareness and effectiveness of healthcare information, the information channels utilization to the healthcare system is the introspection of the present study.

The Government in their objective of empowering citizens with the right information at the right time should be implemented painstakingly so that public

awareness is achieved to the anticipated broadcasted information. The health sector should have proper information management for collecting, storing, accessing, retrieving, and disseminating health information and should have appropriate coordination with the information & publicity sector so that wider health information dissemination is obtained.

## **5.2 SUGGESTIONS**

The findings of the present study have shaped up many suggestions that are enumerated as follows:

1. As seen from the study, the Health Information medium act as an important source for gaining knowledge about health programs and services. Television is the top medium for health information is having a great impact on health information dissemination. It is undoubtedly apparent that in today's context every household owned television and especially for old aged people who are unable to cope up with smartphones and for handicapped that are unable to step out of their house, television can be the main source of health information medium. Hence, the health information providers should introduce maximum television broadcasts of health information to aware the public and reach out to every nook and cranny of the community.

2. Social media being the second preference for health information medium can be utilized to the farthest extent. Social media has been widely used in the present generation but the health information gathered through social media is not high in the present study as anticipated. Hence utilization of social media for dissemination of health information is very essential. The present study highlights some health programs oriented to a different range of users. The programs such as National Mental Health Programs (NMHP), National Tobacco Control Programme (NTCP) can be oriented to youth as such mental illness and tobacco addiction has a high prevalence among youth. Hence as youth are very keen on social media, such awareness programs can be highlighted on social media like YouTube, WhatsApp, etc.

3. The responsibility of health information providers and information users are equivalent and should reciprocate to one another. As living in the information age, people should find themselves adapt to whatever information is needed. If the

information available is adequate but the information users do not seek to it, the whole efforts can go in vain and remain futile. Hence, the participation of the public in the form of awareness specifically in the realm of health information is very essential as it has been frequently said that ignorance can be troublesome and exhaust a huge sum of money. Owing to low literacy and insufficient educational background, people often hesitate to seek information or not have a tendency to concern about the information. For this reason, the health information broadcasted in the form of hoardings, posters, brochures, pamphlets, prints, and media content information should include the mother tongue or the native language so that it can be broadly acknowledged by the community of different educational background.

4. The study finds that the majority of health programs under the National Health Mission were not aware by the respondents. Hence certain measures such as hosting awareness programs in a form of meetings, conferences, seminars, public gatherings, video conferencing, webinars, etc. should be hosted at regular intervals following the specific program-based targeted groups. Hence programs like Reproductive Child Health (RCH) can be oriented specifically for pregnant women and the awareness about the program can be focussed on the stated beneficiary. Likewise, programs like the National Programme for the Healthcare of the Elderly (NPHCE) can be focussed on the elderly, and such information accessibility should be oriented based on the elderly access method. And for other programs recommended for youth, such an information dissemination method should be arranged according to the beneficiary groups.

5. The findings of the study also show the high enrolment of patients in the government-aided health insurance scheme and thus signify the effectiveness of information on the financial assistance schemes. Hence, the awareness of other health programs should also be undertaken just like as reflected in the government medical insurance awareness. Therefore, the awareness of health programs initiated by the Central Government and State Government should be intensified.

### **5.3. SCOPE FOR FUTURE RESEARCH**

1. As the study has been confined to Zoram Medical College (ZMC) hospitals only, it is most desirable to see the entire scenario of Mizoram people in their

awareness and perspective of the effectiveness of different health programs under National Health Mission and Medical Insurance schemes that are intended for the uplift of health status in India. For this purpose, the descriptive comparative statement on genders, educational background, residence, and age impact can be analyzed to find the disparities of health information in Mizoram.

2. A study on the analysis of information medium and its effectiveness for broadcasting health information taken as a whole scenario of Mizoram can be undertaken to identify the most effective health information medium and find out which information medium should be emphasized for communicating health information in Mizoram.

## APPENDICES

### APPENDIX 1: QUESTIONNAIRE FOR PATIENT

1. Name of the respondent (Hming): \_\_\_\_\_

2. Address/ Village (Veng/Khua): \_\_\_\_\_

3. Gender

- Male
- Female

4. Age (Kum zat)

- Blow 21
- 21-30
- 31-40
- 41-50
- 51-69
- Above 60

5. Educational Qualifications:

- |               |                          |          |                          |
|---------------|--------------------------|----------|--------------------------|
| Under Matric  | <input type="checkbox"/> | HSLC     | <input type="checkbox"/> |
| Class XII     | <input type="checkbox"/> | Graduate | <input type="checkbox"/> |
| Post Graduate | <input type="checkbox"/> |          |                          |

6. Department Admitted: \_\_\_\_\_

7. Are you aware of National Health Mission Programme?

(National Health Mission (NHM) hi I hre tawh em?)

- Yes
- No

8. Tick the following prevention programme that has been hard to you?

(Heng zingah hiang I hriat tick rawh?)

- National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS)
- National Programme for Prevention and Control of Deafness (NPPCD)
- National Programme for Prevention and Control of Fluorosis (NPPCF)
- National Leprosy Eradication Programme (NLEP)
- Integrated Disease Surveillance Programme (IDSP)



- Expanded Program on Immunization (EPI)

9. Tick the following control programme that has been hard to you?

(Heng zingah hian I hriat tick rawh?)

- National Iodine Deficiency Disorders Control Programme (NIDDCP)
- National Vector Borne Disease Control Programme (NVBDCP)
- Revised National Tuberculosis Control Programme (RNTCP)
- National Programme for Control of Blindness (NPCB)
- National Mental Health Programme (NMHP)
- National Tobacco Control Programme (NTCP)
- National Programme for the Healthcare of the Elderly (NPHCE)
- National Oral Health Programme (NOHP)
- Reproductive Child Health (RCH)

10. Tick the medium from which you came to know about the NHM Programme?  
(National Health Mission hi khawi atang nge I lo hmelhriat ve tick rawh le?)

- |                                |                          |                           |                          |
|--------------------------------|--------------------------|---------------------------|--------------------------|
| Television                     | <input type="checkbox"/> | Radio                     | <input type="checkbox"/> |
| Newspaper                      | <input type="checkbox"/> | Pamphlets, Brochures      | <input type="checkbox"/> |
| Social Media                   | <input type="checkbox"/> | Libraries                 | <input type="checkbox"/> |
| Community Association Meetings | <input type="checkbox"/> | Local Information Systems | <input type="checkbox"/> |
| Door to door messages Friends  | <input type="checkbox"/> |                           |                          |

11. Rank the media suitable for communicating healthcare information  
(Healthcare chungchang hriattur pawimawh te hi eng atanga thehdarh nge tha I tih?)

- |                                |                          |                           |                          |
|--------------------------------|--------------------------|---------------------------|--------------------------|
| Television                     | <input type="checkbox"/> | Radio                     | <input type="checkbox"/> |
| Newspaper                      | <input type="checkbox"/> | Pamphlets, Brochures      | <input type="checkbox"/> |
| Social Media                   | <input type="checkbox"/> | Libraries                 | <input type="checkbox"/> |
| Community Association Meetings | <input type="checkbox"/> | Local Information Systems | <input type="checkbox"/> |
| Door to door messages Friends  | <input type="checkbox"/> |                           |                          |

12. Are you satisfied with the accessibility of information from the hospital?  
(Hriselna leh healthcare chungchang hriattur pawimawh thehdarhna kawngah hospital hi thawk tha I ti em?)

- Yes
- No

13. Are you enrolled to any medical insurance scheme?  
(Damdawiin senso rulhletna dawn theihna scheme ah I tel ve em)

- Yes
- No

14. Where do you get the information about medical insurance scheme?  
 (Medical Insurance Scheme hi khawi atang nge I lo hmelhriat ve tick rawh le)

Television	<input type="checkbox"/>	Radio	<input type="checkbox"/>
Newspaper	<input type="checkbox"/>	Pamphlets, Brochures	<input type="checkbox"/>
Social Media	<input type="checkbox"/>	Libraries	<input type="checkbox"/>
Community Association Meetings	<input type="checkbox"/>	Local Information Systems	<input type="checkbox"/>
Door to door messages Friends	<input type="checkbox"/>		

15. Do you find dissemination of healthcare information regular?  
 (Healthcare chungchang thehdarhna hi zing I ti em?)

➤ Yes

➤ No

16. Rank the frequency of healthcare information dissemination by the hospital?  
 (Hospital-a healthcare chungchang thehdarhna hi engtianga zing nge nia I hriat han tick rawh le?)

➤ Daily (Nitin)

➤ Weekly (Kartin)

➤ Monthly (Thlatin)

➤ Quarterly (Thla thum dan)

➤ Half Yearly (Kum chanve dan)

➤ Yearly (Kumtin)

➤ Never (Ti ngailo)

17. Give your suggestions for enhancing the information service rendered by the hospitals in healthcare

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## BIBLIOGRAPHY

- Adegun O. A., & Isaac, Y. A. (2014). Information Dissemination and decision making in Secondary Schools in OYO state. *Innovare Journal of Education*, 2(1), 4-7.
- Agarwal, S. & K. Sangar, K. (2005). Need for dedicated focus on Urban Health within National Rural Health Mission. *Indian Journal of Public Health*. 49(3)
- Akanda, A. E., & Roknuzzaman, M. (2013). Rural Information Provision in Bangladesh: A Study on Development Research Network. *Information and Knowledge Management*, 3(10), 64-73..
- Alduraywish, S. A. (2020). Sources of Health Information and Their Impacts on Medical Knowledge Perception Among the Saudi Arabian Population: Cross-Sectional Study. *Journal of Medical Internet Research*, 22(3).
- Anna Malai, Saravanan (2012). Introduction to Networking. Retrieved from ResearchGate
- Angula, N., & Dlodlo, N. (2017). Mobile Technology for Healthcare Information Dissemination to Low Resource Areas of Namibia. *International Journal of Science and Research (IJSR)*, 6(4), 662-674
- Balarajan, Y., Selvaraj, S., & Subramanian, S. V. (2011). Health care and equity in India. *The Lancet*, 377, 505–15.
- Burzyńska, J., Binkowska-Bury, M., & Januszewicz, P. (2015). Television as a source of information on health and illness – review of benefits and problems. *Progress in Health Sciences*, 5, 174-184.
- Chachhar, A. R. (2012). Impact of satellite television on agricultural development in Pakistan. *Global Media Journal*, 2(2).
- Chaudhry, B. et.al (2006). Systematic Review: Impact of Health Information Technology on Quality, Efficiency, and Costs of Medical Care. *Annals of Internal Medicine*, 144(10).
- Chen, C. C., Yamada, T., & Smith, J. (2014). An Evaluation of Healthcare Information on the Internet: The Case of Colorectal Cancer Prevention. *International Journal of Environmental Research and Public Health*, 11, 1058-1075 p.
- Coomarasamy, A. (2001). Medical journals and effective dissemination of health research. *Health Information and Libraries Journal*, 18, 183-191.
- Colledge, A. (2008). Health information for patients: time to look beyond patient information leaflets. *Journal of the Royal Society of Medicine*, 101, 447–453.
- Devadason, F., & Lingam, P. P. (1996). A Methodology for the Identification of Information Needs of Users. *62nd IFLA General Conference*. IFLA.

- Department of Economics & Statistics (2016). *Statistical Handbook Mizoram*. Aizawl: Directorate of Economics & Statistics.
- Donovan, R. J. (1995). Steps In Planning and Developing Health Communication Campaigns: A Comment on CDC's Framework for Health Communication. *110*(2), 215-217.
- Eakin, D., Jackson, S. J., & Hannigan, G. G. (1980). Consumer Health Information: Libraries as Partners. *Bull. Med. Libr. Assoc.*, *68*(2), 220-229.
- Edejer, T. T. T. (2000). Information in Practice: Disseminating health information in developing countries: the role of the internet. *BMJ*, *321*, 797-800.
- Ettel, G. (2012). How Do Adolescents Access Health Information? And Do They Ask Their Physicians? *The Permanente Journal*, *16*(1), 35-38.
- Fox, Susannah (2011). *The Social Life of Health Information*. Washington: Pew Research Centre's Internet and American Life Project
- Guite, Florence (2019). *Women Health Information Communication channels in rural areas: a study of Kangpokpi sub-division, Manipur* (Doctoral Dissertation, North-Eastern Hill University, Meghalaya).
- Gann, B. (2019). Transforming lives: Combating digital health inequality. *IFLA Journal*, *45*(3), 187-198.
- Gisolfi, P. (2014). Up Close: Designing 21st-century libraries - Library by design. Retrieved from: <http://lj.libraryjournal.com/2014/06/buildings/lbd/upclose-designing-21st-centurylibraries-library-by-design-spring-2014/>
- Government of Mizoram Planning & Programme Implementation Department (Research & Development Branch). *Mizoram Economic Survey 2017 – 18*. Retrieved from <https://planning.mizoram.gov.in/uploads/attachments/e0cb711b1289b16c55c6d4273c3d003c/economic-survey-2017-18.pdf>
- Isazadeh, A. (2004). Information Society: Concepts and Definitions. *WSEAS Transactions on Systems*, *6*.
- Jawahar, S. K. (2007). Healthcare Scenario in India. *ICU Management and Practice*, *6*(4), Retrieved from <https://healthmanagement.org/c/icu/issuearticle/healthcare-scenario-in-india>
- Joynt, P & Warner, M (1996). *Managing Cross Cultures*. London: International Thomson Business Press.
- Kandadai, V. (2016). Measuring Health Information Dissemination and Identifying Target Interest Communities on Twitter: Methods Development and Case Study of the @ SafetyMD Network. *JMIR Res Protoc*, *5*(2), 1-11.

- Kavita, S (2008). An economic analysis of access utilization and cost of maternal healthcare in rural areas of Tamil Nadu (Doctoral Dissertation, Bharathiar University, Coimbatore). Retrieved from <http://hdl.handle.net/10603/102232>
- Kaur, A., & Kaur, S. (2018). Information Seeking Behaviour of Medical Practitioners: A Study of Majha Region of Punjab. *International Journal of Information Dissemination and Technology*, 8(3), 166-169.
- Kreps, G. L. (2005). Disseminating relevant health information to underserved audiences: implications of the Digital Divide Pilot Projects. *J Med Libr Assoc*, 93(4), 68-73.
- Kruesi, L. M., Burstein, F. V., & Tanner, K. J. (2019). With open science gaining traction, do we need an Australasia PubMed Central (PMC)? A qualitative investigation. *PLoS ONE*. 14(2). Retrieved from <https://doi.org/10.1371/journal.pone.0212843>
- Lalmalsawmzauva, K. (2014). Disparities of Healthcare Facility in Mizoram, India. *2014 Asia-Pacific Social Science Conference (APSSC)*. South Korea.
- Marie Zodinpuii (2018). Primary Health Care Delivery Services in Aizawl: Functions & Challenges (MPhil Dissertation, Mizoram University, Mizoram)
- Marriott, S., Palmer, C., & Lelliott, P. (2000). Disseminating healthcare information: getting the message across. *Quality in Health Care*, 9, 58-62.
- Mathiharam, K. (2003). The fundamental right to health care. *Issues in Medical Ethics*, 11(4), 123.
- Madden, A. (2000). A definition of information. *Aslib Proceedings* (pp. 343-349). London: JFS.
- McCreadie, M., & Rice, R. E. (1999). Trends in analysing access to information. Part II. Unique and integrating conceptualization. *Information Processing & Management* (pp. 77-99). Elsevier Science.
- Ministry of Health and Family Welfare (2020). National Health Mission. Retrieved from <https://nhm.gov.in/index4.php?lang=1&level=0&linkid=445&lid=38>
- Mchombu, K. (2003). Information Dissemination for Development: an impact study. *Information Development*, 19(2), 111-126.
- Nandan, Deoki (2005). National Rural Health Mission – “Rhetoric or Reality”. *Indian Journal of Public Health*. 49(3)
- National Health Mission Mizoram (2019). Executive Summary. Retrieved from <https://nhmmizoram.org/page?id=2>
- Nagabhushana, R (2017). An evaluation of Yeshasvini Healthcare Scheme a case study in Chamarajanagara district (Doctoral Dissertation, University of Mysore, Mysore). Retrieved from <http://hdl.handle.net/10603/219132>

- Ottosen, T., Mani, N. S., & Fratta, M. N. (2019). Health information literacy awareness and capacity building: Present and future. *IFLA*, 45(3), 207-215.
- Pirialam, H. et.al (2019). The importance of public libraries in education for health literacy: A case study on diabetic patients. *IFLA Journal*, 45(3), 216-223.
- Pease, B., & Pease, A. (2004). *The Definitive Book of Body Language*. Australia: Pease International.
- Raban, M. Z., Dandona, R., & Dandona, L. (2009). Essential health information available for India in the public domain of the internet. *BMC Public Health*, 9(208), 1-19.
- Rao, M. et.al (2011). Human resources for health in India. *Lancet*, 377, 587-598.
- Reddy, K. S. et.al (2011). India: Towards achievement of universal health care in India by 2020: a call to action. *Lancet*, 377, 760-768.
- Riabov, Anton (2004). Efficient Information Dissemination Systems (Doctoral Dissertation, Columbia University, Columbia)
- Rahman M. D., Mostafizur (1999). Role of documentation centres in communication and dissemination of scientific and technological ideas in Bangladesh (Doctoral Dissertation North-Eastern Hill University, Meghalaya, India) Retrieved from <http://hdl.handle.net/10603/250229>
- Rabin, B. A., et.al. (2008). A Glossary for Dissemination and Implementation Research in Health. *Journal of Public Health Management and Practice*, 14(2), 117–123 .
- Satpathy, S. K. (2005). Indian Public Health Standards (IPHS) for community health centres. *Indian Journal of Public Health*. 49(3), 123-126.
- Scanfield, D., Sacnfield, V., & Larson, E. L. (2010). Dissemination of Health Information through social networks: Twitter and antibiotics. *American Journal of Infection Control* , 38(3)
- Shonhe, L. (2017). A Literature Review of Information Dissemination Techniques in the 21st Century Era. *Library Philosophy and Practice (e-journal)*.
- Stephens, K. K., Rimal, R. N., & Flora, J. A. (2004). Expanding the Reach of Health Campaigns: Community Organizations as Meta-Channels for the Dissemination of Health Information. *Journal of Health Communication*, 9, 97–111 p.
- Tossy, T. (2014). Major Challenges and Constraint of Integrating Health Information systems in African Countries: A Namibian Experience. *International Journal of Information and Communication Technology Research*, 4(7)
- Watts, Chris & Ibegbulam, Ijeoma (2006) Access to electronic healthcare information resources in developing countries: experiences from the Medical Library, College of Medicine, University of Nigeria. *IFLA Journal*.32(1), 54-61.

World Bank (1999). *World Development Report*. New York: Oxford University Press.

Zarzoliana (2005). Availability, Utilization, Health Care, Facility, Mizoram, Geographical (Doctoral Dissertation, North-Eastern Hill University, Meghalaya). Retrieved from <http://hdl.handle.net/10603/60708>

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COMMENCEMNT OF SECOND SEM/DISSERTATION	: 01.01.2019
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(HEAD)

DEPARTMENT OF LIBRARY & INFORMATION SCIENCE

MIZORAM UNIVERSITY

**ABSTRACT**  
**ON**  
**DISSEMINATION OF HEALTHCARE INFORMATION IN ZORAM MEDICAL**  
**COLLEGE (ZMC): A CASE STUDY**

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## 1.1. INTRODUCTION

Information Dissemination is a significant entity in the realm of Library and Information science subject. Information Dissemination literally refers to the spreading of information to enlighten and aware the desirable target audience. Information can be of different component depending on the subject/topic. In this dissertation, health information is emphasised and apprehended in several ways. Zoram Medical College which was depicted as the most efficient hospital in Mizoram and the only hospital attached to the medical institution was chosen for the study on estimating the effectiveness of health information and its dissemination and to assess the extent of public awareness.

There is an increasing awareness for promoting health issues through various schemes and programs undertaken by the government of India. Article 47 of the Indian Constitution indicates the accountability of the government to envisage the promotion of health standard for every Indian citizen. The availability of health related information should be very adequate in order to improve health conditions and reducing mortality rate. Kreps (2005) states that “Health information is essential in health care and health promotion, because it provides both direction and rationale for guiding strategic health behaviours, treatments, and decisions”. Health, as defined by the World Health Organisation (WHO) is “a state of complete physical, mental, and social well-being and not merely the absence of diseases or infirmity”.

Therefore health information dissemination is essential to maximise information utility. Dissemination was defined by Collins Dictionary as “To disseminate information or knowledge means to distribute it so that it reaches many people or organizations”. Information should be circulated judiciously to aware its users about the benefits and disadvantages of any project at an initial stage and to enable them to identify implications and thus facilitate them to generate more ideas and build perspectives. Colledge (2008) states that “Health literacy is the ability to obtain, understands, act on and communicate health information. A health literate individual is able to obtain and use the information needed to make everyday health decisions”

Due to the diversity and irregular health care information, there is a dismal position of health status in India. World Health Organisation defines a satisfactory healthcare system as a combination of good financing mechanisms, qualified and adequately–paid workforce, good facilities, and access to authentic information for decision making.

### **1.1.1. Health Programmes in Mizoram**

Presently the following project under National Health Mission is being carried out under the Mizoram government of health sector:

**1) Integrated Disease Surveillance Programme (IDSP):** IDSP is a surveillance scheme that is implemented to monitor disease trends for early detection and quick responding of any disease outbreak, identification of causes and initiation of precautionary measures. The main function of the IDSP includes data collection on disease and analysis reports from every district which was done weekly so that timely and effective public health response is made available. The major aim of the IDSP is to ensure that every subordinate state has undertaken an effective control over communicable public health threats (Ministry of Health and Family Welfare, 2020)

**2) Expanded Program on Immunization (EPI):** Immunization Programme is an important initiative for the protection of children from a life-threatening condition that is preventable. EPI was introduced in 1978 in India as a key procedure that is performed to provide vaccination to prevent seven vaccine-preventable diseases i.e. Diphtheria, Pertussis, Tetanus, Polio, Measles, severe kind of Childhood Tuberculosis and Hepatitis B, Haemophilia's influenza type b (Hib) and Diarrhoea. In Mizoram, the EPI has two focus viz. pregnant women against tetanus and children below 1 year against the EPI listed diseases. Apart from this, Polio prevention vaccination was also given to every child under 5 years. Such vaccination was undertaken through various healthcare networks (Ministry of Health and Family Welfare, 2020).

**3) National Leprosy Eradication Programme (NLEP):** In Mizoram, the leprosy case detection was actively undertaken in various parts of the state. Various awareness programs at different parts of the State have contributed to the alleviation of stigma and discrimination of people affected with Leprosy. The State Leprosy Officer is also an active participant in various local TV talk shows and radio talk shows to talk about Leprosy and to create more awareness among the masses.

The State of Mizoram is lucky in showing no stigma and discrimination of Leprosy patients in the State and also the leprosy case is quite rare and almost non-existent as

compared to the other States of India. The State Govt. is very compassionate towards cured Leprosy patients regarding their rehabilitation and is currently employing nine (9) cured Leprosy patients under the State Government on Muster-roll basis in different districts of the State under Health Department (National Health Mission Mizoram, 2019).

**4) National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS):** NPCDCS was launched on 4<sup>th</sup> February 2014 in Mizoram to provide support for diagnosis and cost-effective treatment and to give aid technically and financially for prevention of non-communicable diseases especially cancer, diabetes, Cardiovascular Diseases. It aims to undertake health promotion through behavior change with the involvement of the community, civil society, community-based organizations, media, etc. by focusing on the following elements.

- a) Promotion of healthy food intake
- b) Promotion of physical exercise
- c) Refrain from tobacco and alcohol.
- d) Stress Management
- e) The warning sign of cancer etc. (National Health Mission, 2019)

**5) National Iodine Deficiency Disorders Control Programme (NIDDCP):** NIDDCP was launched in the year 1987 in Mizoram. As iodine is an indispensable micronutrient for the human body and the deficiency can caused growth retard or mental retardation, this program was an advocate to eradicate iodine deficiency disorder like mental and physical retardation, deaf autism, cretinism, stillbirths, abortions, etc. has an objective to bring the prevalence of IDD to below 5% in the country and to ensure 100% consumption of adequately iodide salt (15ppm) at the household level (National Health Mission Mizoram, 2019).

**6) National Vector Borne Disease Control Programme (NVBDCP):** NVBDCP is a program launched for prevention and control of six vector-borne diseases (VBDs) i.e. Malaria, Dengue, Lymphatic Filariasis, Kala-azar, Japanese Encephalitis and Chikungunya in India (National Health Mission Mizoram, 2019).

**7) Revised National Tuberculosis Control Programme (RNTCP):** RNTCP was launched in India in 1992 and was implemented in Mizoram in the year 2003 for the control and elimination of TB in the country and to cut the chain of transmission. RNTCP offers

compensation to patients who have completed treatment as well as to the voluntary DOT Providers who have diligently ensured that patients are taking regular treatment (National Health Mission, 2019). Sputum Microscopy was used for diagnosis where Mizoram has 34 places to examine sputum. There is one TB hospital located in Falkawn but only MDR-TB and XDR-TB patients only are allowed to get admission. The RNTCP also encourage patients by awarding them some honorarium for completion of regular treatment (National Health Mission Mizoram, 2019).

**8) National Programme for Control of Blindness (NPCB):** National Programme for Control of Blindness (NPCB) was launched in the year 1976 to achieve a prevalence rate of 0.3% of the population by 2020. The main objectives of the NPCB are:-

- a) To reduce the backlog of blindness through identification and treatment of blind
- b) To provide comprehensive eye care services and quality service delivery by NPCB.
- c) To strengthen and develop human resources for providing eye care services
- d) To enhance awareness on eye care and prevention measures
- e) To secure the participation of voluntary organization/private practitioners in eye care.

(National Health Mission Mizoram, 2019)

**9) National Mental Health Programme (NMHP):** The Government of India implement NMHP in 1982 to address the huge burden of mental disorder. There is also an alarming increase in the involvement of the incidence and prevalence of the mental disorder. Therefore, NMHP ensures to advocate the availability and accessibility of minimum mental healthcare and to enhance the application of mental health knowledge in general healthcare and social development and to promote participation in the community. (National Health Mission, 2019)

**10) National Tobacco Control Programme (NTCP):** Mizoram is one among the Indian states with a higher degree of tobacco prevalence. According to the Global Adult Tobacco Survey (GATS) in 2009-10; it was found that 72.5% of males and 61.6% of females were consuming tobacco in some form or the other. Several tobacco control initiatives have been undertaken to reduce the high burden of tobacco-related diseases and deaths under this program (National Health Mission Mizoram, 2019). The main aim of the NTCP is to promote

public awareness on the negative effect of tobacco. It inclined to prevent initiation and encourage quitting tobacco among youth.

**11) National Programme for the Healthcare of the Elderly (NPHCE):** The population of elderly persons is rapidly increasing globally. The normal physiological aging process results in a decrease in body stamina as well as immunity. This makes the elderly more prone to diseases and disabilities. Therefore, this program envisages providing a dedicated healthcare system and promotes health curative and rehabilitative services to the elderly for the elderly population (Ministry of Health and Family Welfare, 2020).

**12) National Oral Health Programme (NOHP):** Oral Health is an inherent part of general health. 'Oral Health' means being free of chronic mouth and facial pain, oral and throat cancer, oral sores, birth defects such as cleft lip and cleft palate, periodontal (gum) diseases, tooth decay, and tooth loss and other diseases and disorders that affect the mouth and oral cavity (Ministry of Health and Family Welfare, 2020).

**13) National Programme for Prevention and Control of Deafness (NPPCD):** The NPPCD was launched in India, on a pilot basis since August 2006 for the prevention and control of major causes of hearing impairment and deafness. Manpower training and development, capacity building and service provision was given priority to achieve its goals (National Health Mission, 2019)

**14) National Programme for Prevention and Control of Fluorosis (NPPCF):** This programme envisages all people residing in areas of high fluoride content in drinking water. The main objectives include providing awareness about fluorosis and its effect, capacity building in the form of training and manpower support, preventive measures, diagnostic facilities, management and rehabilitation of fluorosis cases (National Health Mission, 2019)

**15) Reproductive Child Health (RCH):** Improving maternal and child health has been one of the top health priorities of the Government of India. Because of this, the RCH was implemented throughout the country on 15<sup>th</sup> October 1997. The second phase of the RCH program i.e RCH II was launched on 1<sup>st</sup> April 2005. The main objective of the program was to bring about a change in mainly three critical health indicators i.e reducing total fertility rate, infant mortality rate and maternal mortality rate to realize the outcomes envisioned in

the Millennium Development Goals. RMCH+A approach has been implemented in 2013 to address major causes of mortality among women and children as well as the delays in accessing and utilizing health care and services (National Health Mission, 2019)'

## **1.2. SIGNIFICANCE AND SCOPE**

The scope of the study is confined to the healthcare program under the National Health Mission (NHM) undertaken by the Zoram Medical College and the health insurance schemes accessible in the hospital. A study is intended to know the extent of awareness about the various health programs implemented under the NHM and the most frequently used channels for acquiring such information.

In viewing today's context, both the central government and state government have initiated several healthcare programs, health insurance, and healthcare schemes that are essential for the people and require public awareness. Such programs and schemes are generally implemented in various hospitals including Zoram Medical College (ZMC) Hospitals. The core intention of the study revolves around the effectiveness of health utilization through various information channels and the extent of awareness. It is very often that information is disseminated to enable further circulation and to maximize the information widespread to the fullest extent. Recent trends such as consumer movement, women's rights, self-care, cost containment, informed consent, national health insurance, malpractice claims, and the problems of chronic illness, etc. have expanded the interest and catalyzed to amplify the demand for health information.

## **1.3. RESEARCH DESIGN**

### **1.3.1. Statement of the Problem**

Mizoram is a state with Aizawl as its capital city. The geographical area covers 21,081 sq.km. Myanmar and Bangladesh are the two international borders that hover around Mizoram. It has three inter-state borders such as Assam, Tripura, and Manipur. As per the 2011 census, the population of Mizoram is estimated as 10, 97,206. Out of the total population, 5, 55,339 were males, and 5, 41,867 were females. The rural residents comprised of 5, 25,435 and urban residents comprised of 5, 71,771. With a literacy rate of 91.33%, Mizoram ranks third as the state with the highest literacy rate in India. Mizoram healthcare



has been augmented with the starting of the healthcare delivery system in urban areas such as the primary health centre and wellness hub in its capital city. Presently Mizoram has 11 district hospitals, 12 community health centres, 57 primary health centres, 370 sub-centres, and 78 clinics established in Mizoram. Currently, most of the health programs are vertically carried out by the National Health Mission (NHM) of which under its broad spectrum consists of preventive, curative, promotive, rehabilitative, and palliative health services.

The constitution of India envisages the right to life as fundamental to all and constrains the government to ensure that every person is entitled to a healthy life. The federal structure of the Indian governmental system encourages the decentralization of powers and administration where the states are obliged to the efficient health care delivery among the state dweller and the central government is reliable for international health agreement, imparting medical knowledge and education, implementation of national disease prevention and control program, food purification by prevention of food mixed with extraneous material and quality control of drug industry. It is a well-known fact that the present status of health status is gloomy in India. Every Indian citizen has a legal right to have access to appropriate, adequate, and affordable health care during his/her life span. An intensity of transformation of the health-care system to promote equity, efficiency, effectiveness, and accountability in the delivery of health care at all stages is on high demand (Reddy et.al 2011). This provokes the stimulation of various integrated health care services by various to provide equitable, affordable, and quality health care services that are accountable and responsive to people's need. However, the deliberate awareness of its existence and availability is essential to make people informed about the advantage and drawbacks tangled on the project. For this reason, the medium or channels employed for information delivery or project circulation for reaching the public assume an important task. Health-related information; unlike other information has a vast and varied target group. Therefore, the range of dissemination of health-related information becomes more multidimensional. Despite the advancement in Information and Communication Technology (ICT) and the intervention of various mass media, somewhere at the corner of the village, there are still ignorant people who needed to get informed about healthcare facilities.

Information dissemination has a crucial role in health care delivery in all spheres. The Central government has adopted many health treaties and programs to envisage the well-functioning of the health system in India. However, the health status of India is still very low.

Mizoram is one among the Indian state with a higher rate of Non-Communicable Disease (NCD) prevalence and the highest rate of HIV infected cases. Hence, health information is one indicative factor to be taken as a solution to spread prevention and precautionary measures. Also, with the higher rate of poor health condition, awareness about the health programs relevant to their disease and the health insurance is of drastic importance. Therefore, a painstaking selection of appropriate channels for disseminating healthcare information to encompass various people and outreach every nook and cranny of the place at a minimum cost with maximum usability is aspired to achieve in this proposal.

### **1.3.2. Objectives of the Study**

Objectives of the study are an important part of any kind of research. The objectives of this study are given below:

- 1) To find out various channels used for dissemination of Healthcare Information in Zoram Medical College.
- 2) To investigate the most frequent use of information channels for disseminating healthcare information.
- 3) To explore the regularity of information to the public.
- 4) To identify the awareness of healthcare programs by the public

### **1.3.3. Research Methodology**

The present study is the outcome of the analytical and case study of the health information dissemination in Zoram Medical College and the extent of health program awareness by the patient. The primary data has been gathered from the questionnaire distributed to the patients admitted in the Zoram Medical College Teaching Hospital along with the personal interaction among the healthcare providers. The total sample size is 181. The secondary data were collected from the articles, journals, and published as well as unpublished works on relevant topics, the publication of the Government of India, Health & Family Welfare and Government of Mizoram, World Health Organisation. The study was designed to examine the efficiency and mode of dissemination of healthcare information in Zoram Medical College. For fulfilling the research objectives, the survey method using a scheduled questionnaire was applied for data collection.

1) **Sample size:** The study is confined to the inpatient of State Referral Hospital of Zoram Medical College. The methodology adopted to take sample size from 304 total beds in State Referral Hospital of Zoram Medical College is determined as below:

Confidence level : 95%

Margin of Error : 5%

Total Population : 304

Sample size needed : 170

Explanation:

Cochran's Formula to determine the sample size is as follow:

$$n_0 = \frac{Z^2 \times P(1 - P)}{c^2}$$

Where:

- $c$  is the desired level of precision (i.e. the margin of error),
- $p$  is the (estimated) proportion of the population which has the attribute in question,
- The  $Z$  value is found in  $Z$ -table

It is obvious that  $Z$  score of 1.96 is 95% which is obtained from  $Z$ -table.

Suppose for a large population with inadequate information, we assume that half of the population has the attribute in question which gives us maximum variability. So  $P = 50\% = \frac{50}{100} = 0.5$ . Now let's say we want 95% confidence and at least 5 percent – plus or minus – precision.

$$\begin{aligned} \text{Then, } c &= 5\%(100\% - 95\% = 5\%) \\ &= \frac{5}{100} = 0.05. \end{aligned}$$

A 95% confidence level gives us  $Z$  values of 1.96, per the normal tables, so we get

$$\begin{aligned} n_0 &= \frac{Z^2 \times P(1 - P)}{c^2} = \frac{(1.96)^2 \times 0.5(1 - 0.5)}{(0.05)^2} \\ &= \frac{0.9604}{0.0025} = 384.16 = 384(\text{approx.}) \end{aligned}$$

So a random sample of 384 population size should be enough to give us the confidence levels we need.

Cochran's formula is considered especially appropriate in situations with large populations. As the population we're studying is small, we can modify the sample size we calculated in the above formula by using this equation:

$$n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}}$$

Here  $n_0$  is Cochran's sample size recommendation,  $N$  is the population size, and  $n$  is the new, adjusted sample size. Since Zoram Medical College/State Referral Hospital, Falkawn is of 304 beds strength. The sample size required for this hospital is:

$$n = \frac{384}{1 + \frac{(384 - 1)}{304}} = \frac{384}{2.26} = 169.91 = 170(\text{approx.})$$

For 304 beds strength, 170 sample sizes are sufficient which a substantially smaller sample size is.

- 2) **Data Collection:** A survey questionnaire tool was applied for the collection of primary data for the study. A total of 181 questionnaires were administered to those respondents comprised of males and females of varied ages who were admitted to the Zoram Medical College hospital disproportionately to know the relevancy and awareness of the healthcare program and to determine the efficiency of information dissemination of health-related information to the patient public.
- 3) **Data analysis and Interpretation:** The collected data were coded, scrutinized, tabulated, and analyzed through descriptive statistics using IBM SPSS Version 20 and Microsoft Excel.

#### 1.4. CHAPTERISATION

The report is presented in six chapters with bibliography and appendix in a separate text. Chapter one is Introduction explaining different terms and issues relating to the topic including significance and scope of the study, review of related literature to draw gap to fill in this study, statement of the problem, research objectives, and methodology. Chapter two is the Dissemination of Information discussing different issues related to the point of Library and Information Science subject. Chapter three is Healthcare in ZMC: An Overview, which presents different aspects of ZMC, different NHM Programmes, functions, and services to the

community as a whole. Chapter four is Data Analysis, Interpretation, and Findings. Chapter five is Conclusions and Suggestions which presents from the study. A bibliography is also arranged in the standard format of APA Style Manual 6<sup>th</sup> edition.

## **1.5. FINDINGS**

Findings play a significant role in any kinds of research to conclude the study by drawing an outcome of the study. After careful study of the problems from different angles, the scholar draws the following findings and presented according to the research objectives.

### **Objective 1: To find out various channels used for dissemination of Healthcare Information in ZMC**

- 1) The various information channels/medium enlisted in the questionnaire includes Television, Newspaper, Social Media, Community Association Meetings, Radio and Local Information System. Television comprising of 55.2% has acquired the majority source for getting to know about the National Health Mission (NHM) which is important health programs and services. Social Media comes second consisting of 18.2%. Radio and Newspaper equivalently come in the third position consisting of 2.2%.
- 2) The working staff of ZMC shows that information channels such as television, newspaper, social media, radio, pamphlets/brochures were utilised for health information dissemination in ZMC.

### **Objective 2: To investigate the most frequently used information channels for disseminating healthcare information.**

- 1) Health Information medium based on residence shown that Television has the highest impact among rural residents consisting of 46%. At the same time, television attains the majority medium among the urban respondents consisting of 66.67%. Social Media comes in the second majority medium in both rural and urban consisting of 17% among the rural and 19.75% among the urban.
- 2) Health Information medium based on genders also shown that television has the highest impact consisting of 55.56% in male and 54.95% in female. Social Media comes second consisting of 18.89% in male and 17.58% in female. Newspaper

assume the third major medium among male consisting of 4.44% among male. Friends and Radio attain the third major source among female consisting of 2.20% equally.

- 3) On the assessment of age-based information, medium television is the majority medium of all ages, social media follows and comes after.

**Objective 3: To explore the regularity of information to the public**

- 1) For assessment of health information regularities, user's satisfaction on hospital information accessibility shown that dissatisfaction was greater constituting 63.5% whereas 36.5% were satisfied. At the same time, it was also analysed that 69.6% finds healthcare information regular and 30.4% finds irregular. This may reveal that although the hospital did not properly issue the desired information, the entire healthcare sectors taken as a whole are consistent in information dissemination.
- 2) Health Information frequency was assessed based on respondents' perspectives and shown that 28% and 28% of the respondents agreed that the Yearly and Half Yearly are the majority frequency. Meanwhile, 11% still finds that such health information dissemination was never done or never been heard by them.
- 3) That majority respondents i.e. 70.2% were registered to medical reimbursement schemes while 29.8% were not registered. This also reveals the consistency of health information on medical insurance schemes.

**Objective 4: To identify the awareness of healthcare programs by the public**

- 1) 64.7% of the respondent was aware of the National Health Mission programme whereas 32.64% were unaware. Educational background also has an impact on the awareness in which the higher the educational background is the higher percentage of NHM awareness. Postgraduate with 100% has the highest percentage of awareness of NHM which was followed by Graduate with 92.31% and HSLC comes in third with 71.43%. The Under-Matric has the lowest percentage of awareness with 54.12% being aware. However, the tendency of NHM awareness is all higher among all educational rank. Meanwhile, the residence on rural and urban does not have much

impact on the tendency of awareness wherein both the residence (i.e. urban and rural) shows a higher degree of awareness.

- 2) The NPCDS which is one health programs was aware by 38.68% and not aware by 61.32%. On a gender basis, the awareness is lesser constituting 46.67% awareness on male 30.77% awareness on a female. On educational qualification basis, the awareness is higher among Post Graduate (62.5%) and Graduate (65.38%) whereas the awareness is lesser among Under Matric (32.94%), HSLC (42.86%) and Class 12(18.53%). On the Residence basis, the awareness among both rural and urban is lesser constituting 33% awareness among rural and 45.68% awareness among urban.
- 3) The NPPCD which is one health programs was aware by 9.39% and unaware by 90.61%. On a gender basis, the awareness level is lesser constituting only 8.90% awareness among male and 9.90% awareness among female. On residence basis, the awareness is also lesser constituting 3% awareness among rural and 17.28% awareness among urban. On the educational basis, the awareness level is all lesser among all educational rank constituting 3.52% awareness among Under Matric, 8.57% awareness among HSLC, 11.11% awareness among Class 12, 23.08% awareness among Graduate and 25% awareness among Post Graduate.
- 4) The NPPCF which is one health programs was aware by 1.66% and unaware by 98.34%. The awareness level on gender basis was much lesser constituting only 2.22% awareness among male and 1.10% awareness among female. The awareness level based on the educational background is all lesser on all educational rank constituting 1.18% awareness among Under Matric, 5.71% awareness among HSLC, 0% awareness among Class 12, 0% awareness among Graduate and 0% awareness among Post Graduate. Based on the residence, the awareness level extremely low constitutes only 0% awareness among rural and 3.70% awareness among urban.
- 5) Among the total respondent, 24.31% were aware of the NLEP and 75.69% were unaware. The level of awareness is all lesser on gender basis, resident basis and educational qualification basis.

- 6) Out of the total respondent, 18.78% were aware of the IDSP and 81.22% were unaware. The level of awareness is all lesser based on gender, resident and educational qualification.
- 7) Out of the total respondent, 19.34% were aware of the EPI and 80.66% were unaware. The level of awareness is lesser on gender and residence basis. On educational qualification basis, Post Graduate level of awareness constitutes 50% which is equivalent to the unawareness level while the rest of the educational rank is lesser on awareness level.
- 8) Among the total respondent, the NIDDCP was aware by 15.47% and unaware by 84.53%. The level of awareness based on gender, residence and educational qualification are all lesser than the unawareness level.
- 9) Among the total respondent, the NVBCP was aware by 14.36% and unaware by 85.63%. The level of awareness based on gender, residence and educational qualification are all lesser than the unawareness level.
- 10) Out of the total respondent, the RNTCP was aware by 41.99% and unaware by 58.01%. The level of awareness on gender and residence basis are both lesser than the awareness level. On the other hand, on educational qualification basis, the Graduate has a higher level of awareness constituting 61.34% and Post Graduate has an equivalent level of awareness constituting 50%. While the rest of the educational rank have a lower level of awareness.
- 11) Among the total respondent, the NPCB was aware by 22.10% and unaware by 77.90%. On a gender basis, male awareness constitutes 34.44% and female awareness constitutes 9.89% only. On residences basis, rural residence awareness constitutes 21% and urban residence awareness constitutes 23.46%. On an educational basis, the awareness level is all lesser on all educational ranks but the Graduate respondents have a little higher awareness constituting 42.31% awareness level.



- 12) Among the total respondent, 32.60% were aware of the NOHP and 67.40% were unaware. The level of awareness based on gender, residence and educational qualification are all lesser than the unawareness level.
- 13) The NTCP is one among the health programs which is mostly heard by the respondents. The NTCP was aware by 57.46% and unaware by 42.54%. The awareness levels are also higher on the gender basis than the unawareness level constituting 64.44% male awareness and 50.55% female awareness. On residence basis, the awareness level is slightly lower among the rural respondents constituting 47% awareness and the awareness level among urban respondents constitutes 70.37% which is far higher than the unawareness level. On the educational qualification basis, except among the Under Matric respondent, all educational rank has a higher degree of awareness than the unawareness level.
- 14) The NPHCE which is one health program was aware by 10.50% and unaware by 89.50%. The level of awareness based on gender, residence and educational qualification are all lesser than the unawareness level.
- 15) Among the total respondent, 9.94% were aware of the NOHP and 90.05% were unaware. The level of awareness based on gender, residence and educational qualification are all lesser than the unawareness level.
- 16) The RCH which is one health program was aware by 28.18% and unaware by 71.82%. The level of awareness based on gender, residence and educational qualification are all lesser than the unawareness level.

## **1.6. CONCLUSION**

Dissemination of healthcare information being one of the significant measures has been and will continue to assume priority by the people and the government. The Government in their objective of empowering citizens with the right information at the right time should be implemented painstakingly so that public awareness is achieved to the anticipated broadcasted information. The health sector should have proper information management for collecting, storing, accessing, retrieving, and disseminating health

information and should have appropriate coordination with the information & publicity sector so that wider health information dissemination is obtained. The study has been confined to Zoram Medical College (ZMC) hospitals due to the reason that the entire scenario of Mizoram people in their awareness and perspective of the effectiveness of different health programs under National Health Mission and Medical Insurance schemes that are intended for the uplift of health status in India can be determined through this medical institution. For this purpose, the descriptive comparative statement on genders, educational background, residence, and age impact can be analyzed to find the disparities of health information in Mizoram.