

# Assessment of health hazards and associated factors among the returned migrants living at Bati Woreda, Oromia Zone, Amhara National Regional State

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## Abstract

**Background:** Migration is a demographic event which serves as a coping mechanism of poverty alleviation in developing countries, including Ethiopia. The living condition of migrants in economically attractive countries, however, is having a devastating effect. The health risk of Ethiopian migrants to neighboring countries is not well documented.

**Objective:** This study aimed to assess hazards and associated factors among returned migrants living at Bati Woreda, Amhara National Regional State.

**Methods:** A quantitative cross-sectional survey with a sample size of 390 returnees was made in five *kebeles* of the woreda using a structured questionnaire in April 2011. Health hazard was defined as a health outcome that occurred during the process of migration involving travelling, staying in the destination, or getting back home. The quantitative data was entered and cleaned using Epi Info Version 3.5.1. Descriptive statistics was performed to present socio-demographic data. Multivariate logistics regression analysis using AOR with 95% CI was used to assess the relative importance of associated factors. The qualitative data was collected using focus group discussions and in-depth interviews using semi-structured question guide. Open Code Version 3.4 was used to select codes, categories and themes for the qualitative data using the thematic analysis.

**Results:** The overall magnitude of health hazards was 41%: diarrhea 31.6% and malaria 10.5% were the leading acute illnesses. After controlling the possible confounders in binary multivariate logistic regression, push factors related to age  $\geq 35$  years [AOR (95%CI) =3.48 (1.73,7.02)], the ability to read and write in educational status [AOR (95%CI) = 2.49 (1.17,5.30)], being jobless and a housewife [AOR (95%CI) = 2.17(1.29,3.64)] and AOR (95%CI) =5.28 (2.17,12.83)], respectively, and presence of better employment opportunities and living conditions as a pull factors [AOR (95%CI) = 8.61(3.16,23.47) and [AOR (95%CI) = 6.35 (1.89,21.36)], respectively, were determinants of health hazards.

**Conclusion:** Migrants were highly exposed to health hazards because of the illegal routes of the movement. Socio-economic variables with respect to age, education and unemployment were predictors of the migration phenomenon. Providing safety protection from potential health hazards before leaving the country, proper social and psychological rehabilitation of returnees is recommended. [*Ethiop. J. Health Dev.* 2013;27(1):55-63]

## Introduction

Migration is a process that involves movement of people (spatial mobility) from one geographical location to another. Thereby changing residence by crossing predefined boundaries (1, 2).

Migration, both voluntary and forced, is increasing all over the world. People are moving in larger numbers faster and further than at any other time in history. Lack of policies needed to make migration a healthy and socially productive process has contributed to the growth of migration related health risks (3). Patterns of migration are affected by factors such as geographical, and economical, environmental and political crises. However, poverty and the desire for a better life still continue to be significant drivers of population movement (4).

During the first five months of 2008, more than 20,000 people arrived by sea in Yemen. This was on an

escalation of more than double the number for the same period in 2007; and 400 people had died or were missing, in the process according to the report of the United Nations High Commissioner for Refugees (UNHCR). The actual number of casualties was likely higher, as many individuals are lost at sea and never found. About two-thirds of the arrivals in Yemen were Somalis and one-third Ethiopians. The Ethiopians that survived the crossing, however, faced increased challenges compared to Somalis since: they were considered illegal and subjected to deportation without regard to their right asylum claims (5).

From September 2009 to August 2010, International Organization for Migration (IOM) assisted the voluntary return of more than 3,781 Ethiopian illegal migrants stranded in the Middle East, Libya, Somaliland, Punt land, Tanzania and Europe. In August 2010 alone, IOM

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assisted more than 600 illegal migrants to return home in safety and dignity from Yemen (6).

Health risks due to migration are multiple and the degree of severity is high given the deprivation of access to health and other social services in the recipient countries. Migrants reflect health condition characteristic of their place of origin and carry several of these conditions when they move from one place to another (7-9). Physical violence in the form of trauma and torture are commonly observed during the movement of refugees, displaced and disadvantaged migrant populations (10-14).

Socio-demographic composition of migrating population describes the relative importance of poverty in push countries. However, demographically disaggregated information on African migrants whose motive is searching jobs is limited. According to the IOM, females make up a significant percentage of the migrant population. The number of African women leaving their countries either as autonomous or dependent migrants is increasing (15).

Every year, thousands of Somalis and Ethiopians risk their lives crossing the Gulf of Aden to Yemen. Hoping to escape the conflict and extreme poverty in their own countries, the desperate migrants are regularly abused and sometimes killed by the brutal smugglers who are paid to get them across (5). The relationship between health risks and migration is not adequately studied to impact health policies in Ethiopia (16). This study investigates migration factors, socio-demographic information, health hazards, and determinants in the returned migrants living at Bati *Woreda*.

## Methods

### **Study Setting:**

The study took place in Bati *Woreda*, Oromia Zone, Amhara National Regional State. *Bati* town is the capital of the *Woreda*, located in Northeast of Ethiopia, about 417 Km from Addis Ababa. Bati *Woreda* has 23 *kebeles*, and this study was carried out in five selected (operational areas of IOM) rural *kebeles* where the returned migrants were living together with their siblings and parents.

### **Study Design:**

A cross-sectional study using quantitative and qualitative methods of data collection was employed. Thematic analysis was used for the qualitative study in order to describe health hazards related determinants among the returned migrants. The study was carried out in April 2011.

### **Study Population:**

The study populations were all returned migrants from abroad and living at the time of the study in the selected five *kebeles*, namely: Kurkura, Jeldeti, Mehammed, Hato and Garero of Bati *Woreda*.

Eligibility of study participants for this study was:

- Returned migrants who came from Djibouti, Somalia, Yemen and Saudi Arabia which are targeted destinations of migrants from the study area.
- Migrants who returned within September 1<sup>st</sup> 2009 to August 31<sup>st</sup>, 2010 after considering the Ethiopian full calendar year that could minimize the possibility of recall bias by the respondents.

### **Sample Size Determination:**

Sample size was initially calculated with a 40% prevalence of HIV/AIDS, among migrant (17). However, in order to maximize the benefit of the largest sample size, the prevalence rate of health hazard on returned migrants was assumed to be 50%. With a 95% confidence level and 5% margin of error, the minimum sample size was determined by using the formula for a single proportion calculated as 422 including 10% non-response.

### **Sampling Technique:**

Since the number of all returned migrants from the specified countries during the specified period was 390; all returned migrants were included in the survey. Returned migrants were identified with the assistance of neighborhoods, *kebele* representatives and health extension workers. Accordingly, the number of returned migrants from the selected five *kebeles*, where IOM is operating, was 100 from Kurkura, 89 from Jeldeti, 65 from Mammed, 54 from Hato and 82 from Garero.

### **Data Collection Procedure:**

Structured and pre-tested questionnaire were prepared in English to collect quantitative study from returned migrants. The questionnaire was translated to Amharic then back to English to ensure the consistency of language. A data collection team comprising 9 personnel (the principal investigator, 5 data collectors and 3 supervisors) was established and recruited from government employed health extension workers<sup>1</sup>. Data collectors were trained for two days on techniques of data collection and management. Data was collected from all returned migrants through face-to-face interview.

For the qualitative study, two focus group discussions, one of men and the other of women, and two in-depth interviews were conducted using a semi-structured question guide with purposely selected participants who had spent one year and above in one of the specified countries and those who have travelled to multiple countries. The principal investigator was the moderator and research team supervisors served to collect the information by using tape recorders and taking writers notes.

<sup>1</sup> Health Extension Workers are those who completed grade 10th and had one year health related training, living and work at Health Post level in the community and supervised by diploma level nurses and environmental health officers.

**Operational Definitions:**

- **Health hazard:** any acute or chronic illness, physical injury, sexual harassment and psychological trauma are prevalent among returned migrants. Respondents were asked on the type of hazard they had in either during travelling, in the destination country or while getting back home in Ethiopia during a one year recall period.
- **Push factors:** negative home conditions that force people to move out such as - loss of employment, political instability and natural disasters.
- **Pull factors:** positive prospects at the new location such as better opportunity for education, employment and improved living conditions.
- **Occupation** of the respondent at the time of the data collection.

**Data Management and Analysis:**

During and after the field survey, the quantitative questionnaires were checked for missing responses and consistency of variables. Data were entered into purposely designed data template using EPI INFO version 3.5.1 (CDC, Atlanta, USA) software and cleaned to ensure consistency and completeness of data entry.

The qualitative data was transcribed from tape recorder to a text using local language and then translated into English language. The text data was entered in open Code Version 3.4 statistical software.

Cleaned data was exported to SPSS statistical software package version 15.0 (SPSS Inc, Illinois, Chicago, USA) for analysis. Descriptive statistics was used to present the demographic, socio-economic and the dependent variables. The statistical association between the dependent and independent variables was evaluated by using bivariate and multivariate binary logistic regression analysis using crude odds ratio and adjusted odds ratio with 95% confidence interval. Level of significance was at alpha level of 5%. Multi-collinearity was checked before doing the multivariate analysis. Data were presented using tables and charts. The qualitative data in a text form was entered to Open Code version 3.4 statistical software packages, coded and categorized under different selected thematic areas and presented in a narrative way.

**Data Quality Assurance:**

Prior to the actual survey, two days training was provided for data collectors and supervisors on the data collection instruments, interviewing techniques and data quality concerns. The questionnaire was pretested on 5% of the study population (outside the selected five *Kebeles*). Unclear and ambiguous things were then corrected accordingly. Data entry and cleaning was made with recommended software for epidemiological studies (EPI INFO Window Version 3.5.1) that minimizes gross

errors. Consistency and completeness of the entered data and the field data were systematically checked, cleaned and edited.

**Ethical Considerations:**

An ethical clearance was obtained from Haramaya University and presented to administrative officials of Bati Woreda. The Woreda Administrative Office had provided a permission letter to the five *kebeles*. Informed written consent of each respondent was secured before the commencement of the interviews. The principle of autonomy was maintained through respecting human dignity and individual rights and freedom in the participation of data provisions. Besides, the privacy and confidentiality of information from each respondent was maintained throughout the interviewing process through anonymity.

**Results****Socio-Demographic Characteristics:**

A total of 390 returned migrants within the period of September 1<sup>st</sup>, 2009 to August 31<sup>st</sup>, 2010, from the Woreda were included in this study (response rate 92.4% compared to the calculated sample size). From the 390 respondents, 258 (66.2%) were male and 132 (33.8%) female, providing a male to female ratio of 1.95:1. One hundred eight two (46.7%) were within the age range of 25-34 years. One hundred sixty one (41.3%) were married and most of the respondents, 234 (60%), were illiterate. One hundred eighty (46.2) were unemployed during the time of the interview. All of the respondents were Muslims (Table 1).

Table 1: **Socio-demographic characteristics of returned migrants, Bati Woreda, Amhara Region, April 2011.**

Variables	Frequency (n=390)	%
<b>Sex</b>		
Male	258	66.2
Female	132	33.8
<b>Age</b>		
15-24	140	35.9
25-34	182	46.7
≥35	68	17.4
<b>Residence Kebele</b>		
<i>Kurkura</i>	100	25.6
<i>Jeldeti</i>	89	22.8
<i>Mammed</i>	65	16.7
<i>Hato</i>	54	13.8
<i>Garero</i>	82	21.0
<b>Marital status</b>		
Single	136	34.9
Married/leaving together	161	41.3
Divorced/Widowed	93	23.8
<b>Educational status</b>		
Illiterate	234	60.0
Read & write	96	24.6
Grade 1 <sup>st</sup> – 12 <sup>th</sup> & >12 <sup>th</sup>	60	15.4
<b>Occupation</b>		
Jobless	180	46.2
Merchant	23	5.9
House wife	31	7.9
Farmer	156	40.0

**Migration Characteristics:**

The distribution of the study subjects by destination indicated that the majority (65%) of them had returned from Djibouti. Overall, 71% of them had spent 12-48 months working and living as migrants in the destination countries (Djibouti, Somalia, Yemen and Saudi Arabia).

Nearly all of the respondents travelled to the destination countries through illegal routes. About 97.4% of the migrants had neither a passport nor a visa. Several reasons were given by the respondents for not having these essential travel documents, of which lack of money (30.8%) was the predominant reason (Figure 1).

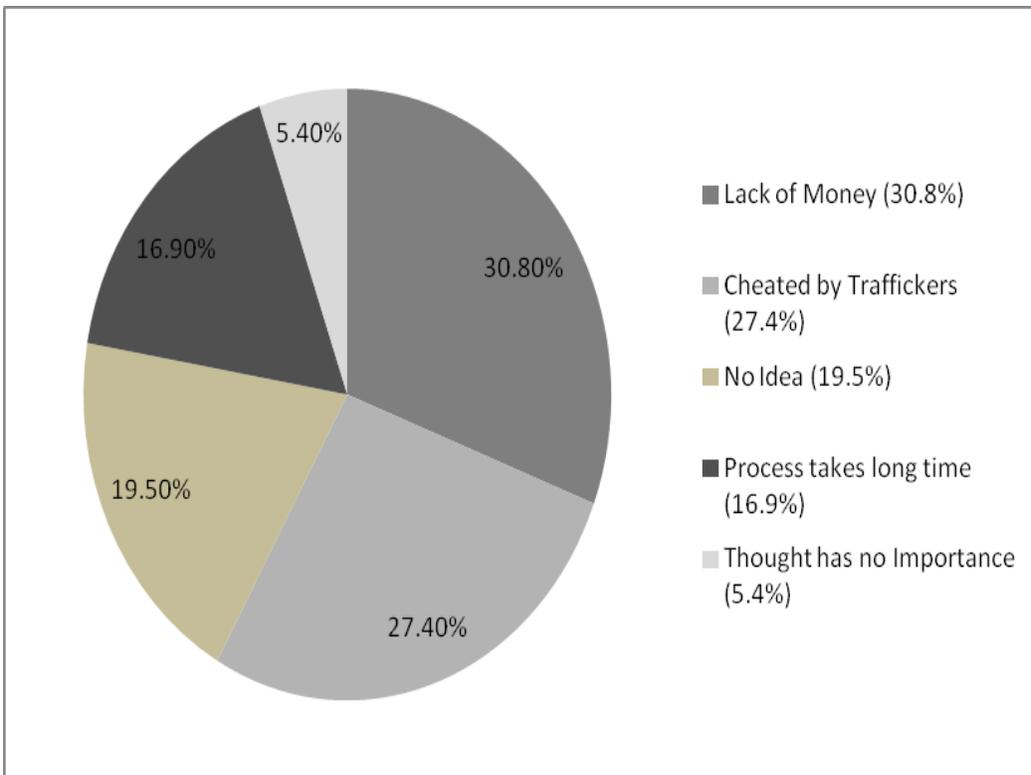


Figure 1: Reported reasoning not to fulfill the requirements of immigration service among returned migrants in percent, Bati Woreda, Amhara Region, April 2011.

**The Magnitude of Health Hazards:**

The magnitude of health hazards in study subjects while travelling to the destination was 39%. The prevailing types of reported health hazards were: acute illness of the same kind: of 74 (48.4%), physical injury: 51 (37.5%) and psychological trauma: 53 (34.9%). Among the acute illnesses, diarrhea was the leading one: 48 (31.6%), followed by malaria: 16 (10.5%).

The proportion of the respondents who had encountered health hazards at the destination country was about 125 (32.1%). Reported common health hazards were: acute illnesses: 74 (59.2%); psychological trauma: 31 (24.8%); and physical injury: 30 (22.4%). Of the acute illnesses, diarrhea was the prevailing one: 34 (27.2%).

About 80 (20.5%) of the respondents indicated that they had at least one type of health hazards just after coming back home from a country where they had migrated (Figure 2). Malaria (26.3%) was the most commonly mentioned disease they said they have contracted at home country, followed by diarrhea (12.5%).

Regarding the push factor, unemployment appeared to be the major factor: 223 (57.2%). The pull factors described by the respondents include, the perceived better employment opportunities in the destination countries as perceived by the respondents (Figure 3): 309 (79.2%).

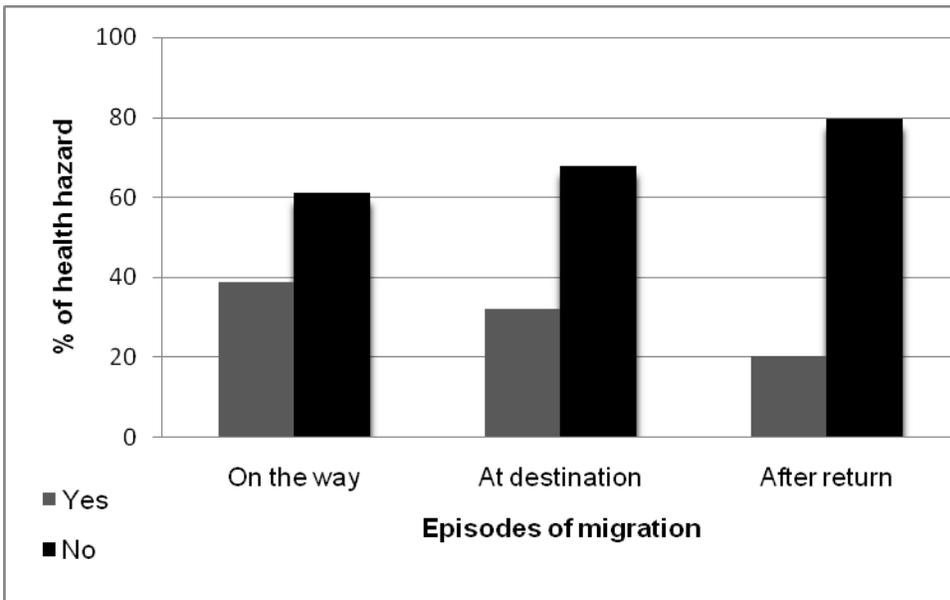


Figure 2: Reported health hazards in three occasions of returned migrants in percent, Bati Woreda, Amhara Region, April 2011

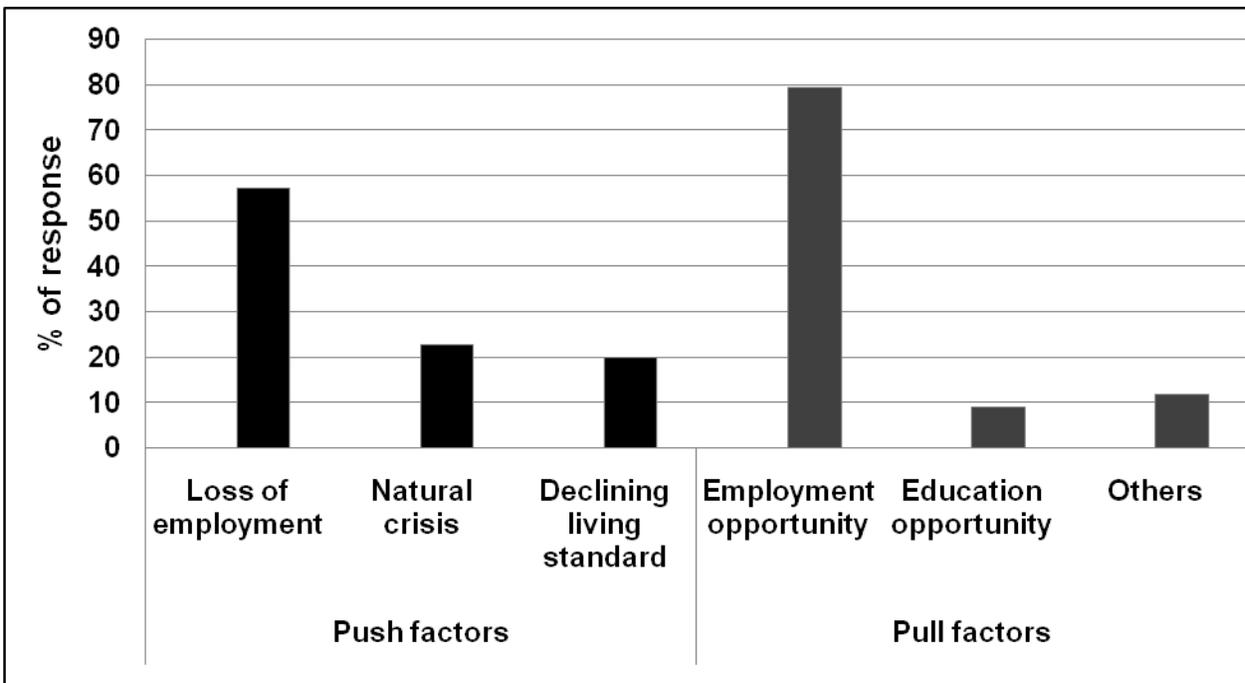


Figure 3: Factors to leave the country of returned migrants, Bati Woreda, Amhara Region, April 2011<sup>2</sup>.

<sup>2</sup> Others includes; better living opportunity in destination country as pull factor

**Determinants of Health Hazards:**

Age group, education, occupation, and pull factors were statistically associated with health hazards in both bivariate and multivariate analysis. The chance of being exposed to health hazards for age greater than or equal to 35 years was statistically significant compared to the 15-24 years age group [AOR (95% CI): 3.48 (1.73-7.02)]. Respondents who can only read and write had an increased risk of health hazards [AOR (95% CI): 2.49 (1.17-5.30)]. Regarding occupational status, being jobless and being a housewife showed a statistical association with health hazards [AOR (95% CI): 2.17 (1.29-3.64)] and [AOR (95% CI): 5.28 (2.17-12.83)], respectively.

The perception of respondents about better employment opportunities and improved living condition as a pull factors had statistically significant association in being vulnerable to health hazards [AOR (95% CI): 8.61; (3.16-23.47)] and [AOR (95% CI): 6.35 (1.89-21.36)], respectively (Table 2).

The findings of the quantitative data on the determinants of health hazards were further elaborated by the qualitative data from the focus group discussions and in-depth interviews, as summarized hereunder:

1. Low socio-economic status was the strongest push factor for the migration as well as for choosing illegal and often dangerous routes, which involved traveling by sea with poor transport boat, crossing borders on foot and traveling at night time in order not to be caught by police officers around the borders and at other check points. A perceived employment opportunity (pull factor) providing an asset, when getting back home, was the primary concern of migrants.
2. The travelling through illegal routes is the result of not having official passport and visa documents, which is also related to the inability to pay to the Ethiopian immigration office and the foreign embassies to get the documents legally.
3. There is an agreement that illegal routes are full of risk. Participants believed that it is a matter of chance and the protection of "Allah" who is believed to safeguard any one from suffering illnesses and death. In addition, the discussants pointed out that they knew someone who had suffered from health problems as a result of migrating abroad through illegal routes.

Table 2: **Binary logistic regression analysis for having health hazards in relation to independent variables of returned migrants, Bati Woreda, Amhara Region, April 2011.**

Variables	Health hazards		C OR <sup>®®</sup> (95% CI)	AOR <sup>®®</sup> (95% CI)
	Yes	No		
<b>Sex<sup>®</sup></b>				
Male	100	157	1.02 (0.66,1.57)	
Female	52	81	1.00	
<b>Age</b>				
15-24	43	97	1.00	1.00
15-34	75	107	1.58 (0.99,2.52)	1.51 (0.89,2.57)
≥35	34	34	2.26 (1.24,4.09)*	3.48 (1.73,7.02)*
<b>Marital status<sup>®</sup></b>				
Single	43	93	0.61 (0.36,1.06)	
Married/leaving together	69	92	0.99 (0.59,1.66)	
Divorced/Widowed	40	53	1.00	
<b>Educational status</b>				
Illiterate	88	146	1.53 (0.82,2.84)	1.53 (0.77,3.02)
Read & write	47	49	2.43 (1.22,4.84)*	2.49 (1.17,5.30)*
Grade 1 <sup>st</sup> - 12 <sup>th</sup> / >12 <sup>th</sup>	17	43	1.00	1.00
<b>Occupation</b>				
Jobless	71	109	1.27 (0.81,1.98)	2.17 (1.29,3.64)*
Merchant	11	12	1.78 (0.74,4.31)	1.61 (0.64,4.06)
House wife	17	14	2.36 (1.08,5.15)*	5.28 (2.17,12.83)*
Farmer	53	103	1.00	1.00
<b>Fulfilled the requirement<sup>®</sup></b>				
Yes	5	5	1.00	
No	147	233	0.63 (0.18,2.22)	
<b>Push factors<sup>®</sup></b>				
Decline in natural resources	30	48	1.00	
Loss of employment	99	124	1.28 (0.75,2.16)	
Natural disaster	23	66	0.56 (0.29,1.08)	
<b>Pull factors</b>				
Better employment	134	175	6.28 (2.42,16.32)*	8.62 (3.16,23.47)*
Better living Opportunity	13	22	4.85 (1.53,15.37)*	6.35 (1.89,21.36)*
Better education	5	41	1.00	1.00

®Not included in the multivariate analysis; ®®COR: Crude Odds Ratio; AOR: Adjusted Odds Ratio;

\*Statistical significant association

## Discussion

This study was intended to assess the magnitude of health hazards and associated factors of returned migrants. The age group 182 (46.7%) of the study subjects ranged from 25-34 years old. This is consistent with the studies conducted in Addis Ababa (Ethiopia), South Africa, and Senegal (15, 18, 19). This age group is assumed to be the most productive and thus is exposed to human trafficking.

Educational status of the study subjects revealed that, 234 (60%) were illiterate, while 96 (24.6%) could only read and write while some 60 (15.4%) of them had some kind of formal education (grade 1-12). This is an indication that the majority of employment seeking migrants from the study area had minimum skills that did not require any professional training to do certain jobs in the destination country. On the contrary, similar studies indicated that the majority of migrants, both men and women, had at least some high-school education (15, 18). The migration from urban areas has better education compared to those coming from the rural areas of our study.

Almost all respondents in this study traveled to the destination countries through illegal routes and had neither passport nor visa. However, the study conducted in Addis Ababa indicated that women used the Omra and Haggy (Muslim pilgrimages) as a pretext to travel to Saudi Arabia and, from there, to other Arab countries. As women are not allowed to travel alone on such pilgrimage, they pay men to accompany or vouch for them as their husbands for the benefits of getting visas (15). This is understood and taken as a means for women to meet and satisfy their migration needs. Several reasons, including lack of money was described by the respondents as the main reason not to fulfill the essential travel (migration) requirements (documents) such as passport and visa. On the focus group discussion the respondents also described the lack (and also fear) of travel, accommodation and related expenses to get the passport and visa legally in Addis Ababa as the main barrier.

The proportion of respondents, who faced at least one kind of health hazard, was 41%. Although it was based on a different health issue, the magnitude of the health hazard in our study was comparable with the study from South Africa in which they showed a magnitude of about 40% in HIV infection (17). This comparison needs to be carefully considered in reference to the types of health hazards to which migrants are exposed. The proportion of respondents who have suffered from malaria and diarrhea illnesses was very high (97.4%), suggesting that the illegal routes through which they have travelled (or spend the night) might have exposed them to mosquito bites and poor sanitary conditions (e.g. contaminated water).

Hundred fifty two (39%) and about 80 (20.5%) of the respondents indicated exposure to health hazards while travelling and just after coming back home. Acute illnesses were the leading incidents followed by psychological trauma. Local support in alleviating the health hazards for them and assisting in the reintegration with the community was not indicated by the respondents. This is consistent with a similar other studies (15).

Unemployment was the most common push factor. This too is almost similar with the study conducted among internal migrants to Addis Ababa (20). Respondents identified and prioritized that factors such as poverty, unemployment, lack of food, water, and housing were the important social problems in their communities. Poverty connected with unemployment was indicated to have a strong link with migration in the sub-Saharan countries (21, 22). Males in our study had the highest proportion of migration, although another study indicated females were significantly involved (19). Females in a traditional society are assumed to be responsible for feeding the family.

As described by the respondents, better employment opportunities in destination countries, was the major pull factor for the illegal practice of migration. The finding is consistent with a similar study (20), which showed job seeking as the main factor for the majority (73%) of internal migrants from the rural areas of Gurage Zone to urban centers. Other pull factors identified during the focus group discussions and in-depth interviews included uncertainty of the quality of life due to the low purchasing power of the local currency, and observing some of the abilities of returned peers in the community to invest on building homes, running small businesses and opening other income generating enterprises such as grain mills.

Age (> 35years), education (reading and writing), and unemployment, being a house wife were found to be predictors for the increased rate of health hazards. An increased rate of HIV was related with the push factor of unemployment (7). The purpose of migration for work in Ethiopia is a bit different from that of India and Nepal, where girls at younger age are actively targeted by traffickers for sexual abuses. The nature of hazard and age characteristics, therefore, is different: malaria, diarrhea (Ethiopia) versus HIV (India, Nepal) (23, 24). Nevertheless, educational and occupational characteristics are similar for both countries.

Between-countries and inter-regional migration is becoming a current agenda given the increased cost of living, continued population growth and the limited investments in developing countries, including Ethiopia. Such population mobility creates an opportunity for the migrants to be exposed to acquire a health risks or

transfer diseases from one place to another in the process of travelling (25).

The focus on health hazards in relation to outmigration is the strength of this study, while the limited sample sizes, possible recall bias for the health outcomes and inadequate references associating the predictors and the health outcomes we dealt are considered to be limitations. In conclusion, the public health burden among migrants was and that push factors from a country of origin, and pull factors attracting of the country of destination are major factors that affect the pattern of migration. In our study socio-economical factors (age, education, and unemployment) were found to be strong determinants of migration in the local context. The creation of job opportunities by private sector and that the Government of Ethiopia promoting self-employment using micro-financing and awareness creation about the health hazards of population movements must be further encouraged and reinforced. Rehabilitation of severely affected returnees on how to rejoin their society and skill training opportunity for helping their future life would be desirable.

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