



VIEWPOINTS

Prioritizing the mental health needs of pregnant adolescents in sub-Saharan Africa

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Sub-Saharan Africa has the highest rate of adolescent pregnancy in the world, with an estimated prevalence of 19.3%. Whereas adolescent pregnancy is considered on the policy agenda as a public health challenge in many sub-Saharan African countries, the mental health impact, although dire, has not received commensurate attention in the policy space. This is not unconnected with sociocultural norms and stigma associated, not just with mental health, but with teenage pregnancy as well. Similarly, adult maternal mental health, though often relegated, has been receiving increasing attention. But pregnant teenagers are often not the focus of available mental health interventions, even though they are more vulnerable to the same pathophysiological stressors, as well as being uniquely exposed to extreme sociocultural and economic stressors. In this viewpoint, we argue that prioritizing the mental health of adolescent mothers is critical in sub-Saharan Africa. We also make important recommendations to ensure that pregnant adolescents receive the mental health services and support they need.

Introduction

Adolescent pregnancy is a challenge which is on the policy agenda of many countries in sub-Saharan Africa. But the mental health impact, although dire, has received minimal attention. Adolescents (10–19 years) make up 23 per cent of the population of sub-Saharan Africa.¹ Thus, the health and well being of adolescents is vital to the attainment of the Sustainable Development Goals.² This period of transition between childhood and adulthood is associated with distinctive physical, social, psychological, and reproductive development milestones. Thus, adolescence is an important developmental phase to identify potential risk factors and intervene early.^{3,4} In this viewpoint, we argue that prioritizing the mental health of adolescent mothers is critical in sub-Saharan Africa. We also make important recommendations to ensure that pregnant adolescents receive the mental health services and support they need.

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The public health burden of adolescent pregnancy in sub-Saharan Africa

Every year, 21 million girls aged between 15 and 19 years get pregnant and about 13 million of them give birth across the globe with 90% of these occurring in low- and middle-income countries (LMICs). Though adolescent fertility rates have declined over the past four decades, global adolescent pregnancy rate remains at 46 births per 1,000 women aged 15–19 years.^{5,6} Sub-Saharan Africa remains the region with the highest rate of adolescent pregnancy in the world, with current estimates showing that more than 100 births occur for every 1,000 women aged 15–19 years.⁷ Evidence pooled from demographic health surveys of 24 African countries, estimates the prevalence of adolescent pregnancy to be 19.3%. Within sub-Saharan Africa, estimates range from 15.8% in Central Africa to 21.5% in East Africa.⁸

One major reason why adolescent pregnancy remains a significant public health concern is that they face higher risk of complications of pregnancy and childbirth including pre-eclampsia/eclampsia and obstructed labour, compared to women aged 20–24 years.⁹ The other major causes of maternal mortality which occur amongst older women including sepsis are also seen in adolescent mothers.¹⁰ In addition, the risk of death due to pregnancy-related complications is double amongst adolescents compared with women who are in their twenties. Babies born to teenage girls are also prone to complications such as preterm births and severe neonatal conditions.^{9,11,12} In addition, they have a 60% higher chance of dying in the first year of life compared to those born to mothers older than 19 years.¹³ However, these complications only relate to those who carry pregnancies further along in gestation, almost four million pregnant teenagers undergo unsafe abortions every year, which is about a quarter of the global burden.¹⁴ Across all stages of pregnancy and childbirth and further along to adolescent motherhood, evidence shows that suicidal behaviour risks are rife amongst pregnant teenagers in sub-Saharan Africa, and it is an issue of public health concern amongst many researchers and health workers.^{15,16} Globally, suicide is the third leading cause of death in girls aged 15–19 years, after maternal conditions.¹⁷ Adolescents also have a 28% higher risk of maternal mortality than older women, with suicidal attempts risk as high as 20%.^{15,18,19}

Adolescent pregnancy is an African anathema

In many African societies, adolescent pregnancy is considered a taboo, and often leaves young mothers highly stigmatized by society. Young girls are often considered to be at fault, irrespective of whether the pregnancy was planned, unplanned or because of abuse.²⁰ In some countries or societies, the consequences of teenage pregnancy can be extreme. For example, there have been reports of teenage mothers and their parents being arrested by the police in Tanzania.²¹ A South African study revealed that families' reactions to

pregnancies among their adolescents include anger, disappointment, abandonment, and the silent treatment. However, acceptance and forgiveness were reported in some families.²²

Mental health challenges faced by pregnant teenagers in sub-Saharan Africa

Mental health challenges are experienced by pregnant teenagers as a consequence of adolescent pregnancy itself, and the several factors that drive the phenomenon. Indeed, the psychological effects of deleterious disposition to pregnant teenagers include suicidal ideation, guilt, loneliness, anxiety, and stress.²³ Early childbearing or pregnancy during adolescence, can disrupt developmental pathway and transitioning into adulthood. Such disruption could have negative implications on their education and health. Many girls who get pregnant are forced to drop out of school, and consequently result in limited career options, employment, prospects, and opportunities. As one South African study reveals, pregnancy is not only a cause, but also a consequence of school dropout.²⁴ The study further revealed attending fewer days at school was associated with had a higher hazard of pregnancy among young women. This situation compounds the existing sociocultural relegation experienced by women in many African homes and communities. In addition, pregnant teenagers, most of whom are unemployed, are likely to be faced with financial barriers to accessing appropriate care.^{25,26} seeking alternative care as advised by uniformed peers. The consequence is the high rates of unsafe abortions, estimated at 99%²⁷; and the attendant maternal morbidity and mortality. Thus, the young pregnant woman is often inundated with stressors that lower her resilience, and her threshold for depression and other mental health conditions. A recent qualitative study in Kenya identified poverty, intimate partner violence, family rejection, social isolation, and stigma from the community, as well as chronic physical illnesses as factors associated with suicidal behavior risk among adolescent mothers.¹⁹ In Nigeria, the cultural stigma associated with adolescent pregnancy made the news rounds in 2019, when 17-year-old girl committed suicide in reaction to stigma associated with pregnancy. The teenager was reported to have ingested an insecticide after she was evicted from home by her grandmother.²⁸

Pregnancy itself, is a potential mental health stressor, even for older women. Generally, women are twice as likely to experience mental health challenges as their male counterparts.²⁹ Hormonal changes during pregnancy further increase women's susceptibility to mood disorders, irrespective of age. Although research on maternal mental health in Africa is sparse, some studies estimate the prevalence of postpartum depression in Africa to range between 15 to 25%.^{30,31} The prevalence of postpartum depression among adolescent mothers ranges from 14% to 53%. This is more than double that observed in older mothers (7–17%).^{32–34} Yet, the condition is not well studied among teenagers, even though extensive research has been conducted in adults, globally.³²

Teenage mothers with untreated depression have a far greater likelihood of having a second pregnancy within two years.³⁵ Mental disorders in teenagers are more likely to persist throughout adulthood.³⁶ High rates of suicide among adolescent women during their first pregnancy have been reported in South Africa. Further, teenage mothers with a common mental disorder are also less likely to complete their education, more likely to engage in risky sexual behavior, and less likely to attend antenatal care.³⁶ Thus, compounding the vicious cycle of maternal morbidity and mortality in this age group. Another likely consequence of untreated depression and poor psychosocial support associated with teenage pregnancy is the tendency of adolescent mothers to develop harsh or negligent parenting styles, which are associated with an increased risk for child mental health disorders. Despite the magnitude of the problem, postpartum depression remains a widely neglected condition on the continent of Africa.³⁶

Time to address the mental health of pregnant teenagers

Interventions to address the physical health complications of adolescent pregnancy have been on the policy agenda in many African countries for decades. Yet, the same may not be said about the associated mental health implications. Generally, mental health has not received priority policy attention across most of sub-Saharan Africa. One study identified low perceived legitimacy of the mental health burden, perceived infeasibility of responding to the problem, and insufficient support to respond to the dilemma as key factors militating against prioritization of mental health in Africa.³⁷ Efforts need be made by mental health advocates, and other stakeholders, to enlighten decision makers with information on the burden and severity of mental illness, as well as provide evidence-based support to respond to the crisis.

The current dominant model for mental health care in many African countries relies on mental hospitals, or psychiatric units of tertiary hospitals as a mode of service provision.³⁸ But as nations across the world make renewed efforts to revitalize primary health care (PHC),^{39,40} an opportunity presents itself to anchor mental health (including maternal mental health) within PHC systems.^{41,42} PHC aims to address essential health needs by integrating preventive, promotive and curative care, that is socially acceptable and universal accessible to all individuals and families at the community level.^{43,44} PHC has been recognized as an appropriate vehicle to improve universal access to integrated health care, and mental health has long been identified as an integral element of PHC. But the practical integration of mental health into PHC systems and services has not gained so much traction in LMICs.^{45–49} Strengthening integrated PHC systems is particularly important in addressing the mental health of pregnant teenagers,⁵⁰ given that the most significant challenges they face occur at the community level.

Perhaps the primary approach to addressing the burden of mental health challenges of adolescent mothers is to address the burden of unplanned teenage pregnancy. Sex education needs to be incorporated into discussions at school, home, and health facilities. Further, safe, stigma-free access to contraceptive needs to be provided for adolescents. The sociocultural stigma and taboo associated with discussions about sex at school and within the community needs to be mitigated to provide a safe environment for teens to engage. Community health workers, who are typically lay members of the community who work either for pay or as volunteers with the local health care system, can be trained to provide sex education community members (including teenagers and their families).⁵¹

Teens are more comfortable learning from teens. Trained peer counsellors and support groups have been used to provide safe environment for adolescents to have healthy conversations on sexual and reproductive health. A cluster randomized trial in Zimbabwe evaluated the effectiveness of training community adolescent peer counsellors in problem-solving therapy on mental health outcomes observed improved symptoms of common mental disorder and depression.⁵² The effectiveness of peer support programmes as demonstrated in Zimbabwe was so significant such that the country became the first (and perhaps only) to adopt peer support models into its national health system.⁵³

It is also important that policies are instituted to protect and support pregnant teenagers. Such support would include a system that ensures physical, social and financial access to care, as well as educational continuity. School teachers, security operatives, health workers and other authority figures would need to be educated on how to provide support to teenage mothers. Draconian laws that prosecute or persecute adolescents (and their family members) on account of sexual activity or pregnancy need to be repealed, while laws protecting young women from societal persecutions need to be promulgated.

Conclusion

Mental health is a fundamental human right.⁵⁴ Addressing the mental health of young mothers in Africa must begin with this realization. The scope of mental health transcends the mere absence of a psychological disorder to include social, psychosocial, political, economic, and physical environments that enable people and populaces to enjoy dignity and equitable pursuit of their potential.⁵⁵ While many consider the above definition a utopian ideal, prioritizing universal access to basic promotive, preventive, and curative care for teenage mothers is attainable through effective PHC systems, even in resource constrained settings.

Teenage pregnancy, its complications, and consequences, including the sociocultural norms that are against it, are all stressors that significantly affect the mental health of pregnant teenagers. The vulnerability of these teenage

mothers is acutely affected at arguably the most stressful period of their lives. Leaving them behind has untoward impact, not just on the pregnant adolescents and their families. Society at large and the future socioeconomic growth and development of sub-Saharan Africa depends on holistically prioritizing the mental and physical health of the girl child. Providing adequate physical, mental, social and policy support to pregnant adolescents is not a choice but a responsibility.

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REFERENCES

1. UNICEF. *Some 1.2 Billion Adolescents Aged 10–19 Years Today Make up 16 per Cent of the World's Population*. UNICEF; 2016.
2. George A, Jacobs T, Ved R, Jacobs T, Rasanathan K, Zaidi SA. Adolescent health in the Sustainable Development Goal era: are we aligned for multisectoral action? *BMJ Glob Health*. 2021;6(3):e004448. doi:10.1136/bmjgh-2020-004448
3. Atilola O, Abiri G, Ola B. The impact of behavioral disorders on the level of custodial school-engagement among detained adolescent boys: an observational cohort study. *JoGHNP*. Published online 2022.
4. Mansfield R, Humphrey N, Patalay P, Moore A, Stapley E. Adaptation of a school-based mental health literacy curriculum: from Canadian to English classrooms. *Glob Ment Health*. 2021;8:e39. doi:10.1017/gmh.2021.38
5. World Health Organization. *Adolescent Pregnancy*. Geneva; 2020.
6. Santelli JS, Song X, Garbers S, Sharma V, Viner RM. Global Trends in Adolescent Fertility, 1990–2012, in Relation to National Wealth, Income Inequalities, and Educational Expenditures. *J Adolesc Health*. 2017;60(2):161-168. doi:10.1016/j.jadohealth.2016.08.026
7. United Nations Population Fund. *Motherhood in Childhood: Facing the Challenge of Adolescent Pregnancy*. UNFPA; 2013.
8. Kassa GM, Arowojolu AO, Odukogbe AA, Yalew AW. Prevalence and determinants of adolescent pregnancy in Africa: a systematic review and Meta-analysis. *Reprod Health*. 2018;15(1):195. doi:10.1186/s12978-018-0640-2
9. Metello J, Torgal M, Viana R, et al. Teenage pregnancy outcome. *Rev Bras Ginecol Obstet*. 2008;30(12):620-625. doi:10.1590/s0100-72032008001200006
10. Neal S, Mahendra S, Bose K, et al. The causes of maternal mortality in adolescents in low and middle income countries: A systematic review of the literature. *BMC Pregnancy Childbirth*. 2016;16(1):352. doi:10.1186/s12884-016-1120-8
11. Bacci A, Manhica GM, Machungo F, Bugalho A, Cuttini M. Outcome of teenage pregnancy in Maputo, Mozambique. *Int J Gynaecol Obstet*. 1993;40(1):19-23. doi:10.1016/0020-7292(93)90767-q
12. Kumar A, Singh T, Basu S, Pandey S, Bhargava V. Outcome of teenage pregnancy. *Indian J Pediatr*. 2007;74(10):927-931. doi:10.1007/s12098-007-0171-2
13. Save the Children. *Every Woman's Right: How Family Planning Saves Children's Lives*. Save the Children; 2012.
14. Haddad LB, Nour NM. Unsafe abortion: unnecessary maternal mortality. *Rev Obstet Gynecol*. 2009;2(2):122-126.
15. Musyimi CW, Mutiso VN, Nyamai DN, Ebuenyi I, Ndeti DM. Suicidal behavior risks during adolescent pregnancy in a low-resource setting: A qualitative study. *PLoS ONE*. 2020;15(7):e0236269. doi:10.1371/journal.pone.0236269
16. Quarshie ENB, Oppong Asante K. Self-harm and suicidal behaviours among pregnant adolescent girls and young women could be doubly compounded in sub-Saharan Africa: A call for further research. *eClinicalMedicine*. 2022;45(101339):101339. doi:10.1016/j.eclinm.2022.101339
17. World Health Organization. *What We Can Learn from Mortality Data?* WHO; 2014.
18. Freitas GVS, Cais CFS, Stefanello S, Botega NJ. Psychosocial conditions and suicidal behavior in pregnant teenagers: a case-control study in Brazil. *Eur Child Adolesc Psychiatry*. 2008;17(6):336-342. doi:10.1007/s00787-007-0668-2

19. Blanc AK, Winfrey W, Ross J. New findings for maternal mortality age patterns: aggregated results for 38 countries. *PLoS ONE*. 2013;8(4):e59864. [doi:10.1371/journal.pone.0059864](https://doi.org/10.1371/journal.pone.0059864)
20. Uromi SM. Schoolgirl pregnancies as a most critical and rapidly growing challenge in Tanzania. *International Journal of Innovation and Scientific Research*. 2014;10(1):191-194.
21. The Citizen. *Tanzanian Police Arrest 5 Pregnant Pupils and Their Parents*. Nation; 2018.
22. Govender D, Naidoo S, Taylor M. “I have to provide for another life emotionally, physically and financially”: understanding pregnancy, motherhood and the future aspirations of adolescent mothers in KwaZulu-Natal South, Africa. *BMC Pregnancy Childbirth*. 2020;20(1):620. [doi:10.1186/s12884-020-03319-7](https://doi.org/10.1186/s12884-020-03319-7)
23. Edet BE, Essien EA, Eleazu FI, et al. Childhood Adversity as a predictor of Depression and Suicidality among Adolescents in Calabar, Nigeria. *JoGHNP*. Published online 2022.
24. Stoner MCD, Rucinski KB, Edwards JK, et al. The Relationship Between School Dropout and Pregnancy Among Adolescent Girls and Young Women in South Africa: A HPTN 068 Analysis. *Health Educ Behav*. 2019;46(4):559-568. [doi:10.1177/1090198119831755](https://doi.org/10.1177/1090198119831755)
25. Banke-Thomas A, Ayomoh FI, Abejirinde IOO, Banke-Thomas O, Eboreime EA, Ameh CA. Cost of Utilising Maternal Health Services in Low- and Middle-Income Countries: A Systematic Review. *Int J Health Policy Manag*. 2020;10(9):564-577. [doi:10.34172/ijhpm.2020.104](https://doi.org/10.34172/ijhpm.2020.104)
26. Banke-Thomas A, Abejirinde IOO, Ayomoh FI, Banke-Thomas O, Eboreime EA, Ameh CA. The cost of maternal health services in low-income and middle-income countries from a provider’s perspective: a systematic review. *BMJ Glob Health*. 2020;5(6):e002371. [doi:10.1136/bmjgh-2020-002371](https://doi.org/10.1136/bmjgh-2020-002371)
27. Gebremedhin M, Semahegn A, Usmael T, Tesfaye G. Unsafe abortion and associated factors among reproductive aged women in Sub-Saharan Africa: a protocol for a systematic review and meta-analysis. *Syst Rev*. 2018;7(1). [doi:10.1186/s13643-018-0775-9](https://doi.org/10.1186/s13643-018-0775-9)
28. Muanya C, Akpunonu S, Onyenucheya A. Addressing rising cases of suicide among teenagers in Nigeria. *The Guardian*. 2019.
29. Kessler RC. Epidemiology of women and depression. *J Affect Disord*. 2003;74(1):5-13. [doi:10.1016/s0165-0327\(02\)00426-3](https://doi.org/10.1016/s0165-0327(02)00426-3)
30. Atuhaire C, Brennaman L, Cumber SN, Rukundo GZ, Nambozi G. The magnitude of postpartum depression among mothers in Africa: a literature review. *Pan Afr Med J*. 2020;37(89). [doi:10.11604/pamj.2020.37.89.23572](https://doi.org/10.11604/pamj.2020.37.89.23572)
31. VanderKruik R, Barreix M, Chou D, Allen T, Say L, Cohen LS. The global prevalence of postpartum psychosis: a systematic review. *BMC Psychiatry*. 2017;17(1):272. [doi:10.1186/s12888-017-1427-7](https://doi.org/10.1186/s12888-017-1427-7)
32. Dinwiddie KJ, Schillerstrom TL, Schillerstrom JE. Postpartum depression in adolescent mothers. *J Psychosom Obstet Gynaecol*. 2018;39(3):168-175. [doi:10.1080/0167482x.2017.1334051](https://doi.org/10.1080/0167482x.2017.1334051)
33. Hudson DB, Elek SM, Campbell-Grossman C. Depression, self-esteem, loneliness, and social support among adolescent mothers participating in the new parents project. *Adolescence*. 2000;35(139):445-453.
34. Kingston D, Heaman M, Fell D, Chalmers B. Comparison of adolescent, young adult, and adult women’s maternity experiences and practices. *Pediatrics*. 2012;129(5):1228-1237. [doi:10.1542/peds.2011-1447](https://doi.org/10.1542/peds.2011-1447)
35. Barnet B, Liu J, Devoe M. Double jeopardy: depressive symptoms and rapid subsequent pregnancy in adolescent mothers. *Arch Pediatr Adolesc Med*. 2008;162(3):246-252. [doi:10.1001/archpediatrics.2007.60](https://doi.org/10.1001/archpediatrics.2007.60)

36. Turner RE, Honikman S. Maternal mental health and the first 1 000 days. *Samj S Afr Med J*. 2016;106(12):26-29. doi:10.7196/SAMJ.2016.v106i12.12129
37. Bird P, Omar M, Doku V, Lund C, Nsereko JR, Mwanza J. Increasing the priority of mental health in Africa: findings from qualitative research in Ghana, South Africa, Uganda and Zambia. *Health Policy Plan*. 2011;26(5):357-365. doi:10.1093/heapol/czq078
38. Francis E, Shifler Bowers K, Buchberger G, Ryan S, Milchak W, Kraschnewski J. Reducing Alcohol and Opioid Use Among Youth in Rural Counties: An Innovative Training Protocol for Primary Health Care Providers and School Personnel. *JMIR Res Protoc*. 2020;9(11):e21015. doi:10.2196/21015
39. Jungo KT, Anker D, Wildisen L. Astana declaration: a new pathway for primary health care. *Int J Public Health*. 2020;65(5):511-512. doi:10.1007/s00038-020-01368-5
40. Eboreime EA. Bridging the ‘two communities’: how an emerging primary healthcare global research consortium can help achieve universal health coverage in low and middle-income countries. *BMJ Glob Health*. 2019;4(Suppl 8):e001573. doi:10.1136/bmjgh-2019-001573
41. Eboreime EA, Abimbola S, Obi FA, et al. Evaluating the sub-national fidelity of national Initiatives in decentralized health systems: Integrated Primary Health Care Governance in Nigeria. *BMC Health Serv Res*. 2017;17(1):227. doi:10.1186/s12913-017-2179-2
42. Eboreime EA, Nxumalo N, Ramaswamy R, Ibisomi L, Ihebuzor N, Eyles J. Effectiveness of the Diagnose-Intervene- Verify-Adjust (DIVA) model for integrated primary healthcare planning and performance improvement: an embedded mixed methods evaluation in Kaduna state, Nigeria. *BMJ Open*. 2019;9(3):e026016. doi:10.1136/bmjopen-2018-026016
43. van Weel C, Kidd MR. Why strengthening primary health care is essential to achieving universal health coverage. *CMAJ*. 2018;190(15):E463-E466. doi:10.1503/cmaj.170784
44. International Conference on Primary Health C. Declaration of Alma-Ata. *WHO Chron*. 1978;32(11):428-430.
45. Eboreime EA, Banke-Thomas A. Beyond the Science: Advancing the “Art and Craft” of Implementation in the Training and Practice of Global Health. *Int J Health Policy Manag*. Published online July 14, 2020. doi:10.34172/ijhpm.2020.131
46. Eboreime EA, Idika O, Omitiran K, Eboreime O, Ibisomi L. Primary healthcare planning, bottleneck analysis and performance improvement: An evaluation of processes and outcomes in a Nigerian context. *Eval Program Plann*. 2019;77(101712):101712. doi:10.1016/j.evalprogplan.2019.101712
47. Eboreime EA, Olawepo JO, Banke-Thomas A, Ramaswamy R. Evaluating the design and implementation fidelity of an adapted Plan-Do-Study-Act approach to improve health system performance in a Nigerian state. *Eval Program Plann*. 2021;84(101876):101876. doi:10.1016/j.evalprogplan.2020.101876
48. Eaton J, Gureje O, De Silva M, et al. A structured approach to integrating mental health services into primary care: development of the Mental Health Scale Up Nigeria intervention (mhSUN). *Int J Ment Health Syst*. 2018;12(1). doi:10.1186/s13033-018-0188-0
49. Bhana A, Petersen I, Baillie KL, Flisher AJ. Implementing the World Health Report 2001 recommendations for integrating mental health into primary health care: A situation analysis of three African countries: Ghana, South Africa and Uganda. *Int Rev Psychiatr*. 2010;22(6):599-610. doi:10.3109/09540261.2010.536152
50. Eboreime EA, Olawepo JO, Banke-Thomas A, Abejirinde IOO, Abimbola S. Appraising and addressing design and implementation failure in global health: A pragmatic framework. *Glob Public Health*. 2021;16(7):1122-1130. doi:10.1080/17441692.2020.1814379

51. Landers SJ, Stover GN. Community health workers—practice and promise. *Am J Public Health*. 2011;101(12):2198. [doi:10.2105/ajph.2011.300371](https://doi.org/10.2105/ajph.2011.300371)
52. Simms V, Weiss HA, Chinoda S, et al. Peer-led counselling with problem discussion therapy for adolescents living with HIV in Zimbabwe: A cluster-randomised trial. *PLoS Med*. 2022;19(1):e1003887. [doi:10.1371/journal.pmed.1003887](https://doi.org/10.1371/journal.pmed.1003887)
53. Mark D, Hrapcak S, Ameyan W, et al. Peer Support for Adolescents and Young People Living with HIV in sub-Saharan Africa: Emerging Insights and a Methodological Agenda. *Curr HIV/AIDS Rep*. 2019;16(6):467-474. [doi:10.1007/s11904-019-00470-5](https://doi.org/10.1007/s11904-019-00470-5)
54. Porsdam Mann S, Bradley VJ, Sahakian BJ. Human Rights-Based Approaches to Mental Health: A Review of Programs. *Health Hum Rights*. 2016;18(1):263-276.
55. Wogen J, Restrepo MT. Human Rights, Stigma, and Substance Use. *Health Hum Rights*. 2020;22(1):51-60.