

Student mental health service provision for suicide behaviour prevention on university campuses in Uganda

Norman Nsereko¹, Mark Griffiths², Seggane Musisi³,
Veronika Basa⁴, Fatma Ayhan⁵, Noah Sendawula¹, and
Pras Ramluggun⁶

Corresponding author

Norman D Nsereko
Nkumba University, P.O. Box 237, Entebbe, Uganda
Email: nnsereko@nkumbauniversity.ac.ug

Affiliations

¹ Nkumba University, Entebbe, Uganda

² International Gaming Research Unit, Psychology Department, Nottingham Trent University, UK

³ Department of Psychiatry, College of Health Sciences, Makerere University, Kampala, Uganda

⁴ Independent researcher, Melbourne, Victoria, Australia

⁵ Department of Nursing, Faculty of Health Sciences, Batman University, Türkiye

⁶ Oxford Brookes University, UK

Copyright

© National Wellbeing Service Ltd

Processing dates

Submitted: 30th June 2023; Re-submitted:

30th September 2023; Accepted:

18th December 2023; Published: 10th May 2024

New paper statement

This paper has not been published elsewhere and is not under consideration in any other publication

Funding

None

Declaration of conflicting interests

None

Acknowledgements

None

Abstract

The prevalence of mental health problems among Uganda university students, unlike globally, has been poorly documented. The present paper posits that the provision of early mental health interventions could prevent or reduce both current and future mental health problems, including suicidal behaviours among Ugandan university students. Various studies in the field of university student health have found the mental health of university student populations do not have adequate psychotherapeutic services. Today, there is a growing recognition for the need to increase investment in the promotion, prevention, and treatment approaches to mental health and well-being as part of the Sustainable Development Goals (SDG) 3.4 developed by the United Nations in 2015. However, little research has been carried out concerning the provision of university mental healthcare services that address students at risk for mental ill-health including suicidal behaviours on Ugandan university campuses. An assessment of the university mental health service provision as a strategy to address student suicidal behaviours on campuses in Uganda would provide insights that underlie the focused services needed through which vulnerable university students can be addressed and helped. This calls for a strategic intervention model, locally contextualized, developed and informed by the Sustainable Development Goals to address the mental health and well-being of the students.

Key words: Ugandan university students, mental health services, suicidal behaviours, provision Strategies

INTRODUCTION

Before the start of the COVID-19 pandemic, a cross-sectional study on university campuses in Uganda indicated that 36.5% of the students surveyed had symptoms of psychosocial mental health problems (Nsereko et al., 2014b). The same study also found that 35% reported emotional problems, 49% reported traumatic experiences, 37.8% reported academic problems, and 21.5% reported antisocial behaviour. It was also found that up to 36.6% of the students had suicidal ideation.

More recently, the COVID-19 pandemic had far-reaching effects on the

students' lives globally, including academic disruption, psychosocial problems, worries about future plans, and job opportunities, concerns about loved ones, coping with lockdowns, and fear of catching the fatal disease. This, culminated in increased rates of psychiatric morbidity during the pandemic (Aristovnik et al., 2020; Huckins et al., 2020; Kecojevic et al., 2020; Shahbaz et al., 2021).

Educational institutions, including universities, adopted several measures during the pandemic. For example, online learning was introduced because of the physical closure of educational

institutions (Ntshwarang et al., 2021). While this addressed the academic engagement of students, it did not provide access to counselling services to help them with their unprecedented rise in emotional, behavioural and mental health difficulties including possible suicidal behaviour during the pandemic (Xiao et al., 2021).

This led to a call to address students' mental health needs during the pandemic (Karla, 2020; Lee, Jeong & Kim 2021; Lipson et al., 2022; Substance Abuse and Mental Health Services Administration, 2021; United Nations Children's and Education Fund, 2021), with critical emphasis on new approaches and strategies to deal with the increasing demand for help relating to mental health issues, and calling on students to be active partners in the promotion of mental health issues (National Academies of Sciences, Engineering, and Medicine, 2021). While the new strategies required university services to uptake and maximize this unique opportunity to improve the well-being of the students at a key point in their lives (Barnet et al., 2021), and help reduce premature mortality by one-third, by 2030 (United Nations, 2015), in Uganda, these efforts were minimal (Uganda National Academy of Sciences, 2022).

EVOLUTION OF MENTAL HEALTH UNDERSTANDING IN UGANDA

In Uganda the predominant understanding of the medical and intervention in mental health was mainly embedded in the beliefs of the spirit world, supernatural possession, the role of the living dead, witchcraft, fortune telling, and traditional medicine. The traditional healers were perceived as experts in illnesses and their treatment and played an important role in the treatment of mental health illnesses (Abbo et al., 2009), up until the 19th century. There was a tendency of keeping mental issues within the family circles due to the stigma associated with it (Nsereko, 2017b).

Since the inception of western mental health services in Uganda in the 1950s, the understanding of mental illness and services in the country has assumed an evolving status about the causality, service provision, and treatment of mental health illness above the culturally-laden beliefs and practices (Musisi & Musisi, 2018). The predominant approach to mental healthcare in Uganda has been the biomedical model up until the end of the twentieth century (Nsereko, 2017b).

This model viewed mental health in a dichotomous and reductionistic way. Mental disorders were viewed as brain

diseases caused by chemical imbalances that are corrected with disease-specific drugs. Suicide was viewed as a consequence of psychiatric pathology and poor treatment of depression (Rocca & Anjum, 2020).

It was a model mainly to address severe mental illness, which is mainly the concern of institutional mental hospital psychiatry and only accounts for a relatively small percentage of the emotional disturbances that students face (Epstein et al., 2022). Research has shown that many of the students' troubling mental symptoms are multidimensional (Adelman & Taylor, 2021; Nsereko et al., 2014a, 2022) with an interplay of academic, social, cultural, emotional problems as well as traumatic experiences that constitute the concern of school mental health workers (Nsereko, 2018).

However, as the model neglected treatment process, inhibited treatment innovation and dissemination, and divided the field along scientist and practitioners, the biopsychosocial model became a more appealing alternative to the biomedical approach. The bio-psychosocial model not only accepted all scientific advances that underly modern medicine, but also highlighted that many conditions cannot be explained by detecting changes at the cellular or molecular level (Rocca & Anjum, 2020).

Currently, while counselling is promoted by the Uganda Counselling Association who recently had the 18th Counsellors Conference 2023 in Jinja at Civil service College (Uganda Counselling association, 2023), counselling in Uganda is still at its infancy. The primary care system is poorly resourced, the funding is inadequate, and incapable of addressing mental health concerns (Nsereko, 2017b).

MENTAL HEALTH PROBLEMS IN UNIVERSITY SETTINGS

Globally, there is growing awareness of university students' poor mental health, as well as the need to improve students' access to mental health services and expand the scope of available interventions that are evidence-based.

The university years are a period of late adolescence and early adulthood development, associated with the peak age for the onset of mental health disorders (Bantjes et al., 2023; Kessler et al., 2007). University students have an increased vulnerability for a wide range of mental health challenges, including higher levels of distress, substance abuse, anxiety, depression, and suicidality (Cömert & Gizir, 2020; Liu et al. 2019; Solmi et al, 2022), indicating that their mental health is more compromised during

their university study than before entry (Lipson et al., 2019, Worsley et al., 2022).

Similarly, research, from countries such as Belgium, Italy, USA, and Sweden suggest that students' physical and mental health are major determinants for students' wellbeing, retention and academic outcomes to succeed in future occupational endeavors (Bruffaerts et al., 2018). Students with mental health problems experience poor academic performance, lower retention and persistence within an academic programme, low grade-point averages, and poor graduation rates (Limone & Toto, 2022). Often, these university students have feelings of despair, lifetime mental health struggles, suicidal ideation, substance abuse or the harming of others (Karla, 2020; Winzer et al., 2018).

Research and official figures indicate concerns of an increase in the number of students experiencing mental health problems over recent years especially since the start of the COVID-19 pandemic (Karla, 2020; National Academies of Sciences, Engineering, and Medicine, 2021). Elevated anxiety and depression as well increased stress were observed among 195 students at a large public university in the United States (Son et al., 2020). In a study of 162 college students in Northern New Jersey (US), high levels of mental health distress like depression and anxiety were reported (Kecojevic et al., 2020).

The African region, has the world's highest rates of death by suicide and six of the 10 countries with the highest suicide rates worldwide are in Africa (World Health Organization [WHO], 2022a). Approximately 11 people per 100,000 per year die by suicide in the African region, higher than the global average of nine per 100,000 people. The WHO (2022a, 2022b) reported that this is partly due to insufficient action to address and prevent the risk factors, including mental health conditions by low-income countries with no (or not enough) investment in mental health service provision.

Moreover, suicide among adolescents has become an increasing concern worldwide; it is the fourth leading cause of death among the 15–29-year-old adolescents (WHO, 2021).

Students with vulnerability to suicidal behaviours are rarely detected or recognized early for effective intervention by parents, teachers or healthcare professionals due to the stigma about mental health (WHO, 2021). According to the WHO (2021), suicide research among university students in low- and middle-income countries, including Uganda, has been neglected by researchers. In Uganda, it is only recently during the COVID-19 pandemic period that a few suicide research studies have

been carried out among Uganda university students. Kaggwa et al. (2022b) reported a university study in Western Uganda on the prevalence of different suicidal behaviours among the university students during the COVID-19 pandemic. They reported that among the university students, the prevalence of (i) suicidal ideation was 31.85%, (ii) suicide plans was 8.15%, (iii) suicide attempts was 6.11%. In another study of press and media reports, 23 Ugandan undergraduate students aged 19–25 years died by suicide during the pandemic (Kaggwa et al., 2021).

While suicide behaviours among university students have particular nuances that require specific conceptualizations, they vary significantly across countries, cultures, racial/ethnic groups and psychological, personal, social, biological and environmental factors (Abdu et al.; 2020, Eisenberg & Lipson, 2020; Fernandes et al., 2018; Lipson et al., 2022). The experience of pursuing a university education can be challenging, it can impact on students' psychosocial and cultural functioning (Grøtan Sund & Bjerkeset, 2019, Nsereko, et al., 2014c), that can lead to suicide behaviours, including suicidal ideation, suicide plans, suicide attempts, and ultimately death (Gomes & da Silva, 2020, Peltzer et al., 2017). To avert the progression of these behaviours it is important to identify them early along with their risk factors (Owusu-Ansah et al., 2020, Quarshie et al., 2019).

Given the suicide behaviour problems and other mental health difficulties among university students, it is imperative for universities to develop strategies to provide students with accessible and affordable mental healthcare services to cater and support mental health needs, as well as for the emotional health and emotional maturity of its population (Iversen et al., 2021, Lee et al., 2021). Recent research indicates that effective stress prevention could reduce up to 80% of the 12-month prevalence for mental disorders and thus suicidal behaviours among university students (Karyotaki et al., 2020).

The mental health literature has identified institutions of learning as the most prominent locus for prevention and treatment of youth with mental health needs. It calls for building capacity for on-campus treatment centres and their staff as locally-driven, trained, and professionally focused through evidence-based programs, processes, and strategies to cater for students with high support needs (Adelman & Taylor, 2021; National Academies of Sciences, Engineering, and Medicine, 2021). Educational institutions have unique opportunities in

offering a range of health, psychological, counselling, and social service programs to support multiple aspects of students' lives, including academic, social, behavioral, emotional, and physical improvement, and to rectify the physical, mental health and learning difficulties and stumbling blocks (Adelman & Taylor, 2021; Worsley et al., 2022).

RESEARCH ON UNIVERSITY STUDENT MENTAL HEALTH IN UGANDA

Over the last ten years, there has been a significant upsurge in the pursuit of higher education in Uganda (Nsereko, 2018). This has resulted in increased enrolment of students and the founding of new universities and other tertiary institutions. In Uganda, university student enrolment over the recent years was recorded as follows: 220,201 in 2012/13; 247,473 in 2013/14; 257,855 in 2014/15; 254,043 in 2015/16; 259, in 2016/17; 261,087 in 2017/18; 275,254 in 2018/19; and 264,908 in 2019/2020 (National Council for Higher Education, 2022).

The majority of mental health studies carried out in Uganda have concentrated on the mental health issues of the general population, prevalence and aetiology of mental distress and substance abuse, in addition to logistics of mental health provision (Kigozi et al, 2010). For instance, in a systematic review and meta-analysis a total of 127 studies published between 2004 and 2021 to determine the pooled prevalence of depression and the prevalence of depression across different study populations in Uganda, only four studies were on university students and the rest were carried out among refugees, war victims, individuals living with HIV, postpartum or pregnant mothers, children and adolescents, individuals with substance abuse, and caregivers of patients (Kaggwa et al., 2022). Only a few studies have endeavoured to study mental health issues and some related behaviours among university students and these have concentrated on prevalence, types, and distribution of student mental health disorders. Kaggwa et al. (2022a) examined the prevalence and factors associated with depression and suicidal behaviours among Ugandan university students and found that one in three individuals has depression, with the refugee population being disproportionately affected.

Nsereko et al. (2017c) examined student mental health issues and found that a paradigm shift in the understanding and intervention in campus mental health is needed.

Nsereko and Basa (2017a), in their position paper, examined

the promotion of campus mental health literacy to address the lack of adequate information on the current status of mental health on university students in Uganda. They concluded that the level of mental health literacy needs to be raised as there are still lots of challenging issues in the provision of counseling and mental health services and their utilization in universities.

Nsereko et al., (2023) examined gambling prevalence and factors associated with gambling participation among university students in Uganda and suggested a considered interplay of different players in designing transversal strategies to address this gambling problem that can lead to psychological problems.

Moreover, Nsereko et al. (2014b, 2014c, 2014d) investigated the prevalence, types, distribution and associations of psychosocial problems, development of psychopathology, traumatic experiences, and poor mental health among Ugandan university students and reported on the paucity of counselling services for Ugandan university students. Najjuka et. al. (2021) carried out an online survey during the COVID-19 lockdown among 321 Ugandan undergraduate students and reported 80.7% depression, 98.4% anxiety, and 77.9% stress. They suggested that all stakeholders should monitor the students' mental health especially as the pandemic was progressing. Nantaayi et.al. (2022) examined university students' psychological distress and depression, and their access to mental health services. However, the study did not specify if the students accessed non-university mental health services given that universities services were closed. These aforementioned studies indicate that research concerning mental health service provision on university campuses in Uganda is under-investigated and is a far cry from being comprehensive compared to the developed countries (Dessauvagie et al., 2022, UNICEF, 2021). Further, given the COVID-19 pandemic experiences and the observed high levels of untreated psychological distress observed during the COVID-19 pandemic, current research in Uganda has not focused on examining university mental health service provision as a strategy to address mental health issues such as suicide behaviours on university campuses in Uganda (Kaggwa et al. 2022a, Theurel et al., 2022). In an effort to achieve the Sustainable Development Goal (SDG) 3.4 target of promoting the mental health and well-being of the Ugandan populace by the year 2030 (United Nations, 2015), there is need to increase research, as well as invest in the promotion, prevention, and treatment approaches to support the delivery of mental health and wellness services on Ugandan university campuses.

PROPOSED SOLUTION FOR STUDENT MENTAL HEALTH SERVICE PROVISION FOR UGANDAN UNIVERSITIES

Worldwide, research has shown increased numbers of university students with emotional and psychological distress, resulting in a demand for mental health attention that may not match resource capacity levels (Chessman, & Taylor, 2019; Duffy et al., 2019; Lipson et al., 2019, 2022; Wesley, 2019). This is particularly so because there is a lack of sufficient staff, qualified providers, and a lack of financial investment in mental health programming in the provision of mental health services for vulnerable university students (Chessman, & Taylor, 2019; Seppälä et al., 2020). It is imperative for universities to also cater for the emotional health and emotional maturity of its population because of the opportunity and leadership role it provides and the direct effect it has on the community (Alsubaie et al., 2019; Lai et al., 2022, National Academies of Sciences, Engineering, and Medicine, 2021). Providing student mental health support and services will lead to productivity in student learning, development, academic achievement, and future success (Wesley, 2019).

The provision of early mental health intervention could prevent and/or reduce both current and future mental health problems and suicidal behaviours among university students (Iversen et al., 2021). Unfortunately, Uganda has had little research and support for mental health needs, especially for university students (Akol et al., 2018; Iversen et al., 2021; Kigozi et al., 2010; Mugisha et al., 2020; Nsereko et al., 2014a, 2014b). Generally, there is insufficient financing of health services with less than 1% of the 9.8% of its GDP is allocated to healthcare (and less than 1% of the healthcare budget on mental health) (Kigozi et al., 2010; Molodynski et al. 2017; WHO, 2022a).

This translates as very low prioritization of mental health services which, in turn, negatively affects availability and access to mental health services in the country for those with mental

health difficulties (Akol et al., 2018; Mwesiga et al., 2021; WHO, 2022b). These observations suggest that university student mental health issues with suicide behaviour in particular, are left unattended to as was very evident during the COVID-19 pandemic (Xiao, 2021). Therefore, research is needed to establish what current strategies could be employed to address Ugandan university students' mental health issues and suicidal behaviours.

CONCLUSION

University students' mental health problems are many and varied in Uganda and are often complicated by suicidal behaviours. This was brought more to the surface during the COVID-19 pandemic. The present authors suggest that strategic studies are needed to define, describe, and conceptualize how different entities in Ugandan universities could be mobilized and involved in student mental health. These need to involve key university administrators, health personnel (including multidisciplinary psycho-social personnel), and the prospective consumers of mental health services, the students themselves. There is a need to interrelate and co-ordinate the provision of the mental health services as a continuous livelihood strategy to promote students' mental health on university campuses in Uganda.

The strategic intervention model should be locally contextualized, developed and informed by the Sustainable Development Goals (SDG) 3.4 for the promotion, prevention, and treatment approaches to mental health and well-being of the Ugandan population by the year 2030. It must address students' vulnerability to suicidal behaviours, as well as catering for students' psychosocial needs and their right to mental health services. It should be premised on strategic planning, annual evaluation, and targeted improvement of the quality of life of students as they pursue their academic careers on Uganda's university campuses. ■

Biographies

Norman D. Nsereko is with Nkumba University, Entebbe, Uganda. Email: nsereko@nkumbauniversity.ac.ug

 <https://orcid.org/0000-0001-9461-6057>

Mark Griffiths is Director, International Gaming Research Unit, Psychology Department, Nottingham Trent University, Nottingham, UK. Email: mark.griffiths@ntu.ac.uk

 <https://orcid.org/0000-0001-8880-6524>

Seggane Musisi is CEO, Entebbe Lakeside Hospital, and Emeritus Professor of Psychiatry, College of Health Sciences, Department Of Psychiatry, Makerere University, Kampala, Uganda

Email: segganemusisi@yahoo.ca

 <https://orcid.org/0000-0002-3454-0000>

Veronika Basa, is an independent researcher, 11/284-285 Nepean Hwy Seaford Vic 3198, Melbourne, Australia.

Web: www.veronikabasa.com

Email: info@veronikabasa.com

 <https://orcid.org/0000-0002-6908-4930>

Fatma Ayhan is with the Department of Nursing, Faculty of Health Sciences, Batman University, Turkey

Email: kucuksumbul@gmail.com

 <https://orcid.org/0000-0001-9717-1727>

Noah Sendawula is with with Nkumba University, Entebbe, Uganda.

Email: noahsendawula@nkumbauniversity.ac.ug

 <https://orcid.org/0009-0003-4913-689X>

Pras Ramluggun is with Oxford Brookes University UK

Email: pramluggun@brookes.ac.uk

 <https://orcid.org/0000-0003-0421-3559>

Citation

Nsereko, N. D., Griffiths, M., Musisi, S., Basa, V., Ayhan, F., Sendawula, N., & Ramluggun, P. (2024). Student mental health service provision for suicide behaviour prevention on university campuses in Uganda. *International Journal of Stress Prevention and Wellbeing*, 8, 4, 1-10. <http://www.stressprevention.net/volume/volume-8-2024/volume-8-article-4/>

References

- Abdu, Z., Hajure, M., & Desalegn, D.** (2020). Suicidal behavior and associated factors among students in Mettu University, South West Ethiopia, 2019: An institutional based cross-sectional study. *Psychology Research and Behavior Management*, 13, 233-243. <https://doi.org/10.2147/PRBM.S240827>
- Abbo, C., Ekblad, S., Waako, P., Okello, E., & Musisi, S.** (2009). The prevalence and severity of mental illnesses handled by traditional healers in two districts in Uganda. *African Health Sciences*, 9, S16-S22
- Adelman, H., & Taylor, L.** (2021). *Embedding mental health as schools change*. University of California. <https://smhp.psych.ucla.edu/pdfdocs/barriersbook.pdf>
- Akol, A., Moland, K. M., Babirye, J. N., & Engebretsen, I. M. S.** (2018). "We are like co-wives": Traditional healers' views on collaborating with the formal child and adolescent mental health system in Uganda. *BMC Health Service Research*, 18(1), 258. <https://doi.org/10.1186/s12913-018-3063-4>
- Alsubaie, M. M., Stain, H. J., Webster, L. A. D., & Wadman, R.** (2019). The role of sources of social support on depression and quality of life for university students. *International Journal of Adolescence and Youth* 24, 484-496. <https://doi.org/10.1080/02673843.2019.1568887>
- Aristovnik, A., Keržič, D., Ravšelj, D., Tomaževič, N., & Umek, L.** (2020). Impacts of the COVID-19 pandemic on life of 13 higher education students: A global perspective. *Sustainability*, 12(20), 8438. <https://doi.org/10.3390/su12208438>
- Bantjes, J., Hunt, X., & Stein, D. J.** (2023). Anxious, depressed, and suicidal: Crisis narratives in university student mental health and the need for a balanced approach to student wellness. *International Journal of Environmental Research and Public Health*, 20(6), 4859. <https://doi.org/10.3390/ijerph20064859>

- Barnett, P., Arundell, L. L., Matthews, H., Saunders, R., & Pilling, S.** (2021). 'Five hours to sort out your life': qualitative study of the experiences of university students who access mental health support. *BJPsych Open*, 7(4), Article e118. <https://psycnet.apa.org/doi/10.1192/bjo.2021.947>
<https://doi.org/10.1192/bjo.2021.947>
- Bruffaerts, R., Mortier, P., Kiekens, G., Auerbach, R. P., Cuijpers, P., Demyttenaere, K., Green, J. G., Nock, M. K., & Kessler, R. C.** (2018). Mental health problems in college freshmen: Prevalence and academic functioning. *Journal of Affective Disorders*, 225(1), 97-103. <https://doi.org/10.1016/j.jad.2017.07.044>
- Chessman, H., & Taylor, M.** (2019). College student mental health and well-being: A survey of presidents. *Higher Education Today*. August 12. Retrieved September 2023, from: <https://www.higheredtoday.org/2019/08/12/>
- Cömert, E., & Gizir, C.** (2020). Dark triad among university students: The predictive roles of HEXACO personality traits. *Studies in Psychology*, 40(1), 127-159. <https://doi.org/10.26650/SP2019-0031>
- Dessauvagie, A. S., Dang, H. M., Nguyen, T. A. T., & Groen, G.** (2022). Mental health of university students in southeastern Asia: A systematic review. *Asia-Pacific Journal of Public Health*, 34(2-3), 172-181. <https://doi.org/10.1177/10105395211055545>
- Duffy, M. E., Twenge, J. M., & Joiner, T. E.** (2019). Trends in mood and anxiety symptoms and suicide-related outcomes among U.S. undergraduates, 2007-2018: Evidence from two national surveys. *Journal of Adolescent Health*, 65(5), 590-598. <https://doi.org/10.1016/j.jadohealth.2019.04.033>
- Eisenberg, D., & Lipson, S. K.** (2020). The Healthy Minds Study: 2020 data report. *The Healthy Minds Network*. Retrieved September 15, 2023 from: <https://healthymindsnetwork.org/wp-content/uploads/2021/02/HMS-Fall-2020-National-Data-Report.pdf>
- Epstein, M. H., Cullinan, D., Lambert, M. C., Kauffman, J. M., Katsiyannis, A., & Mason, W. A.** (2022). A 22-Year cross-sectional cohort study of the emotional and behavioral characteristics of students with emotional disturbance. *The Journal of Special Education*, 57(1), 36-46. <https://doi.org/10.1177/00224669221109172>
- Fernandes, M. A., Vieira, F. E. R., Silva, J. S. E., Avelino, F. V. S. D., & Santos, J. D. M.** (2018). Prevalence of anxious and depressive symptoms in college students of a public institution. *Revista Brasileira de Enfermagem*, 71(suppl 5), 2169-2175. <https://doi.org/10.1590/0034-7167-2017-0752>
- Gomes, C. F. M. & da Silva, A.** (2020). Epidemiological aspects of suicidal behavior in college students. *Research, Society and Development*, 9(5), e38953106. <https://doi.org/10.33448/rsd-v9i5.3106>
- Grøtan, K., Sund, E. R., & Bjerkeset, O.** (2019) Mental health, academic self-efficacy and study progress among college students – *The SHOT Study, Norway. Frontiers in Psychology*, 10, 45. <https://doi.org/10.3389/fpsyg.2019.00045>
- Huckins, J., et al.** (2020). Mental Health and Behavior of College Students during the Early Phases of the COVID-19 Pandemic: Longitudinal Smartphone and Ecological Momentary Assessment Study. *Journal of Medical Internet Research*, 22(6), 1-13, e20185. <https://doi.org/10.2196/20185>
- Iversen, S.A., Nalugya, J., Babirye, J.N. Engebretsen, I.M.S. & Skokauska, N.** (2021). Child and adolescent mental health services in Uganda. *International Journal of Mental Health Systems* 15, 66-77. <https://doi.org/10.1186/s13033-021-00491-x>
- Kaggwa, M. M., Najjuka, S. M., Bongomin, F., Mamun, M. A., & Griffiths, M. D.** (2022). Prevalence of depression in Uganda: A systematic review and meta-analysis. *PLoS one*, 17(10), e0276552. <https://doi.org/10.1371/journal.pone.0276552>
- Kaggwa, M. M., Arinaitwe, I., Nduhuura, E., Muwanguzi, M., Kajjimu, J., Kule, M., Ajuna, N., Machacha, I., Nkola, R., Najjuka, S. M., Wamala, N. K., Bongomin, F., Griffiths, M. D., Rukundo, G. Z., & Mamun, M. A.** (2022a). Prevalence and Factors Associated With Depression and Suicidal Ideation during the COVID-19 Pandemic Among University Students in Uganda: A Cross-Sectional Study. *Frontiers in psychiatry*, 13, 842466. <https://doi.org/10.3389/fpsyg.2022.842466>
- Kaggwa, M. M., Arinaitwe, I., Muwanguzi, M., Nduhuura, E., Kajjimu, J., Kule, M., Najjuka, S. M., Nkola, R., Ajuna, N., Wamala, N. K., Machacha, I., Mamun, M. A., Ho, C. S., Griffiths, M. D., & Rukundo, G. Z.** (2022b). Suicidal behaviours among Ugandan university students: a cross-sectional study. *BMC psychiatry*, 22(1), 234. <https://doi.org/10.1186/s12888-022-03858-7>
- Kaggwa, M. M., Muwanguzi, M., Nduhuura, E., Kajjimu, J., Arinaitwe, I., Kule, M., Najjuka, S. M., & Rukundo, G. Z.** (2021). Suicide among Ugandan university students: evidence from media reports for 2010-2020. *BJPsych international*, 18(3), 63-67. <https://doi.org/10.1192/bji.2021.13>
- Karla, R. F.** (2020). *Consequences of student mental health issues in schools*. Capstone Projects and Master's Theses. 823. Retrieved September 15, 2023, from: https://digitalcommons.csUMB.edu/caps_thes_all/823
- Karyotaki E., Cuijpers P., Albor Y., Alonso J., Auerbach R. P., & Bantjes J., et al.** (2020). Sources of stress and their associations with mental disorders among college students: Results of the World Health Organization World Mental Health Surveys International College Student Initiative. *Frontiers in Psychology*, 11, 1759. <https://doi.org/10.3389/fpsyg.2020.01759>

- Kecojevic, A., Basch, C. H., Sullivan, M., & Davi, N. K.** (2020). The impact of the COVID-19 epidemic on mental health of undergraduate students in New Jersey, cross-sectional study. *PLoS One*, *15*(9), e0239696.
<https://doi.org/10.1371/journal.pone.0239696>
- Kessler, R. C., Amminger, G. P., Aguilar-Gaxiola, S., Alonso, J., Lee, S., & Ustün, T. B.** (2007). Age of onset of mental disorders: A review of recent literature. *Current Opinion in Psychiatry*, *20*(4), 359-364.
<https://doi.org/10.1097/YCO.0b013e32816ebc8c>
- Kigozi F., Ssebunya J., Kizza D., & Ndyanababgi S.** (2010): An overview of Uganda's mental health care system: results from an assessment using the World Health Organization's Assessment Instrument for Mental Health Systems (WHO-AIMS). *International Journal of Mental Health Systems* *4*(1), 1-9.
<https://doi.org/10.1186/1752-4458-4-1>
- Lai, A. Y. K., Cheung, G. O. C., Choi, A. C. M., Wang, M.-P., Chan, P. S. L., Lam, A. H. Y., Lo, E. W. S., Lin, C.-C., & Lam, T.-H.** (2022). Mental health, support system, and perceived usefulness of support in university students in Hong Kong amidst COVID-19 pandemic: A mixed-method survey. *International Journal of Environmental, Research and Public Health*, *19*, 12931.
<https://doi.org/10.3390/ijerph191912931>
- Lee, J., Jeong, H. J. & Kim, S.** (2021). Stress, anxiety, and depression among undergraduate students during the COVID-19 pandemic and their use of mental health services. *Innovative Higher Education*, *46*(5), 519-538.
<https://doi.org/10.1007/s10755-021-09552-y>
- Limone, P., & Toto, G. A.** (2022). Factors that predispose undergraduates to mental issues: A cumulative literature review for future research perspectives. *Frontiers in Public Health*, *10*, 831349.
<https://doi.org/10.3389/fpubh.2022.831349>
- Lipson, S. K., Lattie, E. G., & Eisenberg, D.** (2019). Increased rates of mental health service utilization by U.S. college students: 10-year population-level trends (2007–2017). *Psychiatric Services*, *70*(1), 60-63.
<https://doi.org/10.1176/appi.ps.201800332>
- Lipson, S. K., Zhou, S., Abelson, S., Heinze, J., Jirsa, M., Morigney, J., Patterson, A., Singh, M., & Eisenberg, D.** (2022). Trends in college student mental health and help-seeking by race/ethnicity: Findings from the national healthy minds study, 2013-2021. *Journal of Affective Disorders*, *306*, 138-147.
<https://doi.org/10.1016/j.jad.2022.03.038>
- Liu, C. H., Stevens, C., Wong, S. H. M., Yasui, M., & Chen, J. A.** (2019). The prevalence and predictors of mental health diagnoses and suicide among U.S. college students: Implications for addressing disparities in service use. *Depression and Anxiety*, *36*(1), 8-17.
<https://doi.org/10.1002/da.22830>
- Molodynski, A., Cusack, C., & Nixon, J.** (2017). Mental healthcare in Uganda: Desperate challenges but real opportunities. *British Journal of Psychiatry International*, *14*(4), 98-100.
<https://doi.org/10.1192/s20564000002129>
- Mugisha, J., Kinyanda, E., Osafo, J., Nalukenge, W., & Knizek, B. L.** (2020). Health care professionals' perspectives on barriers to treatment seeking for formal health services among orphan children and adolescents with HIV/AIDS and mental distress in a rural district in central. *Uganda Child and Adolescent Psychiatry Mental Health*, *14*, 26.
<https://doi.org/10.1186/s13034-020-00332-8>
- Musisi, N., & Musisi S.** (2018): The legacy of colonial medicine in Uganda. In: Bala, P. (Ed.), *Medicine and colonial engagements in India and sub-Saharan Africa* (pp. 131-153) Cambridge Scholars Publishing.
- Mwesiga, E. K., Nakasujja, N., Muhwezi, W. W., & Musisi, S.** (2021). The COVID-19 pandemic has reinforced the need for community mental health-care models in Uganda. *The Lancet. Psychiatry*, *8*(5), 362.
[https://doi.org/10.1016/S2215-0366\(21\)00070-5](https://doi.org/10.1016/S2215-0366(21)00070-5)
- Najjuka, S. M., Checkwech, G., Olum, R., Ashaba, S., & Kagwa, M. M.** (2021). Depression, anxiety, and stress among Ugandan university students during the COVID-19 lockdown: An online survey. *Africa Health Sciences*, *21*(4), 1533-1543.
<https://doi.org/10.4314/ahs.v21i4.6>
- Nantaayi, B., Ndawula, R. K., Musoke, P., Ssewante, N., Nakyagaba, L., Wamala, J. N., Makai, E. A., Wannyan, B., Wamala, N. K., Kanyike, A. M., Akech, G. M., Ojilong, D., Agira, D., Nakimuli, A. B., Asimwe, A., & Bongomin, F.** (2022). Psychological distress and access to mental health services among undergraduate students during the COVID-19 lockdown in Uganda. *Frontiers in Psychiatry* *13*, 792217.
<https://doi.org/10.3389/fpsy.2022.792217>
- National Academies of Sciences, Engineering, and Medicine** (2021). *Mental health, substance use, and wellbeing in higher education: Supporting the whole student*. The National Academies Press.
<https://doi.org/10.17226/26015>
- National Council for Higher Education** (2022). The state of higher education and training in Uganda 2019/20.
<https://unche.or.ug/wp-content/uploads/2023/02/State-for-Higher-Education-Report-2019-2022.pdf>
- Nsereko, D. N.** (2017b). The evolution of mental health understanding and practice in Uganda. *International Journal of Emergency Mental Health and Human Resilience*, *19*(1), 354-360.
- Nsereko, N. D.** (2017c). University campus mental health: A paradigm shift on Uganda campuses. *European Journal of Counselling Theory, Research and Practice*, *1*(7), 1-8.
<http://www.europecounseling.eu/volumes/volume-1-2017/volume-1-article-7/>

- Nsereko, D. N., & Basa V.** (2017a). Promoting campus mental health literacy. *Mental Health & Human Resilience International Journal*, 1(1), 000105.
<https://doi.org/10.23880/MHRIJ-16000105>
- Nsereko, D. N., Musisi, S., & Holtzman, S.** (2014a). Evaluation of psychosocial problems among African university students in Uganda: Development and validation of a screening instrument. *Psychology Research*, 2(4), 112-131.
<https://doi.org/10.17265/2159-5542/2014.02.003>
- Nsereko, D. N., Musisi, S., Nakigudde, J., & Holtzman, S.** (2014b). Prevalence, types, distribution and associations of psychosocial problems among university students in Uganda. *International Journal of Research Studies in Psychology*, 3(4), 3-16.
<https://doi.org/10.5861/ijrsp.2014.695>
- Nsereko, D. N., Musisi, S., Nakigudde, J., & Ssekiwu, D.** (2014c). Psychosocial problems and development of psychopathology among Ugandan university students. *International Journal of Research Studies in Psychology*, 3(3), 3-16.
<https://doi.org/10.5861/ijrsp.2014.638>
- Nsereko, D. N., Nakigudde, J., & Ssekiwu, D.** (2014d). Traumatic experiences and poor mental health among university students in Uganda. *African Journal of Traumatic Stress*, 3(2), 40-80.
<https://doi.org/10.13140/2.1.1286.6563>
- Nsereko, N. D.** (2018). Proliferation of university institutions in Africa: Student academic life and mental health challenges. *European Journal of Counselling Theory, Research and Practice*, 2(4), 1-6.
- Nsereko, D. N., Palmer, S., & Basa, V.** (2022). Advancing psychometrics in Uganda's institutions of higher learning with emphasis on structural equation modelling (SEM). *Nkumba International Research Journal (NIRJ)*, 2(1), 7-21.
- Nsereko, D. N., Kaggwa, M. M., Adebisi, T., Ssewanyana, D., Basa, V., Hussain, S. R. Kihumuro, B. R., Ssewante, N., & Bbosa, S.** (2023). Gambling prevalence and factors associated with gambling participation among university students in Uganda. *Qeios*.
<https://doi.org/10.32388/QL6YC1.2>
- Ntshwarang, P. N., Malinga, T., & Losike-Sedimo, N.** (2021). eLearning tools at the University of Botswana: Relevance and use under COVID-19 crisis. *Higher Education for the Future*, 8(1), 142-154.
<https://doi.org/10.1177/2347631120986281>
- Owusu-Ansah F, Addae A, Peasah B, Oppong Asante K, Osafo J.** (2020). Suicide among university students: prevalence, risks and protective factors. *Health Psychology and Behavioral Medicine*, 8(1), 220-233.
<https://doi.org/10.1080/21642850.2020.1766978>
- Peltzer, K., Yi, S., & Pengpid, S.** (2017). Suicidal behaviors and associated factors among university students in six countries in the Association of Southeast Asian Nations (ASEAN). *Asian Journal of Psychiatry*, 26, 32-38.
<https://doi.org/10.1016/j.ajp.2017.01.019>
- Quarshie, E. N. B., Cheataa-Plange, H. V., Annor, F., Asare-Doku, W., & Lartey, J. K. S.** (2019). Prevalence of suicidal behaviour among nursing and midwifery college students in Ghana. *Nursing Open*, 6, 897-906.
<https://doi.org/10.1002/nop2.271>
- Rocca, E., Anjum, R. L.** (2020). Complexity, reductionism and the biomedical model. In: Anjum, R.L., Copeland, S., Rocca, E. (eds.), *Rethinking causality, complexity and evidence for the unique patient*. Springer.
https://doi.org/10.1007/978-3-030-41239-5_5
- Seppälä, E. M., Bradley, C., Moeller, J., Harouni, L., Nandamudi, D., & Brackett, M. A.** (2020). Promoting mental health and psychological thriving in university students: A randomized controlled trial of three well-being interventions. *Frontiers in Psychiatry* 11, 590.
<https://doi.org/10.3389/fpsy.2020.00590>
- Shahbaz, S., Ashraf, M. Z., Zakar, R., Fischer, F., & Zakar M. Z.** (2021). Psychosocial effects of the COVID-19 pandemic and lockdown on university students: Understanding apprehensions through a phenomenographic approach. *PLoS One*, 16(5), e0251641.
<https://doi.org/10.1371/journal.pone.0251641>
- Solmi, M.; Radua, J., Olivola, M., Croce, E., Soardo, L., Salazar de Pablo, G., Il Shin, J., Kirkbride, J.B., Jones, P., & Kim, J. H.** (2022). Age at onset of mental disorders worldwide: Large-scale meta-analysis of 192 epidemiological studies. *Molecular Psychiatry* 27, 281-295.
<https://doi.org/10.1038/s41380-021-01161-7>
- Son, C., Hegde, S., Smith, A., Wang, X., & Sasangohar, F.** (2020). Effects of COVID-19 on college students' mental health in the United States: Interview survey study. *Journal of Medical Internet Research*, 22(9), 1-14. Article e21279.
<https://doi.org/10.2196/21279>
- Substance Abuse and Mental Health Services Administration** (2021). Prevention and treatment of anxiety, depression, and suicidal thoughts and behaviors among college students. SAMHSA Publication No. PEP21-06-05-002. Rockville, MD: National Mental Health and Substance Use Policy Laboratory.
- Theurel, A., Witt, A., & Shankland, R.** (2022). Promoting university students' mental health through an online multicomponent intervention during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, 19(16), 10442.
<https://doi.org/10.3390/ijerph191610442>

Uganda Counselling association (2023).

<https://www.facebook.com/ugcounselling/>

Uganda National Academy of Sciences (2022). Finding humanity in uncertainty: Pandemic preparedness and response in Uganda. *Report of the Committee on Pandemic Preparedness and Response*. Kampala, Uganda: The Uganda National Academy of Sciences.

United Nations Children's and Education Fund (2021). *The State of the World's Children 2021: On My Mind – Promoting, protecting and caring for children's mental health*.

<https://www.unicef.org/reports/state-worlds-children-2021>

United Nations (2015). *Transforming our world: The 2030 agenda for sustainable development*. United Nations.

Retrieved September 15, 2023, from:

<https://www.unfpa.org/resources/transforming-our-world-2030-agenda-sustainable-development>

Wesley, A. (2019). Strategies for addressing mental health support on campus. *NASPA Policy and Practice Series*, 4. NASPA-Student Affairs Administrators in Higher Education. <https://www.naspa.org/report/strategies-for-addressing-mental-health-support-on-campus>

Winzer, R., Lindberg, L., Guldbrandsson, K., & Sidorchuk, A. (2018). Effects of mental health interventions for students in higher education are sustainable over time: A systematic review and meta-analysis of randomized controlled trials. *PeerJ*, 6, e4598.

<https://doi.org/10.7717/peerj.4598>

World Health Organization (2021). *Suicide worldwide in 2019: Global health estimates*. Retrieved: September 15, 2023, from:

<https://www.who.int/publications/i/item/9789240026643>

World Health Organization (2022a) Regional Office for Africa. *Reversing Suicide, Mental Health Crisis in Africa*.

Retrieved: September 15, 2023, from:

<https://www.afro.who.int/news/reversing-suicide-mental-health-crisis-africa>

World Health Organization (2022b). *World mental health report: Transforming mental health for all*. Licence:

CC BY-NC-SA 3.0 IGO. Retrieved September 15, 2023, from:

<http://apps.who.int/iris>

Worsley, J. D., Pennington, A., & Corcoran, R. (2022). Supporting mental health and wellbeing of university and college students: A systematic review of review-level evidence of interventions. *PLoS One*, 17(7), e0266725.

<https://doi.org/10.1371/journal.pone.0266725>

Xiao, Y., Hinrichs, R., Johnson, N., McKinley, A., Carlson, J., Agle, J., & Yip, P. S. F. (2021). Suicide prevention among college students before and during the COVID-19 pandemic: Protocol for a systematic review and meta-analysis. *JMIR Research Protocols*, 10(5), e26948.

<https://doi.org/10.2196/26948>