A Study of the Impact of the Life Style and Living Conditions on the Diseases Pattern on Slum Dwellers in Dhaka City

A Dissertation submitted to the Department of Pharmacy, East West University, Bangladesh, in partial fulfillment of the requirements for the Degree of Bachelor of Pharmacy

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Declaration by the Research Candidate

I, Akram Bhuiyan, ID: 2013-3-70-004, hereby declare that the dissertation entitled "Impact of Life Style on Slum Dwellers Diseases" submitted by me to the Department of Pharmacy, East West University and in the partial fulfillment of the requirement for the award of the degree Bachelor of Pharmacy, under the supervision and guidance of Meena Afroze Shanta, Senior Lecturer, Department of Pharmacy, East West University, Dhaka

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Certificate by the Supervisor

This is to certify that the dissertation, entitled "A study of the impact of the life style and living conditions on the disease pattern of slum dwellers in Dhaka city" is a research work done by Akram Bhuiyan (ID: 2013-3-70-004), in partial fulfillment of the requirement for the degree of Bachelor of Pharmacy under my supervision

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Signature of the Supervisor

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Certificate by the Chairperson

This is to certify that the thesis entitled "A study of the impact of life style and living conditions on the disease pattern of slum dwellers in Dhaka city" submitted to the Department of Pharmacy, East West University for the partial fulfillment of the requirement for the award of the degree Bachelor of Pharmacy is a record of original and genuine research work carried out by , Akram Bhuiyan ,ID: 2010-3-70-004 during the period 2016-2017 of his research in the Department of Pharmacy, East West University.

Dr. Chowdhury Faiz Hossain
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Dedication

This research paper is dedicated to all the people living under extreme poverty, helpless, stuck in life and deprived of their human rights specially the slum dwellers.

Abstract

Dhaka is the most densely populated city of Bangladesh. People migrant from rural areas towards Dhaka for their livelihood and thus leads gradually to create slums. Usually people live in slum faces unhealthy condition and also it leads to pollute the environment. It is evident that disease states of the inhabitants are strongly affected by lifestyle. Aim of the study is to find the relation between life style of these people and diseases, they usually suffer. Participants are randomly selected from different areas of Dhaka city like Meradia, Badda, Aftabnagar etc. Smoking habits, sanitation type, water treatment systems, food habits are largely related to asthma, diarrhea and skin diseases. Most of the slum dwellers use tube well water for all purposes of their work, thus density of population, unhealthy life condition, unhealthy sanitary systems, lack of physical activity leads them to suffer by different diseases like Diarrhea (35 %), Hypertension (22.5%), Skin Disease (17.5%) are the common diseases in the slum dwellers. 57 % slum dwellers seek professional help for diseases condition. If this practice increases along with the hygienic life style than disease rate will decrease. Slum dwellers are not even properly aware about vaccination. If any step can be taken for awaring themselves about their life style, importance of vaccination etc, then the disease rate can be decreased at a significant rate.

Key words: Slum Dwellers, Food Habit, Physical Activity, Sanitation, Hygiene, Disease.

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1.1 Overview

There are about 69795.28 million people in our world. the number of people is increasing day by day. There are many people live in every country below the poverty line. These people are predominant in the subcontinent. They account for about more than 5% of the world's population. They do not have any home of their own and they don't have any facilities compared with others. They are seemed to be separated from the society. They do not even have any lands. Yes we are talking about slum dwellers. These people normally live in slums area and their economy is very poor. They can not afford their fundamental needs like education shelter, medication, cloths etc. Slums in Dhaka city have been growing rapidly since 1971. Several surveys on slum growth in Dhaka, conducted by Centre for Urban Studies (CUS) recorded slum populations 275,000 in 1974, 718,143 (2,156 slums) in 1991, 1.5 million (3007 slums) in 1996 and 3.4 million (4,966 slums) in 2005 (CUS, 2005). Trend of growth shows that slum population increased two times more than previous count and it has been increasing since 1991.

(World Bank, 2017)

1.2 Definition of Slum

Slum is an area where people who lives under the poverty line and without any lands make there housing unit unsystematically in vacant place which is owned by the government or private sectors or a slum is a cluster of housing units which grow unsystematically in government owned or private vacant land. The walls and roofs of such houses are generally made of straw leaves, Gunny bag, polythene paper, bamboo etc. a tin shed house or even a building may be added, if it is situated within the purview and environment of a slum. The physical and hygienic conditions of such houses are far below those of a common urban residential area. Generally, this segment of people are distressed and forced to live in such unhygienic condition due to economics reason.

A slum is a cluster of compact settlements of 5 or more households which generally grow very unsystematically and haphazardly in an unhealthy condition and atmosphere on government and private vacant land. Slums also exist in the owner based household premises. . In the majority of slums, up to 20 - 100 families use one toilet and only on payment. An article published on 13 September 2001 in the Daily Jugantor commented that "the sewerage facilities provided by

Dhaka WASA and Dhaka City Corporation is only for 30 per cent citizens of the city and the remaining 70 per cent are deprived of these facilities".

(BBS , 1999)

1.2.1 Classifications of slums

Slums can be divided into three groups:

1. Unauthorized occupation of government or semi-government lands
2. Living in thatched houses made of papers, polythene, tin etc, built on unauthorized vacant land near railway lines or on the footpath or by side of the main roads.
3. Living in unauthorised private lands.

1.2.2 Characteristics of slums

The main characteristics of slum population are listed below:

*High rate of poverty
* High incidence of unemployment
* Huge extent of urban decay
* Breeding grounds for social problems like crime, drug addiction, alcoholism etc
* High rates of mental illness and suicide etc
* Low level of economic status of its residents
* Inadequate infrastructural facilities
* Acute problem of malnutrition (Garner & Thaver , 1993).

1.3 Epidemiology world slum condition

Slums were common in the 19th and early 20th centuries in the United States and Europe. New York City is believed to have created the world's first slum, named the Five Points in 1825, as it evolved into a large urban settlement. More recently slums have been predominantly found in urban regions of developing and undeveloped parts of the world, but are also found in developed economies. Slum creates many obstacles in the development of a country.

(Khalilur et al., 2015)

When consider on international situation regarding slums, it is very significant. Late in 2003 the United Nations reported that one billion people, approximately one third of the world's urban dwellers and a sixth of all humanity live in slums. And it predicted that within 30 years that figure would have doubled a third of the current world population. During the 1990s the urban population across Asia, Africa and South America grew by a third. There at least 550 million slum dwellers in Asia, 187 million in Africa, 128 million in Latin America and the Caribbean and further 54 million in the world's richest countries. Slums punctuate almost every city of the world. This has become a universal phenomenon accompanying with urban growth. Sri Lankan experience on slums is discussable and it is one of current topics of national policy planners. The ratio of slums will increase day by day with chronic problems. As existing data showed, slums are continuously on the increase. Of the total housing stock about one half belongs to middle and income whiles the balance half belongs to low-income population. The low income housing stock has been subdivided in to several categories depending on the nature of the structure. According to survey on low-income resettlements conducted by the Ministry of Urban Development & Housing in 1998/99, sub categories of low-income settlements were identified.. Slums provide low-cost housing and low-cost services for rapidly expanding low-income urban populations, and also serve as networks of social support for new migrants to the city. Early slum improvement efforts were a response to outbreaks of contagious diseases that were believed to originate in slums. There is a long literature linking housing deprivation with ill health later in life; even during the 1950s, morbidity rates in urban UK were higher than in rural areas. Many millions in slums suffer unhealthy living conditions, resulting in shorter life and chronic illness. The poorer general health of slum dwellers and the lack of access to medical attention increase their likelihood of dying from epidemic diseases such as AIDS and tuberculosis, while poor sanitation exposes them to waterborne diseases. About 37 per cent of urban households in the developing world have piped water, 15 per cent have sewerage and 60 per cent have electricity. The levels of household connections to networked infrastructure are major indicators of urban adequacy and increase rapidly with city development. In least developed countries, only 8 per cent of wastewater is treated and only 12 per cent of solid waste is collected. The central role in triggering health concerns for these populations is posed by malnutrition in children, reduced breastfeeding, respiratory problems as a result of exposure to toxic fumed emitted by burning fuels for cooking and heating purposes, insufficient water availability, sanitation, draining and rubbishing dumping issues. Furthermore, the population's ignorance of getting rid of infection breeding reservoirs, high crime rates, fire injuries

and extreme weather conditions are also significant contributing factors to increasing the health problems. Collectively, these factors account for the spread of many communicable and non communicable diseases which include a vast list of health conditions and diseases such as diarrhea, hookworm, cholera, typhoid, leishmaniosis, leptospirosis, dengue, pneumonia, malaria and tuberculosis. Thus this stydy on the health problems problems of slum dwellers focus on health issues and socioeconomic status and try to attract the government in improving the condition of slum dwellers worldwide.

(healthunits.com, 2016)

1.4 Slums in India

According to Government sources, the Slum Population of India have exceeds the population of Britain. It has doubled in last two decades. According to last census in 2001, the slum dwelling population of India had risen from 27.9 million in 1981 to 61.8 million in 2001. Indian economy has achieved a significant growth of 8 percent annually in last four years, but there is still large number of people nearly 1.1 billion still survives on less than 1 $ (around 46 INR) in a day. Increase in Indian Population over a period of time has also resulted in slum population growth. Figure 1.5(a) : Primary Census Abstract for Slum, 2011, Office of the Registrar General & Census Commissioner, India. This table represent the percentage share of slum population to total Slum population of India 2011. According to the table the biggest percentage share of the slum population compare to the total slum population of India is, Maharashtra having 18.1 % it was less than the 2001.Due to the government initiatives and good governance and better policy implementation slums has reduced in compared to census 2001. If we consider Andhra Pradesh having 15.6% which is higher than the census 2001, in 2011 census West Bengal got 3rd position having 9.8% and Uttar Pradesh has got 4th position with the value of 9.5% . On the basis of the this table we can concludes that the number of statutory and slum reported towns were increasing day by day. It is not a good signal for the development of the country. There is need for the effective plans and policies for the better quality of the life.

(Bijendra, 2014)

There are a range of slums in India, starting with shacks, made of cardboard and tin sheets on Mumbai and Kolkata streets, to organized slums like Dharavi where residents pay pretty style and disease pattern of slum dwellers in Dhaka city rents to slumlords for a tiny amount of space. It's common for a family to live 10 to a room. Often several people are working, so it's not an income problem. The slum room might have a refrigerator, bottled gas stove and even an air conditioner for the blazing summer. All these count as luxuries, not essentials, in India. Every home will have a TV with a dish or fancier connection. What is most difficult is the total lack of privacy. Often the women have to queue up for hours to fetch water. And worst of all, most have to queue up for a long time to use a row of public toilets and to bathe. Most urban Indians, even the poorest, bathe every day if they can. It's essential in a climate where summer temperatures can reach 40 degrees and it's hot, humid and sticky all through the year. In Kolkata and Mumbai, the slum dwellers and homeless people bathing at a roadside water hydrant in full view of the passing public. It's common for a family to live 10 to a room. Often several people are working, so it's not an income problem. The slum room might have a refrigerator, bottled gas stove and even an air conditioner for the blazing summer. All these count as luxuries, not essentials, in India. Every home will have a TV with a dish or fancier connection. What is most difficult is the total lack of privacy. Often the women have to queue up for hours to fetch water. And worst of all, most have to queue up for a long time to use a row of public toilets and to bathe. Most urban Indians, even the poorest, bathe every day if they can. It's essential in a climate where summer temperatures can reach 40 degrees and it's hot, humid and sticky all through the year. In Kolkata and Mumbai, the slum dwellers and homeless people bathing at a roadside water hydrant in full view of the passing public.

(newint.org, 2016)

1.5 Slums of Bangladesh: An overview

Slum dogs can become millionaires in the movies, but in real world the scenario is totally different. Indeed, they lead a very miserable life and suffer thousands of problems in their everyday life. But who are the slum dwellers? According to the UN, …"their residents are missing at least some of the following: durable walls, a secure lease or title, adequate living space and access to safe drinking waters and toilets." The slums of Dhaka city are no exception. The future of the city is vast third world slum. Western security experts rightly fear failed states; in the

future they will have to worry about failed cities. Mega cities of ten millions or more, are on the rise across Asia, while cities like Dhaka, Jakarta, Lagos and Delhi will cross twenty million threshold by 2020.

In 2010, the population of the city of Dhaka has been projected at 17.6 million people, with up to 60% in the slums. Everyday we observe the influx of hundreds of new people to the city of Dhaka. But why do people come to Dhaka and other cities in Bangladesh? There are two factors behind it: a) pull factor and b) push factor. Bangladesh is urbanizing fast. People are moving to places where there are or perceived to have jobs and oppurtunities. The cities are the new centers of jobs and opportunities. The bigger the center, the stronger is the pool. Dhaka is the primate city in Bangladesh according for over 30% of the total GDP. It is pulling rural migrants faster and larger than any other cities in Bangladesh. Findings showed that, 56% people migrated to Dhaka city for economic reasons. There are also some push factors working in the process of migration to the cities, specially to Dhaka city. Now-a-days maximum slum dwellers are one kind of environmental migrants. The often natural disasters: flood, drought, cyclones, riverbank erosion destroys the agricultural outcomes every year. While Bangladesh is an agro-based country these disasters are much painful for the farmers and they are Until the early nineteen nineties, majority of the slums were located on public lands. The percentages of slums on private lands were less. Things began to change in the nineties. The government started to evict many slums from public properties. Open private lands were still available. Private land owners started to rent out the lands to slum dwellers as the return on these lands were handsome because of high densities. Thus in 2006, 77% of slums were on private lands.

(Basharat, 2014)

obliged to go to the cities. The job sector of rural areas are not much strong so people are pushed to the cities. And for many other people demonstration effect is big enough to push them to the cities.

The Bangladesh Demographic and Health Survey(BDHS) is a periodic study of the population and urban areas are surveyed including the slum areas. Some findings of the survey can be mentioned here. Slum land was owned by a land owner or Bosti(slum) owner for 83%, and rent

collected for permission to build a bamboo shelter to use as a home. Land owners and Bosti owners are not thought to pay government taxes and are not accountable for the conditions or safety of the slums. All families lived in one-room dwellings, with construction usually of bamboo frame, fencing and roof. An average of five people lived in each room, and some families had over eight individuals in one room. Female, adults and children tended to work as housekeepers, labourers or in the garment piecework, while male adults and children tended to work as rickshaw pullers, laborers, brick breakers, drivers or carpentars. The average income per family was 3725 Taka per month and the average expenditure was 3218 Taka per month. However many families reported that expenses greater than income and dependence on loans for survival. Expenditures included rent, food, education, cloths, electricity, water, wood and health care.

A fifth of slum households are missing at least 3 of their basic needs. According to an UNESCO report, education figures for slums in Bangladesh's capital Dhaka are among the worst in the South-Asian country.The report entitled, "Education for All Global Monitoring Report 2010, Reaching And Marginalized", which was launched in January from the UN Headquarters in New York, revealed schools run by non-governmental organizations play and important function in slums in Dhaka. Childhood immunization in Dhaka slum households has been reported at (51-76) %. In the survey 89% reported childhood immunization, though records for each child were not polled. The rate of substance use and gambling is very alarming.

(Basharat, 2014)

There are also some positive factors. A 2005 study on migration and poverty in Asia by the International Organization for Migration notes that ''even if migrant jobs are in the risky informal sector, the gains to be made can be several times higher than wages in rain-fed agriculture.'' Many slum dwellers are infact enterpreneurs, albeit writ very small. At the individual level, the woman were benifitted in terms of mobility and skill, self confidence, widening of interests, access to financial services, build own savings, competence in public affairs and status at home and in the community that lead a better awareness for enhancing women's empowerment. However there is a need for proper training for sustainable development in the long run.

Although there are some positive aspects, the negative aspects overshadows these positive factors. So some reforms can be done for the betterment of the lives of the slum dwellers.

- Thoughtful open space planning and environmental management and sustainable development of the city area.
- Urban land management of the city will be much more feasible for all.
- Rehabilitation of slum dwellers in new settlements in which the allocated slum dwellers will have legal tenure of land and thereby benefit from future development programs.
- The current land occupied by the slums will be cleared and returned to the private and public owners in phases.
- NGOs and other donors and assisting agencies can provide financial and other help knowing that the residents have security of tenure.
- Provisions for various slums either by the public sectors or NGOs would be eminently feasible.
- The government should ensure healthcare and reproductive training and facilities.
- Educational and Vocational training should be served.

Community building will become feasible while currently there is no community in the slums. People live in fear of eviction, of criminals, rent seekers and other miscarants. It will be possible for them to live in the knowledge of security and protection of the law of the land.

(Basharat, 2014)

Bangladesh has one of the highest rates of the urban population growth rate of about 4th decennial population census 2001, Statistical Yearbook of Bangladesh, 2004). The number of the urban poor has also increased from 7 million in 1985 to 11.9 million in 2005(CUS Slum Report, 2005). Moreover an estimated 3-4 lakhs new migrants arrive each year and create new problems in urban areas. By 2030, an estimated 5 billion of the worlds 8.1 billion people will live in cities. About 2 billion of them will live in slums, primarily in Africa and Asia, lacking access to clean drinking water and working toilets, surrounded by desperations and crimes. So it is very hard to predict that how the reform packages will work. But at first combined effort is necessary from the policy makers level with the coordination of grassroot level is necessary to solve the slum

problems to make a better future for the citizens of Dhaka Megacity. The situation of these slums is not very satisfactory. Most respondents(89%) did not feel that they lived in a hyzenic environment, and 93% felt that the slum had lead to disease or ill health in their families. The most desirable place to live was felt to be in their village of origin(57%), while others dreamed of living in higher-class places in the city(14%), a place more quiet(14%) or free of mosquitoes(5%). Only 6% were happy in their current location. Evils described were unclean latrine facilities(30%), harassment by slum owners and need to pay bribes(10%), lack of employment (32%), mosquitoes (86%), extremes of heat (5%), lacking roof (11%), harassment of women (7%), lack of available fuel/gas (17%) and lack of food (3%). Barriers preventing to a move to a more desirable location were stated as a lack of funds(91%), lack of land (11%), inability to find work (10%), lack of government assistance (14%), illiteracy (2%) and large family size(1%). A fifth of slum households are missing at least 3 of their basic needs. According to an UNESCO report, education figures for slums in Bangladesh's capital Dhaka are among the worst in the South-Asian county. The report entitled, "Education for All Global Momitoring Report 2010, Reaching And Marginalized", which was launched in January from the UN Headquarters in New York, revealed schools run by non-governmental organizations play and important function in slums in Dhaka. Childhood immunization in Dhaka slum has been reported at (51-76)%. In the survey 89% reported childhood immunization, though records for each child were not polled. The rate of substance use and gambling is very alarming.

(Basharat, 2014)

Table 1.1 : Number of slums in Bangladesh

Years	Number of slums and squatter clusters**1)** **Total**	Number of slum households	Slum population
1986 in Census of slum areas and Floating Population 1997, for these same areas.	–	176745	831645
1997	2991	334431	1,391,459
2005	9048	1043329	5233217

The slum area census 1986 covered the three Statistical Metropolitan Areas (SMA), Chittagong, Dhaka and Khulna including Paurashavas and city and counted 176745 households in slums whereas this figure was recorded as 259244

With some variation, Mapping and Census of urban Slum of Bangladesh, 2005 accounted it as 977891 for the city corporation areas of these cities.

Furthermore, the number of population living in these areas was founded as 831645, 1063010 and 4876453 in the census of 1986, 1997 and 2005 respectively.

(wordpress.com, 2011)

Table 1.2: Number of slums in Dhaka city

years of survey	Number of slums and squatter clusters	Number of slum households	Slum population
1974	–	–	275,000
1986	–	121328	–
1991	2,156	–	718,143

1996	3,007	–	1500000
1997	1579	185917	754866
2005*	4966	673883	3286770

Due to the variation in the definition of slum, the figures of the table ill matched for different years, but table depicted the tremendous increase in the slum, slum household as well as Slum population in Dhaka city.

(wordpress.com, 2011)

Table 1.3: Number of slums in Bangladesh: by division

Number of slum and cluster between 1997 and 2005 census				
City	1997	% of total	2005	% of total
Dhaka Mega city	1579	52.79	4966	54.9
Chittagong SMA	186	6.22	1814	20
Khulna SMA	202	6.75	520	5.7
Rajshahi SMA	84	2.81	641	7.1
Barisal	*		351	3.9
Sylhet	**		756	8.3
14 cities	293	9.8	***	***
100-Paurashavas	647	21.63	***	***
Total	2991	100	9048	100

*Included with Khulna** Included with Chittagong*** Not coverage

According to the report of the Census of slum areas and Floating Population 1997, the largest number of slum situated in Dhaka city followed by 100-Paurashavas and 14 cities respectively. While in 2005, Dhaka remained the first followed by Chittagong, Rajshahi SMA and Barisal accordingly.

In addition to that, the report confirmed that, 1579 slums and cluster were situated in Dhaka SMA whereas this figure reached at 4966 in 2005 with a broad definition of slums. (See definition of slum).the percentages of these numbers recorded as 52.9 and 54.9 respectively.

Between 1997 and 2005, the percentages of slum in Chittagong SMA, Khulna SMA and Sylhet fluctuated in the range of 5 to 8.in 2005 census, 641 slums founded in Rajshahi SMA while it was only 84 in 1997.

The data insure that, the expansion of slums is not confined not only to divisional cities but also in the urbanized areas and Paurashavas.

(wordpress.com, 2011)

Table-1.4: **Number of slum Households and their % between 1986 and 2005 census**

City	1986	% of total	1997	% of total	2005	% of total
Dhaka Mega city	121328	68.65	185917	55.59	673,883	64.6
Chittagong SMA	30854	17.45	45143	13.5	266,182	25.5
Khulna SMA	24563	13.9	28184	8.43	37,826	3.6
Rajshahi SMA	–	–	6998	2.09	27,665	2.6
Barisal	***	***	*	*	19,460	1.9
Sylhet	***	***	**	**	18,313	1.7
14 cities	–	–	24448	7.31	***	***
100-Paurashavas	–	–	43741	13.08	***	***
Total	176745	100	334431	100	1,043,329	100

*Included with Khulna** Included with Chittagong*** Not coverage

During 1986, the number of slum households was 176745 in the three divisional

Cities including Paurashavas, while this figure increased and reported at 334431 in the six divisional Cities including Paurashavas and some urbanized areas, called SMA.in the census on the slums of six city corporation in 2005, this number recorded as1, 043, 329.however, Dhaka still occupied the first position in terms of living slum household, which was 68.65 and 64.6% in

1997 and 2005 respectively. Chittagong SMA secured the second position followed by Khulna SMA, Rajshahi SMA and sylhet containing 25.5%, 3.6%, 2.6%, 1.9% and 1.7% respectively.

(wordpress.com, 2011)

Table 1.5: Percentage of male and female In Distribution of population between 1986 and 1997 census

City	1986	1986	1986	1997	1997	1997
City	Total population	% of male	%of Female	Total population	% of male	%of Female
Dhaka Mega city	575604	52.75	47.25	745866	54.66	53.82
Chittagong SMA	138282	58.58	41.42	188839	14.05	13.07
Khulna SMA	117750	52.5	47.5	119305	8.05	9.15
Rajshahi SMA	***	***	***	29766	2.11	2.17
Barisal	***	***	***	*	*	*
Sylhet	***	***	***	**	**	**
14 cities	***	***	***	109012	7.77	7.9
100-Paurashavas	***	***	***	189670	13.39	13.88
Total population	831645	53.69	46.31	1391458	51	48.99

In 1986, the total population in slum was 831645 with 53.69 % and 46.31% of male and female respectively in three divisional cities with adjacent Paurashavas.while in 1997.this figure reached at 1391458 with 51% and 48.99 % of male and female respectively in six divisional cities with adjacent Paurashavas and urban areas. The slum population figured out as 5233217 in 2005 for six divisional cities.

(wordpress.com, 2011)

Table 1.6: Population Density: Slum Area and Overall City, 2005

City	person Per acre	person Per acre
City	slum area	city total
Dhaka	891	121
Chittagong	1032	94
Khulna	536	82
Rajshahi	272	39
Sylhet	626	52
Barisal	541	29
all cities	831	95

The density figure reflects the miseries of slum people.The average population density in slums were 831 persons per acre in 2005. Density varied from 272 persons per acre in Rajshahi to 1,032 in Chittagong. Dhaka had the second highest density at 891 persons per acre. The overall gross population density for Dhaka was less than 121 persons per acre. Thus, the population density in slums there was at least 7 times higher than average and Overall City.

(wordpress.com, 2011)

1.6 Causes of slum

1.6.1 Rural–urban migration

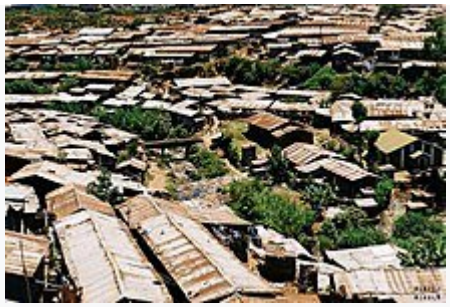


Fig 1.1

Kibera slum in Nairobi and Kenya, the second largest slum in Africa and third largest in the world. Rural–urban migration is one of the causes attributed to the formation and expansion of slums. Since 1950, world population has increased at a far greater rate than the total amount of arable land, even as contributes a much smaller percentage of the total economy. For example, in India, agriculture accounted for 52% of its GDP in 1954 and only 19% in 2004; in Brazil, the 2005 GDP contribution of agriculture is one-fifth of

its contribution in 1951. Agriculture, meanwhile, has also become higher yielding, less disease prone, less physically harsh and more efficient with tractors and other equipment. The proportion of people working in agriculture has declined by 30% over the last 50 years, while global population has increased by 250%.

1.6.2 Urbanization

Fig 1.2

A slum in . Rocinha favela is next to skyscrapers and wealthier parts of the city, a location that provides jobs and easy commute to those who live in the slums.

The formation of slums is closely linked to urbanization. In 2008, more than 50% of the world's population lived in urban areas. In China, for example, it is estimated that the population living in urban areas will increase by 10% within a decade according to its current rates of urbanization.The UN-Habitat reports that 43% of urban population in developing countries and 78% of those in the least developed countries are slum dwellers.

Some scholars suggest that urbanization creates slums because local governments are unable to manage urbanization, and migrant workers without an affordable place to live in, dwell in slums. Rapid urbanization drives economic growth and causes people to seek working and investment opportunities in urban areas. However, as evidenced by poor urban infrastructure and insufficient housing , the local governments sometimes are unable to manage this transition. This incapacity can be attributed to insufficient funds and inexperience to handle and organize problems brought by migration and urbanization. In some cases, local governments ignore the flux of immigrants during the process of urbanization. Such examples can be found in many Africa countries. In the early 1950s, many African governments believed that slums would finally disappear with economic growth in urban areas. They neglected rapidly spreading slums

due to increased rural-urban migration caused by urbanization. Some governments, moreover, mapped the land where slums occupied as undeveloped land.

1.6.3 Poor house planning

Lack of affordable low cost housing and poor planning encourages the supply side of slums. The Millennium Development Goals proposes that member nations should make a "significant improvement in the lives of at least 100 million slum dwellers" by 2020. If member nations succeed in achieving this goal, 90% of the world total slum dwellers may remain in the poorly housed settlements by 2020. Choguill claims that the large number of slum dwellers indicates a deficiency of practical housing policy.Whenever there is a significant gap in growing demand for housing and insufficient supply of affordable housing, this gap is typically met in part by slums. The Economist summarizes this as, "good housing is obviously better than a slum, but a slum is better than none".

Insufficient financial resources and lack of coordination in government bureaucracy are two main causes of poor house planning. Financial deficiency in some governments may explain the lack of affordable public housing for the poor since any improvement of the tenant in slums and expansion of public housing programs involve a great increase in the government expenditure. The problem can also lie on the failure in coordination among different departments in charge of economic development, urban planning, and land allocation. In some cities, governments assume that the housing market will adjust the supply of housing with a change in demand. However, with little economic incentive, the housing market is more likely to develop middle-income housing rather than low-cost housing. The urban poor gradually become marginalized in the housing market where few houses are built to sell to them.

1.6.4 Colonialism and segregation

Fig 1.3

An integrated slum dwelling and informal economy inside Dharavi of Mumbai Dharavi slum started in 1887 with industrial and segregationist policies of the British colonial era. The slum housing, tanneries, pottery and other economy established inside and around Dharavi during the British rule of India.

Some of the slums in today's world are a product of urbanization brought by colonialism . For instance, the Europeans arrived in Kenya in the nineteenth century and created urban centers such as Nairobi mainly to serve their financial interests. They regarded the Africans as temporary migrants and needed them only for supply of labor. The housing policy aiming to accommodate these workers was not well enforced and the government built settlements in the form of single-occupancy bedspaces. Due to the cost of time and money in their movement back and forth between rural and urban areas, their families gradually migrated to the urban centre. As they could not afford to buy houses, slums were thus formed.

1.6.5 Poor infrastructure, social exclusion and economic stagnation

Social exclusion and poor infrastructure forces the poor to adapt to conditions beyond his or her control. Poor families that cannot afford transportation, or those who simply lack any form of affordable public transportation, generally end up in squat settlements within walking distance or close enough to the place of their formal or informal employment.Ben Arimah cites this social exclusion and poor infrastructure as a cause for numerous slums in African cities.Poor quality, unpaved streets encourage slums; a 1% increase in paved all-season roads, claims Arimah, reduces slum incidence rate by about 0.35%. Affordable public transport and economic infrastructure empowers poor people to move and consider housing options other than their current slums.

A growing economy that creates jobs at rate faster than population growth, offers people opportunities and incentive to relocate from poor slum to more developed neighborhoods. Economic stagnation, in contrast, creates uncertainties and risks for the poor, encouraging people to stay in the slums. Economic stagnation in a nation with a growing population reduces per capita disposal income in urban and rural areas, increasing urban and rural poverty. Rising rural poverty also encourages migration to urban areas. A poorly performing economy, in other words, increases poverty and rural-to-urban migration, thereby increasing slums.

1.6.6 Poverty

Urban poverty encourages the formation and demand for slums. With rapid shift from rural to urban life, poverty migrates to urban areas. The urban poor arrives with hope, and very little of anything else. He or she typically has no access to shelter, basic urban services and social amenities. Slums are often the only option for the urban poor.

1.6.7 Politics

Many local and national governments have, for political interests, subverted efforts to remove, reduce or upgrade slums into better housing options for the poor.Throughout the second half of the 19th century, for example, French political parties relied on votes from slum population and had vested interests in maintaining that voting block. Removal and replacement of slum created a conflict of interest, and politics prevented efforts to remove, relocate or upgrade the slums into housing projects that are better than the slums. Similar dynamics are cited in favelas of Brazil, slums of India, and shanty towns of Kenya.

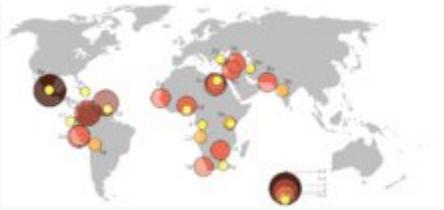


Fig 1.4

but those slums are scattered. The numbers show population in millions per mega-slum, the initials are derived from city name. Some of the largest slums of the world are in areas of political or social conflicts.

Scholars claim politics also drives rural-urban migration and subsequent settlement patter

The location of 30 largest "contiguous" mega-slums in the world. Numerous other regions have slums, ns. Pre-existing patronage networks, sometimes in the form of gangs and other times in the form of political parties or social activists, inside slums seek to maintain their economic, social and political power. These social and political groups have vested interests to encourage migration by ethnic groups that will help maintain the slums, and reject alternate housing options even if the alternate options are better in every aspect than the slums they seek to replace.

1.6.8 Social conflicts

Millions of Lebanese people formed slums during the civil war from 1975 to 1990.Similarly, in recent years, numerous slums have sprung around Kabul to accommodate rural Afghans escaping Taliban violence.

1.6.9 Natural disasters

Major natural disasters in poor nations often lead to migration of disaster-affected families from areas crippled by the disaster to unaffected areas, the creation of temporary tent city and slums, or expansion of existing slums.These slums tend to become permanent because the residents do not want to leave, as in the case of slums near Port-au-Prince after the 2010 Haiti earthquake,and slums near Dhaka after 2007 Bangladesh Cyclone Sidr.

Usually it is claimed that, a large number of poor people come to the divisional cities and adjacent paurashavas for livelihood and many other purposes, which highly contributing.

(wordpress.com, 2011)

Table-1.7 Reason for coming to slum (as % of total households)

River erosion	17.2
Uprooted	12.53
Driven out	2
Abandoned	1.22
Meager income	19.97
Insecurity	2.43
For job	39.53
Others	5.12
Total	100
Total households	334431

The eight reasons founded for migrated to slum areas in which 39.53% of slum households for looking job followed by insufficient income, River erosion, uprooted.

(wordpress.com, 2011

1.7 Living conditions

These characteristics are very common across the world. There are some new information obtained from the survey. They are given below according to the numbers.

1.7.1 Locations of the slums

Most of Slum's of Bangladesh and other countries are situated in Government land and land of railway department is one of the most common locations of Slum's. Slums are growing rapidly, now 19.4% of total population of Dhaka City lives in the Slum's and lack of government officials presence and activeness are main reason working behind the growing Slum's of Dhaka City in the Government Property. Slum's situating near the Rail Station do not have any specific place for cooking, washing, cleaning. So it is found that the Slum people are doing their washing and cleaning along with cooking under the open sky which is pretty bad for their health. Reagdling of this fact most Slum's do not have a proper access to safe water which is the main reason for water diseases which is occuring to the children mostly.

1.7.2. Gender discrimination

People like us love to maintain particular time table for having our breakfast, lunch or dinner. But people living in Slum's don't have any time table for having breakfast, lunch or dinner. Slum people only have their meal when ever they are able to cook that and cooking of meal depends on generating income or on earning money. So unless they are able to earn money they can not hope for having meal. So after knowing some facts like this I feel very lucky and very sad at the same time. I feel lucky because i don't have to Waite to earn to have my meal and I feel sorry and sad after knowing childrens who are younger than me have to earn first every day to ensure meal every day.

1.7.3 Sanitation system

It is really unfortunate to see that Slum's situating inside the Capital city do not have a healthy and permanent sanitation system. Most of the slums have hanging latrines on the water bodies which is making the water bodies polluted. Sanitation system highly related to the environment. Most of the slum dwellers normally use direct pit or single pit. It makes the environment polluted and unhealthy. Most of the slum dwellers do not use soap after using the toilet. They normally

use water. Again many of the children toilet in the open places in the slum areas. Therefore diseases are frequent in the slum area. All of these unconsciousness and lack of positive steps from the Government are making the environment polluted. It is highly alarming that, the toilet and sanitation facilities are absolutely unsafe as well as unsatisfactory. The three pie diagrams depicting toilet facilities show that, unsafe and unhealthy toilet facilities occupied the majority percent of toilet in the slums. such as temporary (79.45%) ,Kancha (53.80%) and pit (52.8%) in 1986,1997 and 2005 respectively. even open space were used and still using as toilet which accounted 8.99% and 4.1%in 1997 and 2005 respectively. while the safety toilets were few in numbers such as sanitary (20.55%) and sanitary (7.93%),pucca(20.14%) in 1986 and 1997 respectively.

In addition to that, latrines linked to sewers and septic tanks and water sealed latrines are considered safe from a hygienic standpoint. Only 28.8% of slum households had access to one of these three types of latrines in 2005. Dhaka slum residents had the best access to safe latrines (35.6%) while those in Sylhet and Barisal had very poor access (only 2.1% and 0.4%, respectively) for the same time. Pit latrines, a variety widely regarded as unsafe, were common in slum areas. In almost all slums, latrines were usually shared by two or more households. In 13.4% of slums, one latrine was shared by 11 or more families.

(wordpress.com, 2011)

1.7.4. Environment

Environment of the slums areas are somewhat different. You will not believe until you see with your own eyes. Normally the environment is very unhygienic and polluted. I find most Slums people are not aware and interested to know about the negative consequences of living in a Unhealthy environment. Because of unconsciousness and lack of awareness they do not pay any attention about making the the surrounding area of their Slum clean. Now-a-days many well known NGO's are working for rising awareness in the rural areas of Bangladesh. But they are forgetting or ignoring about the Slum people who came here from the rural areas. So NGO's and other Government Organization should pay an attention to make them aware of the situation before it gets worst.

(wordpress.com, 2011)

1.7.5. Risky Life of Slum

The People who live in the slums area usually lead a very risky life. They are always prone to several diseases due to unhygienic environment. Many of us might have an idea that people living in those Slum's are not aware of the fact that it is too much risky. Any kind of natural disaster can make a lots of damages and losses of life. But most of the Slum people are living there after knowing all the possibilities of occurring accidents. For the Slum people "Living today is more important than tomorrow."

(wordpress.com, 2011)

1.7.6. Formation and structure of slum

In the Dhaka city there are mainly three types of Slum's are found. One is made of Tine, another is made of Bamboos and last one is made of Poly bags. Among all the three types the most common types that is seen frequently while moving in the Dhaka city is the Slum's made of Poly bags. Slum's, which are made of Poly bags, are mostly temporal and most of them contain one room only. Numerous efforts are given to have a financial position, which make situation suitable for the Slum people so that they can build this kind of tiny house.

Not only in Dhaka but also in other cities of the sub continent same types of slums are found. Slums area and formation in India and Bangladesh are almost similar. The ratio of slum dwellers living in India is comparatively higher than Bangladesh.

(wordpress.com, 2011)

Table-1.8 Housing Structure (percentage of households)

Housing Structure (percentage of households)			
	1986	1997	2005
Jhupri/Shacks/Mud	20.55	41.41	11.3
Bamboo structure/ Tong	44.66	0	0
Tin shed	30.48	28.33	0
Tong	0	8.57	0
Chhai	0	17.69	0
Pucca	0	0.91	0

semi pucca	0	3.09	42.4
Kutcha flimsy structure	0	0	44.8
Dilapidated old buildings	0	0	1.1
Others/better quality	4.31	0	0.5
total	100	100	100

The Housing Structure of slum dwellers is very poor. According to the report of the slum census-1986, 44.66% households lived in Bamboo structured houses followed by Tin shed 30.48% and Jhupri/Shacks/Mud 20.55%.however, in 1997, Jhupri dominate housing structured by capturing the highest portion 41.41% and reduced to 11.3% in 2005.Conversely, 44.8 % households lived in Kutcha housing followed by semi pucca 42.4% and old buildings 1.1% respectively.

(wordpress.com, 2011)

1.7.7 Cooking system

The cooking system in slums area is very difficult. They do not have any specific place to cook. They can not use any fuel or gases for the purpose of cooking. Even many families share one cooing place. Therefore it becomes more difficult and time consuming. They normally use paper to make fire and their cooking places are made of soil. They can not afford to buy wood or any other things to make fire. They usually cook under the open sky. Slums dwellers do not have separate room for cooking. Mothers or any female person of the family usually do the work of cooking. The slum dwellers usually use straw leaves, gas etc. as fuel for preparation of their meals. Wood is still the main sources of the fuel in the slum areas. the data states that, in 1986, the majority percent (71.60%)of the slum household used wood as fuel followed by 10.60% straw/leaves/cowdung,7.44% gas,4.79% husk and 3.38% kerosene etc.

But the census report- 2005 claimed that, gas has become the second sources of fuel in the slum and 44.6% of households depend on gas. It was not available in Khulna, Rajshahi and Barisal. In Dhaka, 81.2% of clusters and 57.6% of households in slums had access to cooking gas while in Chittagong and Sylhet gas was available to only 27.9%.

(wordpress.com,2011)

1.7.8 Education

Though education is one of the fundamental human needs but most of the children can not have it. Many of them can not go to the school. Very few can pass the primary level of their education. They normally get their basic their basic education in their slums where many organizations come to teach then once or twice in a week. Only about 20% of them can to go to primary school but can not continue after their primary level of education. There are many reasons behind this. Poor economic condition is the most common reason of it. Parents can not afford to carry the expenses to teach their children in schools. Again low social class status make them thinking that it is not necessary to teach them as it will not help them to do something special in life. Even many of the parents take their children to work with them thinking that they can help and associate them. Most of the slum dwellers are illiterate, there are many who can not write anything except their own name. But now a days the percentage is raising high as many of the world's organizations are coming forward to give education among the slum dwellers. And it is very hopeful to know that many private organizations are also coming to help the slums dwellers along with government agencies.

(wordpress.com, 2011)

1.7.9 Common illness

Illness is a common cause of crisis faced by slum dwellers, but the type of health shock varies. The major illnesses were joint pain or back pain, peptic ulcer disorders (PUD), dysentery, diarrhoea, fever, cough, typhoid, skin diseases and scabies, hypertension, heart disease, tuberculosis, ringworm, jaundice, tumours, cancer, pregnancy-related complications, asthma, hydroceles, eye problems, dental complications and injuries from road accidents. There were seasonal variations in diseases, but fever, diarrhea, dysentery and jaundice were common around the year. During winter, coughs, fevers, pneumonia, chicken pox, scabies and asthma were more prevalent. During the summer months, fever, diarrhea, dysentery and chicken pox were common. In the rainy season, fever, diarrhea, cholera, scabies, coughs and colds were frequent. Common acute illnesses were jaundice, typhoid, pneumonia, pregnancy-related problems, tuberculosis, while common chronic illnesses included asthma, gastric, cancer, tumours, hydroceles, hypertension and heart

disease. Based on the quantitative study, the numbers of common diseases were recorded from the slum dwellers in Dhaka city.

(Baten *et al*., 2013)

1.7.10 Health related challenges

Most slum dwellers faced the constant threat of a health-related shock. They had a higher prevalence of illness and a lower capacity to access proper treatment in time. Although there was some access to different types of health services, nothing is cheap in a mega-city like Dhaka, especially not for the extreme poor.

(Baten *et al*., 2013)

1.7.11 Health seeking behavior

Even though they are residents of Dhaka, many slum dwellers did not have access to the range of modern health facilities within the city. Public, private and NGO sectors provided health services that are not always affordable for the extreme poor. They were also sometimes unable to properly utilize services because of poor information or a lack of awareness. Low literacy levels, in particular, among urban slum dwellers hindered access to healthcare. Due to these limitations on access and affordability, and the fact that living conditions meant that they were more likely to become ill, many of the urban extreme poor visited other, less effective, service providers.

(Baten *et al*, 2013)

1.7.12. Smoking, alcohol, and drug abuse

Smoking of cigarettes or biri was predominant among men in slum areas (60 percent), followed by District Municipalities (51 percent). Smoking of cigarettes or biri begins at

early age in Bangladesh and increases with age; by age 15-19 slightly above a third of men (35 percent) in slums and District Municipalities were already smokers and across all ages the prevalence of smoking was consistently lower by 12 to 15 percentage points among nonslum than slum men. Smoking was more prevalent among the poorest men and those having no education. Biri smokers tended to have more intense habits than cigarette smokers. Rates of ever use of drugs or alcohol were identical across slum and slightly higher among men in District Municipalities (17 percent). Current use of drugs or alcohol by men was less than five percent across domains.

(Angeles *et al*, 2006)

Table-1.9 Literacy of slum people by locality 1986 and 1997

City	1986	1997
Dhaka Mega city	12.61	14.35
Chittagong SMA	16.48	16.99
Khulna SMA	15.08	16.67
Rajshahi SMA	***	13.36
Barisal	***	*
Sylhet	***	**
14 cities	***	14.66
100-Paurashavas	***	12.53
National	**13.6**	**14.66**

Literacy refers to the ability to write a letter. The literacy rate of slum's population was14.66% where the male literacy rate was 17.88 and female literacy rate was 11.32% respectively, which was slightly higher than that of 1986 figures. But it was significantly smaller than the literacy rate of 32.4% in 1991 census. It appears that literacy rates very low in slum areas.

1% of slum households, respectively.

(wordpress.com, 2011)

1.7.13 Sources of drinking water:

The census report-1997 states that, the 55.42% of slum households used Tube-well as the sources of their drinking water followed by municipal tap 21.59%, others 15.35% and river/canal 2.88% respectively. Only 1.01% households were collected drinking water from the ponds.

Conversely, 61.10% households were getting their drinking water from the municipal taps followed by tube-well 37% and others 1.90% respectively as reported in slum census-2005.

1.7.14 Income Pattern and poverty rate in Slums

Table-1.10 Households' Monthly Income Pattern by City (percentage of households)

City	<2000 tk	2001-3000tk	30001-4000tk	4001-5000tk	above 5000 tk	Number of households
Dhaka	3.8	19.6	34.5	27.6	14.6	673,883
Chittagong	21	36.8	27.6	11.6	2.9	266,182
Khulna	34.4	54.3	9.4	1.5	0.3	37,826
Rajshahi	8.8	52.1	33.9	4.7	0.5	27,665
Sylhet	0.8	1.9	22	69.3	5.9	18,313
Barisal	44.6	44.8	9.9	0.6	0.1	19,460
all cities	10.7	26.8	29.6	23.7	9.1	1,043,329

The census report-2005 explained that, 90.8% slum people lived below the urban poverty line (tk.5000 as **estimated by the CUS study team for May 2005) with** 37.5% having incomes below Tk. 3,000 per month**. Most of households (29.6%) income range was 2001**-3000tk followed by 2001-3000tk **(**26.8**%),** 4001-5000tk **(**23.7**%) and** <2000 tk **(**10.7**%)** respectively. on the other hand, only 9.1% of households had the income.

(wordpress.com, 2011)

Significance of the study

A comprehensive and proper approach need to be planned and implemented by both the government and NGOs for the improvement of living standards of the slum-dwellers. Dhaka city is one of the most densely populated cities in the world. As has already been mentioned over 60 per cent of them live in slums with inadequate facilities. This helps to turn them into breeding grounds of social and political contention. This problem must be addressed now before it gets out of control and becomes a cauldron liable to bubble over devouring any progress that may have been achieved.

(wordpress.com, 2011)

The study was designed to study the life style and their living conditions of the slum dwellers and their impact on the disease pattern of slum.

Objectives of the Study

The objective of the study is to gain a better understandind of the life style of slum dwellers in different areas of Dhaka city and also to understand the role of the living conditions, daily activity, family status, sanitation system etc.

2.1 Quality of life style of slum dwellers (with special reference to Sri Lanka)

In case of social transmittance, some anti-social phenomena have been occurred. Especially in this modern world, there are different kinds of social phenomenon. Poverty, suicide, prostitution, alcoholism, malnutrition, child deviancy, child abuse are most affected social problems which the present society have to face in these decades. According to several studies, poverty is the main and center problem among them. Because of this center problem, many other related problems have arisen. These social effects directed to create many social issues such as unemployment and under employment, malnutrition, illness, low income dwellers as slum and shanties, prostitution, abortions, criminals, and other social and health related problems etc. On the other hand these social experiences help to derive new social problems. Therefore, this study focuses to explore urban slum residences. It researched slum resident's life style through quality of life social indicators in this study. As consequences, it makes a platform to discuss and make arrangements to uplift their quality of life.

(Wasantha , 2015)

2.2 Socio-economic conditions of slum dwellers: A theoretical study

The socio economic condition of the slum dwellers is generally poor because of the lack of basic social amenities; functional skills, proper education, source of the income, hygiene andhealth resources. However, slum dwellers directly or indirectly play an important role in nation building. With this point of view the study of slum dwellers becomes important. This paper attempts to demonstrate the theoretical ideas relating to socio-economic conditions of slum dwellers and its reasons and to extend appropriate measures for the improvement in the conditions of slum dwellers. Since, slum dwellers are the stock of the potential human resource, it can be developed through skill enhancement programmes initiated by the government and through appropriate public action relating to social provisions and redistribution social amenities. This paper is conceptual in nature and based on detailed literature collected from various sources like books,

research articles, NSSO reports, Census of India etc. Lastly, this paper suggests the effective measures to minimize the problems and raise the living conditions of the slum dwellers.

(Brijendra Nath , 2016)

2.3 Slum rehabilitation in the context of urban sustainability : a case study of Mumbai

In the last two decades, migration from villages and small towns to metropolitan areas has increased tremendously in India. This leads to the degradation of urban environmental quality a nd sustainable development especially in the metropolitan cities. The problems faced by the people living in the urban areas of India have become major concerns for the government over the last two decades. Slums are considered to be the major issue within many urban areas; particularly problems related to transportation, population, health and safety. India is one of the fastest developing countries with many metropolitan cities (e.g. Mumbai, Pune, Bangalore, Hyderabad, Delhi and Chennai). To explore the effect of rehabilitation of slums on urban sustainability,Mumbai was selected as a case study. Compared to the other metropolitan cities in India, Mumbai is one of the biggest metropolitan regions and capital of the state of Maharashtra with many sl-ums varying in sizes.

In addition, every year millions of rupees are being spent to resettle and rehabilitate slums to make Mumbai sustainable. It is reported that around 6 percent of the total land holds nearly 60 percent of the total Mumbai population (CBC, 2006). From 1980 onwards, the rate of migration and the sprawling nature of slums into the city has become an major issue, although many organisations are working towards development of Mumbai, the conditions are not conducive to achieving urban sustainable environment as most of the organisations are not working on a united front. Also, various researchers have reported that to maintain the pace of sustainable urbanisation, a holistic approach to sustainable development needs to be considered. Considering today's poor urban environmental quality in Mumbai, there are many projects under health and education which affect thousands of families. The majority of families affected by urban development projects are located in slum areas which are under consideration for resettlement and/ or rehabilitation. The aim of this research is to examine slum areas and their effects on sustainable urban development. To accomplish the above aim, a case study based approach,engagingaseriesfaceface interviews, was used. As a part of this research, an urban development project funded by the World Bank to achieve urban sustainability in Mumbai

Metropolitan Region (MMR) was explored. Also, several visits to other slums and rehabilitated areas were conducted to identify the qu-ality of life in slums and rehabilitated are collected.

(Amey *et al*., 2009)

2.4 A study on the lives of slum dwellers of urban Lahore

A slum is a rundown area of the city characterized by substandard housing and other basic necessities of life. This study is carried out to analyze the quality of life, extent of poverty, health and hygiene conditions amongst the slum dwellers of Urban Lahore, Pakistan. The target population is stratified according to socio-economic status. This cross sectional study included 150 respondents from urban slum areas of Lahore, Pakistan. Data is collected through a structured questionnaire. The results of the study revealed that the average income of the slum dwellers is above the poverty line of Pakistan. The average monthly income of slum dwellers varies with respect to slum area. The infant mortality rate amongst the slum dwellers is lower than that of Pakistan; however the fertility rate is quite high. Almost hundred percent of the women reported that their children were vaccinated against Polio and majority were satisfied with the food and health facilities. Insufficient water, sanitation facility and lack of access to electricity were the main problems reported. Awareness about health, safety and hygiene of Slum dwellers is considerably low due to inadequate education.

(Kalsoom *et al*., 2014)

2.5 The socio-economic condition of female slum dwellers: a study on slums in Dhaka

Bangladesh is a land of grueling poverty in terms of economic sense. The country lacks significant amount of natural resources except 150 million populations. Dhaka is the fastest growing mega-city in the world. Annually, the city draws an estimated 300,000 to 400,000 mostly poor migrants who provide critical employment for the city's industries and services. Most migrants come from rural areas in search of opportunities, which can provide new livelihood options for them. As one walks through Dhaka, the pervasive poverty is evident, as is the inequality between rich and poor. In 2010, the population of the city of Dhaka has projected at 17.6 million people, with up to 60% in the slums. The poor mainly live in slums scattered throughout the city, with close to 80 percent of slums located on privately owned land creating considerable institutional challenges in terms of

basic service provision. The article explores the socio-economic condition of females in slum area of Dhaka City. The finding of the study is social economic condition of female in slum area of Dhaka city of Bangladesh.

(Shadia , Farhanaz 2015)

2.6 Socio-economic status of slum dwellers: A case study of Uttara periphery, Dhaka

The present study was an attempt to assess the living status of slum dwellers at Uttara, periphery, Dhaka. A slum is a heavily populated urban informal settlement characterized by substandard housing, squalor, most lack reliable sanitation services, supply of clean water, reliable electricity, and other basic services. Analysis showed that the average money spend for food and groceries was Tk.2,757.41 (44.86%) whereas the average monthly house rent including utilities was Tk.1,968.33 (32.02%). It was note that educational expense of children was Tk.555.00 (9.03%). per month while cost for health care per month was Tk.457.5 (7.44%). It was observed that they live in unhygienic surroundings. In the slum area, the youngest and adult age group (0-24 years) had morbidity rate of 30.8% followed by population in the age group 35-39 years (17.9%). Morbidity was lowest (5.1%) for the population belonging to age group 30-34 years, followed by morbidity of population aged 40 and above (each group has morbidity rate 12.8%). Slum people were found to be engaged in day labourer, small job services, rickshaw pulling, and little business.

(Md. Khalilur *et al*.,2015)

2.7 Assessing the livelihood of slum dwellers in Dhaka city

The present study was an attempt to determine the factors affecting the livelihood of the socioeconomic improvement of migrants and to analyze the causes of rural-urban migration in slum areas. Slum areas have no available formal education facilities and slum people were found to be engaged in rickshaw pulling, day labourer, petty business, small job services etc. Analysis showed that migration and taking in micro credit were beneficial for the slum dwellers. Receiving and utilizing micro credit income level, consumption, expenditure and socio-economic status of the slum dwellers improved to some extent. Due to participation of slum dwellers in NGOs, their economic, social and decision making improved substantially. Credit disbursement through NGOs with integrated approach could bring positive changes in the life of poor slum women as well as their community. Findings showed that Fifty six per cent people migrated to Dhaka city for economic reason. Factors of migration had a significant contribution of rural urban migration

and also significant livelihood improvement has taken place due to micro credit. At the individual level, the women were benefited in terms of mobility and skill, self confidence, widening of interests, access to financial services, build own savings, competence in public affairs and status at home and in the community that lead a better awareness for enhancing women's empowerment. However, there is a need for proper training for sustainable result in the long run.

(Alamgir *et al.*, 2014)

2.8 Health care seeking behavior of slum-dwellers in Dhaka city

The slum population, whether slums are legally created or not and whether the dwellers live on the formal sector occupations or not, should get the basic amenities of life, including healthcare, for the benefit of the entire population of cities. The need for formulation of appropriate policy and proper implementation thereof for rapid improvement of health in the cities, especially in the slums of the cities, is urgent. That in turn requires information and evidence about the constraints on both demand and supply sides of healthcare use in the urban slums. The pertinent issue of this study was what are the determinants of low demand for healthcare from the qualified providers in the slums of Dhaka city. The purpose of this study was to address the demand side of the issue using a household survey on slum population in the largest concentration of slums in the country- Dhaka city. The survey assessed the level of demand for health care and access to health care from qualified providers, and identified the determinants of health care seeking behavior. The results of this study will be useful for formulating the appropriate policies to increase the demand for health care as well as access to health care so that use of health care by the slum-dwellers rises to the desired level.

(Nahid *et al*., 2015).

2.9 Do the slum dwellers enjoy the basic constitutional and economic rights as a citizen in Bangladesh?

Bangladesh is a country of about 156million people including nearly 7.81 million of slum people. This paper investigates 28 years data for 1986- 2014 periods on the living standard of slum dwellers of Bangladesh. It presents the different forms of deprivations, sufferings and miseries of slum people from basic needs including social, constitutional

and economic rights. More specifically, the wretchedness of slum dwellers in housing, drinking water, sanitation, food intake, healthcare, education, employment, income patterns, social status and security, economic and public assistance has been explored in this paper. In addition, poverty scenario and services of social organization among slum people has been focused in this paper. Finally, it recommends some policies to improve the living conditions of slum dwellers in Bangladesh(Basharat , 2014). 2.10 Sustainable urban development of slum prone area of Dhaka City Dhaka, the capital city of Bangladesh, is one of the densely populated cities in the world. Due to rapid urbanization 60% of its population lives in slum and squatter settlements. The reason behind this poverty is low economic growth, inequitable distribution of income, unequal P a g e | 33 A study on life style and disease pattern of slum dwellers in Dhaka city distribution of productive assets, unemployment and underemployment, high rate of population growth, low level of human resource development, natural disasters, and limited access to public services. Along with poverty, creating pressure on urban land.

(Sinthia, 2013).

3.1Types of the study

It was attempt to measure the understanding of life style of slum dwellers in different areas of Dhaka city, environmental effct in their living condition, prevalance of diseases occuring and to establish the differences of their improvement which differs from slum to slum.

3.2 Place of Study

The study was conducted in slums of different areas of Dhaka city like Meradia, Aftabnagar, Keodhala, Junghal, Badda.

3.3 Study population

In this study, Targeted population was general people aged between 18-60 years

3.3.1 Inclusion criteria of the cases

i) Slum dwellers

ii) People aged between 18-60 years

3.3.2 Exclusion criteria of the cases

i) People below 18

3.4 Sample Size

Sample size of the study was 200.

3.5 Study Period

The duration of the study was about six months that started from December 2016 to May 2017.

3.6 Data Collection Method

This paper consisted of multiple choice questions. An English language survey was developed based on information drawn from relevant literatures pertaining to life style of slum dwellers in urban areas in some developing countries. The English language survey was delivered in Bengali language to the slum dwellers for their better understanding. Questionnaires are covered to understand the reasons of diseases, how living condition acting on disease, response against disease etc.

3.7 Questionnaire Development

The pre-tested questionnaire was specially designed to collect the simple background data and the needed information. The questionnaire was written in simple English language in order to avoid unnecessary misunderstanding but delivered in Bengali language to the slum dwellers. The Questionnaire was developed based on the study of different journal papers to study the influence of life style on the diseases, and as well as to study response against disease in Bangladesh. Survey questionnaire form has mainly different parts.

3.8 Sampling Technique

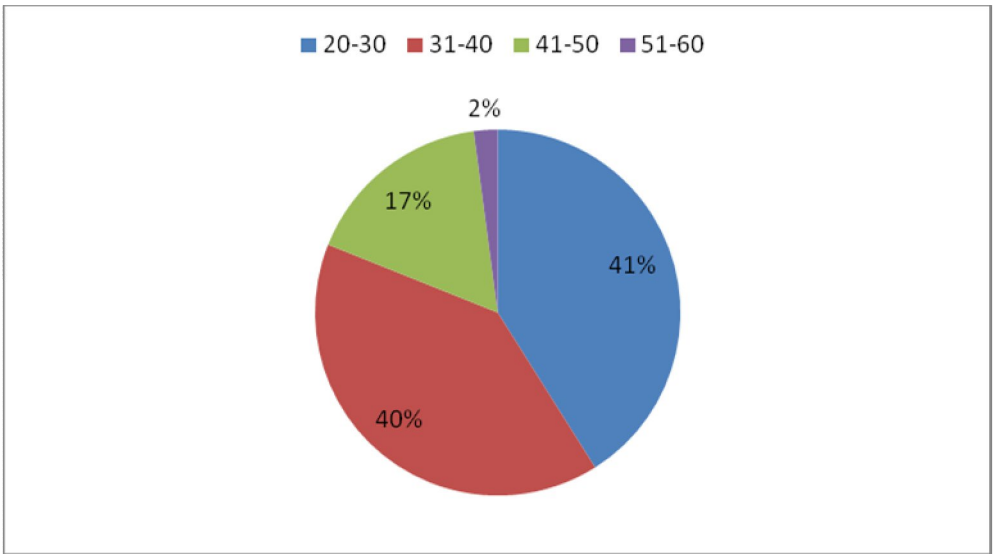
In this study random sampling was followed.

3.9 Data Analysis

After collecting, all the data were checked and analyzed with the help of Microsoft Excel 2010. The result was shown in bar, pie and column chart and calculated the percentage of the study.

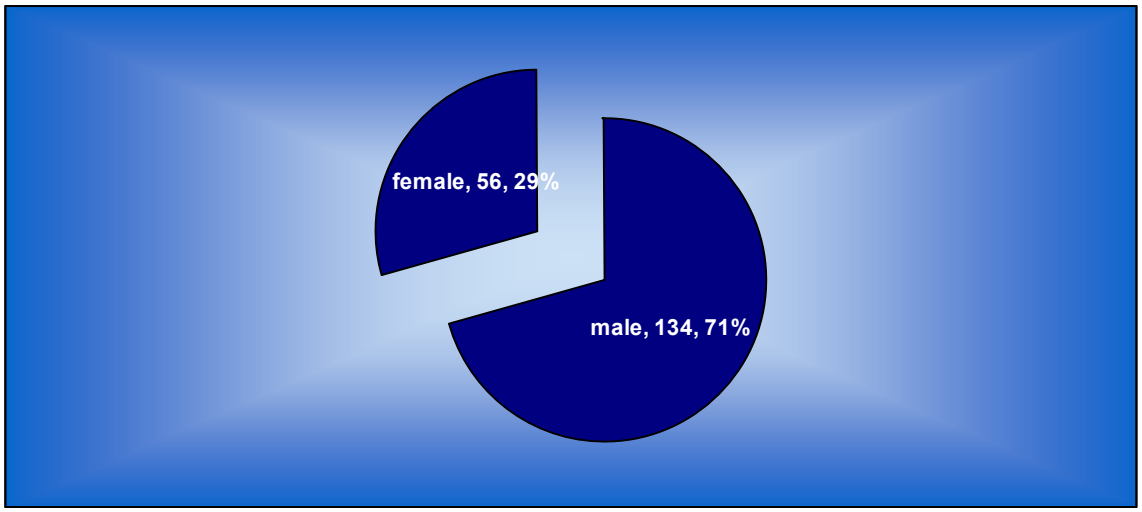
4.1 Personal Information

4.1.1Age Distribution:



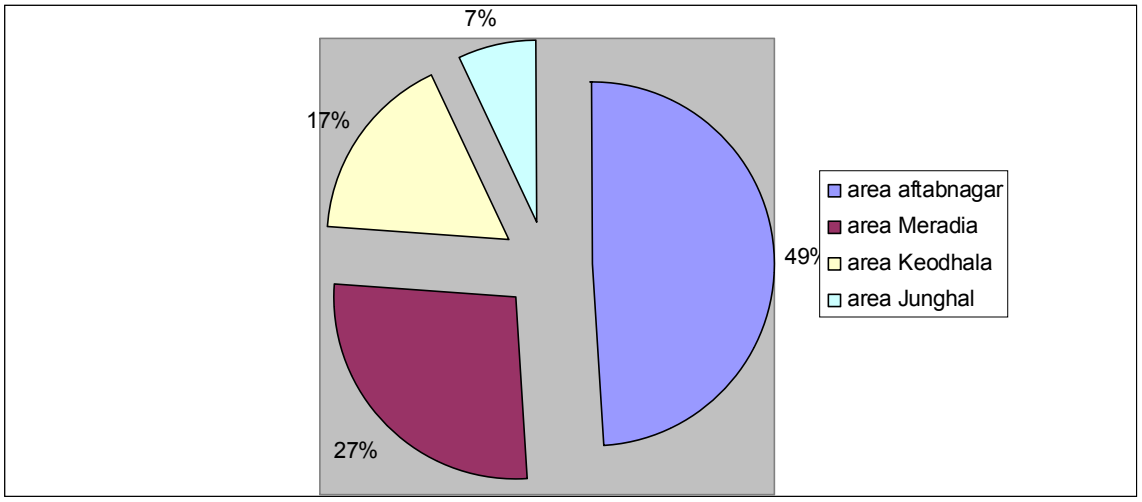
* About 41% of people's age ranges from 20-30.
* About 40% people's age range from 30-40.
*17% people's age was from 41-50.
* And the remaining were from between 50-60.

4.1.2 Gender Distribution:



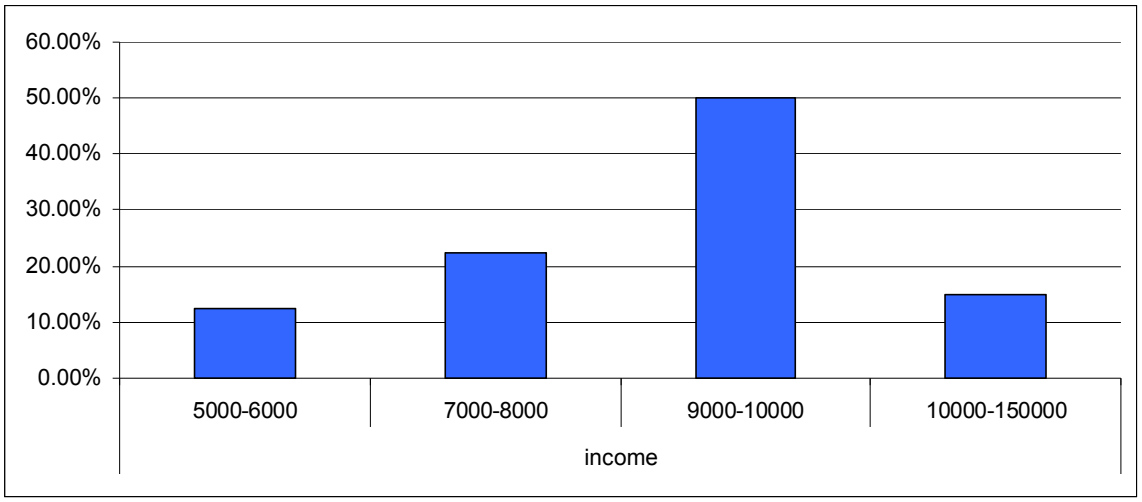
I collected 200 data. Among them 134 people were male and 56 people were female. Male accounts for 71% and remaining 29% were female.

4.1.3 Area Distribution:



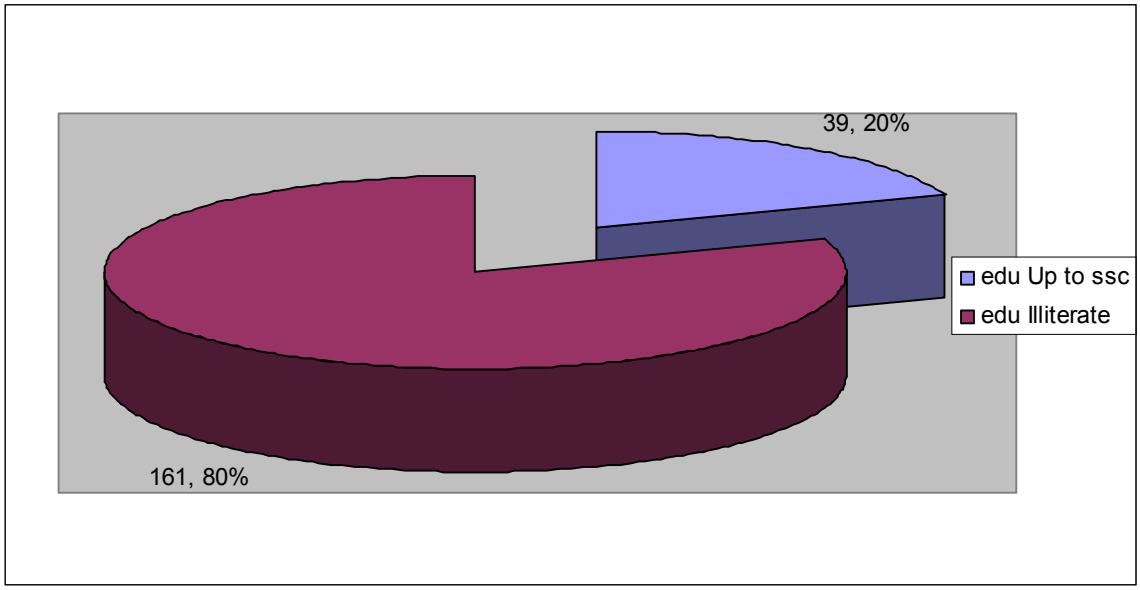
* 49% of the data were examined in Aftabnagar. 27% of the people were from Meradia, 17% of people were from Keodhala and 7% of people were from Junghal.

4.1.4 Monthly Income



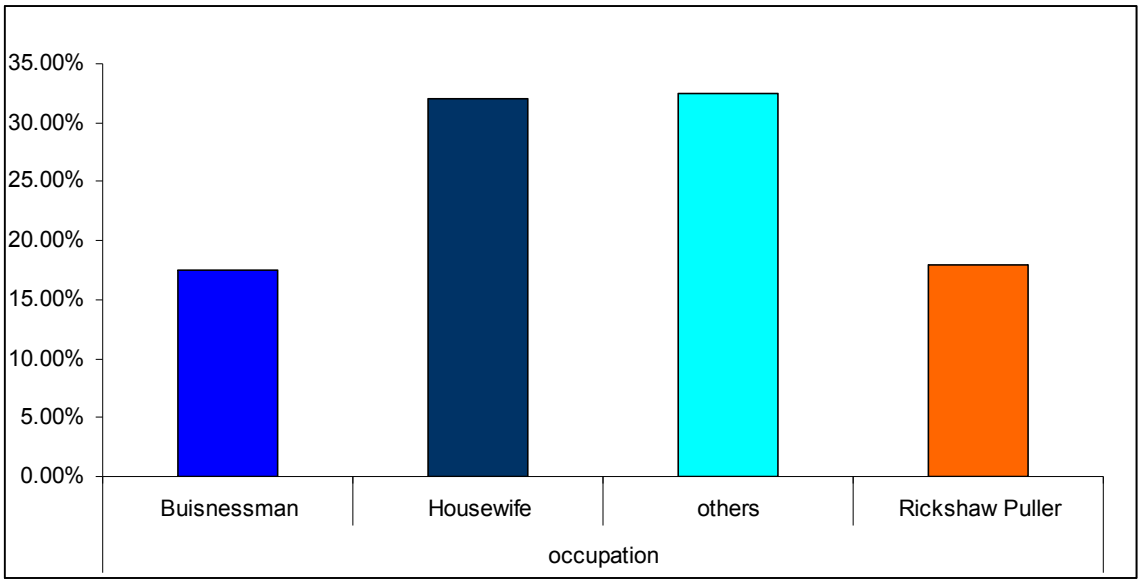
*12.5% of slum people among those people have a monthly income of between 5000-6000 and about 22.5% of people have the income of between 7000-8000. I found that that about 49.5% of people income more than 10000 taka as both the member of the family are engaged in work.

4.1.5 Educational Status:



*About 19.5% peoples education were up to ssc and the remaining 80.5% were illiterate.

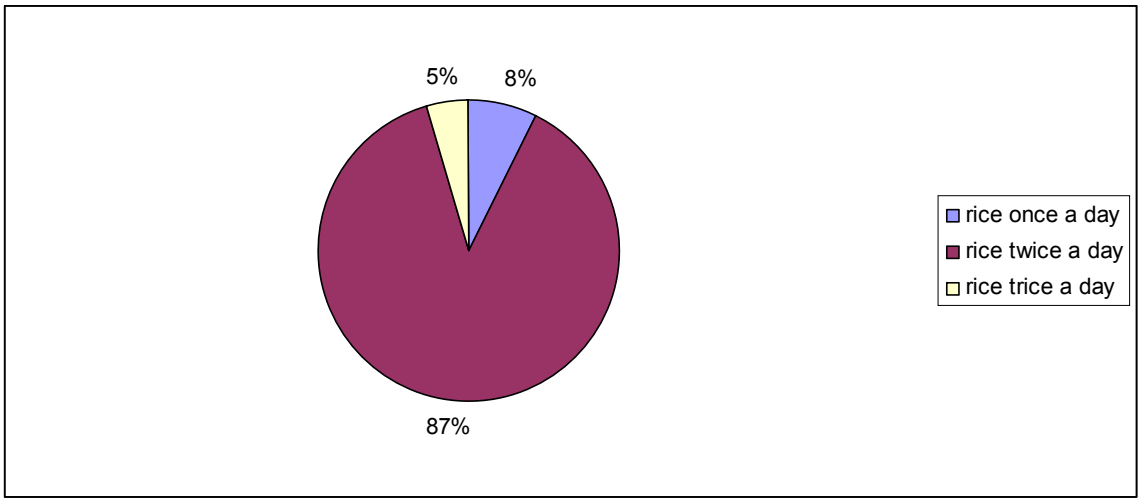
4.1.6 Occupational Status:



*17.5% of the people were businessman, 32.5% were housewife, 32% were engaged in others work and the remaining were the rickshaw puller.

4.2 Food, Drinks and Habits

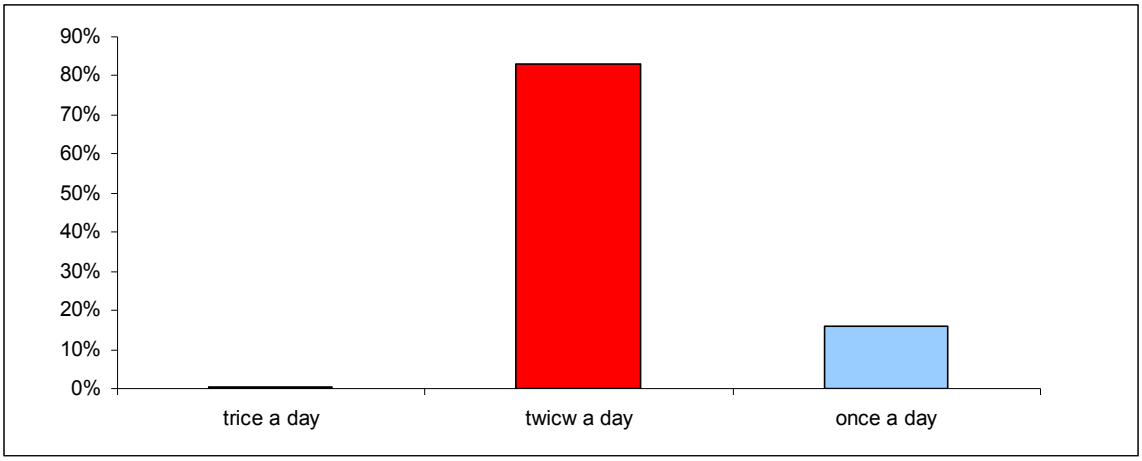
4.2.1 Rice Intake:



1) Among the all responds there were about 7.5% people eat rice once in day daily and 88% of people were taking rice twice in a day.

2) The remaining 4.5% slum people used to intake rice trice in a day and that amount was very low.

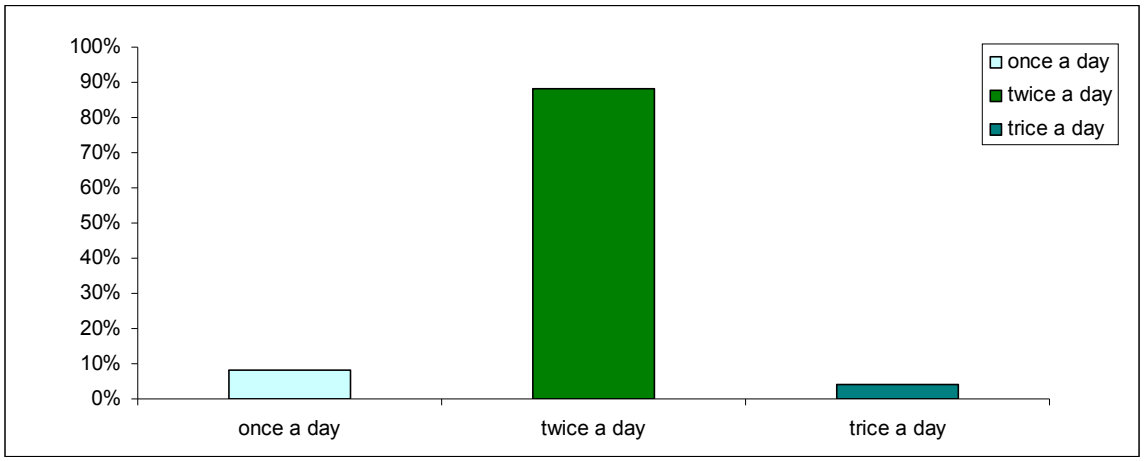
4.2.2 Bread Intake:



1) From all the responding slum dwellers It was found that there were 16.5% people used to intake bread twice in a day daily.

2) About 83% of slum dwellers were taking bread once in a day daily which accounts for the highest ratio in my research.

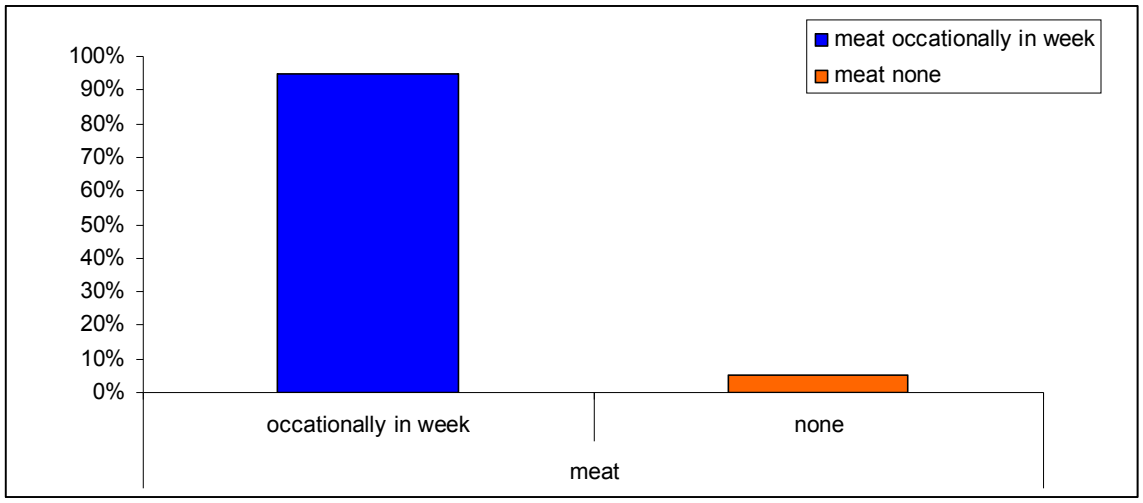
4.2.3 Vegetable Intake:



1) Slum dwellers can not afford rich foods like meat and fish. They mainly rely on vegetables. In taking vegetables twice in a day has been predominant. About 88% people intake vegetables twice in a day daily.

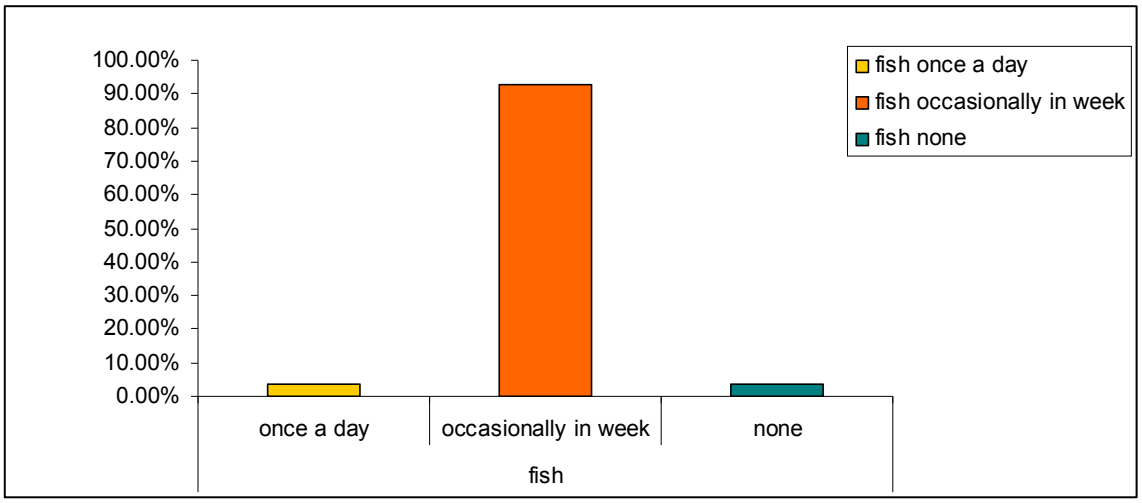
2) Among all the people responded in my survey it was found that about 8% of people were taking vegetables once in a day. 4% of people were used to take vegetables thrice in a day.

4.2.4 Meat Intake:



1) Among all the people responded in my survey it was found that there is 95% of people who eat meat occasionally in a week. And the others accounts for 4%.

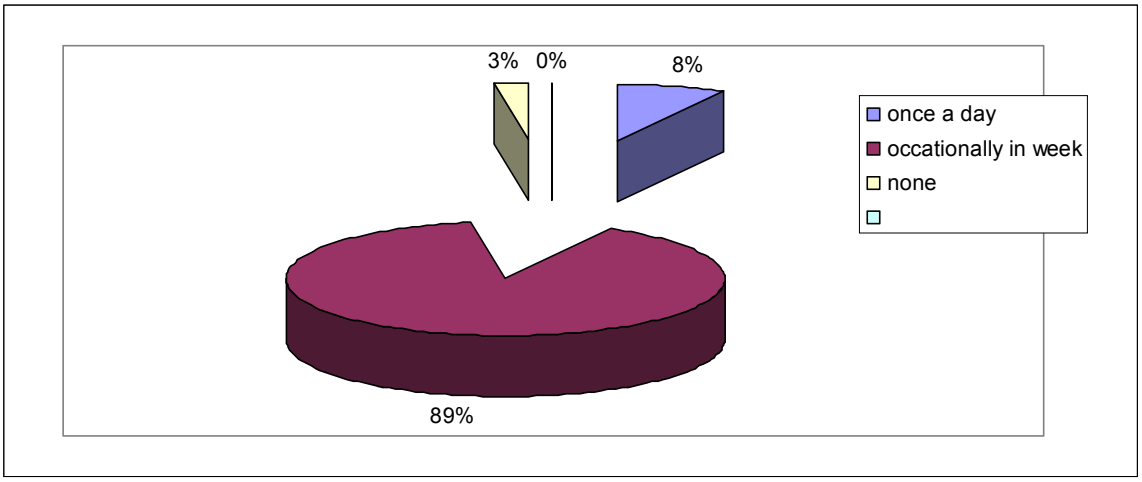
4.2.5 Fish intake:



1) Among those 200 people there were many who could not afford to buy and eat fish daily. There were 93.5% of people who could eat fish occasionally in a week.

2) 3% and 3.5% of people used to intake fish once in a day and twice in a day accordingly.

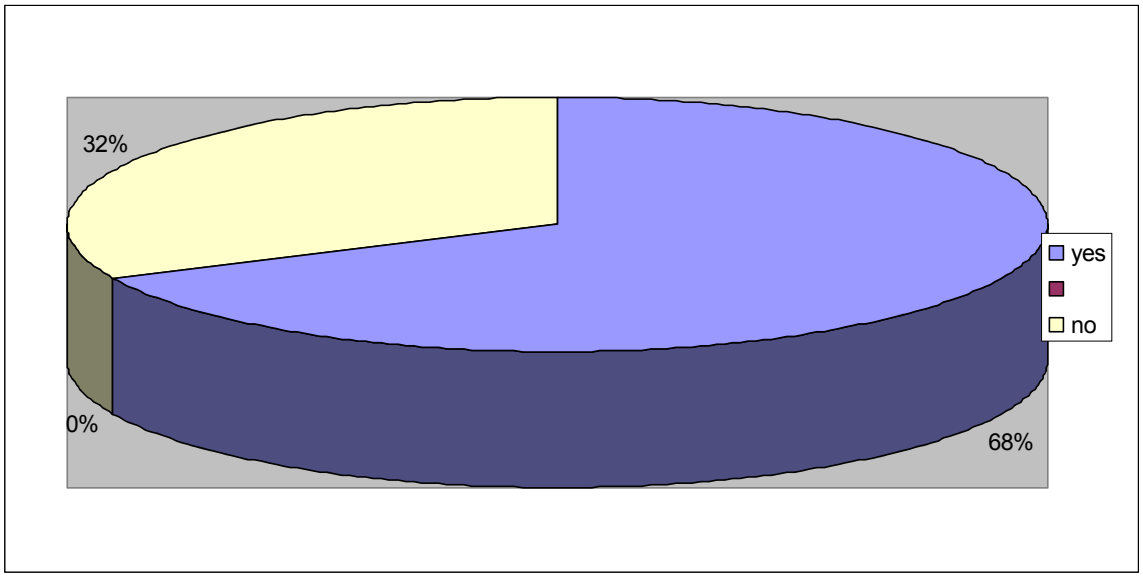
4.2.6 Egg Intake:



1) It was obvious that slum dwellers used to intake egg more compared to meat and fish as egg cost not cost them much. About 56% of people were used to intake egg in their meal occasionally.

2) There were 40% of people among those 200 people who eat egg once and twice in a day in their

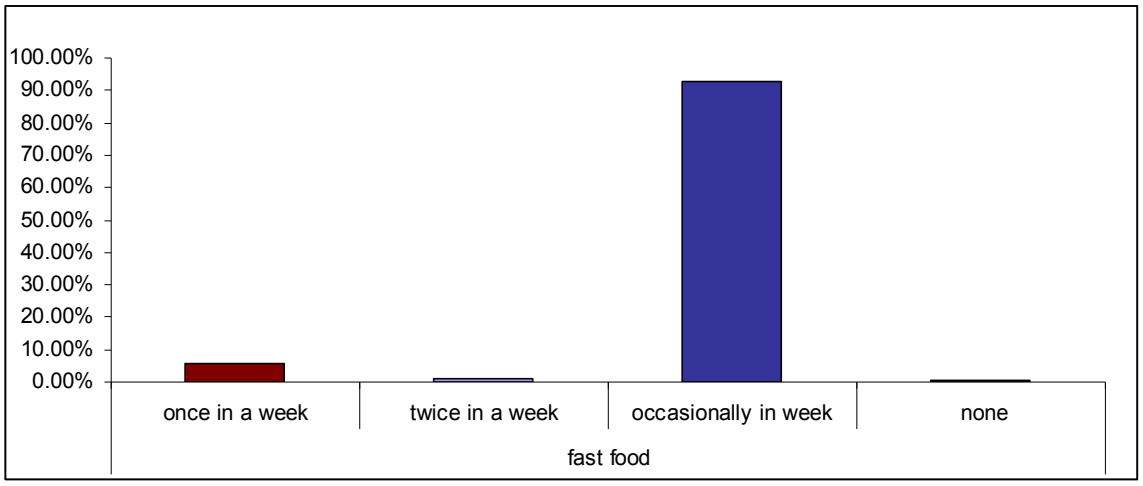
4.2.7 Raw Salt Intake:



1) About 69.43% of slum dwellers intake raw salts and the remaining people do not.

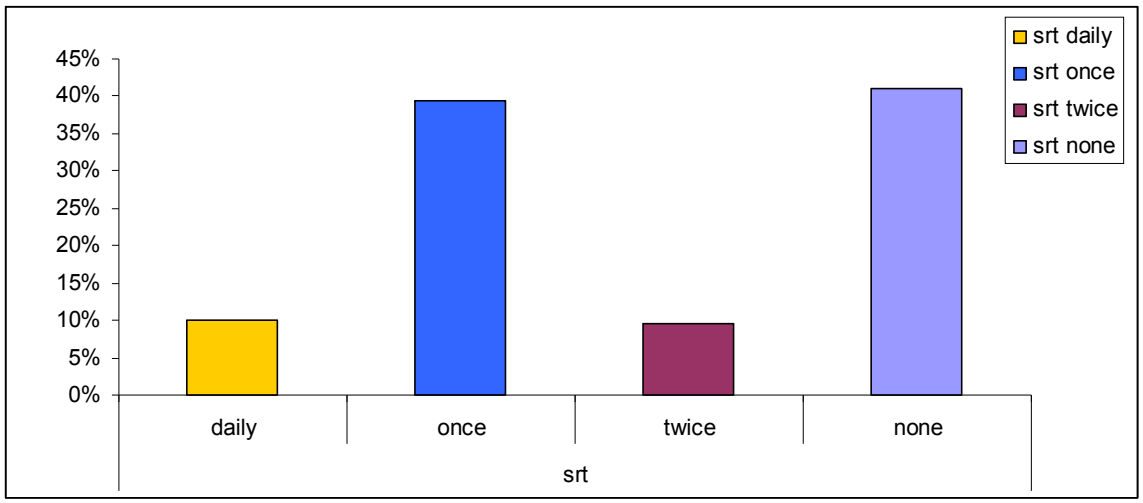
2) This observation was easy compared to others.

4.2.8 Fast Food Intake:



* Fast food is commonly known with the elite class of people. There are about 93% people living in the slum area normally or barely intake any fast food. They eat this fast food occasionally. 5.5% of people intake fast food once in a week and remaining are account for 2 to 3 percentage who intake fast food.

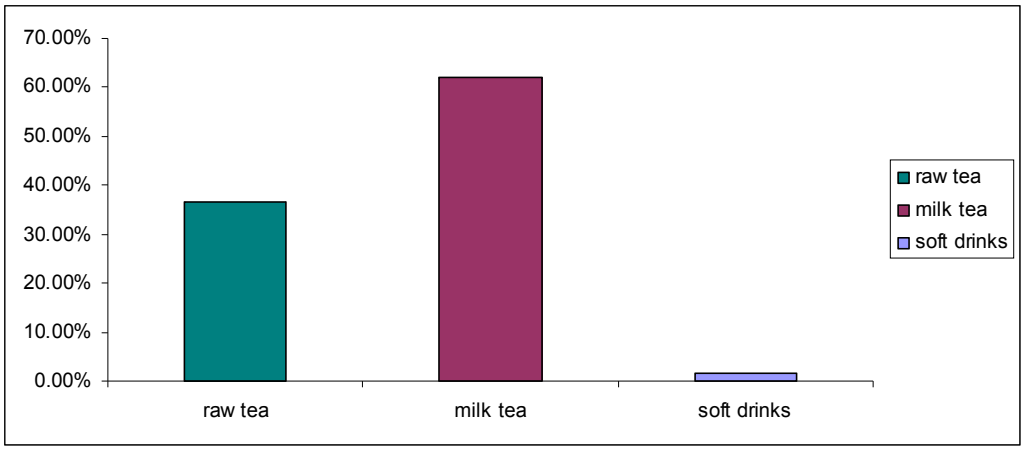
4.2.9 Street Food:



* Most of the male people living in the slum area usually do not stay at home at day. They often eat food from the outside and from street. There are about 5.5% peoples who intake street food daily and about 39.5% of these people intake street food at least once in a day.

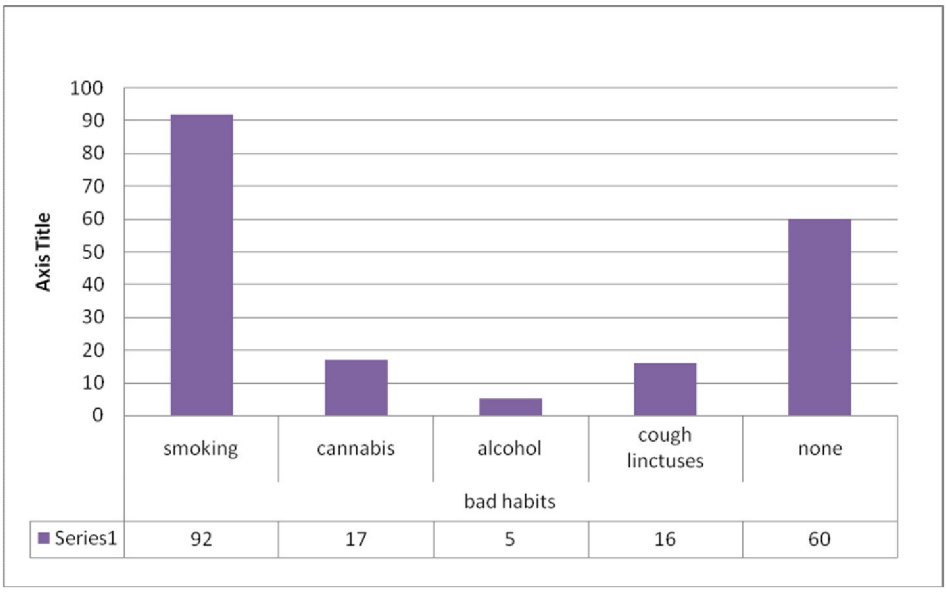
* 42.5% of slum people do not take street food and 5% of slum people take street food twice in a day.

4.2.10 Drinks Intake:



* Among all those people 36.5% of people were observed to to intake raw tea as drinks and 62% of people were seen to drink milk tea. 1.5% people used to intake soft drinks.

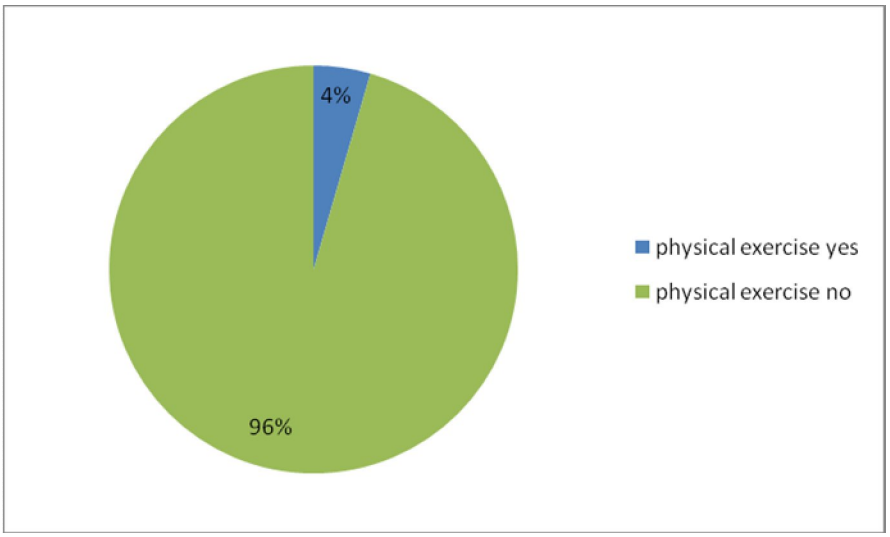
4.2.11 Bad habits:



* We all know people living in the slum area usually have some bad habits. It was observed some of these and found that 46% of these people smoke, 8.5% of these people use cannabis, 2.5% of these people consump alcohol. There were about 30% people who had no bad habits.

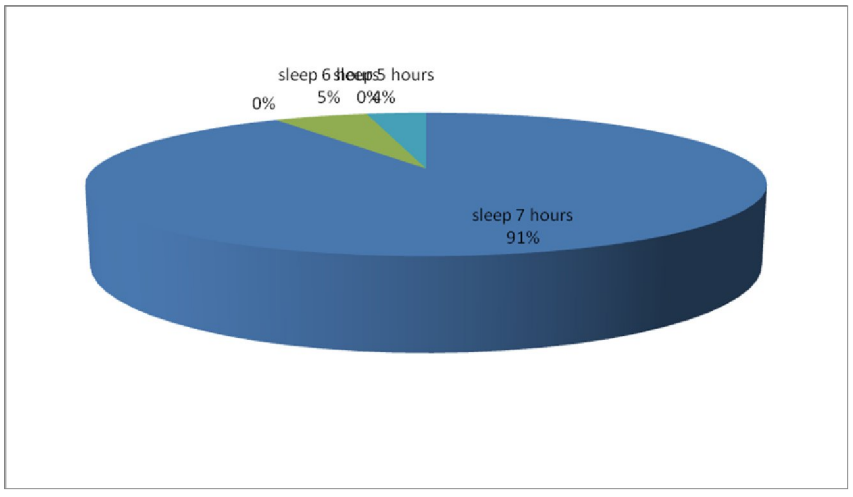
4.3 Daily Activity

4.3.1 Physical Exercise;



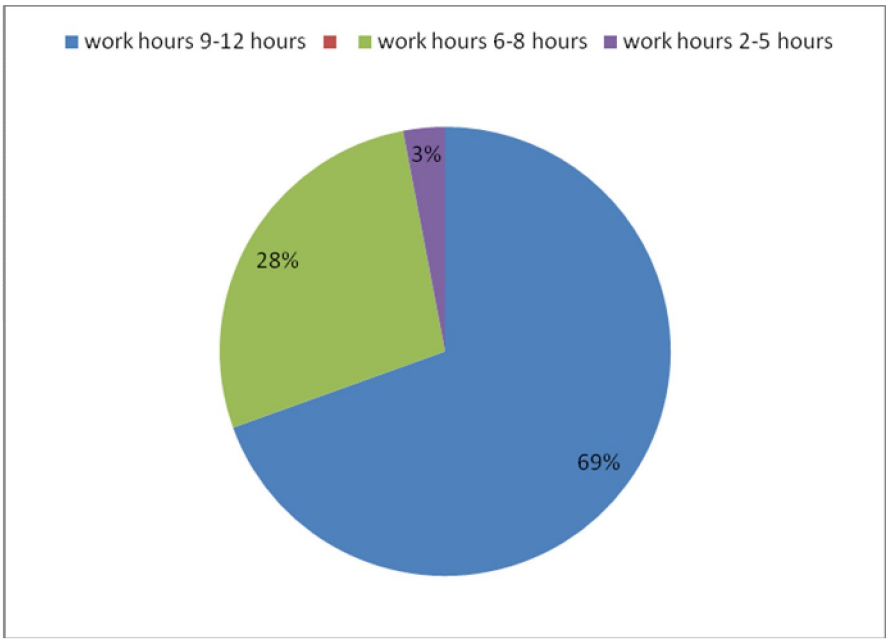
* About 90 to 95% 0f slum people do not have the intension of physical exercise and only few of those were observed to seen to have physical exercise for their extreme health concern.

4.3.2 Sleeping Periods:



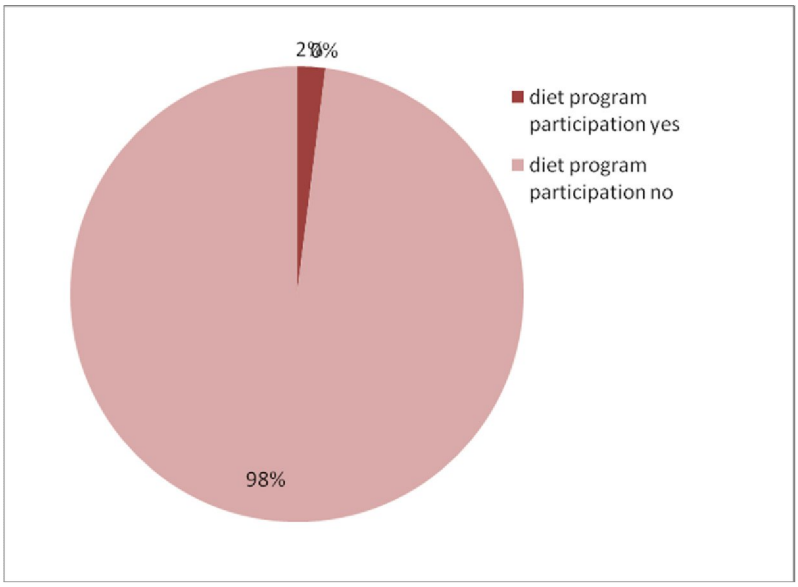
* 91% of slum people sleeps 7 hours or more than 7 hours as there is lack of source of entertainment. 5.5% of these people sleeps around 6 hours and remaining sleeps for 5 hours or less.

4.3.3 Working periods:



* 69.5% of slum people work for about 9-12 hours daily and 27.5% of people works for around 6-8 hours and the remaining does less than 6 hours or s

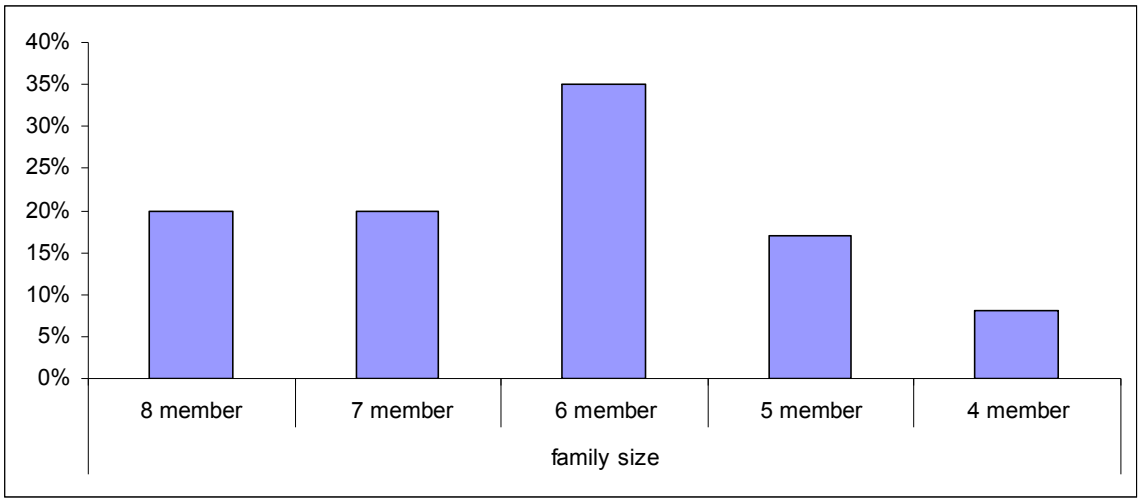
4.3.4 Diet Programme Participation:



* About 90-95 % of people do not take part in diet participation. There are only few who took part in this.

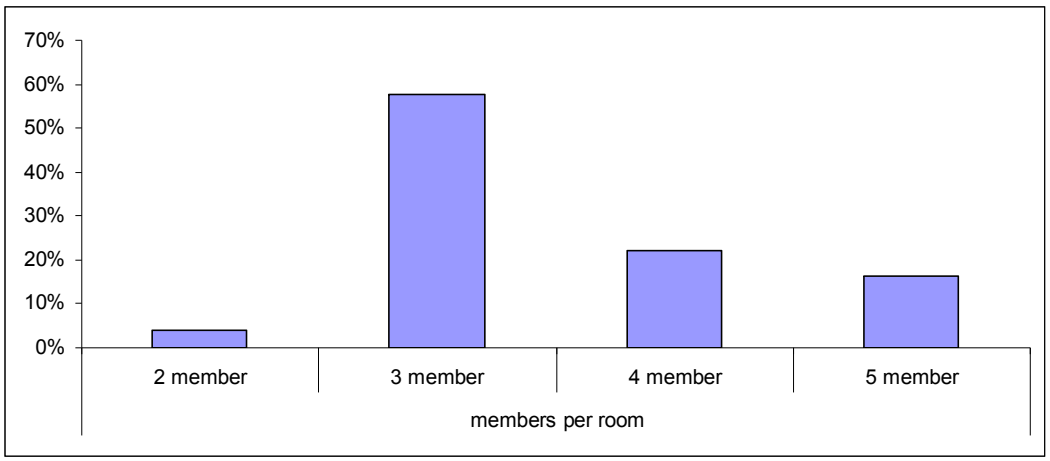
4.4 Family Status

4.4.1 Family Members



* Slum dwellers usually live with a large uncontrolled family. Their family consists of 6,7 or 8 members most of the time. In my research I found that 35% of people has family which consist of 6 members. About 30% of people have family which contain more than 7 or 7 members. This is because they do not concern about the birth control and family planning.

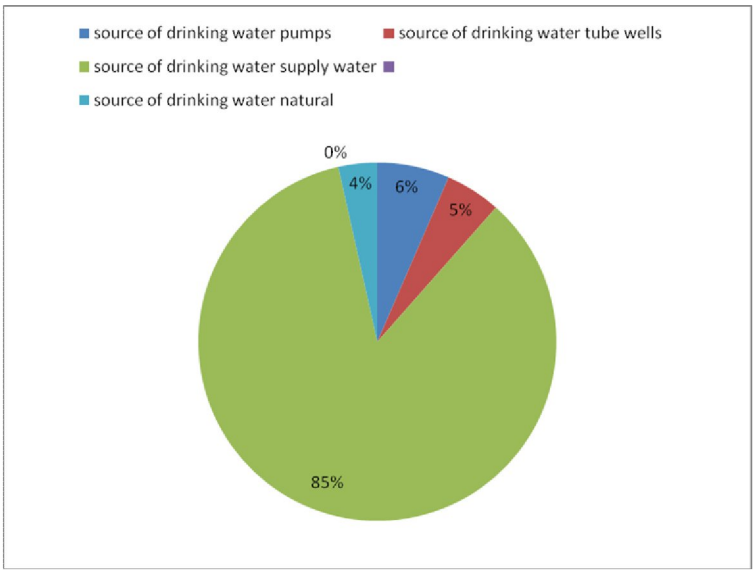
4.4.2 Members Per Room:



* 4% of family consisting 2 members live per room.
* 3 person live per room account for 57.5%
* 4 members living per room account for 22% .
* 5 members living per room account for16.5%.

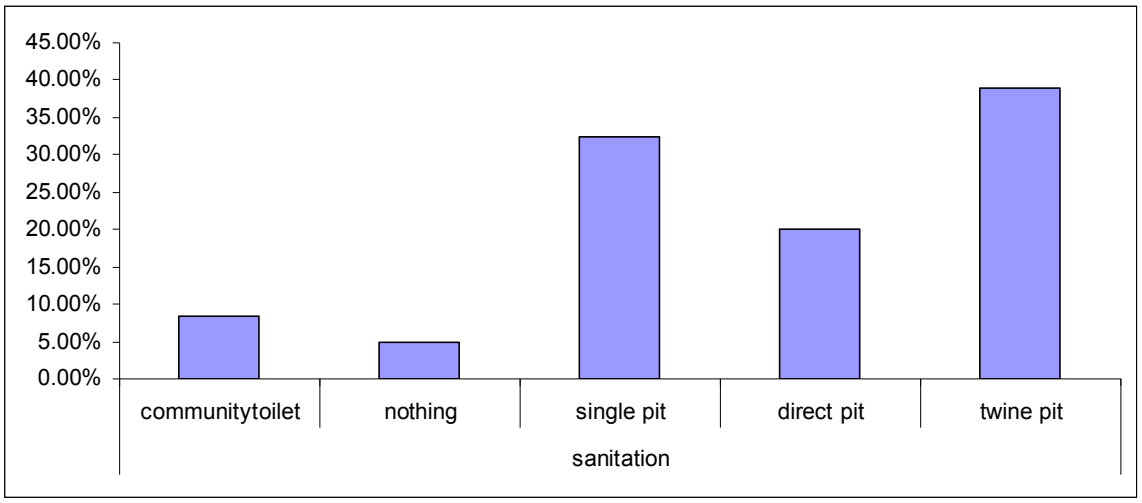
4.5 Sanitations and Hygiene

4.5.1 Sources of Drinking Water:



* 6.5% people were taking water from pumps.
* 5% people used water from tube well.
* 85% person used to drink water from supply source and this is the major part.
* 3.5% people used to drink water from natural sources.

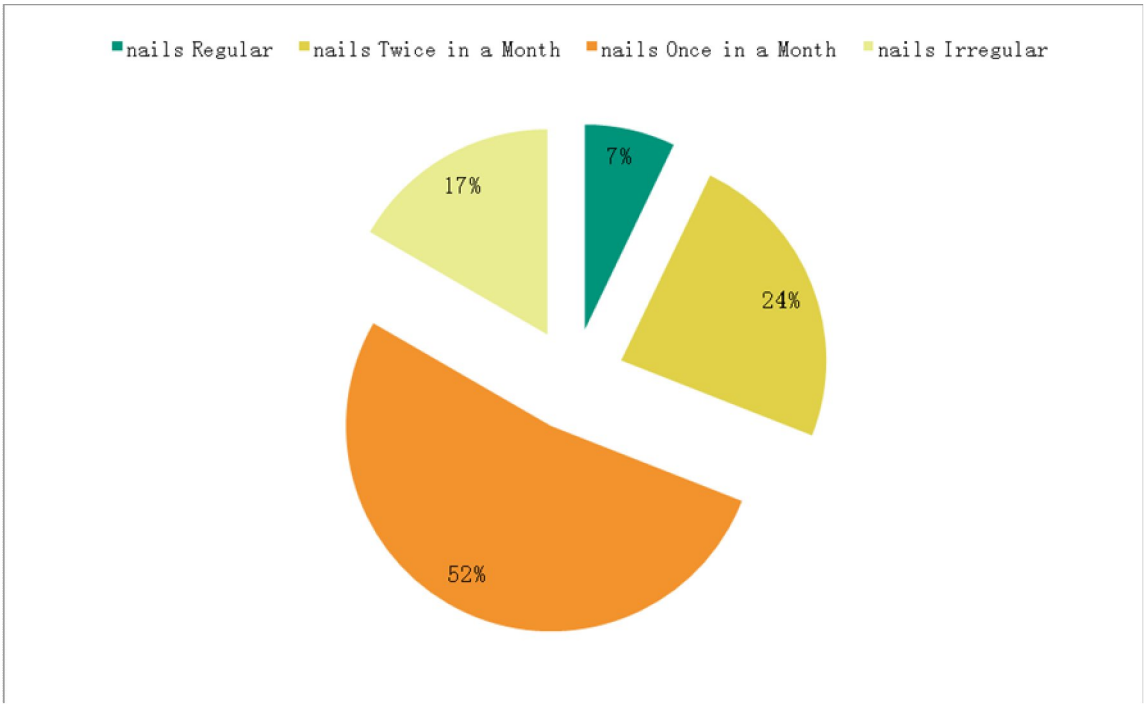
4.5.2 Sanitation:



* 8.5% people used community toilet as their sanitation purpose.
* 5% people used nothing as their sanitation purpose.

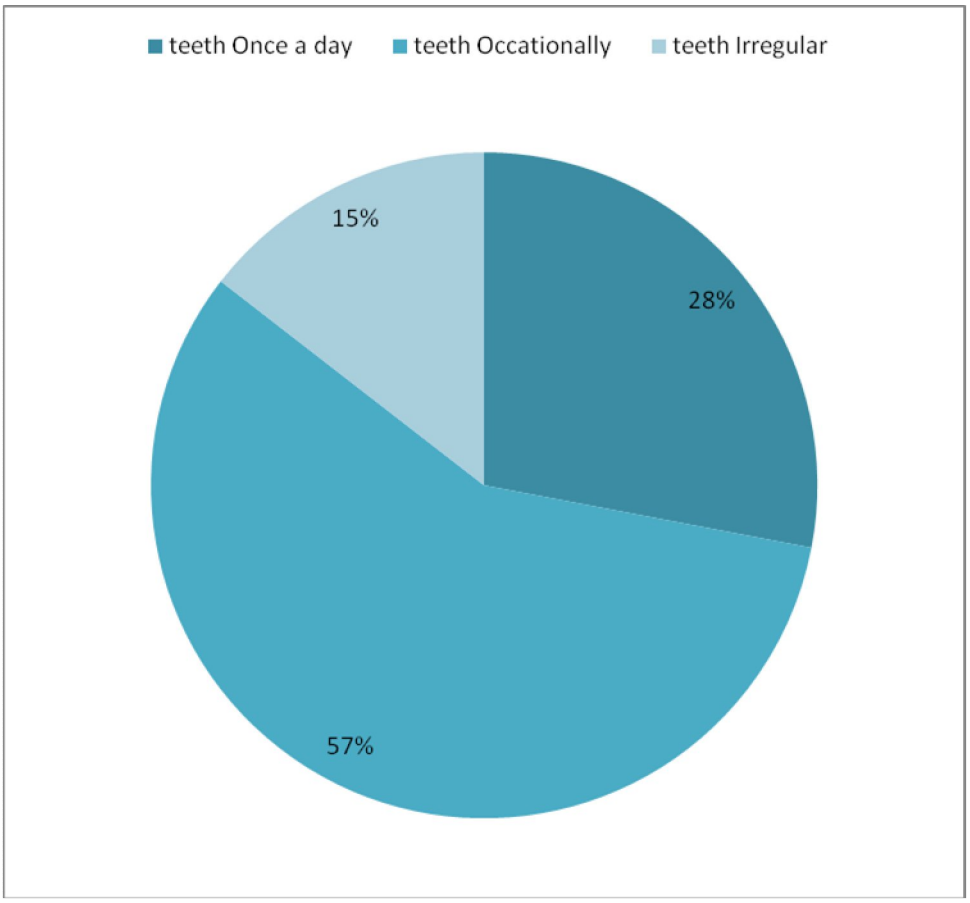
* 32.5% person was used to use single pit for sanitation.
* 20% of these people were using direct pit for sanitation.
* 39% people used to have twine pit for sanitation.

4.5.3 Habits of Cutting Nails:



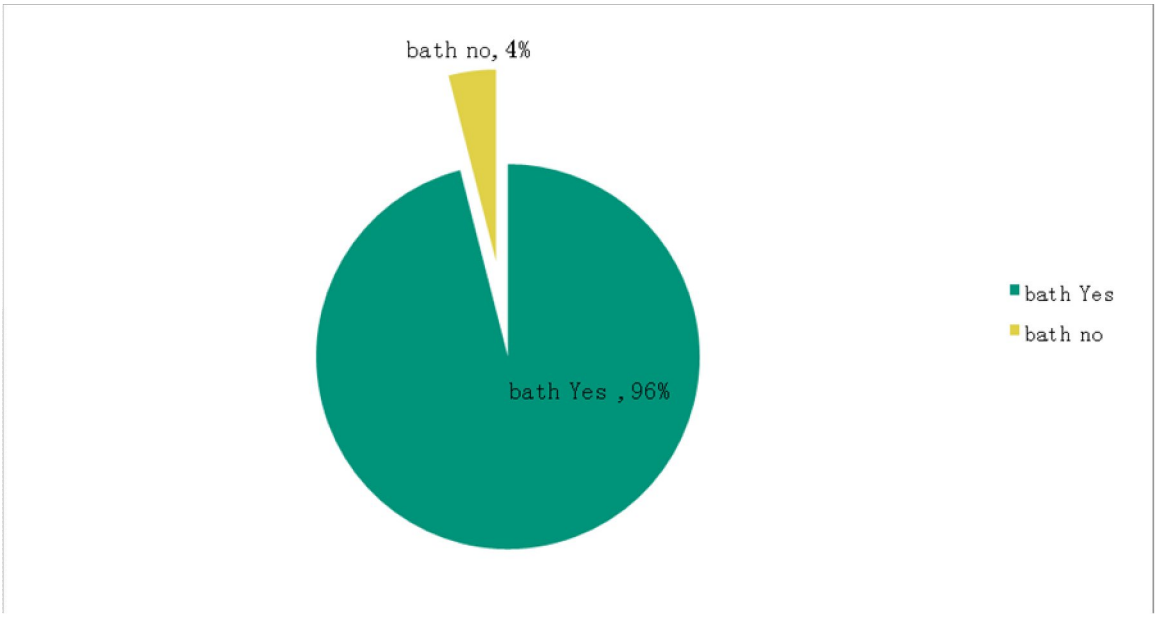
* 7.5% of people used to cut their nail regularly.
* 25% people used to cut their nail twice in a month.
* 55% people used to cut their nail once in a month.
* 17.5% people were not regular in cutting nails.

4.5.4 Habits of Brushing Teethes:



* 28% slum dwellers used to brush their teeth once a day at least.
* 57.5% people brush their teeth occasionally.
* Remaining was irregular in brushing their teeth.

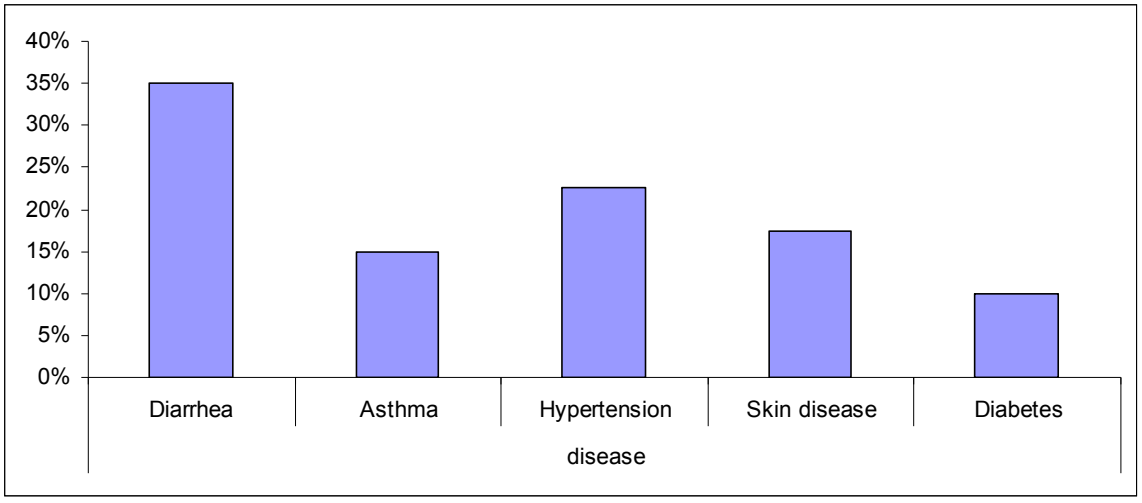
4.5.5 Habits of Taking Bath:



* 96% person used to take bath regularly.
* Remaining 4% were irregular in taking bath for different reasons.

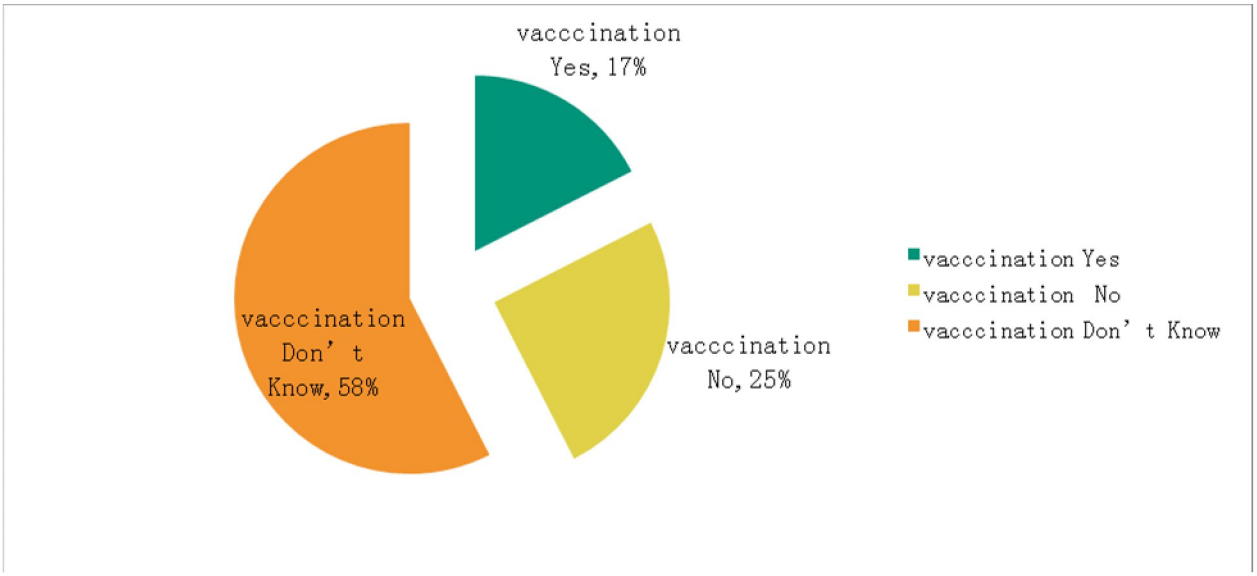
4.6 Disease Condition

4.6.1 Disease Condition:



Disease is very common in slum areas. 35% people were suffering from the diarrhea. 15% people were in asthma disease. 22.5% people had hypertension. About 17.5% persons were suffering from skin diseases.

4.6.2 Vaccination:



* 17.5% people took vaccinations for the treatment of the disease.
* 22.5% slum dwellers said that they did not take any vaccinations ever.
* And remaining 57.5% said that they had no idea whether thay took vaccinations or not.

5 Discussions:

In developing countries like Bangladesh health is a great concern for peoples living under poverty line. Lifestyle of the slum dwellers in cities is very unhygienic. So their pattern of diseases is different from other non slum dwellers. From the research of Md Khalilur rahman we found that 43.3% of the responders were aged below 30 years whereas we found that it was 40% who responded aged below 30. In our study we have found that 80% of the populations were illiterate where it was 41.7% in Md Khalilur Rahman research. About 61.3% of the populations were engaged in household or garments work whereas in my survey we found that it was about 68%. In that research we see that here are about 38.3% family have two earning members where in my survey we found that it was about 45.6%. In their survey 88.3% people lived in a rental place and 5% of people had their own house but it was about 95% who lived in rental place. In their survey they found that 61.3% responders were male and 38.7 responders were female but in my survey we found that male responders were about 71% and female responders were 29%. About 51.7% people had earnings more than 5000 Tk but in my survey we found that it was about 67% who had earnings more than 5000 Tk.

(Khalilur et al 2015)

Most of the slum dwellers usually drink water without any proper treatment as well as they use tubewell water for other purposes also such as for bathing, washing cloths etc. So they suffer from several skin diseases in most of the cases (about 17.5%) as well as suffer from diarrhea (35 %). They face more than one disease in every last year because of their unhealthy sanitation practice. In our study we have also found that slum dwellers intake a higher amount of raw salt in their meal as a result it increases their blood pressure. And they in most of the cases also suffer from hypertension (22.5 %). Slum peoples are mainly affected by diarrhea, hypertension and skin diseases, asthma etc which was quite similar o that survey with which we compared my results. All this diseases are strongly related to their lifestyle and living conditions. Asthma (15 %) occurs in many people due to smoking habits. Most of the slum dwellers are chain smoker. Biri (19.5 %) and cigarettes (14.5%) are the most common tobaccos in rural areas. Diarrhea is

one of the most common diseases among the rural people as a lot of people use water of natural sources for drinking and other purposes. Also in most case rural people don't treat drinking waters (99 %) which was about 85% in Khalilur Rahman survey. So this causes severe gastrointestinal problems like diarrhea. In our study we have found that a significant number of slum dwellers (22.5%) didn't take any vaccination and another significant number (57.5%) do not know whether they vaccinated or not but they found it was about 49% who did no take any medication or vaccination. There are about 93% people who normally or barely intake any fast food. They eat this fast food occasionally. 5.5% of people intake fast food once in a week and remaining are account for 2 to 3 percentage who intake fast food but in their survey it was about more than 65% who had fast food

6. Conclusion

In our study in the lifestyle of the slum and non-slum dwellers of villages and urban areas it is evident that disease states of the inhabitants are strongly affected by lifestyle. Smoking habits, sanitation type, water treatment systems largely related to asthma, diarrhea and skin diseases. This kind of disease are very common in peoples living in both slum and non-slum dwellers in rural areas. Our study found these very basic causes of health hazards which can be easily minimized by creating awareness among the peoples. People have practice of self-medication instead of seeking professional help. Professionals can suggest about a hygienic living condition and life style. In this context both government and non-government organization should work to develop the current situation by providing necessary awareness programs in both the rural and urban areas.

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Annexure

A Study of the Impact of the Life Style and Living Conditions on the Diseases Pattern on Slum Dwellers in Dhaka City

Part 1

Please put a tick (✓) where applicable

Age: _____Years, Gender: Male / Female, Occupation:_____, Weight: _____kg,

Height:_____, Living area: Rural/ Urban, Class: Slum dwellers/ Non-slum dwellers

Lipid Level:_____, Blood Group: _____ Blood Pressure: _____

Marritial Status: Married/ Unmarried/ Divorced/ Widow,

Monthly Family Income:_____,

Education Level: Primary/ High School/ College & University/ Illiterate

Part 2

Q1. How often do you take rice?

a. Trice a day b. Twice a day c. Once a day

Q2. How often do you take bread?

a. Trice a day b. Twice a day c. Once a day d. Occasionally in week e. None

Q3. How often do you vegetables?

a. Trice a day b. Twice a day c. Once a day d. Occasionally in week e. None

Q4. How many times do you take meat in your meal?

a. Trice a day b. Twice a day c. Once a day d. Occasionally in week e. None

Q5. How often you take fish in your meal?

a. Trice a day b. Twice a day c. Once a day d. Occasionally in week e. None

Q6. How often you take egg in your meal?

a. Trice a day b. Twice a day c. Once a day d. Occasionally in week e. None

Q7. Do you take raw salt?

a. Yes b. No

Q8. How often do you take fast food?

a. Daily b. Twice in week c. Once in week d. Occasionally e. None

Q9. How often do you take street food?

a. Daily b. Twice in week c. Once in week d. Occasionally e. None

Q10. What kind of drinks you take?

a. Raw Tea b. Milk Tea c. Coffee d. Soft Drinks e. Energy Drinks f. Alcohol g. None

If ‗Energy drinks', does it contain high alcohol level? ―Yes/ No‖

Q11. Do you have any bad habits?

a. Smoking b. Cannabis c. Alcohol d. Cough linctuses e. Others f. None

If Smoking, it is Biri / Cigarette.

Part 3

Q12. Do you do physical exercises? (If 'Yes', than give tick on the duration of your physical exercise)

a. Yes b. No

(30min / 1hour / 2hous / 3 hours / 4hours

Q13. How many hours do you sleep?
a. > 7 b. 7 c. 6 d. 5 e. < 4

Q14. How many hours do you work?

a. > 12 b. 12 - 9 c. 8 - 6 d. 5 - 2 e. < 2

Q15. What do you do in your free time? (If 'b / c / d', than how many hours do you spend on it?)

a. Sports b. Watching TV c. Computer d. Mobile browsing e. Sleeping

(half hour / 1 hour / 2hours / 3 hours / 4 hours)

Q16. Have you ever participate in any diet program?

a. Yes b. No

Q17. How many times do you participate in diet program?

a. 4 b. 3 c. 2 d. 1 e. None

Q18. Why do you participate in diet program?

a. To lose weight b. Doctor's suggestion c. Health Concern d. Others

Part 4

Q19. Family size: _____ members.

Q20. Members live in per room: _____ members.

Q21. What is the source of your drinking water?

a. Pumps / Tube wells b. Supply Water c. Natural Source & Others

Q22. How do you treat your drinking water?

a. Boiled b. Filtration c. Filtration after boiling d, None

Q23. What is the source of water which used for other purpose than drinking?

a. Pumps / Tube wells b. Supply Water c. Natural Source & Others

Q24. What kind of sanitation do you use?

a. Community toilet b. Twine pit c. Single pit e. Direct pit e. No toilet

Q25. Do you wash your hands before taking food & after using toilet? (If 'Yes', then give tick mark on what you use to wash)

a. Yes b. No

(Soap / Ash / Soil / Water)

Q26. How often do you cut your nails?

a. Regular b. Twice in month c. Once in month d. Irregular e. None

Q27. Do you brush your teeth properly? (If 'Yes', then give tick on how many times)

a. Yes b. No

(Once in day / Twice in day / every time after eating / occasionally)

Q28. Do you take bath properly? (If 'Yes', then give tick on how many times)

a. Yes b. No

(Once in day / Twice in day / Alternate day / Once in week / Occasionally)

Part 5

Q29. Did you suffer from any of the following diseases last one year (If 'Yes' then give a tick mark on the diseases)?

a. Yes b. No

(Diarrhea / Obesity / Asthma / Hypertension / Arthritis / Insomnia/ Skin Disease/ Diabetes)

Q30: In the past year, how did you act in case of the following health problems: (Diarrhea / Obesity / Asthma / Hypertension / Arthritis / Insomnia/ Skin Disease/ Diabetes)

a. I used medication according to the advice that the doctor had given me in the past when I had such symptoms

b. I used medicine by myself or by advice of my relatives

c. Friends and media

d. I used herbal drugs

e. I didn‘t use any medications

Q31: In the past year, what were the reasons for seeking professional help?

a. Symptoms last for more than a week

b. Symptoms were worsening

c. Presence of severe pain

d. Usual treatment was not effective

e. Side effects

f. When you think that problems were serious‟

g. In case of mental problems

Q32. Are you vaccinated for any diseases? (If ‘Yes’, than for which diseases you take the vaccine?)

a. Yes b. No c. I don‘t know

(Tetanus / Polio / Hepatitis A / Hepatitis B / Diphtheria / Rotavirus / Influenza / Pneumococcal / Rubella / Chickenpox)

Thank You