

# Perception, Attitude and Associated Factors on Schizophrenia and Depression Among Residents of Hawassa City, South Ethiopia, Cross Sectional Study

Getinet Ayano<sup>1,\*</sup>, Melkamu Agidew<sup>1</sup>, Bereket Duko<sup>2</sup>, Haregwoin Mulat<sup>3</sup>, Melkamu Alemayew<sup>4</sup>

<sup>1</sup>Department of Research and Training, Amanuel Mental Specialized Hospital, Addis Ababa, Ethiopia

<sup>2</sup>Community Health and Leadership Module, School of Nursing and Midwifery, College of Medicine and Health Sciences, Hawassa University, Hawassa, Ethiopia

<sup>3</sup>Department of Psychiatry, College of Medicine and Health Sciences, University of Gondar, Gondar, Ethiopia

<sup>4</sup>Department of Psychiatry, School of Medicine, College of Health Sciences, Addis Ababa University, Addis Ababa, Ethiopia

## Email address:

ayanogetinet@yahoo.com (G. Ayano), berkole.dad@gmail.com (B. Duko), melkish2002@gmail.com (M. Alemayew)

heregwoinmulat@yahoo.com (H. Mulat), melkamuagidew@yahoo.com (M. Agidew)

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**Abstract:** *Introduction:* mental disorders including schizophrenia and depression are becoming one of the public health problems in Ethiopia. However, little is known about perception, and attitude of the public regarding schizophrenia and depression. The main aim of this study was to assess perception, attitude and associated factors of schizophrenia and depression among residents of Hawassa city, southern Ethiopia. *Methods:* A community based cross sectional study was conducted in Hawassa city, May 2014. Participants were selected by using multistage sampling method. The study participants were allocated to the selected kebeles (villages) proportionally to their estimated number of households. Data was collected by using structured, pre-tested and interviewer administered questionnaire. The data entry, clearance and analysis were carried out using SPSS version 20 statistical software package. *Results:* Among respondents 66.5% and 56% of respondents have good perception about schizophrenia and poor perception on depression respectively. About 62.7% of respondents have negative attitude towards schizophrenia, but the attitude of majority of the respondents (75.8%) for major depressive disorders is positive. When it was adjusted for potential confounders, Age [AOR=4.79, 95%CI=(2.13-10.77)], income [AOR= 3.41, CI=(2.12-5.50)], getting information from mass media [AOR=1.38, CI=(1.11-2.07)] & information from religious institutions [AOR=0.44, CI=(0.285-0.68)] have statistically significant association with perception on schizophrenia. Age [AOR=3.12, 95%CI= (2.08-4.68)] and educational level [AOR= 2.34, CI= (1.71-5.02)] have statistically significant association with perception on depression. Income [AOR= 4.54, CI= (2.25-9.15)], source of information from health institution [AOR=1.69, CI= (1.03-2.76)] and perception [AOR= 3.05, CI= (2.15-4.34)] have statistically significant association with attitude towards schizophrenia. Educational level [AOR= 1.71, CI= (1.08-2.71)] and perception [AOR= 2.27, CI= (1.57-3.27)] have statistically significant association with attitude towards depression. *Conclusion:* Age, educational level, Income and source of information's for perception and educational level, income, source of information and perception for attitude found to be significant predictors. Educating people about schizophrenia and depression by using mass media and health institutions and working with religious institutions is vital.

**Keywords:** Schizophrenia, Depression, Perception, Attitude

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## 1. Introduction

Today, mental disorders including schizophrenia and depression are recognized as a public health problem in

developed as well as developing countries. At least 40 million people in the world suffer from severe form of mental disorders and about a tenth of adults, an estimated 450 million people worldwide, are affected by mental disorders at any one time. They now account for about 14%

of the global burden of disease mostly chronically disabling illness, depression and other common mental disorders such as psychosis [1, 2] and this will rise to 15% by the year 2020. For disability alone, without the effects of premature mortality, the impact of neuropsychiatric conditions is starkly still: they account for 31% of all years lived with disability [3].

Different studies indicated that large portion of the community fail to recognize about mental disorders, for instance in one study 88% public identify schizophrenia symptoms, and 69% major depression symptoms, as mental illness [4]. Most of the increased willingness to define the phenomena as mental illness has occurred with diagnoses other than schizophrenia [5]. The public remains more likely to identify schizophrenia symptoms as mental illness than symptoms of depression or other disorders [6, 7, 8]. Nevertheless, Italian study found that only 21% of the public identified a case labeled vignette of an exhibiting schizophrenic symptoms as schizophrenia [9]. Negative attitudes towards people with mental health problems are well documented. These attitudes lead to discrimination in many domains, including the workplace and housing, and to rejection by family and friends [10].

A study conducted in Dominica republic concerning people attitude towards mental disorders by involving community leaders and community members using case vignette, person with psychosis vignette was diagnosed as suffering from mental illness by 84% of community leaders and 71.5 of community members, however; in each of other vignette less than 30% of respondents thought that mental illness is present [11]. Similarly, European survey has found that lack of understanding of terms schizophrenia and mania. Substantial portion of the community fail to recognize about mental disorders. Most commonly known mental disorder is schizophrenia (74%), the most commonly cited cause of mental illness were environmental factors including stress in daily life (83%) followed by genetic predisposition (75%) [12]. Similarly, many members of the public can not recognize symptoms of mental disorders. They differ from mental health experts in their belief about the cause of mental disorders, most effective treatment and attitude which hinder help seeking are also common [13].

In Ethiopia a cross-sectional study conducted on how are mental health problems perceived by a community in Agaro town, majority of the respondents (74%) identified schizophrenia as a mental health problem while only 15% of the respondents identified major depressive disorder as mental health problem. Schizophrenia was considered as the most serious problem. This study showed that, 83% and 72.4% preferred modern medicine for the treatment of, schizophrenia, and major depression respectively. Holy water was preferred by (19%) of the respondents for the treatment of schizophrenia. Treatment by family members at home was preferred by (29%) of the respondents for the treatment of MDD. According to this study more educated people preferred modern medicine more often than those who had low educational levels [14].

According to most Ethiopians' perceptions, mental illness is generally believed to be affliction caused by supernatural forces including demon possessions bewitchments by evil spirit, ancestor's spirit or evil eye. Physical causes are rarely considered responsible for mental problems. This influence the attitude towards mental illness and help seeking associated with mental health problems [15].

Most people in Ethiopia use traditional methods for treating mental illness and those who look for modern treatment do so having tried and failed the available local means [16, 17]. After having tried and failed the available local means many families keep the patient at home under restraint until they are no longer aggressive and violent once the disruptive behavior is over they will be released from chain and many of them become wanderers and homeless. Thus very few cases of mental illness consult clinics for help. Even among those few cases, most psychopathologies go unnoticed by health professionals, except for overt and extreme cases [18].

Community survey done on community perception about mental and physical illness in north western Ethiopia revealed that natural factors such as loss of loved one are believed as common causes for depression and schizophrenia and supernatural phenomenon such as sorcerers spells, evil spirit considered as cause schizophrenia. According to this study pray and home care are believed to be important sources of treatment for schizophrenia and modern treatment is believed as important treatments for depression [19].

A number of factors are associated with the community perception and attitude related to mental disorders which are mainly socio demographic including gender, age, religion, income and education [18, 19, 20].

Efforts to improve public perception of mental disorder have been much less common than for cancer and heart disease, nevertheless a number of approaches have been tried ; which includes information campaign targeted at general population which showed change in the knowledge attitude and belief of the public about mental illness and help seeking [21, 22, 23]. Despite the increased burden of mental disorders and unfavorable perception and attitude, except some studies in some parts of Ethiopia, there is very little data available in Ethiopia including the study area. Therefore, this study is aimed at determining the prevalence of perception and attitude of the community about schizophrenia and depression and identifying its associated factors in the Hawassa city of southern Ethiopia.

## 2. Methods

*Study Setting and Design:* A community based cross-sectional study was conducted from May to June, 2014 in Hawassa city, South Ethiopia

*Study Population:* The study population consisted of a sample of adults who were residing in the city during study period. Those adults who were not long-term residents of the city (less than 6 months) were excluded.

*Sampling procedures:* Multistage sampling technique was

used to select the study participants. Seven kebeles (villages) were selected from 21 kebeles using the randomized method. A proportional allocation was employed to obtain the sample size from each kebele. The starting point was randomly selected and a systematic random sampling method was used to select the study participants.

**Data collection:** Data were collected using pretested interviewer administered questionnaire, which contains socio-demographic characteristics (age, education, occupation, marital status and others), questions to assess perception and attitude which are standardized questionnaires prepared by WHO expert group. The structured questionnaire developed by a WHO task-force and was originally used in the WHO Collaborative Study in India, the Philippines, and Sudan was used to assess attitude [18]. The WHO study design with case vignettes has also been used in a study Butajira to assess attitude about mental disorders [19], on Ethiopian medical students [20] and as part of the national mental health plan in the United Republic of Tanzania [21]. Vignette descriptions of two mental disorders were read to the participants and followed by questions. The responses were graded on a 3-point scale (0, 1, 2) where 0 indicated not serious 1, somewhat & 2 most serious according to the parameters and the cut point above the mean score are considered as negative attitude and below or equal to mean score considered as having positive attitude.

**Data Processing and Analyses:** Data were analyzed using SPSS version 20. Description of means, frequencies, proportions and rates of the given data for each variable was calculated. Bivariate analysis was done to see the association of each independent variable with the outcome variable. Those variables having p-value less than 0.2 were entered into the multivariate logistic regression model to identify the effect of each independent variable with the outcome variables. A p-value of less than 0.05 was considered statistically significant, and adjusted odds ratio with 95% CI was calculated to determine association.

**Ethical Consideration:** Ethical clearance was obtained from the Institutional Review Board of the University of Gondar and Amanual Mental Specialized hospital. An official letter was obtained for Southern Nations Nationalities and Peoples Regional Administration Health Office and Hawassa town Administration Health Office and letters were prepared for the local authority of the selected kebeles (villages). Written informed consent was obtained from each study participant after they were introduced to the purpose of the study and informed about their rights to interrupt the interview at any time. Confidentiality was maintained at all levels of the study.

### 3. Results

#### 3.1. Socio Demographic Characteristics

A total of 830 participants were included in the study which makes the response rate 98.2%. There were slightly more female respondents 471 (56.7 %) than males 359 (43.3%). The mean age of the respondents was 36.2 ( $\pm$  SD

=11.93) years. Concerning religion more than half of participant were orthodox Christian 491(59.10) followed by Muslim 179 (21.5%). the dominant ethnicity was Sidama 399 (48.1) followed by Gamo 99 (11.9%). More than half of participant were married 447(53.9) and about 1/3<sup>rd</sup> of them were single 270 (32.5%). Concerning occupation about 193 (23.2 %) were house wives, 161(19.4%) private employees & 148 (17.8%) were government employees. About 262 (31.6%) of participants have educational level diploma & above. Regarding income the median monthly family income was 920 Ethiopian birr (Table 1).

**Table 1.** Distribution of respondents by their Socio demographic characteristics, Hawassa City, south Ethiopia, May, 2014.

Variable	Frequency	Percent (%)	
Sex	Male	359	43.3
	Female	471	56.7
Age in years	≤24	177	21.3
	25-34	192	23.2
	35-44	290	34.9
	>44	171	20.6
Marital status	Single	270	32.5
	Married	447	53.9
	Separated	32	3.9
	Divorce	21	2.5
Religion	Widowed/widower	60	7.2
	Orthodox	491	59.1
	Muslim	179	21.6
	Protestant	120	14.5
	Catholic	30	3.6
	Others	10	1.2
Educational level	No schooling	200	24.1
	Primary	169	20.4
	Secondary	199	23.9
	Higher education	262	31.6
Occupation	Government employee	148	17.8
	Private employee	161	19.4
	House wife	193	23.3
	Merchant	150	18.1
	Unemployed	88	10.6
	Student	50	6.0
	Others	40	4.8
Ethnicity	Amhara	41	4.9
	Tigre	61	7.3
	Oromo	50	6.0
	Gurage	81	9.8
	Sidama	399	48.2
	Gammo	99	11.9
Monthly income	Wolaita	99	11.9
	Low income	90	10.8
	High income	740	89.2

#### 3.2. Source of Information About Schizophrenia and Depression

Majority of the respondents were heard about major depressive disorder and about two third of the study participant were heard about schizophrenia. The main source of information for schizophrenia are mass media which accounts,

399(48%) followed by religious institutions 113(13.6%) of the respondents. Unlike schizophrenia the major sources of information for major depressive disorder are from friends 739 (89%) followed by from family 598(72%).

**3.3. Descriptions of Cases Perceived as Mental Disorder by Respondents**

Majority of the respondents 648 (78.10%) identified schizophrenia as a mental disorder while only 174(21%) of respondents identified major depressive disorder as a mental disorders.

**3.4. Perceived Seriousness of Schizophrenia and Depression**

Schizophrenia was regarded as the most serious mental disorders by majority of the respondents 672(81%). But Major depressive disorder was considered as least serious mental disorder by 754(90.8% ) of the respondents.

**3.5. Perceived Prognosis of Schizophrenia and Depression**

Schizophrenia was regarded as very chronic mental disorders by majority of the respondents 730(88%) but Major depressive disorder was considered as mental disorder with full recovery by 744(89.6%) of the respondents.

**3.6. Perceived Etiologies of Schizophrenia and Depression**

Regarding etiologic perceptions about two third and about half of the respondents have good perceptions to poverty, infections, use of substance, loss of loved one, conflict with family, heredity, punishment from God & evil spirit are responsible to cause schizophrenia & almost all of the respondents have good perceptions. More than two third of participants have good perception regarding loss of loved one and conflict with the family are responsible causes for major depressive disorders (Table 2).

*Table 2. Distribution of respondent's by their etiologic perceptions of mental disorders (n=830), Hawassa City, May 2014.*

Characteristics	Casual perceptions			
	Schizophrenia		Major depressive disorder	
	Good (%)	Poor (%)	Good (%)	Poor (%)
Head injury cause illness	66.3	33.7	41.4	58.6
Genetic cause illness	76	24	45.8	54.2
Physical illness cause illness	66.4	33.6	44	56
Substance misuse cause illness	66.3	33.7	44	56
Loss of loved one cause illness	68.7	31.3	77.2	22.8
Conflict with family cause illness	65	35	64	36
Punishment by God cause illness	66.3	33.7	57.3	42.7
Evil spirit cause illness	67.5	32.5	57.5	42.5
Bewitchment cause illness	67.5	32.5	57.8	42.2
Poverty causes illness	73.5	26.5	40	60
Illness is contagious	67.5	32.5	99.4	0.6

**3.7. Perceived Treatments for Schizophrenia and Depression**

Concerning perceived treatments of mental disorders more than two third of respondents for schizophrenia and less than half for major depressive disorders of have good perceptions to the importance of modern medicine, psychotherapy and home management to help for person with these disorders.

**3.8. Summary of Magnitude of Perception of Public About Schizophrenia and Depression**

About two third 552(66.5%) of respondents have good perception about schizophrenia but the perception of more than half 465(56%) of the respondents is poor on depression.

**3.9. Attitude Towards Schizophrenia and Depression**

The attitude of majority of participants concerning possibility of impairing work opportunity, marital prospects and living at home is positive for major depressive disorder and more than half of respondents for schizophrenia have positive attitude about their possibility to impair work opportunity, marital prospects and living at home.

**3.10. Summary of Magnitude Attitude of Respondents Towards Schizophrenia and Depression**

The attitude of about two third 520(62.7%) of the respondents is negative for schizophrenia but the attitude of majority of the respondents about cases with depression is positive 629 (75.8%).

**3.11. Correlates of Perception of Participants About Schizophrenia**

Perception about schizophrenia was found positively & significantly associated with age of the respondents. Age group 35-44 and 25-34 were found 4.79 and 4.39 times more likely have good perception than their younger age (age≤24)[AOR=4.79, 95%CI=(2.13-10.77 and AOR=4.39, CI=(1.60-12.06) respectively. Respondents who get their schizophrenic related information from mass media were found 1.52 times more likely having good perception on schizophrenia than respondents who don't get schizophrenic related information with odds of [AOR=1.52, CI=(1.11-2.07)]. Respondents who get schizophrenic related information from religious institutions were found 56% less likely to have good perception compared to their counter parts with Odds ratio of [AOR=0.44, CI= (0.285-0.68)]. In additions respondents with high income were found 3.41 times more to have good perceptions as compared to respondents with low income with odds ratio of [AOR= 3.41, CI=(2.12-5.50)]. However other factors such as educational level, and getting information from health institution were not found significant predictors of perception about schizophrenia (Table 3).

**Table 3.** Socio-demographic characteristics and other factors associated with perception on schizophrenia at Hawassa City, South Ethiopia, May 2014.

Perception on schizophrenia				
Variables	Good	Poor	COR (95%,CI)	AOR (95%,CI)
Age				
≤24(RC)	98	79	1.00	1.00
25-34	138	54	2.06(1.34-3.17)*	4.39 (1.60-12.06)*
35-44	215	75	2.31(1.56-3.43)*	4.79 (2.13-10.77)*
>44	101	70	1.16(0.76-1.78)	1.75 (0.68-4.52)
Educational status				
No schooling (RC)	120	80	1.00	1.00
Primary	101	68	0.99 (0.65-1.50)	1.02(0.24-1.58)
Secondary	140	59	1.58 (1.04-2.40)*	1.01(0.15-1.11)
Higher education	191	71	1.79 (1.21-2.66)*	1.06(0.62-2.13)
Monthly income				
Low income	40	50	1.00	1.00
High income	515	228	2.81(1.80-4.38)*	3.41(2.12-5.50)*
Source of information				
Mass media				
No (RC)	272	159	1.00	1.00
Yes	280	119	1.38(1.03-1.84)*	1.52(1.11-2.07)*
Health institution				
No (RC)	491	257	1.00	1.00
Yes	61	21	1.52(0.91-2.55)	1.09(0.57-1.75)
Religious institution				
No (RC)	489	228	1.00	1.00
Yes	63	50	0.59(0.39-0.88)*	0.44(0.29-0.68)*

Each socio demographic variables adjusted for socio demographic variables, source of information and; each source of information's adjusted for socio demographic variables and source of information.

Key:.\* significant association (p value < 0.05), RC (1:00): reference category/group

### 3.12. Correlates of Attitude of Participants Towards Schizophrenia

Attitude about schizophrenia was found positively & significantly associated with family monthly income, participants with high family monthly income were found to have 4.54 times more likely to have positive attitude as compared to their counter parts with odds ratio of [AOR= 4.54, CI=(2.25-9.15) ]. Respondents who get schizophrenic related information from health institutions were found to have 1.69 times more likely to have positive attitude compared to their counter parts with Odds ratio of [AOR=1.69, CI=(1.03-2.76)]. In additions respondents who have good perceptions about schizophrenia were found 3.05 times more likely to have positive attitude as compared to respondents with poor perceptions with odds ratio of [AOR= 3.05, CI=(2.15-4.34) ]. However other factors such as age, educational level, and getting information from mass media and religious institution were not found significant predictors of attitude about schizophrenia.

**Table 4.** Binary logistic analysis of respondents selected Socio-demographic characteristics and other factors associated with attitude towards schizophrenia in Hawassa City, South Ethiopia, May, 2014.

Attitude towards schizophrenia				
Variables	Positive	Negative	Crude OR(95%,CI)	Adjusted OR(95%,CI)
Age				
≤24 (RC)	65	112	1.00	1.00
25-34	68	124	0.95 (0.62-3.1.45)	1.05(0.28-1.57)
35-44	107	183	1.07(0.68-1.49)	1.11(0.29-1.39)
>44	70	101	1.19(0.78-1.84)	1.18(0.30-1.99)
Educational status				
No schooling (RC)	70	130	1.00	1.00
Primary	70	99	1.31 (0.86-2.03)	1.44(0.57-3.63)
Secondary	70	129	1.08( 0.67-2.1.52)	1.06(0.33-2.24)
Higher education	100	162	1.15(0.78-1.68)	1.15(0.58-2.50)
Monthly income				
Low income (RC)	10	80	1.00	1.00
High income	300	440	5.46(2.78-10.70)*	4.54(2.25-9.15)*
Source of information				
Mass media				
No (RC)	160	271	1.00	1.00
Yes	150	249	1.02(0.77-1.35)	1.01(0.69-1.26)
Health institution				
No (RC)	269	479	1.00	1.00
Yes	41	41	1.78(1.13-2.82)*	1.69 (1.03-2.76) *
Religious institution				
No (RC)	270	447	1.00	1.00
Yes	40	73	1.10(0.73-1.67)	1.04 (0.64-1.57)
Perception about schizophrenia				
Poor perception (RC)	59	219	1.00	1.00
Good perception	251	301	3.10 (2.22-4.32)*	3.05 (2.15-4.34)*

Key:.\* significant association (p value < 0.05), R (1:00): reference category/group

### 3.13. Correlates of Perception of Participants About Depression

Perception about major depressive disorder was found positively and significantly associated with age of the respondents. Age group 35-44 were found 3.12 times more likely have good perception than their younger age (age ≤24) [AOR=3.12, 95%CI= (2.08-4.68)]. Respondents with higher educational level were found 2.34 times more to have good perceptions as compared to those with those respondents with no schooling with odds ratio of [AOR= 2.93, CI=(1.71-5.02) ]. However other factor such as income, source of information from mass media, health institution and religious institutions were not found significant predictors of perception about major depressive disorder.

**Table 5.** Binary logistic analysis of respondents Socio-demographic characteristics & other factors associated with attitude towards depression (n=830), Hawassa City, South Ethiopia, May 2014.

Perception on depression				
Variables	Good	Poor	Crude OR(95%CI)	Adjusted OR(95%CI)
Age				
≤24 (RC)	58	119	1.00	1.00
25-34	66	126	1.07(0.70-1.68)	1.02(0.65-1.60)
35-44	182	108	3.46(2.33-5.13)*	3.12(2.08-4.68)*
>44	59	112	1.08(0.69-1.69)	1.07(0.68-1.69)
Educational status				
No schooling (RC)	73	127	1.00	1.00
Primary	67	102	1.14(0.75-1.74)	1.15(0.74-1.78)
Secondary	71	128	0.97(0.64-1.45)	1.09(0.65-1.52)
Higher education	154	108	2.48(1.70-3.62)*	2.34(1.58-3.48)*
Monthly income				
Low income	37	53	1.00	1.00
High income	328	412	1.14(0.73-1.78)*	1.17(0.72-1.84)
Source of information				
Mass media				
No (RC)	319	430	1.00	1.00
Yes	46	35	1.77(1.12-2.81)*	1.32(0.57-3.02)
Health institution				
No (RC)	311	417	1.00	1.00
Yes	54	48	1.51(0.99-2.29)	1.03(0.44-1.99)
Religious institution				
No (RC)	281	387	1.00	1.00
Yes	84	78	1.48(1.05-2.09)*	1.31(0.78-2.20)

Each socio demographic variables adjusted for socio demographic variables, source of information and each source of information's adjusted for socio demographic variables and source of information.

Key:-\* significant association (p value < 0.05), RC (1:00): reference category/group

### 3.14. Correlates of Attitude of Participants Towards Depression

Attitude about major depressive disorder was found positively & significantly associated with educational attainment, participants with higher educational level were found to have 1.71 times more likely to have positive attitude as compared to those respondents with no schooling with odds ratio of [AOR= 1.71 CI=(1.08-2.71)]. In additions respondents who have good perceptions about major depressive disorder were found 2.27 times more likely to have positive attitude as compared to respondents with poor perceptions with odds ratio of [AOR= 2.27, CI=(1.57-3.27)]. However other factors such as age, income, and getting information from mass media, health institution and religious institution were not found significant predictors of attitude about major depressive disorder.

**Table 6.** Binary logistic analysis of respondents Socio-demographic characteristics & other factors associated with attitude towards depression (n=830), Hawassa City, South Ethiopia, May 2014.

Attitude on depression				
Variables	Positive	Negative	Crude OR(95%CI)	Adjusted OR (95%)
Age				
≤24 (RC)	129	48	1.00	1.00
25-34	136	56	0.90(0.57-1.42)	1.03(0.58-1.45)
35-44	236	54	1.63(1.04-2.54)*	1.27(0.80-2.03)
>44	128	43	1.11(0.69-1.79)	1.13(0.691.84)
Educational status				
No schooling (RC)	143	57	1.00	1.00
Primary	119	50	0.95(0.60-1.49)	1.02(0.58-1.46)
Secondary	148	51	1.16(0.74-1.80)	1.18(0.75-1.85)
Higher education	219	43	2.03(1.30-3.18)*	1.71(1.08-2.71)*
Monthly income				
Low income (RC)	70	20	1.00	1.00
High income	559	181	0.88(0.52-1.49)	0.89(0.51-1.53)
Source of information				
Mass media				
No (RC)	566	183	1.00	1.00
Yes	63	18	1.13(0.65-1.96)	1.48(0.59-1.69)
Health institution				
No (RC)	557	174	1.00	1.00
Yes	75	27	0.87(0.54-1.40)	1.01(0.22-1.17)
Religious institution				
No	504	164	1.00	1.00
Yes (RC)	125	37	1.09(0.73-1.65)	1.22(0.66-2.24)
Perception on depression				
Poor perception (RC)				
poor perception	319	146	1.00	1.00
Good perception				
Good perception	310	55	2.58(1.82-3.65)*	2.27(1.57-3.27)*

Each socio demographic variables adjusted for socio demographic variables, source of information and perceptions; each source of information's adjusted for socio demographic variables, source of information and perceptions; perception adjusted for socio demographic variables and source of information's.

Key:-\* significant association (p value < 0.05) RC (1:00): reference category/group.

## 4. Discussion

This study assessed the magnitude of perception about the two specific mental disorders, attitude towards the disorders and associated factors among residents of Hawassa City, South Ethiopia.

A Person depicted by schizophrenia vignette was recognized as suffering from mental disorder by majority of the respondents (78.6%) which is in line with a study conducted in the Dominica Republic [11] & USA [23] where 84% & 74% of respondents reported case with schizophrenia as having mental disorders respectively. It is also in line other studies [14, 24, 25]. However, major depressive disorder was recognized as mental disorder by 21% respondents. This could be due to their less severe manifestations of the

disorder. The other possible explanation may be due to its symptoms are subjective in nature or are not overt. This result is in line with studies done in USA [23, 26] where 19% of respondents recognized depression as mental disorder and Ethiopia in Agaro town [14].

Schizophrenia was regarded as the most serious mental disorders by majority of the respondents 81% [27] but major depressive disorder was considered as least serious mental disorder by majority of (90.8%) of the respondents. Major depressive disorder considered as least serious may be due to symptoms are subjective than objective in nature. This result is in harmony with other Studies conducted in Ethiopia [14, 19].

Schizophrenia was regarded as chronic mental disorders by majority of the respondents (88%). Major depressive disorder was considered as mental disorder with full recovery by 89.6% of the respondents. Major depression considered as disorder with full recovery, the possible reason may be due to everyone occasionally feels blue or sad but these feelings are usually short-lived and pass within a couple of days. Which is in agreement with study conducted in other countries [23, 28, 29] and in Ethiopia [19, 30].

Regarding etiologic perceptions about two third and about half of the respondents have good perceptions to poverty, infections, use of substance, loss of loved one, conflict with family, heredity, punishment from God and evil spirit are responsible to cause schizophrenia and almost all of the respondents have good perceptions contact with person with major depressive disorder responsible as cause. More than two third of participants have good perception regarding loss of loved one and conflict with the family are responsible causes for major depressive disorders. This result is in agreement with systematic review study [12], studies conducted in Israel [24] and Nigeria [25] which revealed a multi factorial cause for mental disorders and also in line with studies done Bahirdar, Ethiopia [19].

Concerning perceived treatments of mental disorders more than two third of respondents for schizophrenia and less than half for major depressive disorders of have good perceptions to the importance of modern medicine, psychotherapy and home management to help for person with these disorders. This in harmony with other studies conducted in Ethiopia [14, 19].

About two third of respondents have good perception about schizophrenia 552 (66.5%) but the perception of the respondents to depression is poor 465 (56%). This result cannot compare with other studies because of no study identified which tried to assess magnitude perception to specific mental disorders.

Age is found to be a significant factor that associates with perception of mental disorders. Respondents with age group 35-44 were found 4.79 fold for schizophrenia & 3.12 fold for major depressive disorder more likely to have good perception as compared to age less than or equal to 24. In addition individuals with age group 25-34 were found 4.4 times more likely to have good perception to schizophrenia as compared to their younger age group (less than or equal to

24). This could be due to exposure to scientific information or knowledge with age. This result cannot compare with other studies because of no study identified which tried to assess perception to specific mental disorders as well as consider age as variable.

It was found that respondents with higher educational level were found 2.34 times more likely to have good perception than respondents with no schooling. This might be due to the ability to relate things, as this group is likely to have exposure to scientific knowledge. It could also because of better access to information through school, news paper and different media. This result cannot compare with other studies because of no study identified which tried to assess perception to specific mental disorders as well as consider educational attainment as a variable.

Respondent's higher income was found 3.41 fold for schizophrenia. This result cannot compare with other studies because of no study identified which tried to assess perception to specific mental disorders as well as consider income as variable.

Respondents who get mental health information from mass media were found 1.52 fold for schizophrenia more likely to have good perception than respondents who doesn't get information from mass media. It could be due to increased inclusion of mental health issues in mass media which involves mental health professionals. Respondents who get mental health information from religious institutions were found have 56% for schizophrenia less likely to have good perception than respondents who doesn't get information from religious institutions. This result cannot compare with other studies because of no study identified which tried to consider source of information as variable for each specific mental disorders.

The attitude of majority of participants concerning possibility of impairing work opportunity, marital prospects and living at home is positive for major depressive disorder and more than half of respondents for schizophrenia have positive attitude about their possibility to impair work opportunity, marital prospects and living at. This result is in harmony with the studies conducted Ethiopia [14, 30].

The attitude of about two third 520 (62.7%) of the respondents is negative for schizophrenia. This might be due to these disorder have observable overt manifestations or bizarre behavior. But the attitude of majority of the respondent's cases with depression is positive 75.8%. This could be due to the less severe manifestations that this disorder has. The other possible explanation might be due to its symptoms are subjective in nature or are not overt and it is considered as least serious and not chronic or full recovery. This result is in line with other studies conducted in Ethiopia [19].

Respondent's higher income was found 4.54 fold for schizophrenia more likely to have positive attitude as compared to respondents with low income. This result is in line with study conducted in Bahirdar, Ethiopia [30].

It was also found that respondents with higher educational level were found 1.71 times more likely to have positive

attitude than respondents with no schooling. This might be due to the ability to relate things, as this group is likely to have exposure to scientific knowledge. It could also be because of better access to information through school, news paper and different media. This result is in harmony with the studies conducted Ethiopia [14, 19, 28].

Respondents who get mental health information from health institutions were found 1.7 fold for schizophrenia more likely to have positive attitude than respondents who doesn't get information from health institutions. The possible reason for same source of information not associated to all mental disorders might be due to the difference in the main idea or content of the message transmitted through that source. The other possible reason may be due to the person involved in the transmission of the information. This result cannot compare with other studies because of no study identified which tried to consider source of information as variable for each specific mental disorders [31].

Perception was found to be significant predictor for attitude respondents about mental disorders. Respondents who have good perceptions were found 3.05 fold for schizophrenia and 2.24 fold for major depressive disorder more likely to have positive attitude as compared to respondents who have poor perceptions. This result cannot compare with other studies because of no study identified which tried to consider perceptions as variable for each specific mental disorder.

This study was conducted at the community level and considered variables other than socio demographic variables as independent variable and perception and attitude to specific mental disorders from the same person in addition assessed perception and attitude to specific mental disorders rather than assessing for general mental disorders. Limitations include the cross sectional nature of the study and unable to differentiate culture bound syndromes/symptoms.

## 5. Conclusions and Recommendations

In conclusion, the study showed that the magnitude perception and attitude of the public towards mental disorders vary from disorder to disorder or differs in relation to specific disorders. In general the perception of public is fairly good about schizophrenia but perception of public about major depression is poor. Broadly speaking the attitude of public to disorders which perceived as serious and chronic such as schizophrenia is negative which is indicated by negative attitude towards patient in relation to marriage, work opportunity and ability to live at home during the period of the illness. Unlike schizophrenia the attitude of the public towards patients with depression is positive indicated by majority of them have shown positive attitude towards this disorders to work opportunity marriage and ability to live at home with the family during the period of the illness. As this study shows the most important factors that were found to be significant predictors of perception of mental disorders are Age, income, getting information from mass media and

information from religious institutions for schizophrenia and age and educational level for depression. Furthermore income, source of information from health institution and perception for schizophrenia & educational level and perception were found to be significant predictors of attitude. Information education communication (IEC) programs is vital to the community & further research which include cultural factors or culture specific syndromes should be conducted to strengthen and broaden these findings.

## Authors Contributions

Getinet Ayano conceived the study and was involved in the study design, reviewed the article, analysis, report writing and Melkamu Alemayehu, Bereket Duko, Haregwoin Mulat and Melkamu Agidew were involved in the study design, analysis and drafted the manuscript. All authors of this paper have read and approved the final draft. The authors declare that they have no competing interests.

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