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COMPARISON OF DEPRESSION AMONG MARRIED AND DIVORCED PEOPLE IN ETHIOPIA: META-ANALYSIS AND SYSTEMATIC REVIEW

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ABSTRACT: ***Background:*** *At a global level, over 300 million people were estimated to suffer from depression in 2015, which was equivalent to 4.4% of the world's population. In Ethiopia, mental illness in particular depression is the leading non-communicable disorder in terms of burden. Depression has an impact on productivity, motivation to work, sleep behavior of the individual, and outcome of different chronic diseases. It is known that in order to set different prevention strategy providing reliable and up-to-date evidence on depression is very essential. Therefore, the purpose of this review is to provide latest available comparison of depression among married and divorced people in Ethiopia.* ***Methods:*** *This is systemic review and meta-analysis by study design. We systematically searched the databases: Google Scholar, Medline and Web of science database for studies conducted in Ethiopia on the availability of depression since 2010. The assessment of included studies were done using checklist developed by Joanna Briggs Institute which consists of eight points to screen article. Combined effect size across the studies using Mantel-Haenszel (MH) statistic (random effect model) and moderator analysis by taking prevalence of depression as fixed factor was used. The I^2 statistic was used to assess variation across studies and above 50% was considered as significant. Egger's and Begg's tests were used to assess for publication bias. Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines protocol was used to write and compile the report.* ***Results:*** *We screened a total of 351 articles. From these, 20 studies were included in the final systematic review and meta-analysis. In Ethiopia, the combined effect size of all studies revealed a statistically significant association between marital status and depression (pooled OR = 0.57; 95% CI: 0.37–0.86).* ***Conclusions:*** *We found that divorced people were more likely to have depression than married people. Thus, more attention should be paid to strengthen activities which discourage divorce at community level and integrating mental health counseling into health extension programme is advisable.*

KEYWORDS: *Depression, Ethiopia, Marital Status, Mental Disorder, Divorce, Systematic Review*

INTRODUCTION

Depression or depressive disorders are mental illnesses characterized by a profound and persistent feeling of sadness or despair and/or a loss of interest in things FMOH (2014).

At a global level, over 300 million people were estimated to suffer from depression in 2015, which was equivalent to 4.4% of the world's population World Health Organization (2017). Eventhough, mental health and wellbeing are specifically addressed under SDG Target 3.4, an estimate of one in 10 people in the world suffer from a mental disorder World Health Organization (2015); which make it a barrier to sustainable development in all regions.

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Common mental disorders globally are going up, particularly in lower-income countries, because of rapid population growth and more people are living to the age when depression most commonly occurs. The total estimated number of people living with depression increased by 18.4% between 2005 and 2015 (GBD, 2015); this reflects the overall growth of the global population, as well as an increase in the age groups at which depression is more prevalent. Eighteen-country adult based study reported that the life time prevalence of Major Depressive Disorder (MDD) was 14.6% in 10 high income countries and 11.1% in 8 low and middle income countries (Bromet et al., 2011). Depression was also reported as 29.6% in Thai (Maneeton et al., 2012), 47.3% in Kathmandu Valley (Kafle et al., 2017), 45.2% in Thailand (Louthrenoo, 2013). We also found that depression is highly prevalent in Botswana which accounts 25.3% among women and 31.4% among men Gupta et al. (2010).

In Ethiopia, mental illness in particular depression is the leading non-communicable disorder in terms of burden. Nationwide study using data from the Ethiopian National health survey showed depressive episode of 9.1% (Hailemariam et al., 2012) and 4.8% (Deyessa et al., 2009) among women. Moreover, the life time prevalence of depression in general population was reported 2.2% (Fekadu et al., 2007).

Depression prevents people from reaching their full potential, impairs human capital, and is associated with premature mortality from suicide and other illnesses and it represents a barrier to sustainable development in all regions (Patel et al., 2015; Lund et al., 2018)

Depressive disorders led to a global total of over 50 million Years Lived with Disability (YLD) in 2015 and up to 15% of individuals with severe depression (about 1 in 7) will die from suicide unless they are properly identified, treated and followed up (FMOH, 2014; World Health Organization, 2017).

Although depression can and does affect people of all ages, the risk of becoming depressed is increased by chemical changes in the brain, poverty, older age, lower educational level, unemployment, life events such as the death of a loved one or a relationship break-up (divorce), lack of adequate support, physical illness and problems caused by alcohol and drug use (FMOH, 2014; Hailemariam et al., 2012; Folb et al., 2015).

Providing reliable and up-to-date evidence on depression among married and divorced adults especially for country having larger populations like Ethiopia is a key ingredient of effective health policy, planning, evaluation and intervention concerning depression. Additionally, it is useful to indicate that whether there is difference in depression among married and divorced adults and if there is difference which group is at risk for depression so that clinician can use this information for patient management. Furthermore, there is also inconsistent reporting of association in the previous study conducted in Ethiopia. Therefore, this systemic review and meta-analysis was aimed at providing latest available evidence on comparison of depression among married and divorced people in Ethiopia.

METHOD AND MATERIALS

SEARCHING STRATEGY

The PRISMA guidelines protocol was used to write the systematic review (16). The studies were searched in Google Scholar, Medline and Web of science database by using the following terms: “depression”, “determinants of depression” and Ethiopia. The data used for this review were extracted from articles published between 2010 and 2020 (Hailemariam et al., 2012; Amha et al., 2020; Psychiatry et al., 2020; Feyera et al., 2015; Seada Seid & Oumer, 2020; Duko et al., 2019; Edmealem & Olis, 2020; Reta & Egziabher, 2019; Yeshaw & Mossie, 2017; Habtewold et al., 2016; Azeze et al., 2020; Ejigu et al., 2020; Minichil et al., 2019; Fanta et al., 2020; Abadiga, 2019; 31.
Berhe & Bayray, 2013; Dorsisa et al., 2020; Tilahun et al., 2018; Tamiru, 2016; Mossie et al., 2016). The reference lists of identified studies were also reviewed to find further articles to be included. Additionally, the presence of previous systematic reviews and meta-analysis on this topic was checked so as to avoid duplication of studies.

STUDY DESIGN

This is systemic review and meta-analysis by study design.

INCLUSION CRITERIA

Studies were included in the review if; (1) the outcome of interest was depression, (2) the study reported data on married and divorced with respect to depression, and (3) both published and unpublished studies conducted between 2010 and 2020.

EXCLUSION CRITERIA

Studies conducted abroad Ethiopia and studies identified depression without tool was excluded.

DATA ITEMS

Studies included in this review use different tool to measure depression but all of them dichotomized depression as “yes” if there is depression and “No” if there is no depression. Married and divorced were considered to be indicators of marital status.

DATA EXTRACTION AND SYNTHESIS

Data extraction was made by using data extraction form. We developed the data extraction form that meet the objective of this study. It included year of publication, the name of an author, study design, and number of depression among married and divorced.

QUALITY ASSESSMENT

The assessment of included studies were done using checklist developed by Joanna Briggs Institute which consists of eight points to screen article and all studies have acceptable quality (Institute, 2017).

STATISTICAL ANALYSIS

We used Review Manager Version 5.3 and Meta essential software to calculate combined effect size and associated 95% confidence intervals so as to compare depression among married and divorced population.

We determined combined effect size across the studies using Mantel-Haenszel (MH) statistic (random effect model) and moderator analysis by taking prevalence of depression as fixed factor. The I^2 statistic was used to assess variation across studies and above 50% was considered as significant (Higgins et al., 2003). Finally, Egger's and Begg's tests were used to assess for publication bias (Borenstein et al., 2010).

RESULTS

SEARCH OUTCOMES

The electronic searching of records results in 351 articles. Among 351 research articles, 200 were excluded due to duplication and our inclusion criteria and 103 articles were excluded because title and abstract did not fit our inclusion criteria. 48 of full-text articles assessed for eligibility and 28 of full-text articles excluded, with reasons of not presenting data on depression and marital status.

Finally, twenty research articles were included to estimate pooled odd ratio of depression among married and divorced adults in Ethiopia (Figure 1).

STUDY CHARACTERSTICS

The sample size of included studies ranges from 4925 (Hailemariam et al., 2012) to 264 (Habtewold et al., 2016). All included studies were cross-sectional surveys and done in different regions of Ethiopia. Four studies from Oromia (Yeshaw & Mossie, 2017; Abadiga, 2019; Dorsisa et al., 2020; Mossie et al., 2016), four studies from Amhara region (Amha et al., 2020; Seada Seid & Oumer, 2020; Edmealem & Olis, 2020; Dorsisa et al., 2020), four studies from Addis Ababa (Habtewold et al., 2016; Ejigu et al., 2020; Minichil et al., 2019; Fanta et al., 2020), four studies from SNNP(Psychiatry et al., 2020; Duko et al., 2019; Azeze et al., 2020; Tamiru, 2016), one study from Harari (Tilahun et al., 2018), One study from Tigray (Berhe & Bayray, 2013), One study is national from Ethiopia (Hailemariam et al., 2012) (Table 1).

COMPARISON OF DEPRESSION

In this meta-analysis, we examined the association between marital status and depression by using 20 studies.

As we have seen from the frost plot, there are 9731 respondents out of which 3280 of them reported having depression and 8576 of them are married while 1155 are divorced.

The combined effect size of all studies revealed a statistically significant association between marital status and depression. Accordingly, married people were less by

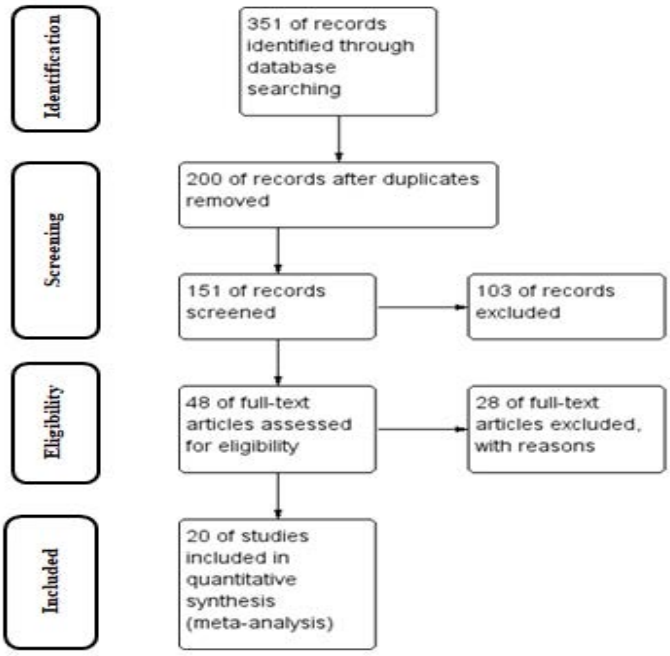

Figure 1. Flow chart of the review process, 2021.

Table 1.

Descriptions of the included studies in the meta-analysis in Ethiopia, 2021.

S.no	Author Name	Publication year	Prevalence of depression (%)	Region	Marital Status	Depression		Tool used
						Yes	No	
1	Abadiga(30)	2019	41.7	Oromia	Married	51	81	PHQ_9
					Divorced	22	27	
2	Amha et al.(17)	2020	45.9	Amhara	Married	175	369	GDS
					Divorced	56	40	
3	Azeze et al.(26)	2020	29.3	SNNPR	Married	69	195	PHQ_9
					Divorced	14	27	
4	Berhe et al.(31)	2013	44	Tigray	Married	47	82	HAM-D
					Divorced	23	14	
5	Dorsisa et al.(32)	2020	31	Oromia	Married	28	97	PHQ_9
					Divorced	28	46	
6	Duko B, et al.(21)	2019	32	SNNPR	Married	150	38	HADS
					Divorced	32	23	
7	Duko et al.(18)	2018	48.6	SNNPR	Married	88	90	PHQ_9
					Divorced	22	23	
8	Edemealem et al.(22)	2020	6	Amhara	Married	7	234	PHQ_2
					Divorced	1	21	
9	Ejigu et al. (27)	2020	27.5	Addis Ababa	Married	2	6	PHQ_4
					Divorced	33	33	
10	Fanta et al.(29)	2020	18	Addis Ababa	Married	22	128	PHQ_9
					Divorced	15	29	
11	Feyera et al.(19)	2015	38.3	Somali	Married	146	316	PHQ_9
					Divorced	50	50	
12	Habtewold et al.(25)		44.7	Addis Ababa	Married	72	111	PHQ_9
					Divorced	16	8	
13	Hailemariam et al.(10)	2012	9.1	All regions	Married	302	3049	ICD_10
					Divorced	34	200	
14	Minichil et al.(28)	2019	57.6	Addis Ababa	Married	1251	114	PHQ_9
					Divorced	72	31	
15	Mossie et al.(35)	2016	29	Oromia	Married	61	181	BDI-II
					Divorced	9	7	
16	Reta et al.(23)	2019	44	Amhara	Married	51	64	PHQ_9
					Divorced	7	5	
17	Seid et al.(20)	2020	20	Amhara	Married	9	167	PHQ_9
					Divorced	8	52	
18	Tilahun et al.(33)	2018	59.7	Harar	Married	168	146	PHQ_9
					Divorced	35	7	
19	Tilahune et al.(34)	2016	24.5	SNNPR	Married	44	129	PHQ_9
					Divorced	4	12	
20	Yeshaw et al.(24)	2017	22.9	Oromia	Married	24	142	DASS_21
					Divorced	9	10	

43% risk of developing depression compared to divorced people (OR = 0.57; 95% CI: 0.37–0.86).

There is a significant heterogeneity across the studies included (I^2 = 85%) (Figure 2).

SOURCE OF HETEROGENEITY

To identify the possible source of heterogeneity, we undertake moderator analysis by taking prevalence of depression as a moderator by using fixed effect model. Accordingly, the moderator analysis indicated that as prevalence of depression increase the effect size of depression also increase (B= 0.02, P-value < 0.001) (Figure 3).

REPORTING BIAS

For this analysis, we also assessed publication bias using Begg's and Egger's tests, the result of the test statistics indicated that there was no possible presence of statistically significant publication bias (p = 0.795) and (p = 0.328) respectively (Figure 4).

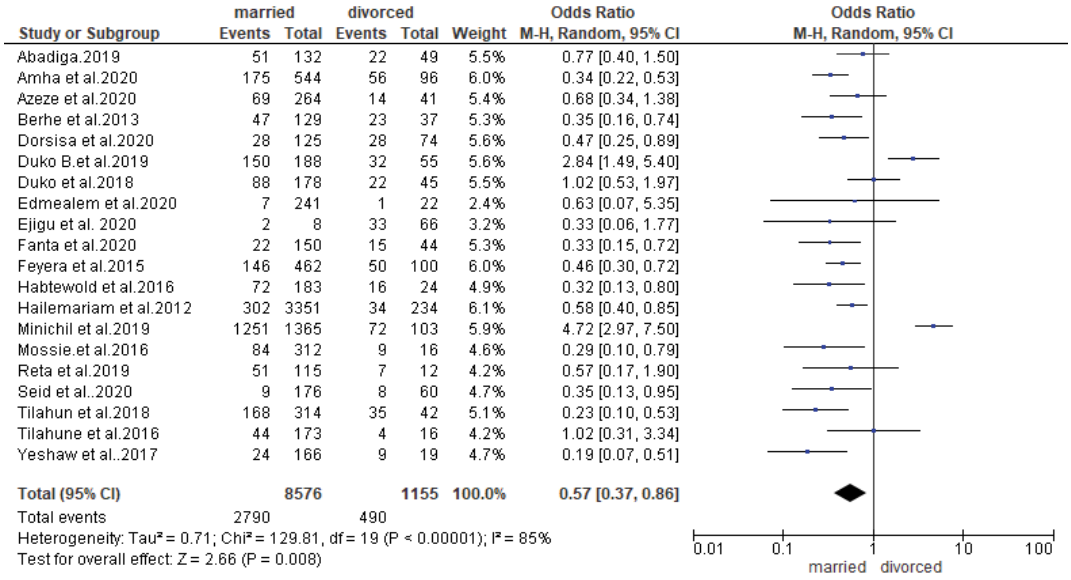

Figure 2. Forest plot of the pooled effect size of depression among married and divorced people in Ethiopia, 2021

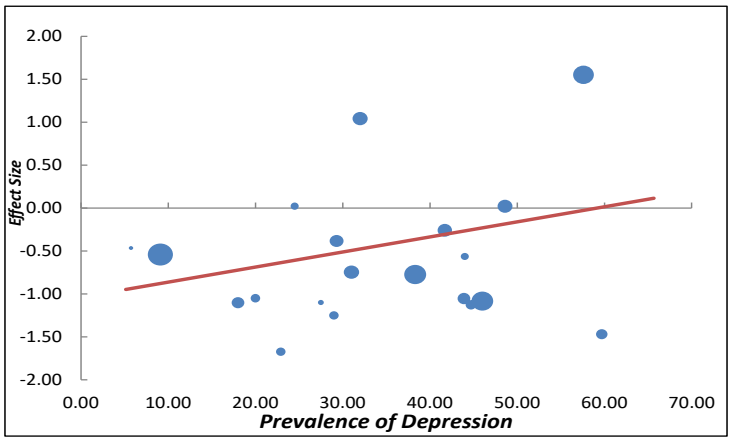

Figure 3. Moderator analysis of prevalence of depression and effect size of depression in Ethiopia, 2021.

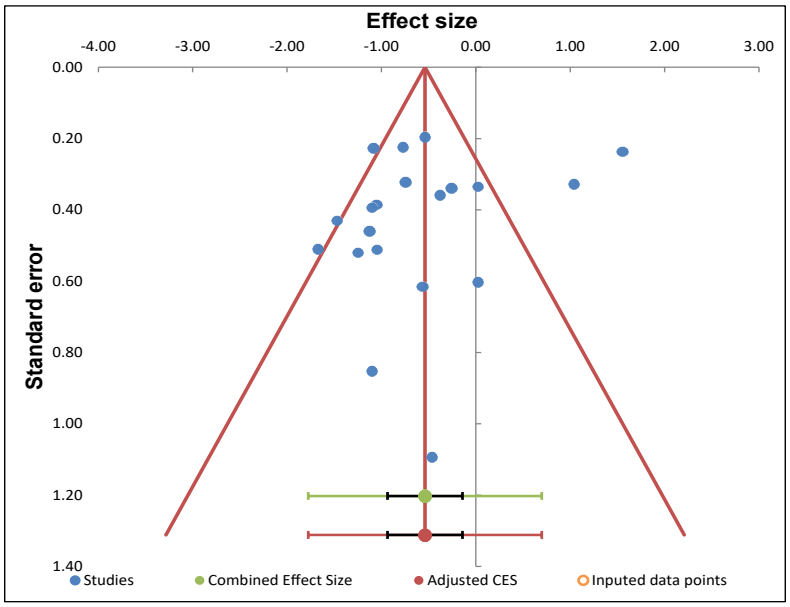

Figure 4. Funnel plot of the comparison between depression and marital status in Ethiopia, 2021.

DISCUSSION

This systemic review and meta-analysis was conducted to compare depression among married and divorced peoples in Ethiopia. Accordingly, the finding suggests that marital status has significant association with depression. Thus, married people have lower chance of depression compared to divorced people.

When compared to the available evidences, our finding was comparable with other studies carried out in different parts of the world like: in India (Kulatunga, 2013), Sri Lanka (Arambewela et al., 2019; Sri Lanka, 2019), Botswana (Gupta et al., 2010) and South Africa (Padayachey et al., 2017) that indicated, being married is a protective factor of depression. Similarly, the finding is in line with previous studies conducted in Ethiopia (Amha et al., 2020; Feyera et al., 2015; Ejigu et al., 2020; Tamiru, 2016; Hajure et al., 2020; Molla et al., 2016) that showed being divorced was positively associated with depression.

Potential explanations for this finding might be attributed to a difference in stress coping mechanism between married and divorced people as well as perceived loneliness sensation and loss of social support in divorced people unlike married people who have the opportunity to find emotional support and intimacy in one's partner.

However, our finding is inconsistent with studies done in India (Sengupta & Benjamin, 2015) and Uganda (Hatcher et al., 2012) that showed marital status were not found to be statistically significantly associated with depression. Other study on depression and ART initiation among HIV serodiscordant couples in Kenya and Uganda also reports marital status has no association with probable depression (Velloza et al., 2018). Additionally, our finding is not comparable studies conducted in several parts of Ethiopia (Psychiatry et al., 2020; Habtewold et al., 2016; Azeze et al., 2020; Berhe & Bayray, 2013; Dorsisa et al., 2020), which suggest that marital status were not found to be predictors of depression. The possible reason for this discrepancy might be difference in study population, sample size, study setting, and prevalence of depression and lifestyle factors such as sociocultural characteristics, environmental.

Finally, this review has some limitations such as the review included studies that were published only in the English language. Furthermore, the protocol of this manuscript was not registered on PROSPERO. Lastly, all of the included studies in the final analysis were cross-sectional study designs which results difficulty of causal conclusion between the outcome variable and its determinants.

CONCLUSION AND RECOMMENDATIONS

We found that marital status were independent determinants of depression. i.e., divorced people were more likely to have depression than married people in Ethiopia. Therefore, we would like to recommend emotional and psychological support by mental health worker for divorced people so as to decrease the occurrence of depression. Additionally, more attention should be paid to strengthen activities which discourage divorce at community level and integrating mental health counseling into health extension programme is advisable.

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AUTHORS' CONTRIBUTION

All authors (AAA, KTT, and AZ) made substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data. All authors (AAA, KTT, GMW, GA and AZ) read and agreed to submit to the current journal.

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AVAILABILITY OF DATA AND MATERIALS

All data analyzed during this study are included in the manuscript.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Not applicable

CONSENT FOR PUBLICATION

Not applicable

COMPETING INTERESTS

The authors declare that they have no competing interests.

REFERENCES

Abadiga M. (2019). Depression and its associated factors among HIV / AIDS patients attending ART clinics at Gimbi General hospital, West Ethiopia. *BMC Res Notes. 12*:527:1–8. Available from: https://doi.org/10.1186/s13104-019-4553-0

Amha H, Fente W, Sintayehu M, Tesfaye B, Yitayih M. (2020). Depression and associated factors among old age population in Dega damot. *J Affect Disord Reports. 2*:100034. Available from: https://doi.org/10.1016/j.jadr.2020.100034

Arambewela MH, Somasundaram NP, Buddhi H, Ranjan P, Kumbukage MP. (2019). Prevalence of Depression and Associated

Factors among Patients with Type 2 Diabetes Attending the Diabetic Clinic at a Tertiary Care Hospital in Sri Lanka : A Descriptive Study. *Psychiatry J. 19*:1–8. Available from: https://doi.org/10.1155/2019/7468363

Azeze GA, Adema BG, Adella GA, Wondimeneh B, Obsa MS. (2020). Factors Associated with Untreated Depression Among Type 2 Diabetic Patients at Halaba Kulito Hospital, South Ethiopia : A Cross-Sectional Study. Diabetes, *Metab Syndr Obes Targets Ther.13,* 2189–98. Available from: https://doi.org/10.1186/s12888-020-02638-5

Berhe, H., & Bayray, A. (2013). Prevalence of depression and associated factors among people living with HIV/AIDS in Tigray, North Ethiopia: a cross sectional hospital based study. *International J Pharmaceutic Sci Res*, *4*(2), 765.

Borenstein M, Borenstein M, Hedges L V, Higgins JPT. (2010). A basic introduction to fixed-effect and random-effects models for meta-analysis. *Res Synth Methods.1*:97–111.

Bromet, E., Andrade, L. H., Hwang, I., Sampson, N. A., Alonso, J., De Girolamo, G., ... & Kessler, R. C. (2011). Cross-national epidemiology of DSM-IV major depressive episode. *BMC Med*, *9*(1), 1-16.

Deyessa N, Berhane Y, Alem A, Ellsberg M, Emmelin M, Hogberg U, et al. (2009). Clinical Practice and Epidemiology Intimate partner violence and depression among women in rural Ethiopia : a cross-sectional study. *Clin Pract Epidemiol Ment Heal*.10.

Dorsisa B, Ahimed G, Anand S, Bekela T. (2020). Prevalence and Factors Associated with Depression among HIV / AIDS-Infected Patients Attending ART Clinic at Jimma University Medical Center , Jimma , Southwest Ethiopia. *Psychiatry J, 20*:1–9.

Duko B, Toma A, Asnake S, Abraham Y. (2019). Depression, Anxiety and Their Correlates Among Patients With HIV in South Ethiopia : An Institution- Based Cross-Sectional Study. *Front Psychiatry.10*:1–7.

Edmealem A, Olis CS. (2020). Factors Associated with Anxiety and Depression among Diabetes, Hypertension, and Heart Failure Patients at Dessie Referral Hospital, Northeast Ethiopia. *Behav Neurol, 20,* 1–10. Available from: https://doi.org/10.1155/2020/3609873%0A

Ejigu AK, Seraj ZR, Gebrelibanos MW, Jilcha TF, Bezabih YH. (2020). Depression, anxiety and associated factors among housemaids working in Addis Ababa Ethiopia. *BMC Psychiatry. 20*(231):1–11. Available from: https://doi.org/10.1186/s12888-020-02638-5

Fanta T, Bekele D, Ayano G. (2020). The prevalence and associated factors of depression among patients with schizophrenia in Addis Ababa, Ethiopia, cross-sectional study. *BMC Psychiatry.20*:3:1–7.

Fekadu A, Alem A, Medhin G, Shibre T, Cleare A, Prince M, et al. (2007). Utility of the concept of minor depressive disorder : Evidence from a large rural community sample in a developing country setting. *J Affect Disord 104,* 104:111–8.

Feyera F, Mihretie G, Bedaso A, Gedle D, Kumera G. (2015). Prevalence of depression and associated factors among Somali refugee at melkadida camp, southeast Ethiopia : a cross-sectional study. *BMC Psychiatry.15*:171:1–7.

FMOH. (2014). Non-communicable disease prevention and control; learning module for level_III health extension program in Ethiopia.

Folb N, Lund C, Fairall LR, Timmerman V, Levitt NS, Steyn K, et al. (2015). Socioeconomic predictors and consequences of depression among primary care attenders with non-communicable diseases in the Western Cape, South Africa : cohort study within a randomised trial. *BMC Public Health, 15*:1194. Available from: http://dx.doi.org/10.1186/s12889-015-2509-4

GBD 2015 Chronic Respiratory Disease Collaborators. (2017). Global, regional, and national deaths, prevalence, disability-adjusted life years, and years lived with disability for chronic obstructive pulmonary disease and asthma, 1990–2015: a systematic analysis for the Global Burden of Disease Study 2015. *The Lancet. Respiratory Medicine*, *5*(9), 691.

Gupta R, Dandu M, Packel L, Rutherford G, Leiter K, Korte FP, et al. (2010). Depression and HIV in Botswana : A Population-Based Study on Gender-Specific Socioeconomic and Behavioral Correlates. *PLoS One.5*(12).

Habtewold TD, Alemu SM, Haile YG. (2016). Sociodemographic, clinical, and psychosocial factors associated with depression among type 2 diabetic outpatients in Black Lion General Specialized Hospital, Addis Ababa, Ethiopia : a cross-sectional study. *BMC Psychiatry.16*, 103:1–8. Available from: http://dx.doi.org/10.1186/s12888-016-0809-6

Hailemariam S, Tessema F, Asefa M, Tadesse H, Tenkolu G. (2012). The prevalence of depression and associated factors in Ethiopia : findings from the National Health Survey. *Int J Ment Health Syst. 6*(23):1–11.

Hajure M, Mandaras Tariku, Mustefa Mohammedhussein AD. (2020). Depression, Anxiety and Associated Factors Among Chronic Medical Patients Amid COVID-19 Pandemic in Mettu Karl Referral. *Neuropsychiatr Dis Treat. 16*:2511–2518.

Hatcher AM, Tsai AC, Kumbakumba E, Dworkin SL, Hunt PW, Martin JN, et al. (2012). Sexual Relationship Power and Depression among HIV- Infected Women in Rural Uganda. *PLoS One. 7*(12):6–12.

Higgins JPT, Thompson SG, Deeks JJ, Altman DG. (2003). Measuring Inconsistency in Meta-Analyses Measuring inconsistency in meta-analyses. *Educ Debate. 327*:557–560. Available from: at: https://www.researchgate.net/publication/10580837

Institute JB. (2017). Critical Appraisal Checklist for Analytical Cross Sectional Studies. Available from: http://joannabriggs.org/research/critical-appraisal-tools.html

Kafle B, Vd S, Sp O, Chapagain M, Tulachan P, Dhungana S. (2017). Prevalence of Depression among elderly living in old age homes of Kathmandu Valley and its association with Sociodemographic variants. *J Psychiatr Assoc Nepa., 4,* 2–7.

Kulatunga OBWRSSPM. (2013). Prevalence of Unrecognised Depression Among Outpatient Department Attendees of A Rural Hospital in Delhi, India. *J Clin Diagnostic Res.7*(9):1921–5.

Louthrenoo BMNMW. (2013). Prevalence and predictors of depression in patients with systemic lupus erythematosus : a cross-sectional study. *Neuropsychiatr Dis Treat, 9*, 799–804.

Lund C, Brooke-sumner C, Baingana F, Baron EC, Breuer E, Chandra P, et al. (2018). Goals : a systematic review of reviews Review Social determinants of mental disorders and the Sustainable Development Goals : a systematic review of reviews. *The Lancet Psychiatry, 5*(4):357–69. Available from: http://dx.doi.org/10.1016/S2215-0366(18)30060-9

Maneeton, B., Maneeton, N., & Mahathep, P. (2012). Prevalence of depression and its correlations: a cross-sectional study in Thai cancer patients. *Asian Pacific J Cancer Prev*, *13*(5), 2039-2043.

Minichil W, Getinet W, Derajew H, Seid S. (2019). Depression and associated factors among primary caregivers of children and adolescents with mental illness in Addis. *BMC Psychiatry.19,* 249, 1–9. Available from: https://doi.org/10.1186/s12888-019-2228-y

Moher D, Liberati A, Tetzlaff J AD. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Med. 6*(6):1–2.

Molla GL, Sebhat HM, Hussen ZN, Mekonen AB, Mersha WF, Yimer TM. (2016). Depression among Ethiopian Adults : Cross-Sectional Study. *Psychiatry J. 16*:14–9. Available from: http://dx.doi.org/10.1155/2016/1468120%0A

Mossie A, Kindu D, Negash A. (2016). Prevalence and Severity of Depression and Its Association with Substance Use in Jimma Town, Southwest Ethiopia. *Depress Res Treat. 16*, 1–7. Available from: http://dx.doi.org/10.1155/2016/3460462%0A

Padayachey U, Ramlall S, Chipps J. (2017). Depression in older adults : prevalence and risk factors in a primary health care sample Depression in older adults : prevalence and risk factors in a primary health care sample. *South African Fam Pract. 6190*:61–6. Available from: http://dx.doi.org/10.1080/20786190.2016.1272250

Patel V, Chisholm D, Parikh R, Charlson FJ, Degenhardt L, Dua T, et al. (2015). Addressing the burden of mental, neurological , and substance use disorders : key messages from Disease Control Priorities , *3rd edition. Lancet, 6736*(15):1–14.

Psychiatry G, Duko B, Geja E, Zewude M, Mekonen S. (2020). Prevalence and associated factors of depression among patients with HIV / AIDS in Hawassa , Ethiopia , cross - sectional study. *Ann Gen Psychiatry.17*:45, 4–9. Available from: https://doi.org/10.1186/s12991-018-0215-1

Reta Y, G/Egziabher RGMBBKKWY. (2019). Depressive disorder and its associated factors among prisoners in Debre Berhan Town, North Showa, Ethiopia.

Seada Seid, Oumer Abdu MMKST. (2020). Prevalence of depression and associated factors among HIV / AIDS patients attending antiretroviral therapy clinic at Dessie referral*. Int J Ment Health Syst.14*,55,1–8. Available from: https://doi.org/10.1186/s13033-020-00389-0

Sengupta P, Benjamin AI. (2015). Prevalence of Depression and Associated Risk Factors among the Elderly in Urban and Rural Field Practice Areas of a Tertiary Care Institution in Ludhiana. *Indian J Public Health. 59*(1):3–8.

Sri Lanka-ye-1-Prevalence and correlates of depression among older urban community-dwelling adults in Sri Lanka - Rajapakshe - 2019 - Psychogeriatrics - Wiley Online Library.

Tamiru asres BT gezahegn BNM eyerusalem. (2016). Prevalence of unrecognized depression and associated factors among patients attending medical outpatient department in Adare Hospital. *Neuropsychiatr Dis Treat.12*:2723–9.

Tilahun H, Awoke N, Geda B, Mesfin F. (2018). Depression and Associated Factors among Adult Inpatients at Public Hospitals of Harari Regional State, Eastern Ethiopia. *Psychiatry J. 20,* 1–6. Available from: https://doi.org/10.1155/2018/6743520

Velloza J, Celum C, Haberer J, Ngure K, Mugo N, Baeten J, et al. (2018). Depression and ART initiation among HIV serodiscordant couples in Kenya and Uganda. *AIDS Behav. 21*(8):2509–18.

World Health Organization. (2015). Health in 2015: from MDGs, millennium development goals to SDGs, sustainable development goals.

World Health Organization. (2017). *Depression and other common mental disorders: global health estimates* (No. WHO/MSD/MER/2017.2). World Health Organization.

Yeshaw Y, Mossie A. (2017). Depression, anxiety, stress, and their associated factors among Jimma University staff, Jimma, Southwest Ethiopia, 2016 : a cross-sectional study. *Neuropsychiatr Dis Treat.13*,803–12. Available from: http://dx.doi.org/10.2147/NDT.S150444