Healthcare Service Utilization and Burden of Communicable Disease among Internally Displaced Population in Lahore

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Abstract— The study conducted at the private health facility of the Union Council (Khan Colony), in Lahore. Objectives of the study are as follows; to determine the burden of communicable diseases (TB, Hepatitis B, Hepatitis C and HIV) among IDPs in Lahore. To determine association of TB, Hepatitis B, Hepatitis C and HIV with socio-demographic variables and to assess the health seeking behavior of internally displaced persons for health care service utilization. The study design is cross sectional prospective survey conducted by collection of data through semi structured questionnaire and taking blood samples for detection of anti-bodies for Hepatitis B virus, Hepatitis C virus, and HIV. The sputum samples collected for detection of tuberculosis (TB). The sampling technique used for this study is nonrandom convenient sampling. The study found that a significant majority (22.6%) of the IDP population is infected with Hepatitis C. The large majority of studied participants comprised of female (73.6%) population. The prevalence of HCV (75%) is more in female population than male. The IDPs mainly originated from Peshawar (42%) and Mardan (34%) divisions of KPK province. The IDPs are prone to bear the burden of communicable disease due to poverty and unfavorable living conditions such as unemployment (79%) and over crowdedness (83%). The IDPs are living in low socio-economic conditions as evidenced from mud houses (15%), low income (89.4%) and high illiteracy (68%) rate. The significant majority of the participants (43.4%) prefer to go to government hospitals for the recent onset of any illness then to Hakeem (15.1%) and traditional healer (13.2%) respectively for utilizing healthcare services. The study concluded that the prevalence of sera-positive Hepatitis C infection among the internally displaced population is 22.6%.

Index Terms-- Internally displaced population, communicable disease, prevalence, health care service utilization, sera-positive, Hepatitis B, Hepatitis C, HIV, and TB

1 INTRODUCTION

The migration crisis whether it is due to conflict or disaster is devastated by the influx of population movement on large scale that may become potential threat to tackle within limited time scale. The migratory population if remains displaced within the international boundary of country of origin give rise to internally displaced population (IDPs).

The global estimate indicates that this type of internal displacement is on the rise since 2003.[1] The population movement and settlement at new destination exert pressure on available resources of the host community to meet the basic requirements of life including quality healthcare services for new arrivals of IDPs. The depletion of resources or unfavorable conditions raises the significant threat of spread of communicable diseases that is disseminated with human contacts. This study is an attempt to assess the burden of communicable diseases among IDPs population residing in urban areas of Pakistan to highlight the hidden pockets where public health interventions can take place for supporting the efforts to provide quality healthcare services to all the citizens of Pakistan.

1.1 Identification of Problem

The internally displaced population residing in urban areas of Lahore is facing challenges to maintain high standard of quality life due to scarcity of healthcare services infrastructure. This population is vulnerable to contract communicable diseases due to their unfavorable living conditions and it becomes state responsibility that public health interventions should be initiated to prevent communicable diseases within this community. What are the challenges this community is facing to maintain quality of life and which type of communicable diseases are present in this community is a big question. The public health programs can be initiated only when we have the answer to this question and this study is going to unearth the healthcare issues along with burden of communicable diseases existing in IDPs community residing in Lahore.

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2 LITERATURE REVIEW

The start of Syrian crisis in 2011 changed the global dynamics of population movement into a new dimension around the world by engaging millions of civilian people on the move either within or across national border due to civil war, terror and conflict driven forced migration.[2] The recent development of global interest in migration perspective is influenced by main push factors of the population movement due to ongoing conflict in Syria, Iraq and Afghanistan and worse security conditions in countries, like Pakistan, Eritrea, Iran and Somalia.[3] There are an estimated 28 million people called internally displaced persons (IDPs) that have moved within the national border around the world.[4] The burden of communicable disease due to migrant population originating from disease endemic areas may pose significant challenge for community health services program in the host community.[5] The prevalence of communicable disease e.g. tuberculosis is an ongoing challenge for the low incidence countries as large proportion of it occurs in migrant population.[6] The prevalence of Human Immunodeficiency Virus (HIV) is associated with the conflict driven population movement and such distribution pattern of high prevalence of HIV may become a security threat to the areas of conflict as well as areas of migrants' relocation.[7] The Hepatitis B Virus (HBV) and Hepatitis C Virus (HCV) have been long neglected from the global public health agenda due to its silent chronic nature and lack of availability of global data is a challenge for international community.[8] The global implication of chronic liver infection is a major threat to public health system of developed countries due to widely distributed migration impact thorough out the world.[9] The internal displacement of population is strongly associated with higher risk of contracting communicable diseases then the counterpart population of native origin. There is published evidence available from Beirut, Bosnia and Herzegovina, Rwanda and Chechnya that suggested strong association between internal displacement of population from war and post war zone and deteriorated health status due to the nature of unfavorable living conditions at host destinations.[10] A recent study conducted in Sri Lanka showed that internal movement of population from conflict affected districts is prone to be negatively associated with wellbeing due to long term displacement in IDP camps.[11] The healthcare services in emergency situation are likely to compromised due to mass movement of population that is affected by insecurity and logistical barriers as it was seen in the case of Darfur IDPs crisis in 2006.[12] According to published literature migration phenomena has a major impact on accessibility and health care services utilization by the migrant and the host community.[13]

The recent emergence of IDPs influx in Pakistan started in 2009, which has legacy of armed conflict between non state actors and the state run military operations that forced the civilians to migrate from Swat and Malakand Division of Khyber Pakhtunkhwa (KP) Province to the relative settled areas of Pakistan.[14] According to the World Health Organization (WHO), the population affected by armed conflict is prone to compromise the status of health and health service infrastructure.[15]

This research study is relatively new or initiating at the given point that tends to explore the prevalence of communicable diseases such as Hepatitis B, Hepatitis C, HIV and TB. The author believe that the practical utility of this thesis is highlighted given the fact that IDP community is socially connected with general population and not easily differentiated on ethnic basis to begin with. There is evidence available for assessment of prevalence of communicable diseases such as Hepatitis B, Hepatitis C, HIV and TB from different countries around the world but there is a gap of availability of published literature regarding the prevalence of communicable disease among internally displaced person (IDPs) migrations originating within Pakistan. The assessment on practical application of healthcare services utilization and trends of seeking healthcare services will generate knowledge for implementation of public health interventions for the IDP community for future prospects of their health status.

3 RESEARCH QUESTION

What is current percentage of internally displaced migrants having communicable diseases and what are the practices for seeking health care services for living within the urban area of Lahore?

4 AIM

To assess the prevalence of communicable diseases (HBV, HCV, HIV and TB) among internally displaced persons (IDPs) moved to settled areas of Lahore and their pattern of healthcare service utilization studied from May 2017 to August 2017.

5 OBJECTIVES

The specific objectives of the study are;

1. To determine the prevalence of communicable diseases (Hepatitis B, Hepatitis C, HIV and TB) among IDPs in Lahore.
2. To determine association of Hepatitis B, Hepatitis C, HIV and TB with socio-demographic variables.

3. To assess the health seeking behavior of internally displaced persons for health care service utilization.

6 RESEARCH METHODOLOGY

The research is conducted by collection of data through semi structured questionnaire for assessment of health seeking behavior and collection of blood samples and sputum samples for detection of HBV, HCV, HIV and TB among IDPs. These IDPs were residing in urban union council (Khan Colony) of Lahore. The detection of communicable diseases was done by detection of anti-bodies of anti HCV, HBsAg and HIV in blood serum and AFB in sputum sample.

6.1 Research Design

The study is a descriptive survey research design because it includes analysis to assess the burden of disease among internally displaced persons (IDPs) migrants and association with demographic variables during the course of their past illness.

6.2 Study Time frame

The study design is a community based cross sectional prospective study. The study is based upon sera-positive or sera-negative results of blood samples collected and the detection of MTB from sputum smears and culture examination. The study duration is from May 2017 to August 2017.

6.3 General Setting

The study is carried out in the private health facility of the Union Council (Khan Colony), where internally displaced population (IDPs) is residing in Lahore. The researcher and research assistants set up a medical camp to have open invitation to attend the medical camp for Internally Displaced Persons residing in Khan Colony. The medical camp was setup to provide medical assistance to under privileged community as well as to meet the requirements of selection criteria for this study.

6.4 Serology for HBV, HCV and HIV

The serological study of blood samples for HBV, HCV and HIV was done through rapid diagnostic test which is carried out by physical examination of the rapid diagnostic kit at nearest health facility, in Lahore. The observed results are found reactive (positive) or not reactive (negative) through rapid diagnostic test only. The preliminary results of sero-positive are considered the final "reactive" results due to scarcity of the feasible resources for sending sample to the reference laboratory for further confirmatory examination.

6.5 TB Diagnostic Algorithm

The criterion for detection of TB is based upon submission of two sputum samples by the enrolled participants separated by one hour apart on a same day as per National TB Control Program guideline-(Basic training Module, 2015). The sputum samples are analyzed for Acid Fast Bacillus (AFB) for smear and culture at National TB control reference laboratory (NRL). The criterion for declaration of positive sample for TB detection is as per recommended guidelines of NTP that bacteriology confirmed positive sample will be only after laboratory confirmation of positive sputum smear or culture for AFB.

6.6 Sampling Strategy

The sampling for this study is done with non-random convenient sample technique adopted due to the sensitive nature of the study population for their ethnic and political affiliations. There is evidence available from the published literature that quantitative study is supported by taking nonrandom convenient sampling method instead of using random sampling technique due to the sensitivity of the research population by any external influence[16]. The researcher and his team found it extremely difficult to investigate the ethnic origin of study population due to sense of insecurity among this particular community. The researcher found that there is a growing sense of insecurity among the study population that belongs to Khyber PakhtunKhwa by origin and due to compromised law and order situation in the country. The research team becomes vulnerable for security threat due to proclamation from the state supported law enforcement agencies that there is presence of banned elements of miscreants among various pockets of Pashtu speaking communities throughout the country. That sense of insecurity among IDPs made them curious for that reason the research team was strongly challenged by local elders of IDP community when the proper identity of the participants was enquired. The second most difficult task was to encounter political rival groups among the IDPs community where one group was politically backed by ruling government and other was by political opposition and the researcher cannot recruit study participants at the same time from both the groups. The prevailing law and order situation and sensitive security condition compelled researchers to adopt nonrandom convenient sampling technique for this study.

6.7 Study population

The recruitment of the study population has taken place exclusively from the community residing at Union Council (Khan Colony) of Gulberg Town, Lahore designated as Internally Displaced Persons (IDPs) due to their native origin from areas belonging to Pashtu speaking communities of Khyber PakhtunKhwa Province.

6.8 Sample size

The initial plan was to recruit a sample size of 100 participants for this study, but as the data collection was progressed it was assessed that due to strong political influence the participants were restricted to freely participate in the study. The total 138 participants attended the medical camp. There were 85 participants that were not meeting the selection criteria were only provided medical assistance from the medical camp and they were discarded from the study. The 53 participants were qualified to participate in the study after obtaining their consent.

6.9 Inclusion criteria

The participants of age 15 or above will be enrolled for the study.

6.10 Data Collection

Informed consent process

Our research team approached the heads of household for permission to speak with and enroll age-eligible household members in this study. The participants were asked for their permission to be included in the study and consent forms were thoroughly explained to each participant in the local language. Written or thumbprint informed consent was obtained. The participants of age below 18 years were recruited for study after taking the consent of their parent or guardians.

Questionnaires and screening of communicable diseases testing

A demographic questionnaire with blood specimen collection was used to collect information to determine HBV, HCV, HIV and TB prevalence and the socio-demographic characteristics. Each respondent was interviewed by a research assistant who has assessed the demographic variables from each participant. Following the interview, a trained nurse collected the blood samples. The antibodies against HBsAg, Anti HCV and HIV were detected through rapid diagnostic kit. The rapid diagnostic test was administered through a sample of blood drawn through veni-puncture from the sample participants to test sera-positive or sera-negative for HBV, HCV and HIV.

The detection of TB was done through "Same Day Diagnosis" approach by collecting two sputum samples at one hour interval as per recommended National TB Control Program (NTP) guidelines (National TB control Guidelines, 2017). The collected samples were sent to Reference Laboratory of National TB Control Program, Islamabad to be tested for sputum smears and culture to examine presence of Acid Fast Bacillus (AFB) for detection of bacteriological confirmed Mycobacterium Tuberculosis (MTB).

6.11 Strengths of the study

The strength of the study was strong commitment and devotion of research team to apply research methodology in a challenging environment. The presence of Pashtu speaking researcher in research is strength of the team to encounter the language barriers.

6.12 Limitations of Study

The operational and administrative constraints restrained the sputum sample analysis by reference laboratory for all the 53 recruited participants therefore the author managed to process required two samples (A+B) of only 24 participants out of total 53 to be processed at National reference laboratory for sputum smear and culture. Following challenging points were faced as limitations of this study.

1. The limitation of the study is that the financial constraint disallowed to process all 53 recruited participants to submit sputum samples.
2. The lack of institutional support from Punjab Provincial TB control program to support the process of culture of sputum samples was observed as a challenge.
3. The lack of institutional support from the Gulab Devi Hospital, TB Laboratory was observed during the study where as the Gulab Devi Hospital TB laboratory is the institution to support the process of detection of AFB from the sputum samples in the Province.
4. The lack of institutional support from the head of the department of National Reference Laboratory, National TB Control Program Islamabad was observed. The author managed to process the sputum culture for AFB from only 24 participants' from National Reference Laboratory, NTP with the courtesy of subordinate staff of the laboratory on personal reference.
5. The lack of support from the International Organization for Migration (IOM) UN migration agency, Pakistan was critically faced as a challenge by the researcher whereas the same organization has initially vowed to support and promote this research activity and later on took it as an administrative hurdle for lead author.

7 DATA ANALYSIS

The data analysis is done as mentioned below;

7.1 Data variables, sources of data and data collection

Data variables are listed according to study objectives:-

Objective 1: To determine the prevalence of communicable diseases (Hepatitis B, Hepatitis C, HIV and TB) among IDPs.

    a. Registration ID
    b. Status of TB smear (Negative/Positive/Not applicable)
    c. Status of TB culture (Negative/Positive/ Not applicable)
    d. Status of HIV (Non-Reactive / Reactive)
    e. Status of HBV (Non-Reactive / Reactive)
    f. Status of HCV (Non-Reactive / Reactive)

Objective 2: To determine association of communicable diseases with socio-demographic variables (month of examination, age, gender, education, Monthly income, living condition)

    g. Time (date of examination)
    h. Age (15 – 30, 31-45, 46-60, 61 and above, not recorded)
    i. Gender (Male / Female / Transgender)
    j. Education (Illiterate, read and write, Primary, Secondary, Metrics, diploma, graduate)
    k. Monthly Income (less than 5000, 5000-10000, more than 10000)
    l. Living Housing Condition (mud house, brick house, concrete house)
    m. Marital Status (Single, married, divorced, widowed, separated)
    n. Subjects who share one bedroom (one, two, three, more than three, none)
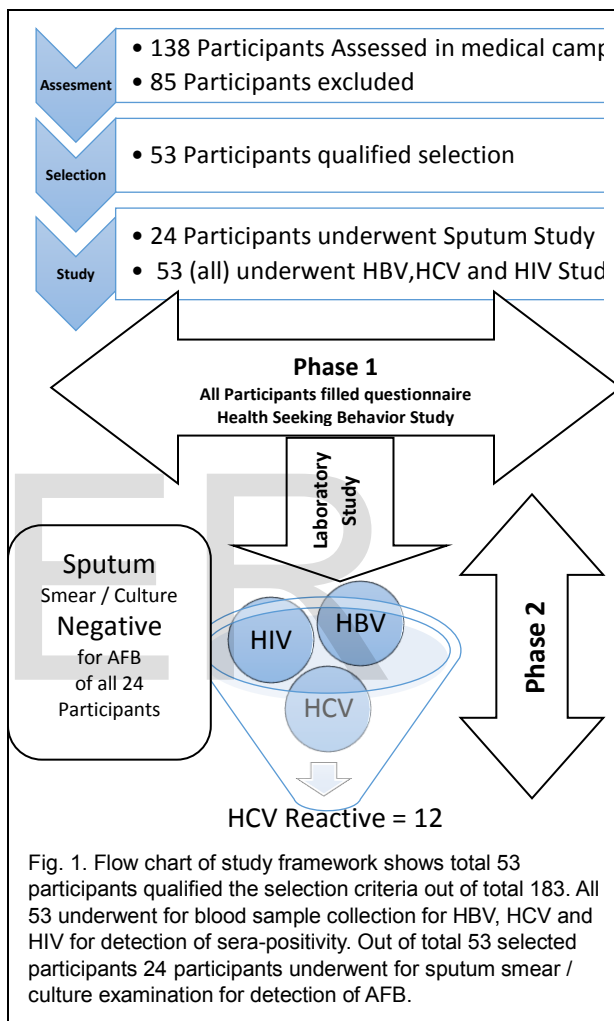   o. Status of current employment (employed, un-employed, no response

7.2 Analysis and statistics

Double data entry and logical checks entered from electronic register into Epi-Data version 3.0 and SPSS software. Associations between selected socio-demographic variables and occurrence of any disease are explored using frequency. A p-value <0.05 is considered significant.

8 FINDINGS

The flow chart of study framework describes the study is completed in two phases as shown in Fig.1. In phase 1 the selection of the participants were completed out of total participants attending the medical camp. Total 138 participants attended the medical camp out of these 85 participants were excluded who did not qualify the selection criterion. Total 53 participants qualified the selection criteria. All the 53 selected participants signed informed consent for this study and provided blood samples for detection of antibodies against HBV, HCV and HIV. On the other hand out of 53 participants recruited for this study only 24 participants opted to submit sputum samples for detection of TB.

Fig. 1. Flow chart of study framework shows total 53 participants qualified the selection criteria out of total 183. All 53 underwent for blood sample collection for HBV, HCV and HIV for detection of sera-positivity. Out of total 53 selected participants 24 participants underwent for sputum smear / culture examination for detection of AFB.

The phase 2 of the flow chart is showing the results of the blood samples examined by rapid diagnostic kit and sputum smears/culture. The laboratory results showed 12 participants tested for anti HCV were found reactive whereas HBsAg, HIV and sputum smears/culture results were found Negative. This flow chart is also showing that all the 53 participants that were qualified for this study have filled the questionnaire form for the analysis of trends of healthcare service utilization.

8.1 Variation in Age

The table No 1 is showing results from the study of demographic variable (age) and author found that about 30 (56.6%) participants that opted to be enrolled in the study were very young and their ages were from the range of 15 to 30 years. The next

TABLE 1
VARIATION IN AGE AMONG IDPs

Age (Years)	Frequency	Percentage
15-30	30	56.6
31-45	12	22.6
46-60	10	18.9
>60	1	1.9
Not Recorded	0	0
Total	53	100

Frequency of demographic variable with age distribution among IDPs Screened for Hepatitis B, Hepatitis C, HIV and Tuberculosis.

group of the participants were about 12 (22.6%) and 10 (18.9%) respectively belonged to the middle age group ranging from 31 to 45 years and from 46 to 60 years of age respectively.

8.2 Frequency of Gender

The demographic study for gender distribution among sample population of the IDPs revealed that significant majority of the females attended the

TABLE 2
FREQUENCY OF GENDER AMONG IDPs

	Male	Female	Total
Frequency	14	39	53
Percentage	26.4	73.6	100

Frequency of demographic variable with gender distribution among IDPs Screened for Hepatitis B, Hepatitis C, HIV and Tuberculosis.

medical camp during this study. The female population of (73.6%) opted to participate in the study as compared to a thin minority of (26.4%) of male population as shown in table No 2.

8.3 Division-wise Origin of IDPs

The aim of this study was to recruit IDPs (internally displaced population) participants that have migrated from Pashtu language speaking dominated areas. The study results as shown in table No 3, revealed that 22 (41.5%) participants

belonged to Peshawar division and 18 (34%) participants were from Mardan division whereas 13 (24.5%) participants were categorized in unknown category because either they were not sure from

TABLE 3
DIVISION-WISE ORIGIN AMONG IDPs

Division	Frequency	Percentage
Bannu	0	0
Malakand	0	0
Hazara	0	0
Mardan	18	34.0
Peshawar	22	41.4
Kohat	0	0
D.I.Khan	0	0
Unknown	13	24.5
Total	53	100

Frequency of division-wise origin among IDPs screened for communicable diseases (TB, Hepatitis B, Hepatitis C, HIV). Unknown category is for those participants who are not aware of their division-wise origin. Frequency of division-wise origin among IDPs screened for communicable diseases (TB, Hepatitis B, Hepatitis C, and HIV).

which division they have originated or they denied to give clue for their ethnic origin, however they were originally from Pashtu speaking community by language.

The large majority of the participants (42%) originally belong to Peshawar division and the second most majority (34%) belonged to Mardan division as shown in Fig 2.
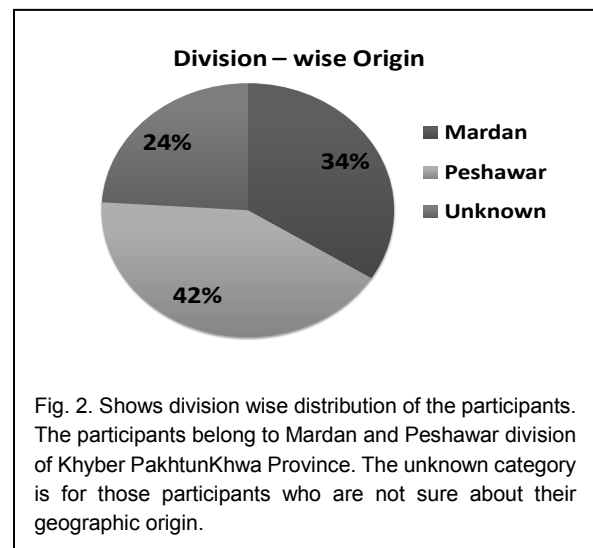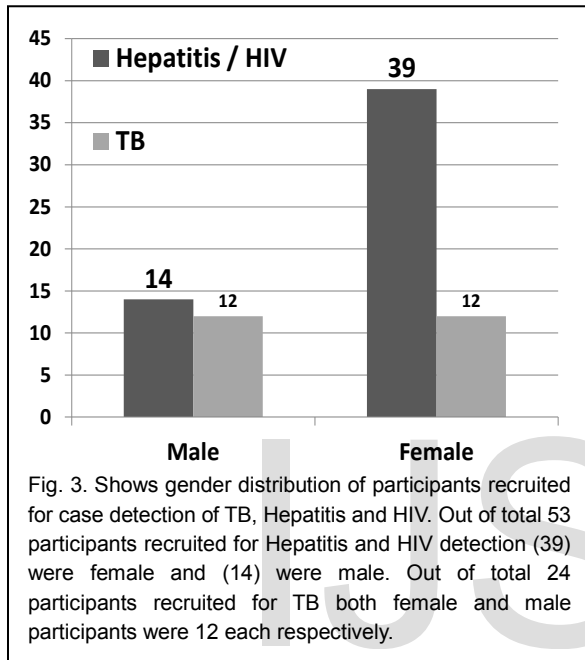

Fig. 2. Shows division wise distribution of the participants. The participants belong to Mardan and Peshawar division of Khyber PakhtunKhwa Province. The unknown category is for those participants who are not sure about their geographic origin.

8.4 Gender-wise Case Detection

The figure no 3 shows male and female distribution of participants for case detection of HBsAg, Anti HCV, HIV and TB. Total 53 participants were recruited for the blood sample collection comprised of 14 male and 39 females. For the detection of AFB from sputum samples the 24 participants out of 53 were recruited to submit sputum samples with 12 participants each in male and female group.
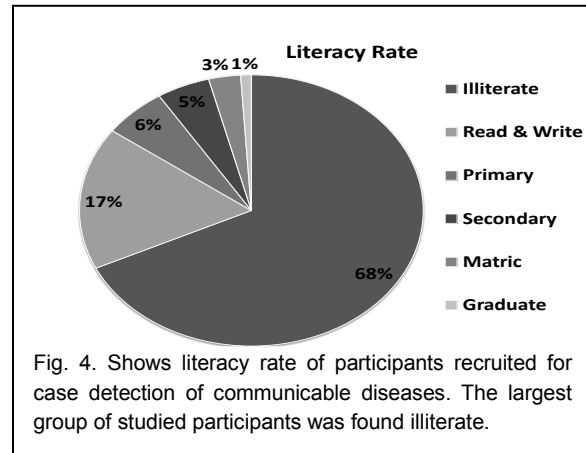

Fig. 3. Shows gender distribution of participants recruited for case detection of TB, Hepatitis and HIV. Out of total 53 participants recruited for Hepatitis and HIV detection (39) were female and (14) were male. Out of total 24 participants recruited for TB both female and male participants were 12 each respectively.

8.4 Literacy Rate

The literacy rate was one of the most important considerable factors in a population that has originally migrated from some other parts of the country. The proportion of the literacy found in this study as shown in figure No 4 was similar to any other IDP population who is presumed to be living under unfavorable, under privileged, and deprived from modern healthcare facilities. This study has shown significant majority (68%) of the studied population was found illiterate (who cannot even write or read their own names) than the second largest group (17%) of the participants was able to read and write only. The minority of the participants had primary (6%), secondary (5%) and matriculate (3%) level of education. The studies showed that only (1%) of population among studied IDPs were literate up to graduate level.
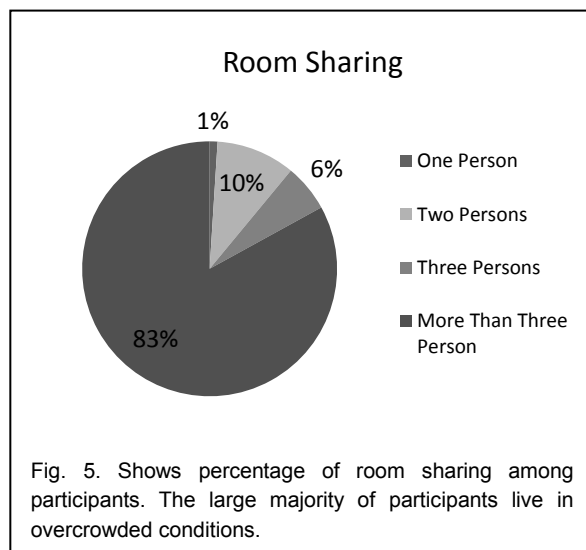
8.5 Crowdedness

The study showed that over crowdedness is deeply eroded in the IDP community and same factor is contributing to their daily life miseries due

to sharing of limited resources. The over crowdedness is un-doughtily strong contributory factor for spread of any communicable disease due to less ventilated, aerated and poor sanitation.

Fig. 4. Shows literacy rate of participants recruited for case detection of communicable diseases. The largest group of studied participants was found illiterate.

This study found the similar pattern as shown in figure no 5. The studied population is living under extreme poverty condition that cannot afford to live with separate room facility for family members. The study result showed that significantly large majority (83%) of the participants are sharing room with more than three persons which reflect that there is high tendency of having an outbreak of communicable disease where person to person contact is favorable for spread of any communicable disease.

Fig. 5. Shows percentage of room sharing among participants. The large majority of participants live in overcrowded conditions.

8.6 Employment Status

The unemployment is another contributory factor for living in unfavorable conditions and the result shown in figure no 6 revealed that significantly

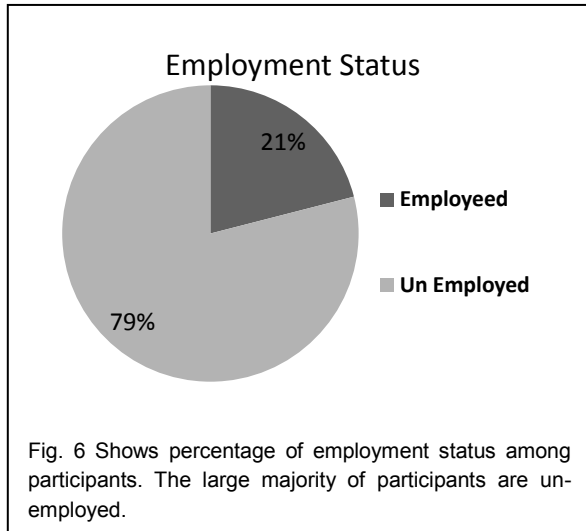large proportion (79%) of IDP population is unemployed.

Fig. 6 Shows percentage of employment status among participants. The large majority of participants are un-employed.

8.7 Social Demographic Variables

The social demographic variables that give a reflection of living condition of any community are housing condition, minimum monthly income of the household and marital status. This study showed the similar pattern of these above mentioned social demographic variables that can be confounding factors in the spread of communicable disease due to poverty and poor sanitary conditions.

8.71 Housing Status

The figure no 7 showing result of the study that (49%) of the studied population was living in concrete houses whereas (36%) was living in brick houses and (15%) of population was living in semi constructed houses made of mud.
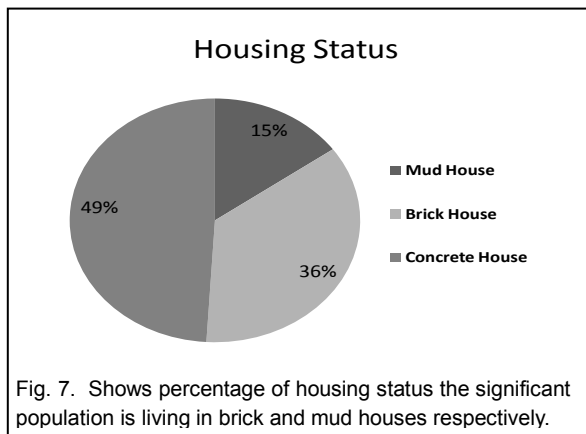
Fig. 7. Shows percentage of housing status the significant population is living in brick and mud houses respectively.

8.72 Monthly Income

The table no 4 is showing that the significant majority 45 (89.4%) of the participants were living in extreme poverty conditions as their monthly

household income was below Rs. 5000/- PKR. The participants among this lowest household income group was either out of job or only one member in

TABLE 4
MONTHLY INCOME

In PKR	Frequency	Percentage
>5000	45	89.4
5000-10000	5	9.4
<10000	5	5.7
Total	53	100

Frequency of monthly income among IDPs screened for communicable diseases (TB, Hepatitis B, Hepatitis C, and HIV).

a family was employed having monthly income below Rs. 5000/- PKR.

8.73 Marital Status

The figure no 8 is showing marital status of the studied population and the author found that significant majority of about 37 (70%) of the participants were married and 16 (30%) of the participants were single.
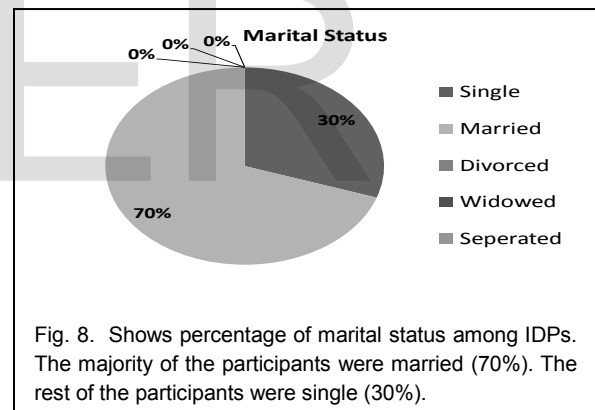

Fig. 8. Shows percentage of marital status among IDPs. The majority of the participants were married (70%). The rest of the participants were single (30%).

8.8 Burden of Communicable Disease

The table no 5 shows the burden of communicable disease with frequency of reactive status of disease among participants for the detection of HBV, HCV, HIV and TB. The result of rapid diagnostic kit tested for HBV, HCV and HIV shows that the 12 participants out of 53 (22.6%) were found reactive for anti HCV. There was no participant found reactive for HBsAg and HIV respectively by rapid diagnostic kit method. The result of sputum smears and culture for AFB was also found negative for all 24 (tested) participants for detection of TB. Hence the result from raid diagnostic kit for detection of anti HCV shows strong prevalence of Hepatitis C among IDP community residing in Khan Colony, Lahore.

Frequency of the Reactive participants

Disease	Total Tested	Reactive	Frequency %
TB	24	0	0
HIV	53	0	0
HBV	53	0	0
HCV	53	12	22.6

Frequency of reactive cases among studied IDPs Screened for Hepatitis B, Hepatitis C, HIV and Tuberculosis.

8.9 Gender Distribution for HCV

The figure no 9 shows the prevalence of HCV among male and female participants about 12 (22.6%) participants found reactive for anti HCV out of total 53 participants. The gender wise distribution of HCV reactive participants showed that females were significantly more affected than males. In our studied population, 09 (75%) out of 12 participants were female and 03 (25%) out of 12 participants were male.
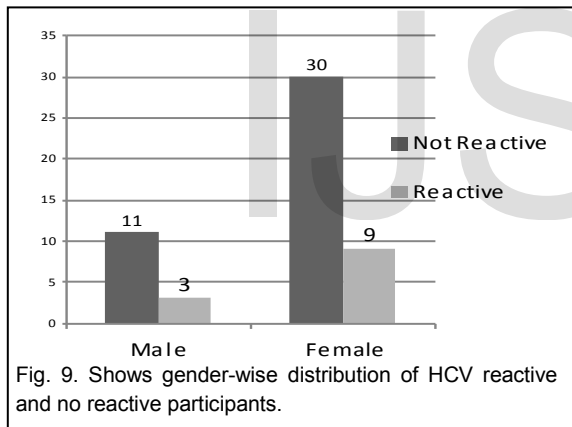
Fig. 9. Shows gender-wise distribution of HCV reactive and no reactive participants.

8.10 HealthCare Service Utilization

The figure No 10 illustrates that the IDP population is showing variance in healthcare service utilization behavior as significant majority of the participants 23 (43.4%) prefer to visit government hospital when they fell sick followed by 8 (15.1%) participants prefer treatment from Hakeem (eastern medicine practitioner) and 7 (13.2%) participants prefer traditional healer respectively.

8.11 Inadequate Health Service

The figure no 11 illustrates the reasons for lacking in health services among IDPs population. The significant majority of the participants 9 (17%) stated that they could not avail the healthcare services because they cannot afford the cost of

health service. The 39 (73.6%) participants gave other reasons for lacking in healthcare services.
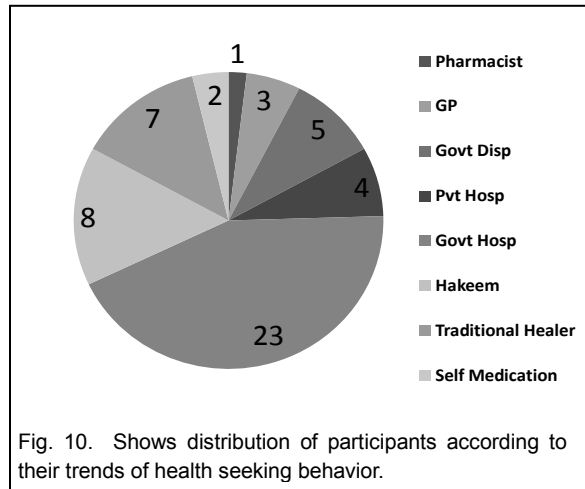

Fig. 10. Shows distribution of participants according to their trends of health seeking behavior.

8.12 Hospital Admission

The figure no 12 illustrates the responses for admission in hospital with in last 6 months. The significant majority of the participants 43 (81.1%) stated that they were not admitted in hospital; however 8 (15.1%) participants stated they were admitted in hospital within last 6 month. The 2 (3.8%) of the participants showed no response to the question if they were admitted in hospital or not within last 6 months.
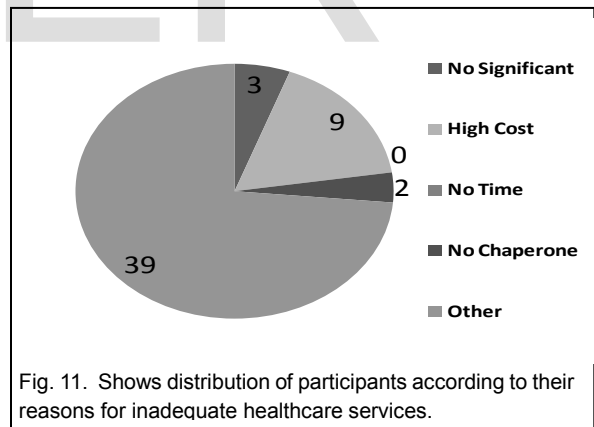

Fig. 11. Shows distribution of participants according to their reasons for inadequate healthcare services.
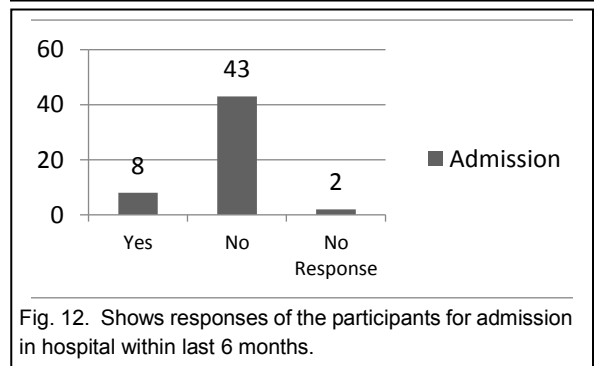

Fig. 12. Shows responses of the participants for admission in hospital within last 6 months.

8.13 Reason for Hospital Admission

The figure no 13 shows the reason for hospital admission among IDPs population. The majority of the participants 50 (94.3%) gave no significant reason for hospital admission out of different categories of diseases, however minority 1 (1.9%) of the participants responded for Accidents, Labour/Delivery, and Gynecological reasons respectively, for reason of hospital admissions.
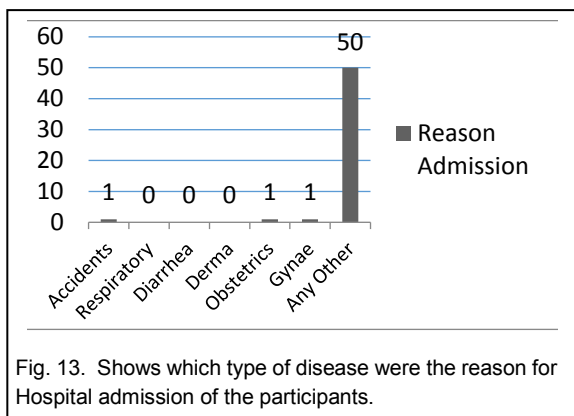

Fig. 13. Shows which type of disease were the reason for Hospital admission of the participants.

8.14 Source of Health Awareness

The figure no 14 shows that which source of communication were available for the participants within the IDPs community. The interpersonal communication for healthcare services utilization was assessed and the results show that (21%) of the participants receive awareness of healthcare services from the health workers. The second most common source of healthcare service information (19%) is from the family members. The thin minority (4%) of the participants receive health information from the newspapers. The (36%) of the participants have other sources for receiving inter personal communication (IPC) for raising awareness of healthcare services.
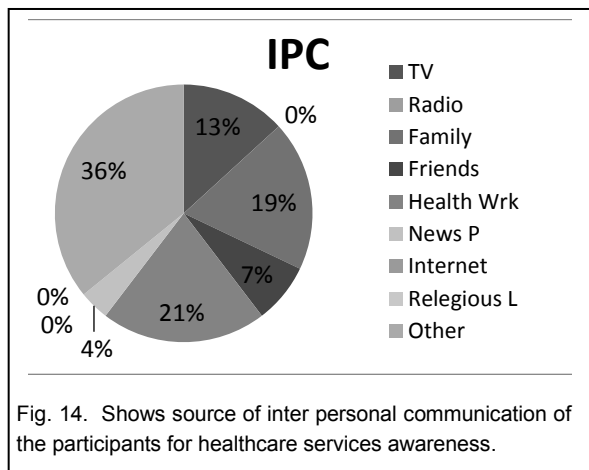

Fig. 14. Shows source of inter personal communication of the participants for healthcare services awareness.

8.15 Association- Demographic Variable
8.15.1 Literacy and Employment

The association of prevalence of HCV with literacy and employment of the studied population is shown in figure No 15 by cross tabulation method. The cross tabulation shows that literacy and employment status has significant importance for spread of communicable disease as total 10 out of 12 (83%) HCV reactive participants were illiterate and 8 (66%) among them were unemployed. One each participant was found who can read and write and literate up to primary level respectively.
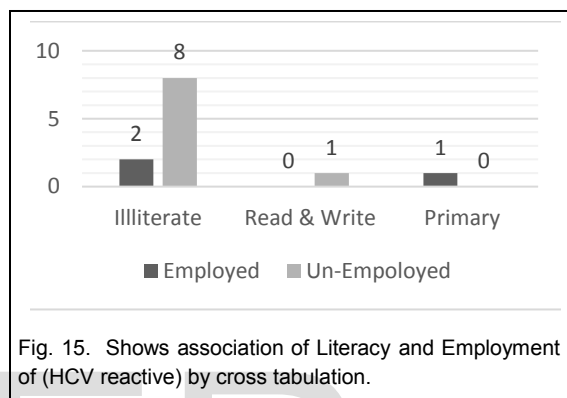

Fig. 15. Shows association of Literacy and Employment of (HCV reactive) by cross tabulation.

8.15.2 Income and Over Crowdedness

The figure No 16 shows association of demographic variables of monthly income and crowdedness with prevalence of HCV by cross tabulation. This cross tabulation of HCV with monthly income and bedroom sharing shows that infection of viral Hepatitis "C" has strong association with participants who are sharing one bed room with more than three household members as the result shows that 9 out of 12 (75%) infected participants with Hepatitis C were sharing bed room with more than three household members. The cross tabulation also reveal strong association of Hepatitis "C" infection with monthly income of the household as 10 participants out of 12 have monthly income of less than 5000/- PKR.
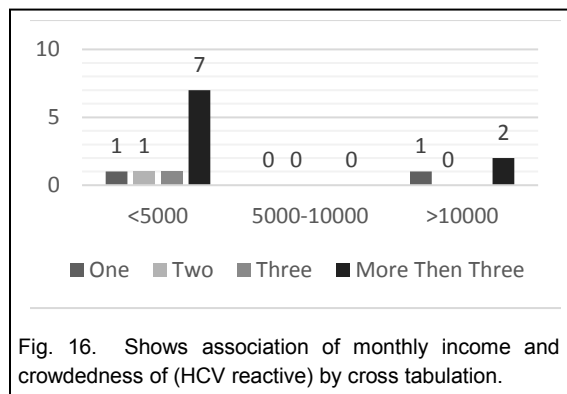

Fig. 16. Shows association of monthly income and crowdedness of (HCV reactive) by cross tabulation.

8.15.3 Education and Age

The figure 17 shows association of age with education of IDPs screened for communicable diseases in this study. The result shows that trend of seeking education is higher among younger age group of IDPs as compared to older participants. The result shows that 15 participants of (15-30) age group are among the non-illiterate category that fall in category of read and write, primary, secondary and matric level education. The illiterate group has largest concentration of 28 participants among all age groups.
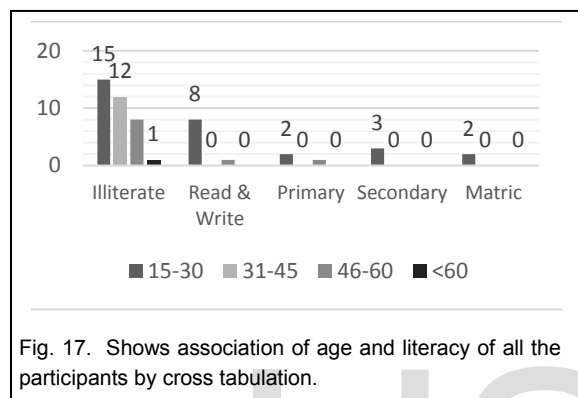

Fig. 17. Shows association of age and literacy of all the participants by cross tabulation.

9 CONCLUSION

This study revealed that the prevalence of sero-positive Hepatitis C infection among the internally displaced population is 22.6%. High prevalence of HCV reactive was observed in females as compared to males. The study found this population is living with low socio-economic status as their means of earning and living standards are not feasible to promote adequate quality of health status. The majority of the population is married, illiterate, unemployed, low economic status and living in over crowdedness.

10 DISCUSSION

The purpose of this study was to investigate the prevalence of communicable diseases among internally displaced persons residing in Lahore. The internally displaced population is categorized as the population that has migrated from their native place of residence due to unfavorable circumstances when they are threatened to compromise their lives and livelihood. The internal migration exerts pressure on the allocated resources of originally settled population and the new arrival has to bear the consequences by compromising resources including healthcare services. This study attempted to highlight very important segment of the society

that usually escape the attention of policy makers as this population tends to live in un-accounted for dwelling. The phenomena of emergence unfavorable conditions lead to forced internal displacement of the population for a "Migration" perspective. The migration perspective is likely to carry unknown disease status from the place of origin to newly settled place of internal migration. That unknown health status may bring forward the threat of communicable diseases within the migration perspective that needs to be investigated for carrying out health intervention. The migration perspective for communicable disease is least investigated topic in Pakistan thus this study is one of the breakthroughs for future researchers to highlight the burden of communicable diseases due to influx of IDPs.

The health related issues of the internally displaced population need to be addressed at a priority to prevent the threat of an epidemic within the community. There is a tendency of overlook of the health issues on the part of private or government run health authorities and such health issues remain neglected for long due to socio-cultural and political hurdles. The internally displaced population is prone to contract communicable diseases due to the nature of their socio-cultural circumstances in relation to their living standards, low socio economic status and literacy rate augmented by over crowdedness. According to the Khan et; al, 2011, it has been well documented that communicable disease prevalence is higher among the low socio-economic settings. The IDPs population residing in Lahore has similar circumstances as any population that has been forced to migrate from their native origin and reside at some other settlements. In such a settlement where there is already limited resources and healthcare services there is increased likelihood of having high incidence of communicable disease. The present study proved the assumption of having communicable disease infections and successfully describes the prevalence of communicable disease in IDPs population that can become source of outbreak if remain unchecked for long time.

This study is unique in its kind as it is the first research attempt to identify the areas of improvement of health standards and promotion of health awareness in the community. This study shows the prevalence of HCV (22.6%) among the IDPs community.

The researcher has noticed another commonly observed feature of alarming significance that most of the infected persons with chronic Hepatitis C were not aware that they can become source of this infection for other members of the community

including their own household members. None of the studied participants had both the HBV and HCV Co-infection. No participant was found infected with Mycobacterium Tuberculin in this study however the chances of having TB infection either primary TB or MDR TB cannot be ruled out in such limited resource setting. The other demographic Factors like illiteracy (68%), over crowdedness (83%), low income rate (89.4%) and unemployment (89.4%) were having similar pattern as it could be observed in any resource limited setting elsewhere. The study opens another avenue of finding an approach to improve the health status of the IDPs. What is the common factor that is playing its role for spread of communicable disease is to be found out? From the discussion the idea generated if all the contributory variables like illiteracy, over crowdedness, low income, and un-employment are categorized together to form a construct variable that is ultimately playing its role to increase the likelihood of high prevalence of HCV infection in the study population then that common factor must be the one to focus for application of knowledge at program level for bringing change in healthcare settings where outbreak of communicable disease is the most immediate threat.

The literature support the idea that there is a construct variable that is contributed from studied variables and can lead to become the standalone categorical variable for spread of communicable disease and that construct is "poverty". If any population that is forced to live in such circumstances where they are deprived from basic nesseccities of life and achieving socially acceptable standard of living that is essential for an ordinary course of life then such a population is defined to be living under the influence of multi-dimensional poverty as in the case of the studied IDP population.[17] The figure no 18 illustrates the construct of poverty from contributing variables that can ultimately be the cause of spread of communicable diseases.
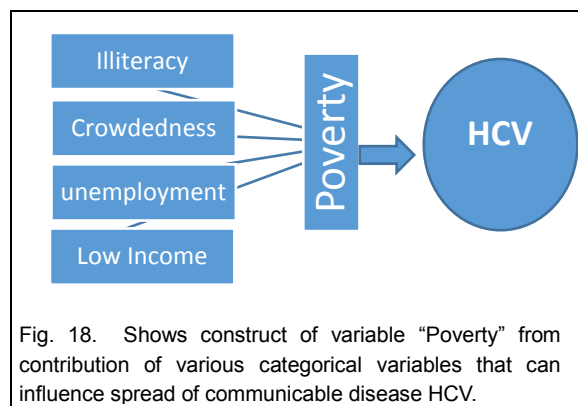

Fig. 18. Shows construct of variable "Poverty" from contribution of various categorical variables that can influence spread of communicable disease HCV.

From the discussion it is pertinent to say that multi-dimensional poverty is the phenomena that can ultimately lead to be the cause of spread of communicable diseases in socio-politically deprived population. The intervention to improve the social infrastructure in the community where all the contributory factors of poverty are addressed at policy level that can bring the required change in raising awareness of the healthcare interventions. The community such as the studied IDP population must have improved infrastructure of capacity building in social sector that can improve the economic condition of individual households. The improved economic condition can ultimately lead to adopt preventive methods for communicable diseases.

11 RECOMMENDATION

1. The most important recommendation from this study is to initiate the aggressive measures to interrupt HCV infection by implementation of social mobilization methods for better awareness of the community.

2. The government health authorities with support of non-governmental organizations (NGOs) should make programs to raise the awareness of the community to adopt preventive measures.

3. The community should have independent health facility and schools within their close vicinity to raise the literacy rate.

12 ETHICAL APPROVAL

12.1 Ethics Issues

Ethics approval for this study was obtained from ethical review committee of University of Management and Technology, Lahore.

12.2 Data confidentiality

Confidentiality of the participants is maintained at all level of analysis only researcher had access to specific details. Only data maintained in electronic system is analyzed and no access to personal contact of the migrant applicant is done. Data is maintained in an electronic register with a password protected code and only authorized persons (Research team) had access of the data for monitoring and analysis purposes.

12.3 Specific patient benefits

This study will indirectly benefit the specific patients as this will lead to improve disease management if burden of disease is identified.

12.3.1 Community participation and benefits:

The policy guidelines will be beneficial for health policy advisors to initiate community oriented intervention for effective case detection and treatment follow up.

12.3.2 Feedback of results:

The results of the study will be shared with individual participants in case if he is found positive for any communicable disease. The results will also be shared with local health authorities.

12.3.3 Implications for policy and practice:

There may be implications for policy and practice depending on results of the study. If this intervention is found to be successful, it will provide the necessary evidence for national program managers to consider scaling up and standardizing this intervention at program level.

12.4 Acknowledgement

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