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MENTAL HEALTH ISSUES AND POLICY IN SUB SAHARAN AFRICA: A VIEW FROM CAPE TOWN TO CAIRO

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Abstract. Although millions of people in Africa have suffered various forms of mental health, such as depression, alcohol use, stress, schizophrenia, epilepsy, and Alzheimer's disease, there is little attention given to mental health issues in the region. This study explores any substantial information regarding mental health issues, mental health policies, and their legislations in the study area covered from Cape Town to Cairo. Secondary information based on different literature reviews was adopted using available secondary data from some African countries. The data source specifically the World Health Organization and Mental Health Atlas [1]. A qualitative based analysis has been performed. Only 22 out of 53 countries within the African region have some form of a mental health policy. Meanwhile about 41% do not have a mental health policy or plan. From a global perspective, mental health issues are critical, particularly in the African region. Therefore, concerned governments, Non-governmental organizations, health institutions, and relevant healthcare service professionals must work together. Moreover, countries with already adopted mental health policies should give more attention to monitoring and evaluation.

INTRODUCTION

The World Health Organization defined mental health as "a state of wellbeing in which people recognize their full potential, which means that they have the ability to handle the common pressures of life, and can work efficiently, and have the ability to contribute to their societies" [2]. Statistics indicate that the number of people with depression and anxiety is increasing from 416 million to 615 million between 1990 and 2013 [3]. Moreover, 14 per cent of the global burden of disease is attributed to mental illness with 75 per cent of those affected being found in low-income countries [4]. However, the burden of mental health from depression is expected to increase from the second biggest contributor to the burden of disease worldwide by 2030 [4]. Information regarding the burden of mental disorder in sub Saharan African countries emphasised that a substantial segment of the population is vulnerable to mental disorder due to psychosocial and socioeconomic stressors such as poverty, migration, urbanization, war, conflict and disasters [2], [5], [6]. Approximately one out of four people in Africa may experience what the WHO refers to as common mental disorders such as anxiety or depression, [7]. In most African countries, people who have mental disorders are often denounced and discriminated against in their daily lives, and do not have access to any form of treatment; and those who do get some form of care are often exposed to inhumane conditions when in mental health treatment facilities [8]. Currently married women suffered during pregnancy, working women suffered more stress and depression. People with mental health disorder constitute a vulnerable group in the society and are restricted [9] from exercising their civil and political rights; moreover, their ability to access important health care such as emergency relief service [9]. The World Health Organization has noted that, mental health facilities within the African context are unsanitary and the living conditions are inhumane, such as the use of caged beds [10].

Studies have reported that health means general health or reproductive health matters. But very few studies have been conducted on mental health in selected African countries with mental health policies and existing or non-existing mental health programs. However, there is no proper solution or lack of awareness; they are treated as a general health problem. Researchers have noted correlated issues particularly psychological problems with concerned nations mental health policy. This present study therefore focuses on mental health issues from Cape Town, South Africa to Cairo, Egypt. We are therefore interested to know exactly what mental health is. Who is suffering, and at what level? What are the factors effecting a mental problem? Which country reported a higher rate of a specific mental health problem(s)? In this regard the mental health in Africas situation and their respective links with associated factors is very crucial. In many parts of Africa, young people are affected due to vulnerable diseases including HIV and AIDS.

However, there is no proper solution or lack of awareness; they are treated as a general health problem. Researchers

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come across with the correlated issues particularly psychological problems with concerned nations mental health policy. We are therefore interested to know exactly what mental health is. Who is suffering, and at what level? What are the factors effecting a mental problem? Which country reported a higher rate of a specific mental health problem(s)? In this regard the mental health in Africas situation and their respective links with associated factors is very crucial. In many parts of Africa, young people are affected due to vulnerable diseases including HIV and AIDS. We are, therefore, interested to know the state of mental health issues in selected African countries. Worldwide, there are many psychosocial disorders which are known to account for about a third of years lived with a disability among adults over the age of fifteen [11].

Associate Factors Linked with Common Mental Issues

Mental health issues within the African context are brought about by a number of factors. The financial situation of an individual may predisposes him/her to mental health problems. Individuals with a lower socio-economic status are more likely to suffer from certain mental health disorders compared to those with a higher socio-economic status [11]. Armed conflicts and natural disasters suffered by some African countries such as Ethiopia, Rwanda, Sudan, Somalia and DRC have resulted in displacement of more than 1.5 million people, and it has been evident that, the difficulties faced by these displaced individuals could result in mental disorder. It has been estimated that about half (50%) of refugees have mental health problems such as chronic mental illnesses as well as post-traumatic stress disorders among others [12].

A study conducted in Nigeria, reveal that, there is no variation in mental health disorder when looking at gender and there was some consistency when comparing these results to other countries which had conducted similar studies [13]. The study further indicate that marital status was not statistically associated with mental disorder although those who were not married (i.e., single, separated, divorced or widowed) had the highest rates of Common Mental Disorder (CMD). The study reveal that, from Nigeria and South Africa single, as well as those who are no longer married (i.e., divorced, widowed or separated) had the highest rates of CMD compared to those who were currently married [13]. On the other hand, mental health disorders are associated with ethnic group. In South Africa, studies show higher rates among the black African population group compared to the white population group, and perhaps this reflects the socio-economic inequalities between these two population groups [14].

Earlier African-based mental health surveys found that there were associations between socio-economic factors and mental health. Hamad and colleagues [14] did a review which identified eleven studies from selected developing countries which reported statistical associations between CMD and variables linked to poverty, even though only less than twenty percent of these studies were from sub-Saharan Africa [14]. Socio-economic factors associated with depression are mostly experienced by women. The existing studies show that mental health problem is linked with low education level. Surveys in Pakistan [15], [16] found that having lower levels of education was positively associated with having mental disorders.

In Egypt, unemployment has been acknowledged as an important determinant of mental disorders among men and women [17]. Theres a handful of studies related to mens exposure to intimate partner violence in in the African region and there are very few studies on health effects associated with this. A study done in Tanzania indicates that intimate partner violence has a statistical association with mental disorder in Tanzania [18]. Patel and colleagues [11] from their study in India argued that the statistical relationship between mental disorders and being female was due to gender discrimination against women in that country.

Previous studies within the African region have shown that contrary life events were statistically associated with depression [19], [20], [21]. The death of close family such as father or mother was associated with depression. Studies done in West Africa and in other parts of Africa have also reported a statistically significant relationship between certain psychosocial factors and dysfunctional parenting as well as low maternal care and orphanhood [19], [20]. Earlier results from developed countries have confirmed a gender-specific influence of particular adverse life events with regard to the risk of psychosocial issues [22], [23].

Objectives

This study focus on mental health issues, mental health policy and legislations in the study area from Cape Town to Cairo. This study is entirely new and none of the previous studies have focused on mental issues in the entire African countries. This study literatures and policy recommendations will be a key message for the program managers and policy makers. The study therefore relies solely on secondary sources of information and covering the entire Africa countries.

METHODS

This study use secondary information from different related literature reviews. Majority of the large scale data sets dealing with general population matters does not specifically focus on mental issues. It therefore depends solely on available sources dealing with mental problems in specific mental dis-

eases. The data source was from the World Health Organization and Mental Health Atlas [1]. Figure 1 the researchers were unable to get the data of prevalence of common mental disorder in all Sub-Saharan African countries. Only three countries had available data. The prevalence of common mental disorder for South Africa is about 30.3% and Nigeria (12%) [24] whereas, the prevalence rate for Egypt is about 17% [17].

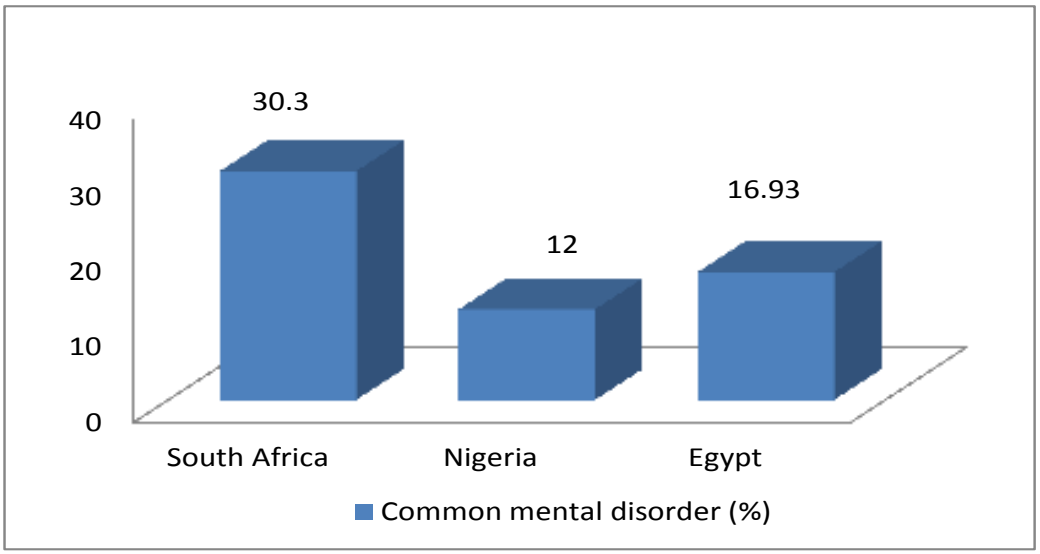

Fig. 1. The prevalence of common mental disorder in South Africa, Nigeria and Egypt.
Source: [25]

Qualitative investigations were adopted from countries with available data and different mental health policy implemented and revised years. There were 22 countries having mental health policies (in Table 1), while 20 countries do not have any mental health policies, and the rest of the countries not listed according to the World Health Organization. Meanwhile, only very few countries provided some importance of mental health issue and have revised their mental health policies. Unfortunately, we are not able to perform in-depth statistical analysis due to the absence of information regarding a particular mental health issues. Our intention is to focus on any one of the mental health matters and those countries that have implemented or trying to adopt a mental health policy from Cape to Cairo. Many African countries implemented a general population policy or reproductive health policies. But only half of the African countries have adopted mental health policy.
Limitations: None of the mental health policy studies has been found in African countries.

RESULTS

Table 1 shows those African countries with mental health policies in existing status. Many mental health problems are listed as per the WHO but available data provided indicates that Tunisia has the highest percentage of neuropsychiatric disorders that are estimated to contribute to 16.7% of the global burden of disease [1]. This is followed by Morocco with the second highest neuropsychiatric disorders that are estimated to contribute about 16% of the global burden of disease. The Table further indicates that, about 41% (22) of the countries from Sub-Saharan Africa do have a mental health policy, and among them only about 64% (14) of them have mental health legislations.

Table 2 shows that about 59% of countries do not have a mental health policy and about 41% have no mental health plan. As indicated, Mauritius has the highest percentage (14.8%) of mental health problem followed by Seychelles (14.4%), then Cabo Verde with (12.9%). Congo Republic, Djibouti, Equatorial Guinea, Libya, South Sudan, and Tanzania did not have any mental health policy, no mental health plan, and no mental legislation in the study, indicating that mental health problems is still a serious challenge to health in these areas.

Table 3 further presents a summary of risk factors associated with mental disorder in Africa. Based on the study findings, five issues were identified though it might be more than five. A summary finding was on the five countries such as Ethiopia, Uganda, Rwanda and South Sudan. The research gap here implies that future researchers have to work on mental disorder cases in the entire Africa as existing stu

TABLE 1
EXISTING MENTAL HEALTH POLICY, PLAN AND LEGISLATION IN AFRICAN COUNTRIES

Sub- Saharan African Countries	Mental Policy (Approved Year)	Mental Health Plan	Mental Health Legislation	Mental Health Problem*
Tunisia	Revised in 2008	Revised in 2008	Exist, revised in 2008	16.70%
Morocco	Revised in 2008	Revised in 2008	Exist, revised in 1959	15.80%
Egypt, Arab Rep.	Revised in 2006	Revised in 2008	Exists, revised in 2009	15.10%
Algeria	Approved in 2009	Exists	Exists, Revised in 1985	13.10%
Ghana	Revised in 1996	Revised in 2007	Exist, revised in 1972	8.80%
Madagascar	Revised in 2005	Revised in 2008	Exist, revised in 2008	7.90%
Gambia, The	Revised in 2007	Revised in 2007	Exists, revised in 1964	7.70%
Mauritania	Revised in 2005	Exist	Does not exist	7.40%
Senegal	Revised in 2006	Revised in 2006	Exist, revised in 1975	7.00%
Namibia	Revised in 2005	Revised in 2009	Exist, revised in 1978	6.90%
Togo	Revised in 1994	Revised in 1994	Does not exist	6.60%
Guinea	Revised in 2000	Revised in 2000	Does not exist	6.50%
Sudan	Revised in 2009	Revised in 2002	Does not exist	6.50%
Nigeria	Revised in 1991	Revised in 1991	Exist, revised in 1958	6.20%
South Africa	Approved in 1997	Approved in 2009	Exist, approved in 2002	5.90%
Rwanda	Revised in 1995	Revised in 2007	Does not exist	4.80%
Liberia	Revised in 2009	Revised in 2009	not exist	4.10%
Zambia	Revised in 2005	Revised in 2007	Exist, revised in 1951	4.10%
Zimbabwe	Revised in 2005	Revised in 2009	Exist, revised in 1996	3.10%
Cote d'Ivoire	Exists	Exists	Does not exist	NA

Source: Mental Health Atlas 2011 - Department of Mental Health and Substance Abuse [1], World Health Organization [25]; Mental health problem*; Neuropsychiatric disorders in Percentage

DISCUSSION

This study focuses on mental health Issues and Policy in Sub-Saharan Africa. The study presents a list of countries with mental health policy, plan and legislation. About 41% (22) of countries in the Sub-Saharan region of Africa have a mental health policy, and among them only about 64% (14) of them have mental health legislations. Although Tunisia is among countries with mental health policy, it has the highest percentage of Neuropsychiatric disorders. This might be due to the fact that the existing health policy does not function properly as indicated on paper. However, about twenty countries do not have a mental health policy. From a summary of risk factors associated with depression in Africa, four studies were found in this regard though it might be more than four. The findings were summarily dependent on the four countries such as Ethiopia, Uganda, Rwanda and South Sudan. The researchers used different types of depression measures such as Becks Depression Inventory, Hopkins Symptom Checklist and Epidemiologic Studies Depression Scale. These scholars considered people who had been affected previously with diseases such as fistula and HIV as well as those who had people after post war. Hence, the findings of the studies are unable to give the exact figure of depression on the countries as a whole. The research gap here implies that future researchers must investigate issues related to depression which could be a representative study of the whole population.

TABLE 2
THE COUNTRIES WITHOUT MENTAL HEALTH POLICY, PLAN AND LEGISLATION IN AFRICA

Sub- Saharan African Countries	Mental Policy (Approved Year)	Mental Health Plan	Mental Health Legislation	Mental Health Problem*
Mauritius	Doesn't exist	Revised in 2002	Revised in 1998	14.80%
Seychelles	Does not exist	Does not exist	Revised in 2002	14.40%
Cabo Verde	Doesn't exist	Revised in 2009	Does not exist	12.90%
Comoros	Doesn't exist	Revised in 2010	Revised in 1995	9.80%
Eritrea	Does not exist	Does not exist	Does not exist	8.80%
Sao Tome and Principe	Does not exist	Does not exist	Does not exist	8.10%
Gabon	Doesn't exist	Doesn't exist	Doesn't exist	7.80%
Benin	Doesn't exist	Doesn't exist	Does not exist	6.10%
Burkina Faso	Does not exist	Does not exist	Does not exist	5.80%
Ethiopia	Does not exist	Does not exist	Does not exist	5.80%
Kenya	Doesn't exist	Revised in 1994	Revised in 1991	5.70 %
Guinea-Bissau	Doesn't exist	Doesn't exist	Does not exist	5.50%
Mozambique	Doesn't exist	Revised in 2007	Does not exist	5.50%
Chad	Doesn't exist	Revised in 2008	Does not exist	5.40%
Uganda	Doesn't exist	Revised in 2010	Revised in 1964	5.30%
Mali	Doesn't exist	Doesn't exist	Doesn't exist	5.20%
Central African Republic	Doesnt exist	Doesn't exist	Does not exist	5.00%
Burundi	Does not exist	Revised in 2010	Does not exist	4.90%
Somalia	Does not exist	Does not exist	Does not exist	4.90%
Lesotho	Does not exist	Does not exist	Revised in 1964	4.80%
Swaziland	Does not exist	Does not exist	Revised in 1978	4.50%
Niger	Does not exist	Revised in 2009	Does not exist	4.40%
Angola	Does not exist	Revised in 2010	Does not exist	4.30%
Malawi	Doesn't exist	Doesn't exist	Revised in 2005	4.30%
Congo, Rep.	Not Available	Not Available	Not Available	Not Available
Djibouti	Not Available	Not Available	Not Available	Not Available
Equatorial Guinea	Not Available	Not Available	Not Available	Not Available
Libya	Not Available	Not Available	Not Available	Not Available
South Sudan	Not Available	Not Available	Not Available	Not Available
Tanzania	Not Available	Not Available	Not Available	Not Available

Source: Mental Health Atlas 2011 - Department of Mental Health and Substance Abuse [1], World Health Organization [25];
Common Mental health problem*, (Neuropsychiatric disorders) in Percentage

CONCLUSION

From the initial to completion phase of this study, only few studies were published in journal articles which focus on mental health in Africa. This might be due to the fact that most countries within this region are not aware of the effects of mental health problems on human being. Based on this study, mental health issues document is useful for researchers, academicians, policy maker, program managers and non-governmental organizations. There is need for in-depth study into this important aspect of health related issues especially within the sub-Saharan regions where victims are neglected and abused within the community. Most countries within the sub-Saharan regions considered mental health policy with general health policy but without separate mental health policy in place as a country. Those countries with mental health policy have not shown improvement as they wanted. The reason could be that these countries have not taken proper evaluation and monitoring the policy in order to bring significant impact on mental health problem.

TABLE 3
SUMMARY OF RISK FACTORS OF DEPRESSION IN AFRICA

Authors	Title and Study done	Method	Remarks	Research Gap
[26]	Depression among women with obstetric fistula,and pelvic organ prolapse in northwest Ethiopia	Depression measures were obtained using the Becks Depression Inventory BDI	variables including age 50 years or older, age at first delivery younger than 18 years, marital status, history of divorce, self-perception of severe disease were significantly associated with depression.	It is hospital based study only focused in North West. There is a research gap that it should cover the entire region in Ethiopia.
[27]	Prevalence and risk factors of major depressive disorder in HIV/AIDS as seen in semi-urban Entebbe district, Uganda	Multivariate analysis: AOR (adjusted odd ratios)	Educational attainment, religion, marital status and occupation were not significantly associated with Major Depressive Disorder. After adjusting for age and sex, the social factors significantly associated with Major depressive disorder were food, insecurity; increasing number of negative life events experienced in the last 6 months.	District based study in Entebbe district. In the future the researchers need to study the entire district in Uganda.
[28]	Prevalence and Predictors of Posttraumatic Stress Disorder and Depression in HIV-Infected and At-Risk Rwandan Women	Measured by: Centre for Epidemiologic Studies Depression Scale (CES-D)	Women making $<$ \$18 a month were three times more likely than those making between \$18 and \$64 a month or $>$ \$64 per month to report depressive symptoms	It is cohort study. The future researchers need to study cross-sectional study as well.
[29]	Poverty, life events and the risk for depression in Uganda	Measured by: major depressive disorder as assessed by the Hopkins Symptom Checklist	Among females, the risk factors independently associated with major depressive disorder were: ecological factors (district; with the rates for females showing an overall pattern similar to that for males); older age age categories above 35 years; socioeconomic factors (no formal education, being separated/ divorced, being a single parent, no employment and poorer socioeconomic status) and the life event of paternal death	It is used to measure Hopkins symptoms checklist. The future researcher need to apply Cornell Scale for Depression in Dementia
[30]	What are the risk factors for the comorbidity of Posttraumatic stress disorder and depression in a war-affected population? a cross-sectional community study in South Sudan	Multinomial logistic regression analyses	Polygamy marriage, never attend school and Severely Disadvantaged socio-economic back ground of people were significantly associated with depression	It is cross sectional study. It would be better the researcher study population survey of posttraumatic stress disorder in South Sudan.

Fig. 2. Physical map of Africa

REFERENCES

[1] World Health Organization, "Mental health atlas," Department of Mental Health, Substance Abuse, WHO Press, Geneva, Switzerland, 2005

[2] World Health Organization,"World health statistics 2014," WHO Press, Geneva, Switzerland, 2014.

[3] World Health Organization,"World health statistics 2016: Monitoring health for the SDGs," WHO Press, Geneva, Switzerland, 2016.

[4] C. D. Mathers and D. Loncar, "Projections of global mortality and burden of disease from 2002 to 2030," *PLoS Medicine,* vol. 3, no. 11, 2006.

[5] A. Fekadu, G. Medhin, M. Selamu, M. Hailemariam, A. Alem, T. W. Giorgis, E. Breuer, C. Lund, M. Prince and C. Hanlon, "Population level mental distress in rural Ethiopia," *BMC Psychiatry,* vol. 14, no. 1, pp. 1-13, 2014.

[6] A. Okasha "Mental health in Africa: The role of the WPA," *World Psychiatry,* vol. 1, no. 1, pp.32-35, 2002.

[7] World Health Organization,"Regional strategy for mental health 2000-2010," World Health Organization, Geneva, Switzerland, 2010.

[8] World Health Organization. "Resource book on mental health, human rights and legislation." WHO Press, Geneva, Switzerland, 2005

[9] World Health Organization, "Mental health and development: Targeting people with mental health conditions as a vulnerable group." WHO Press, Geneva, Switzerland, 2005

[10] World Health Organization, "Investing in mental health," World Health Organization, Geneva, Switzerland, 2003.

[11] V. Patel and A. Kleinman, "Poverty and common mental disorders in developing countries," *Bulletin of the World Health Organization,* vol. 81, pp. 609-615, 2003.

[12] B. G. Harlem, "Mental health of refugees, internally displaced persons and other populations affected by conflict," *Acta Psychiatrica Scandinavica,* vol. 102, no. 3, pp. 159-161, 2000.

[13] O. Gureje, V. O. Lasebikan, L. Kola and V. A. Makanjuola, "Lifetime and 12-month prevalence of mental disorders in the Nigerian survey of mental health and well-being," *The British Journal of Psychiatry,* vol. 188, no. 5, pp. 465-471, 2006.

[14] R. Hamad, L. C. H. Fernald, D. S. Karlan and J. Zinman, "Social and economic correlates of depressive symptoms and perceived stress in South African adults," *Journal of Epidemiology & Community Health,* vol. 6 no. 6, pp. 538-544, 2008.

[15] N. Husain F. Creed and B. Tomenson, "Depression and social stress in Pakistan," *Psychological Medicine,* vol. 30, no. 2, pp. 395-402, 2000.

[16] F. Baingana, A. Dabalen, E. Menye, M. Prywes and Rosholm, M. "Mental health and socio-economic outcomes in Burundi," *A Health, Nutrition and Population Discussion Paper,* World Bank, Washington, DC, WA, 2004.

[17] M. Ghanem, M. Gadallah, F. A. Meky, S. Mourad and G. El Kholy, "National survey of prevalence of mental disorders in Egypt: Preliminary survey," *East Mediterr Health Journal,* vol. 15, no.1, 2009.

[18] A. Umubyeyi, I. Mogren, J. Ntaganira and G. Krantz, "Intimate partner violence and its contribution to mental disorders in men and women in the post genocide Rwanda: Findings from a population based study," *BMC Psychiatry,* vol. 14 no. 1, pp. 315, 2014.

[19] B. Atwine, E. Cantor-Graae and F. Bajunirwe "Psychological distress among AIDS orphans in rural Uganda," *Social Science & Medicine,* vol. 61 no. 3, pp. 555-564, 2005.

[20] J. Broadhead, M. Abas, G. K. Sakutukwa, M. Chigwanda and E. Garura, E. "Social support and life events as risk factors for depression amongst women in an urban setting in Zimbabwe," *Social Psychiatry and Psychiatric Epidemiology,* vol. 36, no. 3, pp. 115-122, 2001.

[21] B. O. Olley, S. Seedat, D. G. Nei and D. J. Stein, "Predictors of major depression in recently diagnosed patients with HIV/AIDS in South Africa," *IDS Patient Care and STDs,* vol. 18 no. 8, pp. 481-487, 2004.

[22] K. S. Kendler, L. M. Thornton and C. A. Prescott, "Gender differences in the rates of exposure to stressful life events and sensitivity to their depressogenic effects," *American Journal of Psychiatry,* vol. 158 no. 4, pp. 587-593, 2001.

[23] K. S. Kendler, C. O. Gardner and C. A. Prescott, "Toward a comprehensive developmental model for major depression in men," *American Journal of Psychiatry,* vol. 163, no. 1, pp. 115-124, 2006.

[24] R. C. Kessler, S. Aguilar-Gaxiola, J. Alonso, S. Chatterji, S. Lee, J. Ormel, T. B. Ustun aand P.S. Wang, "The global burden of mental disorders: An update from the WHO World Mental Health (WMH) surveys," *Epidemiology and Psychiatric Sciences,* vol. 18 no. 1, pp. 23-33, 2009.

[25] World Health Organization, " Mental and Behavioural Disorders," Department of Mental Health, Substance Abuse, WHO Press, Geneva, Switzerland, 2008.

[26] B. M. Zeleke, T. A. Ayele, M. A. Woldetsadik, T. A. Bisetegn and A. A. Adane, "Depression among women with obstetric fistula, and pelvic organ prolapse in Northwest Ethiopia," *BMC Psychiatry,* vol. 13, no. 1, pp. 1-5, 2013.

[27] E. Kinyanda, S. Hoskins, J. Nakku, S. Nawaz and V. Patel, "Prevalence and risk factors of major depressive disorder in HIV/AIDS as seen in semi-urban Entebbe district, Uganda," *BMC Psychiatry,* vol. 11, no. 1 pp. 1-9, 2011.

[28] M. H. Cohen, M. Fabri, X. Cai, Q. Shi, D. R. Hoover, A. Binagwaho, M. A. Culhane, H. Mukayonga, D. K. Karegeya and K. Anastos, "Prevalence and predictors of posttraumatic stress disorder and depression in HIV-infected and at-risk Rwandan women," *Journal of Women's Health,* vol. 18, no. 11, pp. 1783-1791, 2009.

[29] E. Kinyanda, P. Woodburn, J. Tugumisirize, J. Kagugube, S. Ndyanabangi and V. Patel, "Poverty, life events and the risk for depression in Uganda," *Social Psychiatry and Psychiatric Epidemiology,* vol. 46, no. 1, pp. 35-44, 2011.

[30] T. Ayazi, L. Lien, A. H. Eide, M. M. Ruom and E. Hauff, "What are the risk factors for the comorbidity of posttraumatic stress disorder and depression in a war-affected population? A cross-sectional community study in South Sudan," *BMC Psychiatry,* vol. 12, no. 1, pp. 1-12, 2012.

— This article does not have any appendix. —