

# Slum Settlement Development and Its Impact on Women's Health in Gondar Town Chirkos Sub-City

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Submitted: 24 Dec 2022; Accepted: 31 Dec 2022; Published: 02 Feb 2023

**Citation:** Abebe, A. B., Mahtem, A. (2023). Slum Settlement Development and Its Impact on Women's Health in Gondar Town Chirkos Sub-City. *Adn Envi Was Mana Rec*, 6(1), 367-383.

## Abstract

Lack of basic services is one of the most frequently mentioned characteristics of slum. People living in informal settlements, particularly in slums, suffer more spatial, social and economic exclusion. The basic problems inherent in slums are health hazards, particularly for women. The main objective of the study is to investigate Slum settlement Development and Its impact on women's health in Gondar town, Chirkos sub city. Cross sectional design and mixed research approach were used for this study. Three Kebeles were selected from Chirkos sub city purposively and sample households were selected using simple random sampling. Among 3237 target population 110 samples were selected. Data were collected from both primary and secondary sources via survey questionnaire, key informant interview, indirect personal observation and document references. Descriptive quantitative analysis and qualitative way of analysis were used to analyze data. Results show that magnitude of slum settlement development is very high. Slum settlers do not get basic home infrastructures and there is problem of tenure security. Migration of people from another place especially from rural areas, higher rate of population growth, prevalence of local markets in the study area, housing provision problem, poverty and income inequality were found factors responsible for slum development. Women in the slum have poor habit of keeping their personal hygiene and sanitation and have waste disposal habit. Slum settlement has great impact on women's health. The main common disease in slum areas includes measles, pneumonia, diarrhea, typhoid and typhus and common cold.

**Keywords:** Slum, Settlement, Slum Development, Women's Health, Chirkos

## Introduction

The extension of slums in developing countries is a product of 20th- and 21st-century urban growth and represents the very essence of the Third World city. Attempts have been made to eliminate slums but they have almost universally failed because they do not question the urban model that generates the slum in the first place [1]. One-third of the developing world's population lives in urban slums and the absolute number of slum residents grew from 650 million in 1990 to 863 million in 2012 [2]. The population of slum dwellers in developing countries gradually increased to a whopping 880 million in 2014. It also stated that a quarter of the world's total urban population reside in slums. Health is a subject of concern especially for people residing in the slum areas of any state or in any country. The limited healthcare resources at their disposal make their lives susceptible to risks in case of diseases and its management [3].

Housing problem is one of the challenges facing mankind today

and are more critical in Less Developed Countries (LDCs). Slums accommodate the majority of the population of cities in developing countries [4]. In India slums Due to unavailability of proper environment females which came from rural area were facing so many problems in slums. Females were faced with different types of harassment and torture by the male member of the family. As they were left the rural environment and enter into a new environment (slums) which is totally different than the previous one they faced many type of cultural and linguistic problem [5]. In Nigeria at Aba south district there is high slum dwellers and the major factors as discovered, contributing to slum development in the area include rural urban migration, unplanned neighborhood, over-population, non-compliance with laid down rules and illiteracy. It were observed that the resultant effects of this are overcrowding, encroachment on government land, poor housing, poor sanitation, outbreak of diseases, insecurity of life, and decline in property values amongst others [4].

Ethiopia is the second most populous country in Sub-Saharan Africa with an estimated population of about 77 million. Ethiopia has a long history of indigenous urban development. Nonetheless, the country today is one of the least urbanized nations of Africa, with only about 17 percent of its population living in urban areas. In keeping with the pattern of urban growth of the least urbanized countries, the country is currently witnessing one of the fastest rates of urban growth in the world, namely an average five percent per annum [6].

The 2006 CSA further documented that 80% of the housing unit of Gondar consists of one's room only, and the health status of these area are significantly affected by different diseases compared to the affluent once, [7]. Further CSA shows that about 86% of the housing unit has had no independent bathing facilities of their own and also, three quarter (74) of the urban housing units have had no toilet facilities. So this study is intended to investigate slum settlement development and its impact on women's health in Gondar town.

### Method

Cross sectional research design with mixed research approach was employed for this study. Data was collected from both primary and secondary data sources using household surveys, key Informant interview, document reference, indirect personal observation. The study were used both probability and non-probability sampling technique. The city has 12 urban sub-cities with 21 Kebeles and 4 sub-urban Kebeles. Among these Chirkos sub-city was selected purposively. Because according to city administration report 2009,

in Gondar city administration more than 10 Kebeles were affected significantly by harmful pollutant and swages that runs in open drains along the roads which providing a serious way for infectious disease. Among these Kebeles all Chirkos Sub-City which has 3 Kebele (Kebele 06, 07, 08) with 3237 households. Simple random sampling was used to select 110 sample household head sample respondents in the three sample Kebeles. The sample size was determined using the following formula.

$$N = \frac{(z^2)(P)(q)(N)}{e^2(N-1) + z^2(P)(q)}$$

Where, e= margin of error in sampling/0.04/  
z= confidence level/1.96/  
q= (1-p)

$$\begin{aligned} \text{Thus, } N &= \frac{(1.96^2)(0.05P)(1-0.05)(3237)}{0.04^2(3237-1) + 1.96^2(0.05)(1-0.05)} \\ &= \frac{590.42}{5.177 + 0.182} \\ &= \underline{110} \end{aligned}$$

Data were analyzed based on its nature and the instrument used. Data collected via interview and indirect personal observations are analyzed qualitatively. Data obtained from questionnaire and document is analyzed quantitatively. For quantitative analysis mean, percent and frequency were used from descriptive statistics. Data were processed by SPSS (Software package for social science).

## Results and Discussion

### Background Information of Respondents

**Table 1: Demographic Background of Respondents**

No	Variables	Level (Category)	Frequency	Percent
1	Sex	Male	32	29.1%
		Female	78	70.9%
		Total	110	100.0%
2	Age	25-34	16	14.5%
		35-44	41	37.3%
		45-54	32	29.1%
		55 and above	21	19.1%
		Total	110	100.0%
3	Family size	3	7	6.4%
		4	12	10.9%
		5	26	23.6%
		6	47	42.7%
		7	10	9.1%
		8	8	7.3%
		Total	110	100.0%
		Average family size	5.6 per household	

4	Marital status	Married	44	40.0%
		Single	13	11.8%
		Divorce	24	21.8%
		Widowed	29	26.4%
		Total	110	100.0%

Among the sample respondents 70.9% of respondents were female household heads. Therefore in the slum areas under this study most of females have been taking the responsibility to lead the house and the family as household head. The age of 37.3% of respondents is from 34 to 44years old, while the age of 29.1% of the respondents in the study slum area is from 45 to 54years old. So in the slum area the settler's age indicates most of respondent household heads are at their working age. Despite their employment and occupation status most of respondents at their working age and they can do different activities. About 40% of them are married

house hold heads. Thus, in slum area most of the settler household heads have no wife or husband. Despite there are wife's and husbands which are economically dependent from their marriage partner. As indicated the average family in slum area is 5.6 persons per one household. The largest family size of respondents is 6 persons per household accounting 42.7%. Therefore this indicates that most households in the study area have family size of greater than 5 person persons per households. It is clear that most houses in slum area are small and one room in which large number of family live in one house in congested manner.

### Socio Economic Background of Respondents

**Table 2: Socio Economic Background of Respondents**

No	Variables	Level (Category)	Frequency	Percent
1	Religion	Orthodox	70	63.6%
		Muslim	32	29.1%
		Protestant	6	5.5%
		Others	2	1.8%
		Total	110	100.0%
2	Educational status	Illiterate	70	63.6%
		primary school	27	24.5%
		secondary school	11	10.0%
		diploma and above certificate	2	1.8%
		Total	110	100.0%
3	Occupation	Government	6	5.5%
		daily labor	78	70.9%
		Merchants	19	17.3%
		Others	7	6.4%
		Total	110	100.0%
4	Monthly income	Below 600 ET Birr	85	77.3%
		above 600 ET birr	25	22.7%
		Total	110	100.0%

The educational background of slum settler respondents 63.6% of them is illiterate, mean they do not get any formal education, 24.5% of respondents have primary education and experience. Therefore one can confidentially judge that most of respondent household heads in the study area are illiterate that cannot write and read. The occupation of 70.9% of respondents is daily labor. Only 5.5% of them are government. Therefore, most of slum settlers have no permanent and reliable occupation since most of them are daily labor earning money by working daily for different individuals at construction sites etc. The monthly income of 77.3% of respondents is below 600 Ethiopian birr per. this indicate that large number of respondents have very low income per month which is opposite with the average family size of respondents.

### Problems of Slum Settlement and the Magnitude of Slum Development Problem

#### Social Service and Infrastructure Problem of the Slum Access to Safe Water

Water is one of the great necessities of human life, which is often taken for granted in the developed world. A supply of clean water is absolutely necessary for life and health, yet 2 billion people lack access to adequate water supply can only obtain at high price. Unsafe water is the direct causes of many diseases in developing countries. The minimum sufficient quantity is at least 20 liters per person per day [8].

**Table 3: Access to Safe Water**

No	Variables	Category (level)	Frequency	Percent
1	Access to water	Yes	12	10.90%
		No	98	89.10%
		Total	110	100.00%
2	Sources of water	Pipe	24	21.80%
		under ground water	8	7.30%
		River	4	3.60%
		public pipe	72	65.50%
		Other	2	1.80%
		Total	110	100.00%
3	Average Daily water Availability per housing units	below 20 liters	13	11.80%
		21-40 liters	75	68.20%
		41-60 liters	15	13.60%
		above 60 liters	7	6.40%
		Total	110	100.00%

Among 110 sample respondents majority (89.1%) of the respondents has no access to safe water. About 21.8% of households had water from sources from their own water pipe and 7.3% from underground water. Concerning water availability per household 11.8% of households had water access below 20 liters per day; only 6.4% of households have water access above 60 liters per day. This result clearly show that there is critical problem of accessing safe water in the study slum area almost nearly all sample respondent households have no access to safe water. Only few households access safe or clean water. Majorly, more than half of households obtain water from common government tap water and there are also households that access water from rivers and water wells. As most of settlers have no their own tap water shortage of water problem is chronic problem. Most of households' access to water is from 21 to 40 liters per day and even this may be from unsafe sources of water.

According to key informant interviews “only very small number of households has ability to have private tap water. Even though few had their own tap water access they could not get sufficient water. Because of scarcity of tap water in Gondar town there is ignorance of slum areas by the local government personnel’s. Actually from

the very beginning slums do not get attention by local government to have water access. The majority of the households were using public tap water as the primary source of water. Hence there are only 15 public tap water centers in the study area they cannot fetch water in the amount the need. Therefore when the water is coming it is difficult to get sufficient water to the house hold. Besides this the town sent water two times weekly and for limited hour.” A study by stated that at Addis Ababa less than 50% of households have access to sufficient and affordable improved water [8]. Generally lack safe water sources, shortage of water are a severe in the study area so that the magnitude of water problem in the study area is high. Therefore there is no availability of sufficient water amount from safe water sources.

**Sanitation and Hygiene**

To determine people’s access to sanitary facilities, it is important to characterize the various types of facilities available. Inadequate sanitation includes service or bucket latrines (where excreta are manually removed), public latrines, and latrines with open pits. Another indicator of adequate sanitation is sharing of toilet facilities with not more than two households. Availability of kitchen room and bath room is determining the sanitary conditions [8].

**Table 3: Access to Safe Water**

No	Variables	Category (level)	Frequency	Percent
1	Access to toilet	Yes	21	19.10%
		No	89	80.90%
		Total	110	100.00%
2	If no toilet where you used	open space	34	38.20%
		Neighbor toilet	12	13.50%
		Public Toilet	43	48.30%
		Total	89	100.00%

3	Availability of sewerage	Yes	7	6.40%
		No	103	93.60%
		Total	110	100.00%
4	Proper dry and waste management	Yes	14	12.70%
		No	96	87.30%
		Total	110	100.00%
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**Table 4: Sanitation Related Responses in the Slum Area**

No	Variables	Category (level)	Frequency	Percent
1	Access to toilet	Yes	21	19.10%
		No	89	80.90%
		Total	110	100.00%
2	If no toilet where you used	open space	34	38.20%
		Neighbor toilet	12	13.50%
		Public Toilet	43	48.30%
		Total	89	100.00%
3	Availability of sewerage	Yes	7	6.40%
		No	103	93.60%
		Total	110	100.00%
4	Proper dry and waste management	Yes	14	12.70%
		No	96	87.30%
		Total	110	100.00%

As indicated only 19.1% of households has their own toilet for their family. Among 89 respondents who have no privet toilet 38.2% use open space/ open fields and 13.5% their neighbor toilet. In Nigeria in Abia statelarge percentage of respondents' still use primitive ways of sanitary disposal as 51.3% use pit toilet or no

toilet at all [4]. Among 110 93.6% of households have no sewerage system. In term of dry waste still only 12.7% has proper dry waste management system. Thus, there is a critical sanitation and hygiene problem in the areas. Most of them use common public toilets and this exacerbate sanitation problem because public toi-

lets are not well cleaned and managed. Large number of households has no sewerage system to avoid liquid waste. This can lead concentration of liquid waste in the slum area in which it contain congested houses and large number of children and dwellers. Also as the same time there is poor solid waste management system among households in the slum areas. In Nigeria in Abja state large percentage of the respondents said that the drainage condition was bad and in the long run, will affect the safety and healthy living of the masses as it always lead to flooding in the neighborhoods. It was also observed that there was no proper refuse disposal system as the inhabitants disposes their refuse on the road or on the available drainage especially when it is raining [4]. Likewise sanitation is a problem in Indian slums [5]. Therefore the result of this study is not different from this, though there is sanitation problem it is not the problem of Gondar town. The magnitude of sanitation and hygiene problem in the area is so severe potentially causing different acute and respiratory disease for children and women's in the area.

According to Key informant “there are 12 public toilet in three sample Kebeles , However besides more house hold per one public toilet, there were improper usage of toilet and that results hygienic problem, it forces peoples to use open spaces. According to Key informant because of absence of sufficient number of public toilets, these people are forced to excrete in the open space. As most slum dwellers have no private toilet the number of public toilet is small and also the sanitation and management of those public toilets is so poor”.

### Housing Condition

A house is considered ‘durable’ if it is built on a non-hazardous location and has a structure permanent and adequate enough to protect its inhabitants from the extremes of climatic conditions such as rain, heat, cold and humidity. The building materials in the roof, walls and/or the floor measure the durability of the housing. A house is considered to provide a sufficient living area for the household members if not more than three people share the same habitable room that is a minimum of four square meters in area [9].

**Table 5: Housing Condition**

No	Variables	Category (level)	Frequency	Percent
1	Quality of wall construction materials	wood, mud and grass	73	66.40%
		Plastic, Carton and Bamboo	18	16.40%
		mud and stone	17	15.50%
		cement and stone	2	1.80%
		Total	110	100.00%
2	Quality of floor construction materials	Earthen	106	96.40%
		Cemented	4	3.60%
		Total	110	100.00%
3	Location	Hazard	94	85.50%
		Not-hazard	16	14.50%
		Total	110	100.00%
4	House structure	Poor	96	87.30%
		Fair	11	10.00%
		Good	3	2.70%
		Total	110	100.00%

As indicated the materials from which the wall of sample respondent's house is constructed. 66.4% of respondents' home is constructed from wood, mud and grass. The home of 96.4% of respondent is earthen floor. The location of 87.3% of houses is at unsafe and hazardous area. The results clearly show that in the slum area there is problem of housing construction quality. Since the materials used to construct walls of slum houses is very low quality, their location and strength can be exposed to different hazards like flooding, collapsing and wind problems. In general this indicates that housing condition and qualities in the study slum areas are very poor. There is similar result with this study in Ghana that show housing condition in slum settlement is poor and it is constructed from simple and temporary materials. Form the majority

of regional blocks of people dwelling in Accra the sampled slums. In regards to the building materials used to construct those houses, the study showed that 44% of all slum houses in Accra were built with wood, 27.3% were built with sand Crete blocks roofed with aluminum, 26% are built with salvaged materials, including wood, roofing sheets used as walls, and an assortment of other materials. Only 2.7% of slum houses were built with clay [10].

Based on indirect field observation “the housing of slum dwellers was lower quality and poor housing condition. From this we conclude majority of the slum houses were constructed by low quality construction materials”.

**Table 6: Home Crowdedness and Source of Energy**

No	Variables	Category (level)	Frequency	Percent
1	Number of rooms	One	78	70.90%
		Two	24	21.80%
		above two	8	7.30%
		Total	110	100.00%
2	Kitchen	Yes	24	21.80%
		No	86	78.20%
		Total	110	100.00%
3	Source of energy	wood and charcoal	94	85.50%
		Electric	9	8.20%
		Others	7	6.40%
		Total	110	100.00%
4	Area of houses (sq.km)	12 m square and below	18	16.40%
		13-16m square	43	39.10%
		17- 30m square	44	40.00%
		above 30m square	5	4.50%
		Total	110	100.00%

About 7.3% of respondent's house has with more than rooms meaning they have three and more rooms. Only 21.8% of them respond that they have well organized kitchen of their own to cock their food. In addition regarding the source of energy for food preparation only 8.2% of respondents in the area use electricity as source of energy and 6.45% of households use other source of energy like animal dung's. About 16.4% households live in a room which has area of 12 meter square and less. In the slum area 39.1% of households live in a room which has area of from 13 to 16 meter square only 4.5% of them live in a room which has area of more than 30 meter square. Like this study there is overcrowded way of living in one room in slum. In Nigeria in Abia state there is densely populated with about 67% of respondents having occupancy ratio of more than 3 people in a room which led to the overstress of existing facilities [4].

The result show that large number of households which have not adequate and organized kitchen so they are cocking their food in unfavorable condition creating burden specially on women. They are forced to prepare their food even on streets and inside their rooms. Most of households in the slum area live in a single room us they are urban settler it shows there is overcrowded way of living in a single room. Despite they are living in a congested manner in a single room and shortage of kitchen, the source of energy to prepare their food for large number of households is from charcoal and wood. This is other problem as they are not convenient and has problems like polluting their living environment and their home since they are living in a congested manner.

**Security of Tenure**

**Table 7: Security of Land, Threat of Evict, and Interest to Invest on Houses**

No	Variables	Category (level)	Frequency	Percent
1	Security of land and home	pay rents (tenants)	73	66.40%
		owner occupies	13	11.80%
		free of charge (undefined)	24	21.80%
		Total	110	100.00%
2	Threat of evicted	Yes	97	88.20%
		No	13	11.80%
		Total	110	100.00%
3	Interest to invest	Yes	14	12.70%
		No	96	87.30%
		Total	110	100.00%

In terms of land and home security 66.4% of households use the land or the home they dwell by paying rent for it and 21.8% of household claim the land they dwell in undefined process means without legal grounds. About 88.2% of households have fear of threat of evict and the rest 11.8% respondents are confidential on their tenure. Potentially 87.3% of households do not want to invest on their home to rebuild or to maintain it. The land tenure systems in slum dwellings in Ghana Accra also showed that 38% of all slum dwellers were renters, 31.3% were non-renting occupants, and 21.3% were house owners whilst the remaining 9.3% were caretakers [10]. In relation to tenure security, in India most of the ills of traditional tenure can be traced to or stem from tenure insecurity due to uncertainty of ownership and litigation. The registration of land titles means the inclusion of the various interests in the land entitled to a person within the folio of the land register [3]. Like Accra and India in Gondar also there is a problem in land and home ownership most slum settlers are not tenure secured they live in rent house and temporary houses.

As the result clearly indicates those slum settler with secure land and home are very small an in the opposite nearly 88% of have no land and house security they live in frustration the might be forced to leave their settlement since most of them live in rent and by holding their residence without legal ground freely. Because of this reasons large number of respondents have fear of threat of evict from their residence. In the study slum area most settlers have fear to move out from their residence. Therefore most fear evict and as result large number of respondents have no any intention any expenditure to improve or to rebuild their residential home.

According to the key informants, “most of the slum dwellers were believed to settle in their place temporarily therefore they were always lived with threat of evicted.” Therefore generally it is fair to decide that there is problem of tenure security in the selected slum areas for this study.

**Table 8: Distribution of Respondents Based On Access to Different Basic House Infrastructures**

No	Variables	Category (level)	Frequency	Percent
1	Access to different basic house infrastructures	Yes	10	9.1%
		No	100	90.9%
		Total	110	100.0%

The majority (90.9%) of respondents were not sufficiently accessed to different basic home infrastructures. Therefore most of slum settlers in the area do not get basic home infrastructures like private telephone, electricity, water and different services. In short slum settlers have no adequate access to basic home infrastructures; thus living in unfavorable conditions. Globally, the infrastructure gap is increasing as slum population’s rise and living conditions in slums deteriorate [11]. There is infrastructure gap in slums in Gondar town like in global case the personal observations also insure this.

Based on personal observation “Slum houses lack basic services like access to health center, lack of sufficient water, paved walk way, sewerage system, sanitation and other basic infrastructures liquid and solid waste management were not totally safe at slum and non-slum housing however, it was worst in slum housing units. Slum housing units have dispose kitchen and laundry grey water in road and in front of the door.”

### The Magnitude of Slum Development Problem

**Table 9: Magnitude of Slum Development**

S. No	Kebele	Total number of houses	Total number of slum houses		Total number of non-slum houses	
			Frequency	%	Frequency	%
1	06	1709	1211	71%	498	29%
2	07	1249	1032	82.6%	217	17.4%
3	08	1139	994	87.2%	145	12.8%
4	Total	4097	3237	79%	860	21%

With respect to the magnitude of slum development in the three sample Kebeles at Gondar city Chirkos sub city in Kebele 06 among total registered 1211 house 71% of them are characterized as slum. In case of Kebele 07, 82.6% are slum houses. At Kebele 08 only 12.8% houses are non-slum houses.

tion they occupy 5 % of the urban land area [12]. It is possible 27% of population live in slum in India this number is large likewise slum settlers in Gondar is extremely high as the result indicate in the selected study area 79% houses are characterized as slum. Therefore, there is high concentration of slum houses in Chirkos sub city sample Kebeles. In comparison there is severe slum house accumulation in Kebele 08 followed by Kebele 07. The number

In India, although slum dwellers account for 27 % of the popula-



of non-slum houses is very small dominated by slum houses settlements.

The key informant interview especially with Chirkos sub city social affairs officer indicate as:

“Concerning slum development and magnitudes in Chirkos sub city there are large number of slum settlements. In Chirkos sub city among different Kebeles the magnitudes of the problem is high and alarming in Kebele 07, 08 and 06 respectively. In terms of slum development process the slums are in these Kebeles and in Chirkos sub city are not a recent and overnight phenomena. They are the result of gradual process some of slums are in legal some others are legal but they became slum as homes get older and older and

outdated and still some others are slum because they are poorly constructed. As judgment Chirkos sub city is known in terms of slum development among the sub cities of Gondar town”.

#### Factors for Development of Slum Settlements

According to the response of study participants concerning the factors that facilitate the development of slum settlements, migration, poverty, inequalities of income, population size and density and housing provision were identified as the major responsible factors for the establishment and development of slum settlements in the study area as shown below in the table and followed by its qualitative interpretation.

**Table 10: Factors for the Development of Slum Settlements in Gondar Town**

S. No	Factor	Variables	Category/Level	Freq.	Percent
1	Migration	1. Place of birth	Gondar	27	24.50%
			Out of Gondar	83	75.50%
			Total	110	100.00%
		2. Place of origin	Rural	69	830%
			Urban	14	170%
			Total	83	1000%
		3. Reason for migration	Seeking job	34	410%
			Low agricultural income	32	38.50%
			Better education for children	4	4.80%
			Better facility	3	3.60%
2	Poverty	1. Vulnerability to basic deficiencies	Yes	96	87.30%
			No	14	12.70%
			Total	110	100.00%
		2. Considering themselves as poor	Yes	101	91.80%
			No	9	8.20%
			Total	110	100.00%
		3. Financial impediment to get better housing	Yes	12	11.00%
			No	98	89.00%
			Total	110	100.00%
3	Inequality	1. Current employment status	Yes	13	11.80%
			No	97	88.20%
			Total	110	100.00%
		2. Nature of employment permit to live in decent house	Yes	6	5.50%
			No	104	94.50%
			Total	110	100.00%
		3. Permanency of employment	Yes	7	6.40%
			No	103	93.60%
			Total	110	100.00%
4	Population	Low	2	1.80%	
		Medium	32	29.10%	
		High	66	60.00%	

			Very high	10	9.10%
			Total	110	100.00%
		2. Population density influence housing	Yes	92	83.60%
			No	18	16.40%
			Total	110	100.00%
5	House provision	1. Appropriate housing for all community	Yes	16	14.50%
			No	94	85.50%
			Total	110	100.00%
		2. Government and NGO's housing improvement programs	Yes	20	18.20%
			No	90	81.80%
			Total	110	100.00%

In Accra the main factors for slum settlement are industrialization and consequent migration of rural to urban areas, lack of employment opportunities and livelihood resources in rural areas, absence of adequate facilities in the urban area including housing, low wages including income inequality, in effective land reforms and tenure security problems [12]. In the study area the factors for slum development are similar with that of Accra but in the study area the cause of rural urban migration is nit industrialization

### Migration

From the total migrants, 83% of them were from rural area and 17% were from other parts of the city. Regarding the reasons for migration to the town, about 41% migrate for seeking jobs and 9.6% were due to natural disaster. It is concluded that migration of people from another place can be a major factor for the development of slum settlements because it is the peoples who dominantly make up the slum settlements than the original native settlers. The factors motivating migrants to move from their origin were searching for jobs, the subsistence nature of their agriculture, searching for better education for their children and the occurrence of natural disasters.

According to Key informant interview *“Most of slum households came from outside Gondar town due to the large access of labor workers because of the prevalence of nearest local markets in the study area”*.

### Poverty

Concerning vulnerability of respondents to deficiency of basic necessities about 87.3% of the respondents were faced with many basic deficiencies. About 91.8% of respondents respond that they consider themselves as poor. Regarding the prevalence of financial impediments to get better housing, only 11% of households had financial problems to get better housing. Thus most portion of the slum settlers are poor and they lack basic public services. It is mostly the poor people that composes the slum and makes the slum settlements development faster than those who are not poor. Even though there is a consideration of slum settlers as poor, majority of them do not have a financial problem to establish better housing.

### Income Inequality

Regarding to employment only 11.8% of respondents who were employed during the study time. It was 94.5% respondents believe that the nature of their employment don't permit them to live in a decent house. Regarding permanency of their employment only 6.4% of respondents had permanent jobs. Therefore since most of them had no jobs there is great distinction or inequality of income comparing them with those who had permanent job. This means that peoples with no permanent job who had less income predominantly settle and develop slum areas than settler with permanent job and higher income but permanency of employment is not the factor for peoples to live in a decent house.

### Population

As per the level of population size in the study area 60% respondents believed that there was high population density in the study area. About 83.6% of the respondents responded that there is an influence of population density on housing in the slum settlement. Hence higher rate of population growth and density facilitates rapid growth and development of slum settlements in the study area.

### House provision

Based on the standard of housing only 14.5% respondents respond that there is adequate housing for the community. About 18.2% of respondents respond that there were a program by government and other concerned bodies to improve houses in slum area. Since there exists poor standard and unplanned housing in slum poor settlers choose to live in slum areas. The system of housing provision in these settlements indirectly encourages slums to develop.

### Impact of Slum Settlement on Health of Women Dwellers Socio Economic Background of Women Respondents

The socio economic conditions of the society decide the health status of peoples. The unhygienic environment of the slums coupled with sub-standard settlements bereft of basic amenities greatly compromises the health and wellbeing of the slum dwellers, especially the women [13].

**Table 11: Socio Economic Background of Women's**

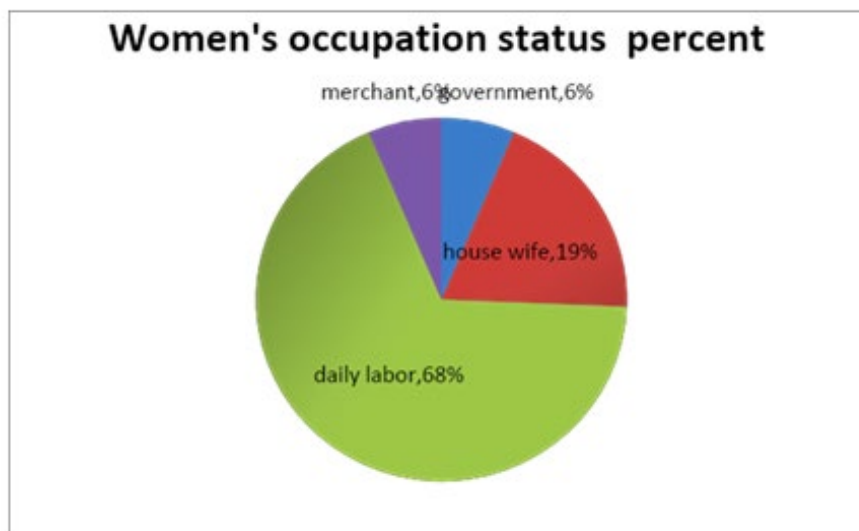
No	Variables	Category (level)	Frequency	Percent
1	Educational status	Uneducated	59	75.60%
		Primary school Certificate	11	14.10%
		Secondary school certificate	8	10.30%
		Total	78	100.00%
2	Awareness about hygienic and health related issues	Yes	16	20.50%
		No	62	79.50%
		Total	78	100.00%

About 75.6% of women's were belongs to uneducated group. Therefore the health of women's can be affected since they may not know about types of diseases associated with sanitation and home congestion. It is because of low education and ignorance of women lead to continuation of wrong beliefs and unscientific attitudes toward health. Majority (79.5%) of household women's were not participating and attaining in health related issues. Like education problem in the study females in the slum have no any detail experience in involving in health related issues and agendas. This can be because most of females in the study area are non-educated and the occupation of most of them is daily labor and they may ignore the issue because of lack of awareness.

According to key informants, regarding to awareness creation program, besides insufficient program, the Kebele Health officers have a program which take place 2 times in 6 months, even if,

health officers invite them by remembering the program, especially slum dwellers were not interested to participate in the program. They think waste their time when attending awareness creation program.

Therefore it can be concluded that majority of women's that reside in Gondar slum have no interest to attain in the awareness creation health program. It indicate that because of lack of awareness about health related issues, the health of the women's in the study area were affected by varies types of diseases. The fact on Raipur city, India also supports this study that there is low socio economic background of women's in slums. In Raipur city, India majorities of women slum dwellers belong to the lower socio economic class and have migrated to the city with the hope of better means of livelihood. They have basically low educational background [14].



**Figure 1: Occupational Status of Women's**

Regarding occupation 6.4% were merchants and only 6.4% were government employees. It indicated that majority of the slum women dwellers were participate in labor work and house works. Therefore since the occupation of most women dwellers in the study slum area is daily labor it can bring different illness on women's resulted from work burden and duration with small wage.

According to the key informants Majority of the slum dweller women's were involve in labor works such as, cooking in the house of rich people, washing clothes, mopping floors and again take up works in their own homes. They also said that in spite of working for long hours they had being paid fewer amounts.

From this one can conclude that women's reside in the study slum area were mostly participate in labor works that did not require higher skill. The majority slums dwellers in the study area do works for long hours, this show how much women's in the study area were face with health problems. In Raipur city, India women's having basically low education, skill, and work experience, they have no choice in the competitive job market and pick up low paid jobs such as construction laborer, domestic servants, casual factory workers, and petty trading business. With their meager income, they are forced to live in slum areas in the most unsanitary and unhygienic conditions, carrying out their existence with the barest necessities of life [14].

## Women's Sanitation and Nutrition

**Table 12: Distribution of Respondents Based on Sanitation Habit of Women's**

No	Variables	Category (level)	Frequency	Percent
1	Habit of throw waste in the street	Yes	64	82.10%
		No	14	17.90%
		Total	78	100.00%
2	Habit of disposing waste	Yes	15	19.20%
		No	63	80.80%
		Total	78	100.00%
3	Habit of cleaning hands by using soap after using toilet	Yes	2	2.560%
		No	76	97.40%
		Total	78	100.00%
4	Intake food habit	One	5	6.40%
		Two	57	73.10%
		Three	14	17.90%
		above three	2	2.60%
		Total	78	100.00%

Accordingly 82.1% of women have had the habit of throwing wastes in the street whereas only 17.9% of women's not mangle wastes properly. Only 19.2% of women have had the habit of disposing wastes. About 97.4% of slum women's were not washing their hands by soap after using toilet and before doing their works. And 73.1% of women's eat their meal two times per day, 6.4% were eat one time per day. The result indicates that most of the slum women's in the study area had the habit of throw waste in the street and had not the habit of disposing wastes properly and their habit in washing their hands after using toilet is insignificant contributing to unhygienic environment of the slum area hence results various diseases. Therefore, the habits of women's in keeping their

sanitation is very poor which can result different types of disease on them as they are the pillars of the household in slum areas. The other problem of women's in the study area is nutrition problem. Most of women's do not eat their food in the normal common food times since most of them are daily labor and their income is very low. In turn poor nutrition in association with its sanitation and hygiene problem exacerbate women's health problem. Most of the slums women in Raipur city, India were faced with the problem like lack of sanitation facilities, health facilities, proper education facilities etc. Most of the families are not aware about the different government welfare scheme that's why they were deprived from various public facilities [14].

Table 13: Reproductive Characteristics of Women's

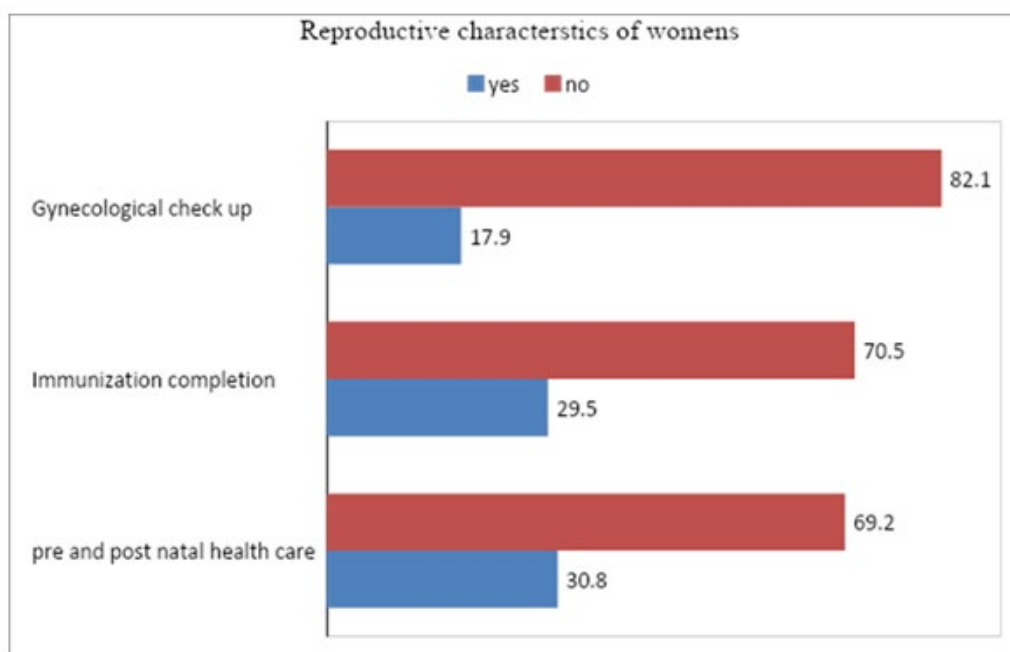
No	Variables	Category (level)	Frequency	Percent
1	Age at marriage of mothers	15-18 years	35	44.90%
		19-22 years	21	26.90%
		23- 26 years	13	16.70%
		above 26 years	9	11.50%
		Total	78	100.00%
2	The age of mother at first birth	15-18years	31	39.70%
		19-22 years	25	32.10%
		23-26 years	10	12.80%
		above 26 years	12	15.40%
		Total	78	100.00%
3	The gap of pregnancy	below 1year	21	26.90%
		1-2 years	36	46.20%
		2-3 years	13	16.70%
		above 3	8	10.30%
		Total	78	100.00%

The age at marriage of women is the key factor in understanding the health status of women's. As shown above 44.9% women's were married between the ages of 15-18 and only 11.5% were married above the age of 26. It is understood that, most women's in slum area were more likely married before the legal age of marriage (18 years) which results early age pregnancy. As females in the slum area get early marriage they are forced to hold different household responsibilities as wife and mother bringing burden, depression and health problem on them. According to key informants "medical prove in case of pregnancy at early age is detriment for the health of the mother and the child."

Accordingly about 26.9% of women's deliver their first child between 15-18 years of age and only 15.4% deliver their first child above 26 years old. It indicates that most of women's (59%) of women's in the study area deliver their first children before 22 years of age. This problem can be associated with women's low

educational background, low sanitation, low income and unreliable occupation like daily labor. Regarding birth spacing 46.2% of women have given birth between one and two years gap and 12.8% of women's give birth two up to three years gap. It implies that majority of the slum women's give birth. Therefore it can be decided that most of the slum women's give birth with small year interval spacing (below 2 years interval) increasing the fertility rate in the area in general and family size of households in particular. It also create burden on women's to care their babies in addition to other responsibilities and this intern has adversely affected their health status.

Based on the key informants, "it is medically proven that pregnancy at early age is detrimental for the health of mother and children and there must be a minimum of three years gap for the second child to be born."



**Figure 2:** Reproductive Characteristics of Women's

About 82.1% of women's do not attend gynecological checkup regularly during pregnancy, 30.8% of women's attended pre and post-natal health care on child bearing and pregnancy times regularly and continuously. It also shows that 29.5% of women's were complete their immunization follow up. It indicate that majority

of women's in the study area were not attending their pre and post-natal healthcare, not complete immunization during pregnancy, also not check the gynecological checkup, which contribute for the ill health of the slum women' s dwellers.

### Access to Health Services

**Table 14: Distribution of Respondent Based of Access to Health Service, Distance between Health Centers**

No	Variables	Category (level)	Frequency	Percent
1	Access to health service	Yes	33	42.30%
		No	45	57.70%
		Total	78	100.00%
2	The age of mother at first birth	below 1 km	14	17.90%
		1-2 km	19	24.40%
		above 2km	45	57.70%
		Total	78	100.00%

As indicated 57.7% women's responds that there is no sufficient access to health service. The distance between home and near health center for 17.9% of women's were less than 1 kilo meter, and 57.7% were more than two kilo meters far from health center. Almost half of the slum women's lack access to health services

and were far more than 1 kilo meter from health Center (92%). Therefore the health centers and hospitals are often far from poor settlement, and it is a long distance with expensive trip. Due to these reasons most of slum women's were not getting access to health center and its services.

**Table 15: Prevalence of Women's Illness in Slum Settlement**

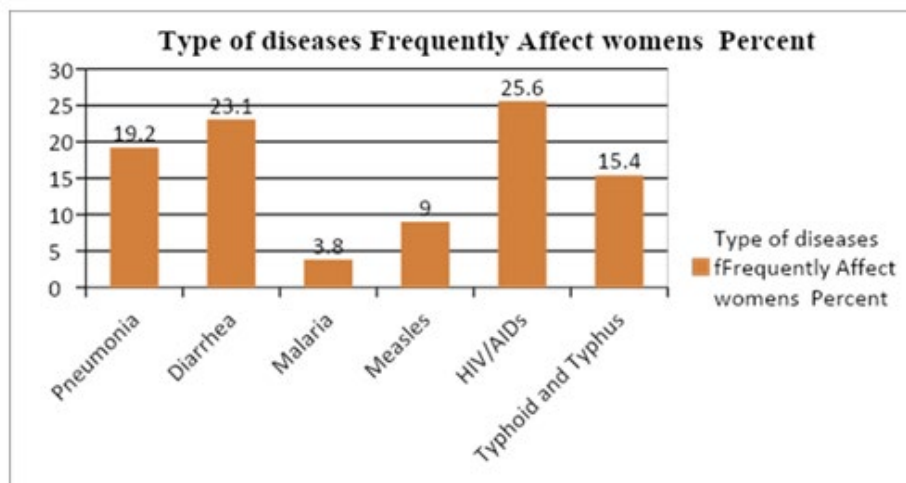
No	Variables	Category (level)	Frequency	Percent
1	Prevalence of illness	Yes	67	85.90%
		No	11	14.10%
		Total	78	100.00%
2	Actions during minor sickness	consult registered doctor	8	10.30%
		consult non-registered doctor	8	10.30%
		Self-prescribed	24	30.80%
		Did not take action	38	48.70%
		Total	78	100.00%
3	Last 6 months absent from work	1-5 days	13	16.70%
		6-10 days	26	33.30%
		above 10 days	39	50.00%
		Total	78	100.00%

About 85.9% of women's respond they were faced with health problem in the last six months. Despite the type and the severity of the illness most of the study area slum dwellers face sickness problems showing that how much women's in the slum are exposed to health problem. The main problems in the slum settlement including small room, congestion, large family size, sanitation and hygiene, nutrition, low educational status, low income high level of fertility.

With respect to actions taken by women's during minor sickness 10.3% of them consult registered doctor and non-registered doctor, 48.7% did not take any action. In case of miner illness slum dweller in the study area has no habit of getting treatment from registered doctors and from formal and legal health centers they prefer other options and surprisingly significant number of respondents waited until they get cure by their immune system or go to health centers when their illness reach at complex stage and this can bring further problems in health and even in their economic productivity. In the last six months because of illness 50% of women's were absent more than 10 days from work. It indicate that half of the

slum women's were absent from their work more than 10 day' s in last 6 months because of illness which results reduction of monthly incomes and the money invest on their health.

In the study area women's have very low quality to keeping their health before when they are ill. In slum settlement women's has low habit to get access to formal and good health services at illness the following support this study. In Raipur city, India 57.33% of respondents said that they consult a doctor. Government hospitals provide comparatively cheaper treatment. Some of them (18.67%) consult the local doctor or quack. The most dangerous practice was self-prescription; 22.33% respondents self-prescribed medicines without proper knowledge. An overall 1.67% people have said that they do not take any medicine for minor cases. 77% of women depend on government hospitals; however, 23% of respondents have said that they avail the facilities of private institutions for health treatment. Women were found to seek treatment only when their health problem caused great physical discomfort or when it affected their work performance [14].



**Figure 3: Frequent Diseases Affect Women's in the Slum Area**

With respect to major disease 23.1% affected by diarrhea and 25.6% affected by HIV. It indicated that almost all 96.1% of the slum women's were affected by different diseases. From this it is possible to understand that pneumonia, diarrhea, typhoid and typhus and HIV/AIDS are the most dominant diseases attacking women's in the slum settlement. An interview with Chirkos sub city health officer also proves this.

According to interview with Chirkos sub city health officer, "*slum settlement in the study area has great impact on women's and children's health. They are vulnerable groups for different health problem because of different health problem casual factors in slum areas. The main common disease in slum areas includes measles, pneumonia, diarrhea, typhoid and typhus and common cold*" [15-49].

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