QUALITY IMPROVEMENT
PERINATAL MENTAL HEALTH
IN THE GOMBE COMMUNITY

MINISTRY OF HEALTH

and

NATIONAL HEALTH SERVICE

GLOBAL HEALTH DIASPORA FELLOWSHIP

August 2023 to February 2024

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UK UGANDA FELLOWSHIP PROGRAMME
IMPROVING PERINATAL MENTAL HEALTH IN GOMBE

INTRODUCTION

1. The Ministry of Health and NHS Fellow Ship Programme

NHS Global Fellowships offer reciprocal leadership development opportunities for clinical and non-clinical staff to experience health systems across the globe. Fellows focus on either quality improvement, research or clinical projects, co-developed with local and/or national overseas partners to enhance the patient experience, improve health outcomes and reduce health inequalities.[1] Fellows are recruited from the NHS in England, and each participant completes a 6-month or 12-month overseas or virtual Fellowship with an overseas partner. In Uganda there are two fellowship programmes: one in Gulu, northern Uganda and the other in Gombe in Buganda, southern Uganda. The National Health Service of England and Wales and the Ugandan Ministry of Health are described in further detail in *Appendix I*.

2. Improving Maternal and Newborn Health and Wellbeing

This project was about improving the recognition of perinatal mental health and access to care for women who attend Gombe Hospital. The fellows employed use of knowledge base surveys of village health teams, Gombe Secondary School students, hospital staff and medical students for baseline information. The World Health Organisation approved, Self Reporting Questionnaire (SRQ20) was used in 4 antenatal and 6 post-natal clinics to assess the mental health and wellbeing of attending women. Other tools such as the Generalised Anxiety Disorder (GAD7, GAD2) screening tools for anxiety and Patient Health Questionnaire (PHQ9, PHQ2) screening tools for depression were also tried out. The objective behind use of these tools was to improve mental health assessments undertaken by generic health workers in antenatal and post-natal clinics. The suitability of such tools for mental health screening of perinatal women in rural areas was analysed, as was the reality of expecting generic health workers to effectively use the tools in busy under-staffed clinics. An executive decision was made to improve the mental health knowledge base of generic staff in the first instance, to improve symptom recognition and appropriate treatment and/or referral for common mental health conditions. This was done through WHO-recommended MhGAP training which was organised for 12 healthcare workers and 12 village health team members. The greater ambition was to set up talking therapy sessions, facilitated by the trained health workers, and so improve recovery rates of perinatal women with mild and moderate mental health conditions.

3. GOMBE PROJECT

Objectives of Integration of Maternal Mental Healthcare at Gombe Hospital.

i. *Early identification*: Improved recognition of perinatal mental health symptoms, especially mild to moderate conditions, by generic staff at Gombe Hospital. To ensure generic staff are able to screen women for depression, anxiety, and substance use disorders during routine ante natal and post-natal care visits.

ii. *Accessible Support*: To provide timely and accessible mental health support and interventions for perinatal women who exhibit signs of mental distress. To improve

[1] NHS Global Fellowship Programme Handbook – May 2023

patient *access* to talking therapies, whether one to one or group sessions, as an option to long term medication

iii. *Improve Outcomes*: To improve maternal and child health outcomes by addressing maternal mental health during the perinatal period. To improve the quality of referrals to the Psychiatric Clinical Officer and Psychiatric Nurse, the highest specialist mental health resource at a General Hospital.

iv. Improved recognition of the availability of Mother and Baby inpatient beds to improve management of post-natal psychosis.

v. *Reduce Stigma*: To promote awareness and reduce the stigma surrounding mental health conditions, encouraging women to seek help without fear of judgment or social repercussions. This can be done by regular, consistent training and awareness raising by staff and partners such as the Village Health Teams.

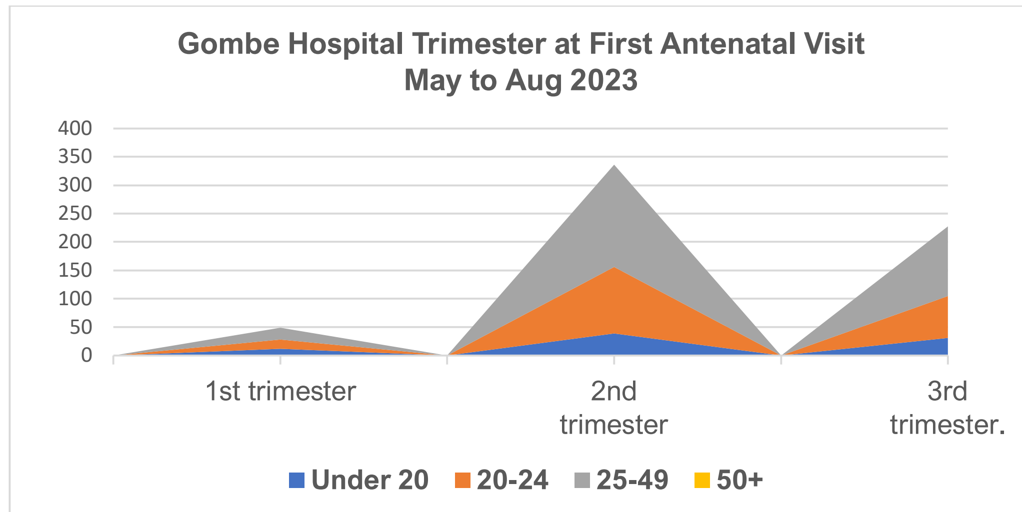
4. PERINATAL WOMEN IN GOMBE

Gombe Hospital is in Butambala district. It is a 100-bed hospital serving the population of Butambala, Gomba and parts of Mpigi and Mityani districts. The facility offers medical, surgical and obstetrics and gynecological services, including antenatal and post-natal services for women. With such an extensive catchment area, and the population so young, maternity care is an extremely busy department at Gombe Hospital.

The perinatal period encompasses pregnancy and 12 months after birth. This presents a unique opportunity to address and support the mental health needs of expectant and new mothers. During this phase, women may experience various mental health challenges, including depression, anxiety, and substance use disorders, which can have adverse effects on both the mother and the unborn child. Integrating maternal mental health interventions in the perinatal period is essential to improve maternal and child health outcomes, enhance maternal resilience, and foster healthy mother-child bonding.

4.1 Perception of the need for Antenatal Care

The World Health Organisation has the *Ending Preventable Maternal Mortality* (EPMM) programme, which set 5 targets for maternal health. Target 1: by 2025, 90% of pregnant women should have 4 or more antenatal contacts during their pregnancy. This project found a mismatch between the WHO ambition and the understanding of the purpose of antenatal care at village level. The integrated antenatal register recorded the gestation age of women at their first antenatal visit. Most women came for a *first visit* during their second trimester, followed by a significant number who attended their first antenatal visit during their third trimester.



During the four antenatal clinics attended, the fellows tried to assess the gap in understanding between rural Ugandan women with high fertility rates on the one hand, and on the other hand, the implementers of the EPMM policy target who are based in Geneva. In rural communities in Uganda, there is the inherent culture of only seeking medical help when in a crisis. Secondly the rural poor may consider health promotion and prevention slightly indulgent, and give it minimal attention. On being questioned women were ambivalent about the need for antenatal care. Several did not prioritise it, with explanations such as the high cost of transport to hospital; some felt their pregnancy was normal - they had had several other children without problems; the antenatal clinic took all day and they could not afford the time, etc. There were some women who simply wanted to secure their national antenatal card, which then ensures they can deliver their babies at Gombe Hospital. This second group of women can turn up at 8 or even 9 months pregnant for a *first* antenatal visit. This highlights a dissonance between policy and practice and highlights the need for extensive community awareness programmes, embedding the importance of antenatal visits for both women and their babies. This could possibly be fronted by village health teams.

4.2. TEENAGE PREGNANCIES

On a global scale, Uganda is ranked 16th among 25 countries with the highest rates of child marriage. According to the United Nations Populations Fund Report 2021[2] the following is true:

- 25 percent of girls in Uganda aged 15-19 years have had a child or are pregnant.
- 34 percent of Ugandan girls are married by 18 years.
- 28 percent of maternal deaths occur among young girls (15-25years).
- Young people are responsible for 34% of new HIV infections annually.
- In 2021, about 32,566 teenage girls got pregnant monthly an equivalent of 1,052 daily.
- In 2021, about 250 children aged below 15 years got pregnant monthly.

[2] UNFPA–UNICEF 2019

4.2.1 The Legal Framework

- *The National Strategy To End Child Marriage And Teenage Pregnancy 2026/2027* states that the legal age of consent is 18 years.
- Defilement is defined as unlawful sexual intercourse with a minor i.e. below the age of 18.
- Teenage pregnancy is conception between the ages of 10 to 19 years.
- Child Marriage in Uganda is a formal or informal marriage or union in which either or both parties are below the age of 18 years.

It is against that backdrop that the rate of children born to children under the age of 18 is considered.

4.2.2 The Covid-19 epidemic had a damaging impact on teenage girls in most low-income countries. The situation threatened education outcomes and progress on Sustainable Development Goal 5. Girls' education may have seen the greatest disruption arising from increased adolescent pregnancy, sexual and gender-based violence, and child and forced marriage. UNESCO estimates that over 11 million girls may never return to school due to the Covid-19 disruption[3]

"Returning to the formal education system after pregnancy is difficult because of non-inclusive learning environments. Apart from the broken hopes and aspirations at the individual level, at the societal level early school drop-out also leads to a loss of economic opportunities".

A recent study conducted in south-western Uganda identifies five main barriers to school-age mothers returning to school following pregnancy: negative self-perception, childcare burdens, community and family tensions, a tense school environment and ineffective policies. [4]

4.2.3 **Teenage Mothers in Gombe**

It was possible to analyse the number of 14 to 18 year olds who attended antenatal and post-natal clinics from:

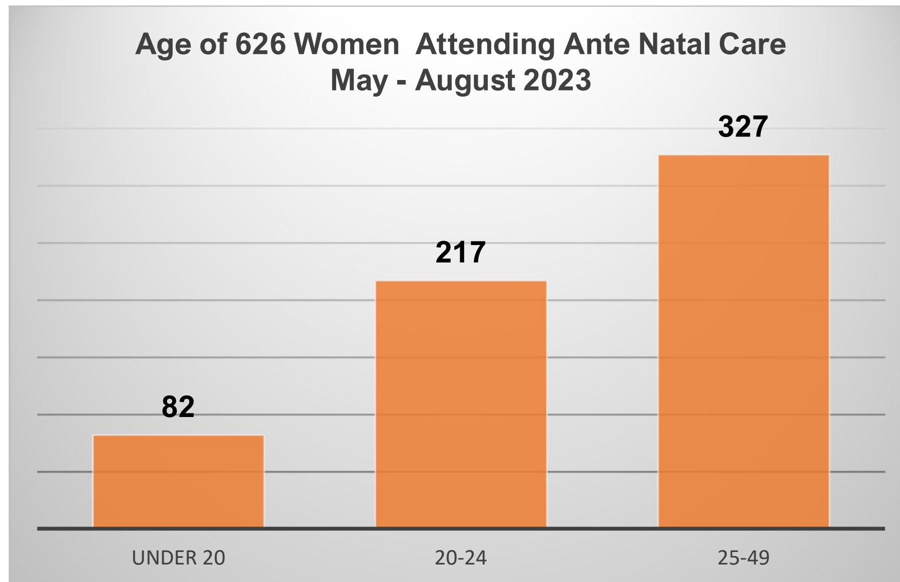
i. The Integrated Ante Natal Register May to August 2023
ii. Antenatal and Maternity abortions and perinatal deaths, October 2022-August 2023

It is fair to say mothers can be very young in Gombe. Some teenage mothers were married and well supported by their partners and families. However, those that were not were at risk of perinatal mental health conditions.

Age: The integrated antenatal registers of May, June, July and August 2023 were analysed with the following findings. Of the 626 mothers the majority (52%) attending the antenatal clinics were between the ages of 25 and 49. However, 82 (13%) were under the age of 20.

[3] ibid

[4] Actions to prevent pregnant girls from school dropout Lessons learnt from Covid-19 in Uganda; The Nordic Africa Institute, 2022. ISSN 1654-6695 ISBN 978-91-7106-892-7



Teenage Mothers in Antenatal and Post-Natal Sessions October to December
These were sessions attended by the project fellows.

Ante Natal Sessions Oct-Nov 2023

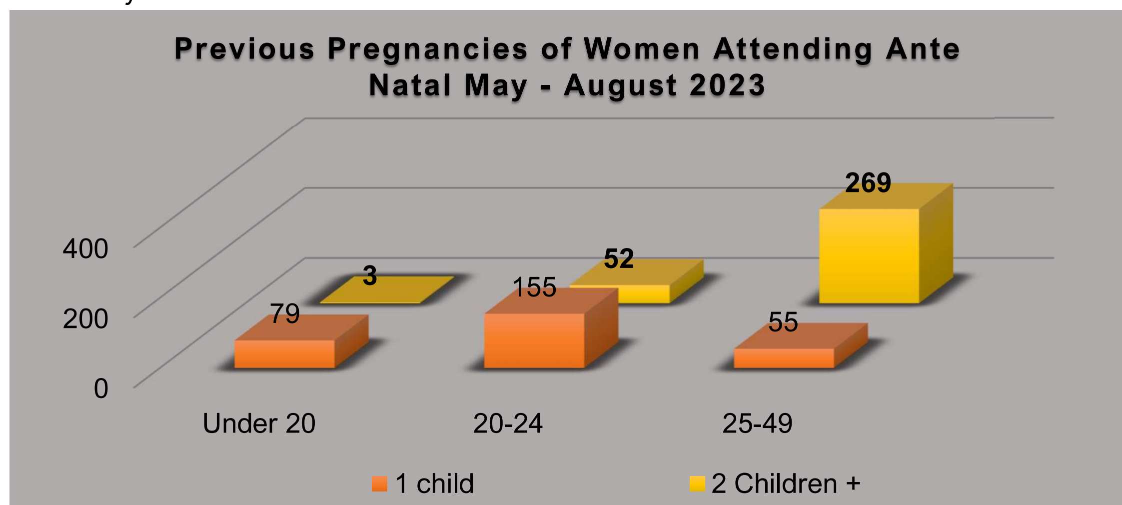
< 20	21	16%
20-24	42	32%
25-49	68	52%
TOTAL	**131**	100%

Post Natal Sessions Oct – Dec 2023

< 20	26	15%
20-24	81	48%
25-49	63	37%
TOTAL	**170**	100%

4.2.4 Number of Previous Pregnancies in Women Aged Under 20 Years Old

Six hundred and twenty six women were recorded, 79 under the age of 20, of whom 3 had had a previous pregnancy ie. They are likely to have began having children whilst they were children themselves.

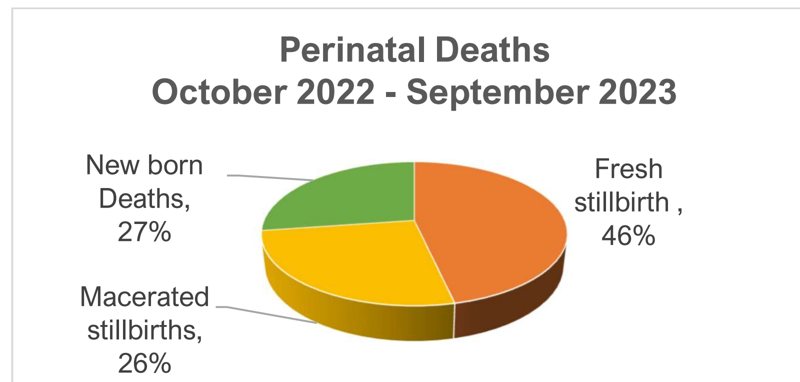


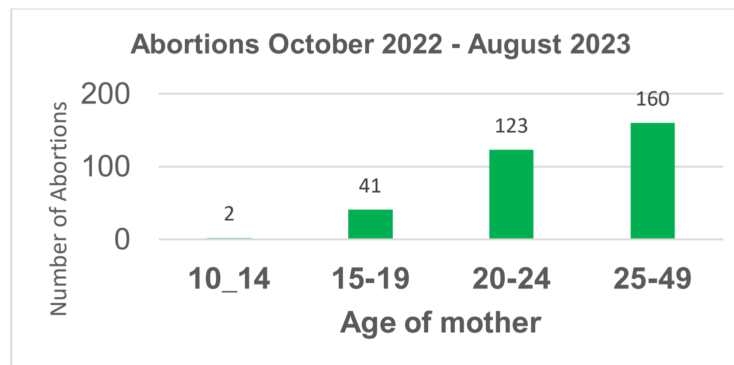
The above statistics indicates a need for improvements in implementation of *The National Strategy To End Child Marriage And Teenage Pregnancy 2026/2027*

5. PERINATAL WOMEN, INFANT DEATHS AND ABORTIONS

5.1 *Clause 4 of the Ugandan Children Act Amendment 2016* provides for full rights of the child. It gives children the right to birth registration. However, there is lack of rigorous implementation, and for a range of reasons, many children are never formally registered and so their existence can go unrecognised by national systems. When a baby loses its life in the first 12 months, if that baby has never been registered, they remain part of an unacknowledged and statistically unrecognised population.

5.2 The EPMM has strategies amongst which are the need to improve metrics, measurement systems, and data quality to ensure that all maternal and newborn deaths are counted.[5] Below is an analysis of the Gombe hospital registers between October 2022 and August 2023





Of the 326 abortions 0.06% of the mothers were girls under the age of 14, 13% were mothers aged 15-19, 38% were mothers aged 20-24 and 49% were mothers aged 25-49.

5.3 These are just the figures of abortions known to the hospital. The perinatal period refers to pregnancy and the first 12 months after childbirth [6i] and hence covers the life of the unborn child. There may indeed be many more perinatal deaths in the community that go unreported for example intentional or spontaneous abortions which may happen out of the hospital setting. In the UK there is currently no provision for the registration of stillbirths before the 24th week of pregnancy. However,

[5] ibid

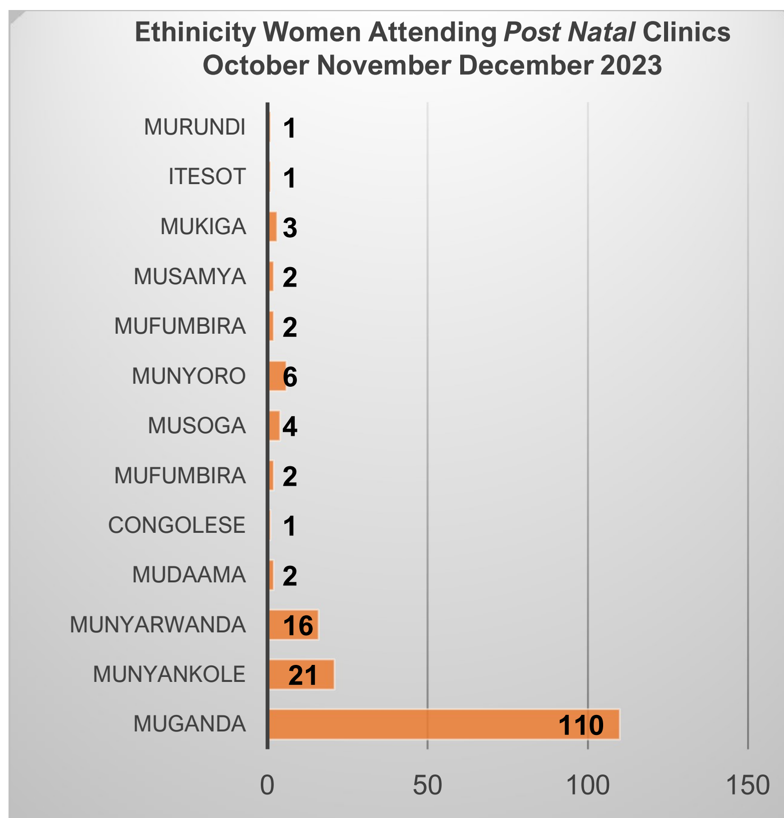
[6] [6] The Perinatal Mental Health Care Pathways, NHS England, NHS Improvement, National Collaborating Centre for Mental Health, May 2018

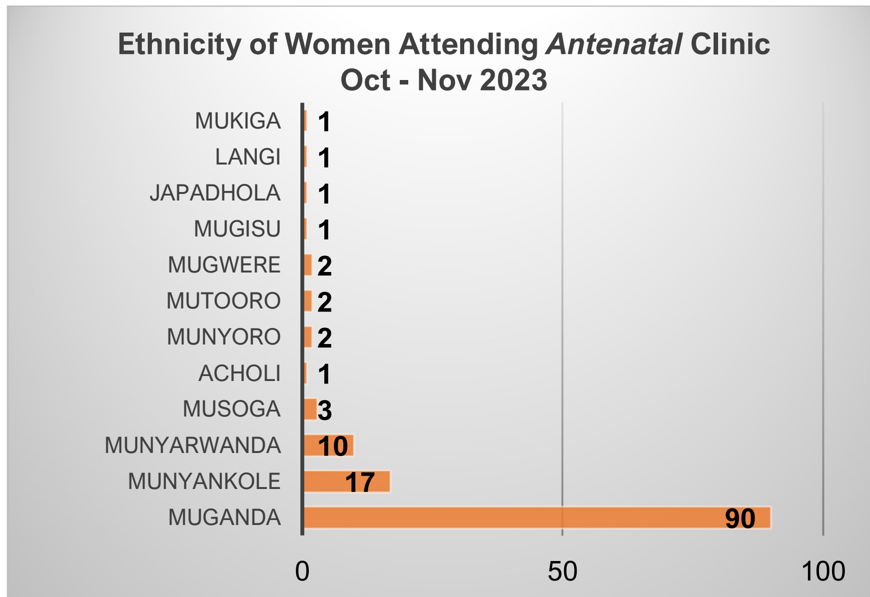
all births in England, Wales and Northern Ireland must be registered within 42 days of the child being born. There is no similar mandatory regulation in Uganda.

5.4 Ugandan mothers are strongly advised to attend hospital for post-natal care at six days, six weeks and six months after birth. This is when babies are entered onto national systems as this is when details of the Maternal and Child Health Post Natal Cards are completed. Mothers are motivated to return to hospital with their babies for vaccinations and other developmental checks on the Child Health Card. Therefore, the focus of post-natal care tends to be more about child development than about the mother's health and wellbeing. When mothers are given some attention, it is often questions about physical and functional recovery from childbirth. If a mother has a still born child, death of a new-born or if she loses her baby in the first 12 months, it is rare for her to attend post-natal clinics. It is fair to say that the depression and anxiety suffered by women who experience such traumas goes unrecognised, unrecorded and some women are likely to remain unsupported in the community.

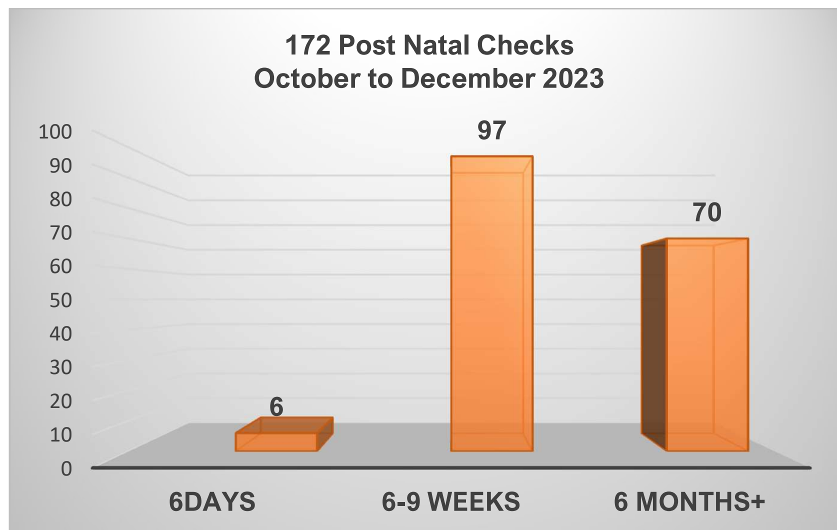
6. THE DEMOGRAPHY OF PERINATAL WOMEN IN GOMBE

6.1 Ethnicity: Gombe is in Buganda and most women attending the clinics are ethnic Baganda. There were also high numbers of women from Ankole and Rwanda.

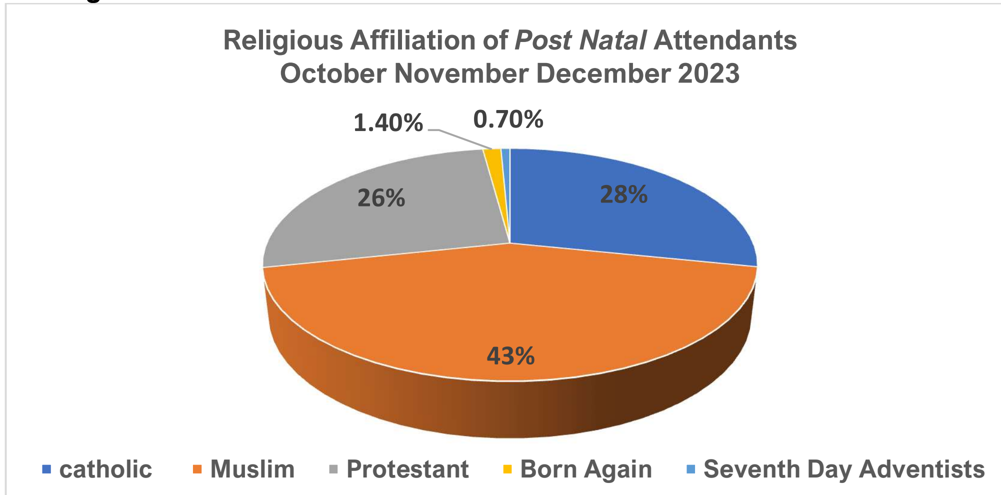




6.2 **Post Natal Checks**: The Ugandan Ministry of Health policy is that women should attend post-natal clinics at 6 days, 6 weeks and 6 months to check up on the mother and the baby. Only a few women attend the 6 day post-natal check, and these are mainly women who have had caesarean sections or had birth complications and are yet to be discharged. Women who have had non-complicated/non-surgical births are discharged within a minimum of 48 hours and many do not make the journey back for the 6 day check. Many attend the "6 weeks" check, loosely interpreted to be until the baby is up to 12 weeks old and the main motivation is to secure child vaccinations. Slightly less women attend the 6 months check, where again the visit appears to predominantly focus on the child's development. However, several turn up well after the baby is 12 months old. Women do not feel restricted and attend as and when they have concerns.



6.3 Religion



The dominant religion in Butambala District is Islam and this constituted 43% of women attending post-natal care. This was followed by 28% women who were Catholic and 26% women who were Protestant. Similar data was gathered at the live ante natal sessions with the responses below:

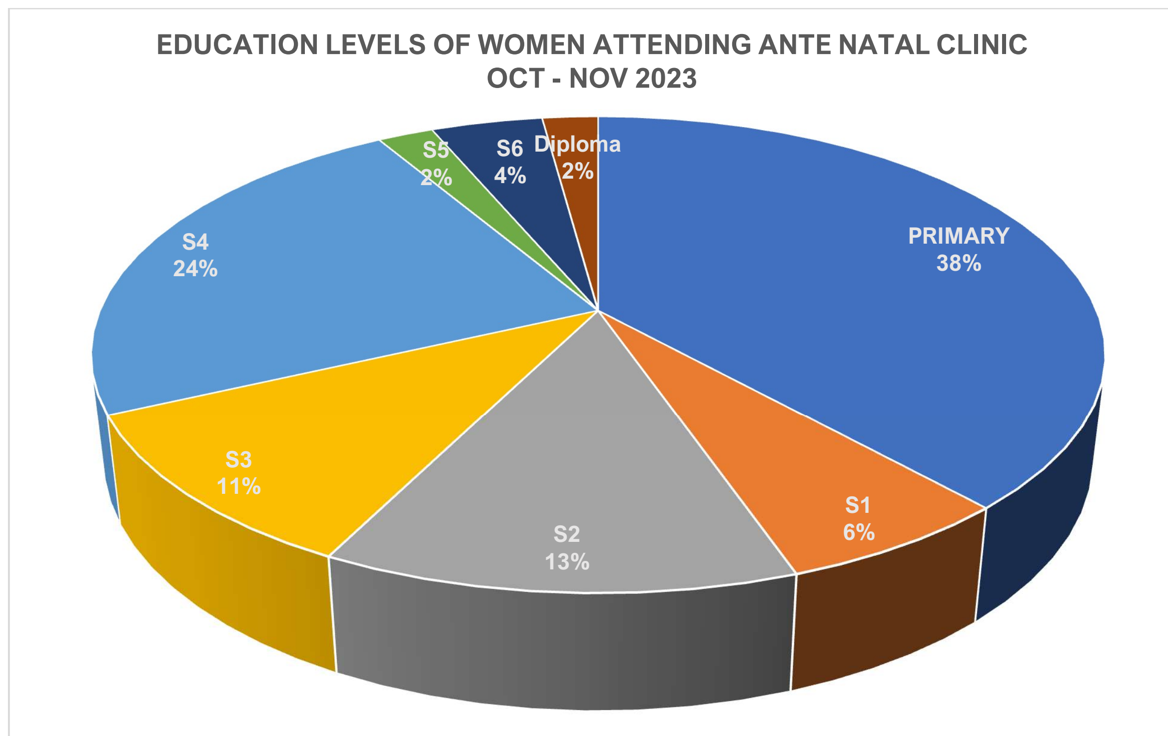
Religious Affiliation of Women Attending *Ante Natal* Sessions October to November 2023		
Catholic	41	31%
Muslim	43	33%
Protestant	34	26%
Born Again	11	8%
7th Day Adventists	2	1.50%
Total	131	

6.4 Education Attainment

Women attending antenatal clinics October – November 2023

Primary School	Senior 1	Senior 2	Senior 3	Senior 4	Senior 5	Senior 6	Diploma/ Degree
38%	6%	13%	11	24%	2%	4%	2%

Women attending antenatal clinics during October and November 2023 had completed primary and/or secondary education. For a variety of reasons many appear to have dropped out during the after the final year in primary school. This is possibly a reflection of the COVID 19 lockdown that lasted from 2020 until 2022, when so many teenage girls dropped out of school and never rejoined. More women said they were married, but a significant number of the younger women said they were living with their parents, aunts or grandmothers. This has economic implications on the women's social and financial support during pregnancy.



7. PREGNANCY AND MENTAL HEALTH

7.1 Epidemiologic studies suggest that an increased risk for major depressive disorder (MDD) exists in women, compared with men. Throughout most of their lives, women are at greater risk for depression than men. During pregnancy around 12% of women experience depression and 13% experience anxiety at some point; many women will experience both. Depression and anxiety also affect 15-20% of women in the first year after childbirth. During pregnancy and the postnatal period, anxiety disorders, including panic disorder, generalised anxiety disorder (GAD), obsessive-compulsive disorder (OCD), post-traumatic stress disorder (PTSD) and tokophobia (an extreme fear of childbirth), can occur on their own or can coexist with depression. The consequences of postnatal depression to the child, mother, and family may include neglect of the child, family breakdown, self-harm, and suicide. However, the more common consequences include emotional and behavioural problems, and cognitive delay in the children of depressed mothers.[7] [8]

7.2 **Hormones**: It has been hypothesized that women presenting with episodes of depression associated with reproductive events (i.e. premenstrual, postpartum, menopausal transition) may be particularly prone to experiencing depression, in part because of a heightened sensitivity to intense hormonal fluctuations.[9]

7.3 **Social Circumstances**: The hypothesis that mood changes related to a heightened vulnerability to hormonal fluctuations experienced during reproductive life events does not, however, preclude the role of psychosocial stressors. In fact, several

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[7] Sinclair D, Murray L, .Effects of postnatal depression on children's adjustment to school.Br J Psychiatry1998;172:58–63. Abstract/FREE Full TextGoogle Scholar

[8] Murray L, Sinclair D, Cooper P, Ducournau P, Turner P, .The socioemotional development of 5 year olds with postnatally depressed mothers.J Child Psychol Psychiatry1999;40:1259–1271.

[9] Ipek Gurol-Urganci, Julia Langham et al. Community Perinatal Mental Health Teams And Associations With Perinatal Mental Health And Obstetric And Neonatal Outcomes In Pregnant Women With A History Of Secondary Mental Health Care In England. www.thelancet.com/journals/lanpsy/home. 11: 174–82 Published Online January 23, 2024 .

psychosocial factors have been associated with mood changes during puberty (e.g., sexual maturity, increased social pressures and obligations), premenstrual dysphoria and childbirth. [10] This project found specific situations raised the risk of poor perinatal mental health in Gombe. This included adolescent pregnancy, difficult birth experience, poverty, gender discrimination, poor nutrition, low educational opportunities, physical ill health, little or no social support, gender based violence and other conflicts, unwanted pregnancy.[11]

7.4. **Pre-existing Mental Health Conditions**: Women with a pre-existing mental disorder are at increased risk of a recurrence or exacerbation of their mental health problems during the perinatal period.[12] In pregnancy and the postnatal period, many existing mental health problems have a similar nature, course and potential for relapse. However, there can be differences; for example, bipolar disorder shows an increased rate of relapse and first presentation in the postnatal period. Some changes in mental health state and functioning (such as appetite) may represent normal pregnancy changes, but they may be a symptom of a mental health problem.

The management of mental health problems during pregnancy and the postnatal period differs from other times because of the nature of this life stage and the potential impact of any difficulties and treatments on the woman and the baby. There are risks associated with taking psychotropic medication in pregnancy and during breastfeeding and risks of stopping medication taken for an existing mental health problem.

There is also an increased risk of postpartum psychosis. Psychosis can re-emerge or be exacerbated during pregnancy and the postnatal period. Postpartum psychosis affects between 1 and 2 in 1,000 women who have given birth. Women with bipolar disorder are at particular risk, but postpartum psychosis can occur in women with no previous psychiatric history. [13]

7.5 Postpartum Psychosis

7.5.1 Following days to weeks after childbirth many women experience the baby blues. However a few women can also suffer from post-traumatic stress disorder (PTSD), post-partum depression, or full-blown psychosis. This change in maternal behaviour and thought process is due to several bio-psycho-social factors. There are physical and hormonal changes, lack of sleep and exhaustion, and the beginning of a new role and commitment in caring for a newborn, which is both physically and emotionally challenging.

7.5.2 Postpartum psychosis is the severest form of mental illness characterized by extreme confusion, loss of touch with reality, paranoia, delusions, disorganized thought process, and hallucinations. It affects around one to two per one thousand females of childbearing age and usually happens immediately within days to the first six weeks after birth. Although rare, it is considered a psychiatric emergency that warrants

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[10] Soares CN, Zitek B. Reproductive hormone sensitivity and risk for depression across the female life cycle: a continuum of vulnerability? J Psychiatry Neurosci. 2008 Jul;33(4):331-43. PMID: 18592034; PMCID: PMC2440795.

[11] Guide for integration of perinatal mental health in maternal and child health services, ISBN 978-92-4-005714-2 (electronic version) ISBN 978-92-4-005715-9 (print version), World Health Organisation 2022

[12] Howard LM, Khalifeh H. Perinatal mental health: a review of progress and challenges. World Psychiatry 2020; 19: 313–27

[13] Antenatal and postnatal mental health: clinical management and service guidance. National Institute for Health and Care Excellence (NICE); 2018 Apr. (NICE Clinical Guidelines, No. 192.) Available from: https://www.ncbi.nlm.nih.gov/books/NBK553127/

immediate medical and psychiatric attention and hospitalization if the risk of suicide or filicide exists.[14]

Filicide is defined as child murder by the mother and *infanticide* is child murder in the first year of life. The term *neonaticide* was coined by Resnick[15] to describe murder of an infant within the first 24 hours of life. Almost all neonaticides are committed by mothers. Neonaticidal mothers are often young, unmarried women with unwanted pregnancies who receive no prenatal care[16]

7.5.3 The lack of strict national birth and death recording requirements, can cloak a multitude of sins. If a baby dies within that first 12 months of life in Uganda, it is possible to have a quiet private funeral in the family burial ground. This is not uncommon in rural settings, but it evades entry into official records. It also results in a lack of recorded evidence for potential filicide or infanticide. Where death is caused at the hands of a mother suffering from post-natal psychosis, this may never be officially recorded. Incidentally, for a range of reasons, (some financial, some social), not all deaths in Ugandan communities are reported to hospitals, police or at District level.

The professionals said:

Women who get psychosis during the perinatal period tend to have a family history of mental illness. Common causes of postpartum psychosis include lack of support for women during pregnancy and after birth. Lack of partner involvement financially, emotionally, materially, marital discord or domestic violence. The lack of support with domestic chores. The word "Machiro" is used to explain a mother who kills her baby, a condition surprisingly well understood in this rural community. However, it is unfortunate that "machiro" is culturally blamed on a wife's infidelity. Much mental distress identified in the community is frequently attributed to witchcraft. The stigma can affect women's care-giving in the family. Traditional healers and herbalists are a first point of access for many mentally distressed mothers in rural communities. Women only present to hospital after significant deterioration in their behaviour.

8. STUDY METHODOLOGY

8.1 The Fellows had to have some baseline information to understand what was required to achieve the project objective. Questionnaires were developed to assess the knowledge of Village Health Team members, students attending Gombe Senior Secondary School and student doctors at the hospital. The assessment was for people's knowledge and understanding of mental health generally. The same questionnaire was used before and after a training intervention to gauge improvements in awareness and understanding of mild to moderate conditions and distress that affects most of us at some point in our lives.

8.2 Gombe Senior Secondary School

Gombe SS is situated next door to Gombe Hospital. It is a very highly regarded local school and has a national reputation for high academic performance and strict

[14] Raza SK, Raza S. Postpartum Psychosis. 2023 Jun 26. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan–. PMID: 31335024.

[15] Resnick PJ. Murder of the newborn: a psychiatric review of neonaticide. *Am J Psychiatry.* 1970;126:58–64. [PubMed] [Google Scholar]

[16] Hatters Friedman S, Resnick PJ. Child murder by mothers: patterns and prevention. World Psychiatry. 2007 Oct;6(3):137-41. PMID: 18188430; PMCID: PMC2174580

discipline. The school is considered to be part of Gombe Village and has village health team members attached to it. The project fellows felt inclined to approach the school to assess the mental health knowledge base of adolescents. The school has a full time counsellor something quite uncommon in Ugandan schools. On Monday 6 November the fellows were given 15 minutes during school assembly to address the school of 2500 students. They were very smartly turned out in uniform, all the girls duly veiled and in long skirts, and the boys in smart shirts and trousers. They were silent throughout the 15 minutes when the fellows introduced mental health and wellbeing. The fellows asserted the need to recognise that during their lives, most would experience mild to moderate mental health conditions, especially anxiety and depression. As this happened to be exam season, recognition of symptoms of anxiety and depression were well received by the assembly. The Assistant Patron of Prefects had organised a longer 2 hours session for selected senior 2 students, that was to be held on Saturday 11th November.

On the 11th November, 42 students turned up, 20 boys and 22 girls, aged between 14 and 16 years of age. A significant number were from the local area, but many were from as far and wide as Gayaza, Mukono, Entebbe, Luweero, Masaka. Although this was a Muslim school, the students came from primary schools of all religious denominations. The students were very attentive, superbly behaved and keen to understand everything about mild to moderate mental health. The exam season was a helpful time to address mental wellbeing and a significant number gradually began to understand and recognise symptoms of anxiety and depression as experienced by themselves or their friends. The students completed the before and after questionnaire and sat through the training intervention asking intelligent questions. This age group is the average age at which education ended for perinatal women at Gombe hospital. The majority of women did not go beyond secondary school education, many having dropped out at 15 or 16 years.

Recognition of mental distress - There was an 18% improvement in the number of students who were more confident they could recognise signs of mental distress.

Awareness of symptoms and behaviours that might indicate of mental distress - There was a 18% improvement in the students who felt able to recognise *symptoms* of mental distress such as people whose behaviour had become erratic, those who were constantly tearful, or sad, those wo restricted their eating, those who had insomnia, slept too much, suffered palpitations etc. There was a 26% improvement in students who felt they could point to *evidence* of mental distress.

Knowledge of mental health conditions – such as post traumatic stress disorder, phobias, eating disorders, obsessive compulsive disorders improved by 20%.

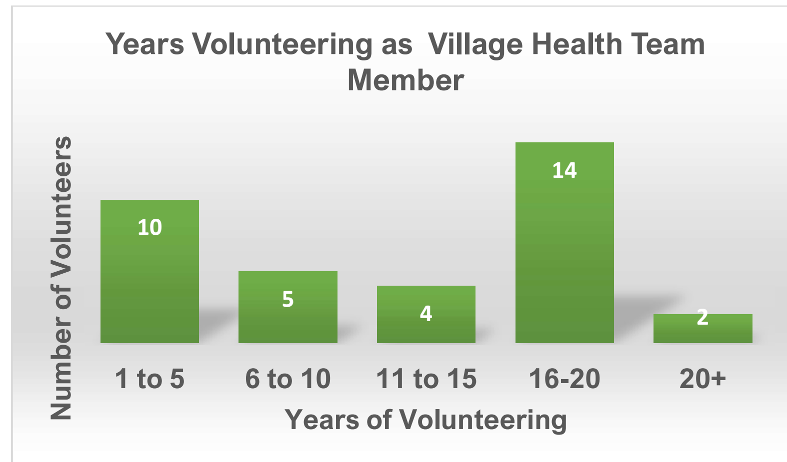
Stigma and attitudes to people with mental health conditions – Although this question attracted the least improvement, yet even in one short session, mental health was demystified enough to change perceptions of people with mental health conditions

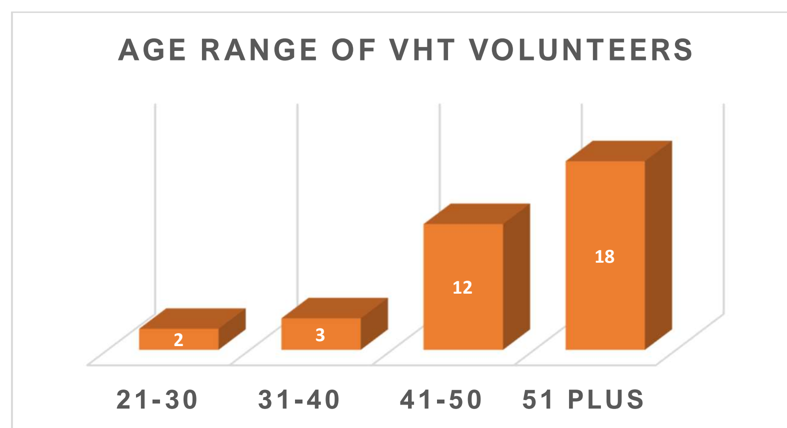
GOMBE SENIOR TWO SECONDARY SCHOOL CHILDREN						
Before			**After**			
Aggregation			**Aggregation**			**% change**
Qn.1	Recognition	33	Qn.1	Recognition	39	18%
Qn.2	Symptoms	57	Qn.2	Symptoms	67	18%
Qn.3	Evidence	457	Qn.3	Evidence	576	26%
Qn.4	Knowledge of Conditions	471	Qn.4	Knowledge of Conditions	565	20%
Qn.5	Stigma and Attitudes	383	Qn.5	Stigma and Attitudes	443	13%

8.3 Village Health Team Members – Monday 11 December 2023

The VHTs Program was established in 2001 as a cost-effective way to link communities with health services. VHTs bring health services closer to the population. Their main role is to bridge the gap between communities and health facilities. Other specific roles of VHTs include: conducting home visits, managing malaria, diarrhoea and pneumonia among children under five years, distributing health commodities such as mosquito nets, health information leaflets about tuberculosis, malaria etc and conducting referrals to health facilities. VHT members are aged above 18 years and can read and write, preferably in a local language. VHTs receive basic health promotion and prevention training, and those involved in the provision of integrated community case management receive additional training. VHTs are community-selected volunteers, the vast majority not clinically trained and who do not receive financial payment for their services. However, they may receive non-monetary rewards, facilitation payments (to cover transport and lunch) and sometimes ad hoc monetary incentives from health partners that work with them in communities.

In Gombe the VHTs were co-ordinated by Faridah Nanyanzi, the Butambala Assistant District Health Officer. Gombe Town Council has 22 villages and she organised 2 VHTs from each village to attend the mental health awareness session on Monday 11 December 2023. Eventually 37 VHTs attended. As the room filled with people the fellows realised that the session had to be carried out in Luganda, not English as they had so carefully prepared. Two people arrived after the first questionnaire had been served, so the analysis was on 35 only. There were 25 farmers, 4 teachers, 2 described themselves as peasants, and there was one housewife, tailor, typist, and hotel worker. These were well respected community members many who had many years of dedicated volunteering in their communities as evidenced in the charts below.





The before and after questionnaires were in English and had to be interpreted into Luganda. This on the spot interpretation and translation carried it inbuilt challenges, as some mental health concepts were new or culturally alien to the VHTs. There was a need to explain symptoms, such as erratic behaviour, excitability without obvious stimulation, restricted eating, insomnia, palpitations etc. The fellows did not have one word interpretations for conditions such as post traumatic stress disorder, obsessive compulsive disorders, phobias, anxiety, eating disorders, etc and had to revert to long explanations and examples. Sometimes this resulted in understanding and sometimes not so much.

Recognition of mental distress – 75% (27 people) of those attending originally felt they would recognise mental distress if they came across it. After the training 8 more people felt they could now recognise mental distress if they came across it. However, 5% (2 people) who originally felt they could recognise mental distress felt at the end of the training that they could not now recognise it.

Awareness of symptoms and behaviours that might indicate mental distress – There was a 4% improvement in awareness of symptoms and behaviours that might indicate mental distress. Clarity on evidence of mental health disorder was improved by 25%. However, when it came to knowledge of mental health conditions such as post traumatic stress disorder, obsessive compulsive behaviours, self harm, eating disorders and neurodevelopment disorders such as ADHD and autism it proved too complicated to translate, interpret and engage VHTs. An executive decision was made to skip question 4 altogether.

Stigma and attitudes to people with mental health conditions - There was an improvement of 5% in attitude and tolerance towards people with mental health conditions at the end of the training. More could have been achieved if the language and cultural differences had been addressed in the Fellows' training preparation.

GOMBE VILLAGE HEALTH TEAM VOLUNTEERS KNOWLEDGE BASE SURVEY						
Before Training			**After Training**			**% Change**
Qn.1	MH Recognition (No. of VHTs)	27	Qn.1	MH Recognition (No of VHTs)	35	**22%**
Aggregated figures below			*Aggregated figures below*			
Qn.2	Symptom recognition	54	Qn.2	Symptom recognition	56	**4%**
Qn.3	Evidence	383	Qn.3	Evidence	477	**25%**
Qn.4	Knowledge of Conditions		Qn.4	Knowledge of Conditions		**Abandoned**
Qn.5	Stigma and Attitudes	338	Qn.5	Stigma and Attitudes	322	**5%**

8.4 Student Doctors, Interviewed on 22 January 2024

The student doctors were approached by contacting their team leader. The medical students were at Gombe Hospital for a 4 month rotation. They came from Habib Medical School, which was part of Islamic University of Uganda.

The questionnaire was amended to suit the group. Sixteen medical doctors attended the session and completed the before and after questionnaire. This group was at first reluctant to complete all questions, many left blank spaces. However, after the training intervention, they were much more forthcoming and confident with their responses.

Confidence in Identifying Depression – there was a swing from 12.5% asserting their confidence, to 81.25% confident they could now identify symptoms of depression in patients.

Confidence in identifying anxiety - The swing was again from 12.5% at first having confidence they could identify anxiety to 87.5%. This was a huge improvement

Knowledge of Mental Health Conditions and symptoms - Out of 19 questions, student doctor responses improved from 42% to 89% being confident they would be able to identify mental health conditions

Stigma and Attitudes - There were tentative improvements in attitudes to mental illness. There was a reduction in ambivalence about the impact of mental health on society, community members and mother with post natal psychosis. The change in attitude about people with mental health problems being able to be effectively treated in general hospitals other than the national referral mental health hospital Butabika

was good to see. It would appear more time was required to have an impact on this matter.

9. IMPLEMENTING WHO APPROVED MENTAL HEALTH ASSESSMENT TOOLS

The project used mental health screening tools to assess women in antenatal and post-natal clinics, including the WHO approved SRQ20, PHQ9 and GAD7. The intention was for obstetricians, midwives and nurses to serve women with these self-completion questionnaires.

9.1 **Self Report Questionnaire 20 (SRQ20) -** The 20 questions are designed to detect non-specific psychological distress. Its subscales include depression and anxiety, somatic symptoms, reduced vital energy and depressive thoughts. The expectation is that people complete the 20 questions themselves unaided. (See Appendix 2)

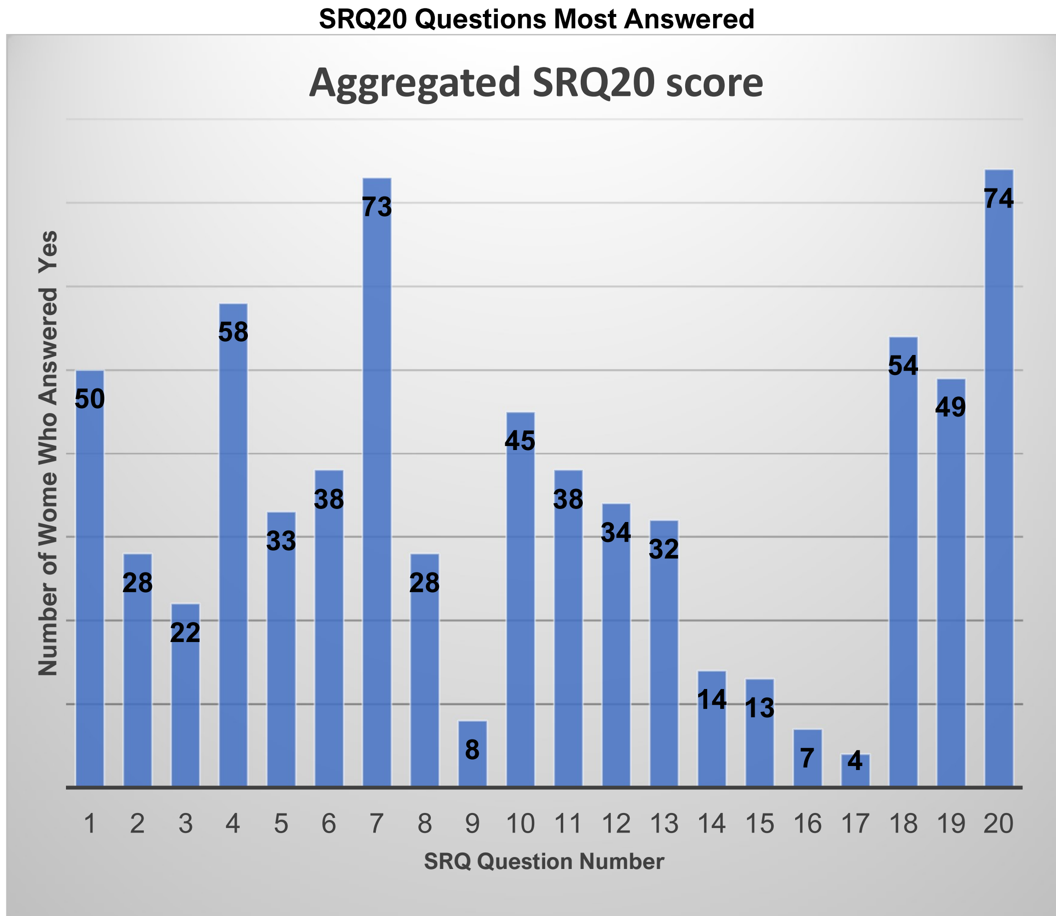
Perinatal Women in Gombe and the SRQ20 **-** The tool has a Luganda translation and although most women attending antenatal and post-natal clinics spoke, understood and read both Luganda and English, there were issues of interpretation, comprehension and culture that undermined the tool's effectiveness. Women were often confused by alien concepts, comprehension was limited and most of the 20 questions had to be explained face to face.

Some questions were legitimately confusing *in this particular rural Ugandan context*. "Do you find it difficult to enjoy your daily activities?" A rural woman's life can be very functional, in which she has very few choices about daily activities: she awakes each day to prepare breakfast for her family, go to the field to cultivate food, take animals to feed, later she milks the cows, prepares the evening meal and prepares her family for bed. It is then difficult to explain what is meant by the question about whether she enjoys her daily activities. The women kept asking for clarification, and so self-completion is not an option for women of this background. It is not simply an issue of comprehension in the literal sense, it is also comprehension of Western concepts (e.g. leisure). Therefore questionnaires would remain uncompleted unless women are supported, and this has staffing implications.

SRQ20 and Pregnancy **–** Some symptoms that could suggest depression and/or anxiety are also symptoms of pregnancy e.g. Bloating, indigestion, stomach cramps, "are you easily tired", or "do you feel tired all the time". The most answered questions as indicated in the chart below are not untypical of the condition of pregnancy:

- Question 20: Are you easily tired?
- Question 7: Do you often experience constipation, heart burn or bloating of the stomach after having your meals?
- Question 4: Are you easily frightened?
- Question 18: Do you feel tired all the time?

SRQ20 Questions Most Answered



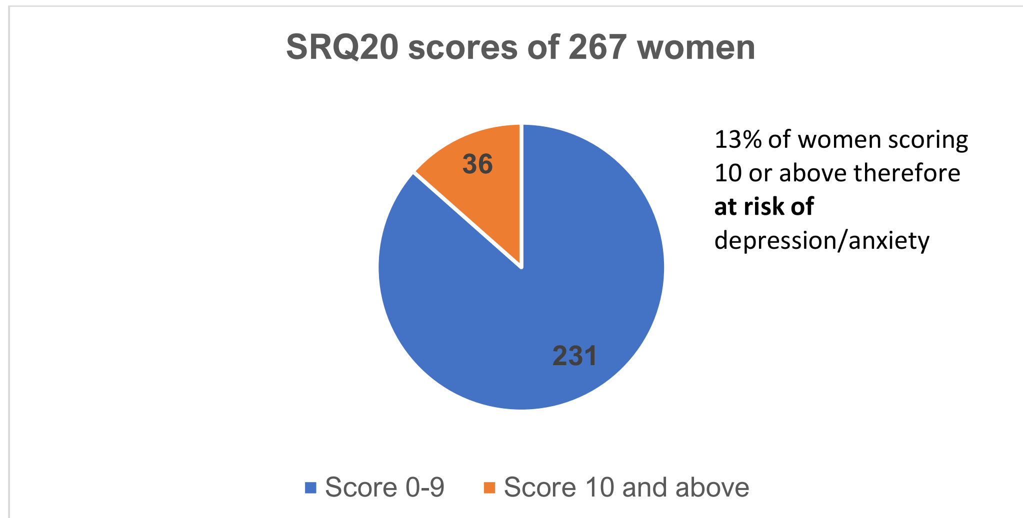
It might be better to work with local communities to interpret and amend these recognised tools so they become relevant to culture and language.

9.2 **Staff Capacity to Use Tools**

From the beginning of the project it was clear antenatal and post-natal clinics were extremely busy places, and often under staffed. There was hardly time to take women through the national antenatal and post-natal card requirements. It was therefore going to be a challenge to ask the same staff to serve women with the SRQ20 of 20 questions, and then to assess whether they required follow up.

9.3 **Risk of depression in perinatal population at Gombe Hospital**

Women with a score of 10 or more out of the SRQ 20 are considered at risk of depression and/or anxiety and require formal diagnosis +/- management. In 267 women who were assessed using the SRQ 20, we found 36 (13%) had a score of 10 or above out of 20.



Due to the high number of SRQ20 questions, the Fellows tested out other screening tools which had fewer questions. This was in the hope that following staff training in mhGAP they would have a feasible screening tool to use in their everyday practice.

9.4 PHQ2 & PHQ9

These tools comprise of 2 and 9 questions respectively. They are used to screen for depression. Attaining the cut-off score of 3 or above on the PHQ2 prompts use of the subsequent PHQ9 to then determine whether depression is present in the patient/client. Unlike the SRQ20, the PHQ9 had the added benefit that it directly leads to a formal diagnosis of depression.

9.5 GAD2 (Generalized Anxiety Disorder 2-item) & GAD7 (Generalized Anxiety Disorder 7-item)

These tools are comprised of 2 and 7 questions respectively and are used to screen for anxiety. Attaining the cut-off score of 3 or above on the GAD2 prompts use of the subsequent GAD7 to then determine whether anxiety is present in the patient/client. Unlike the SRQ20, the GAD7 directly leads to a formal diagnosis of anxiety.

When using PHQ and GAD tools, we found that the questions catered to a largely Western audience and were rather incomprehensible to the average rural Ugandan participant. Furthermore, these tools require the participant to quantify how many days over the past 2 weeks they were feeling certain symptoms, which is not a natural concept for the population. This meant that although the screening tools had fewer questions than the SRQ 20, the advantage obtained was nullified by the time taken to explain the concept of quantifying “Not at all; Several days; More than half the days; Nearly every day”

The professionals said:

“Increased identification of mental health conditions of patients attending hospitals requires a training strategy for all hospital staff. This can be part of their Continued Professional Development modules, or the regular Continuing Medical Education sessions. The strategy will in turn improve outcomes for people with mental health challenges. The availability of Job Aides - charts, desktop symptom reminders, and memory jogs like the MhGAP training chart are

all a crucial part of the strategy. Post partum depression is quite common, and often women with obvious symptoms are simply discharged if they have had a "good labour".

10. POTENTIAL LOCATION OF MOTHER AND BABY UNIT

The Fellows were keen to establish a Perinatal Mental Health Pathway, from primary care to tertiary care. Proper management of the severest postpartum psychosis requires identification of a location for a mother and baby unit, where specialist care is provided and support from a perinatal mental health team for at least 6 weeks. The fellows visited several potential institutions with this in mind.

Professionals interviewed said:

"The idea of setting up a specialist **Mother and Baby Unit** for postpartum psychosis has system problems because of the way mental health services are set up in Uganda. Butabika, the national MH referral hospital, does not have specialist wards, or specialist beds. Mental health conditions from depression, schizophrenia to bi-polar are treated on a mixed ward. Kirinnya Ward was specifically created as a forensic ward, however that too accommodates a majority of non-forensic patients. The opportunity for identifying a Perinatal Mother and Baby Unit, or setting aside specific beds might possibly have a chance to be developed at General or Regional Hospitals "

As a result of the mixed ward policy, there is currently no specific protocol for dealing with the specialist condition that is perinatal mental health. There is the Convalescent Ward at Butabika Hospital which accommodates mothers in the recovery stage (not acute) of their condition to stay with their babies. This is a promising start, but does not take into account mothers in the acute phase to be managed with their babies. Bosa Unit (a mental health unit at Mulago Hospital) had extremely heavy outpatient demand, and the 4 inpatient beds were oversubscribed. Bosa Unit could not be a suitable location for a national Mother and Baby Unit for women with postpartum psychosis. Kawempe National Referral Hospital (obstetrics and gynaecology) was also an incredibly busy place, with high patient turnaround and limited subsequent patient follow up. The fellows felt Kawempe Hospital would not be suitable for a national post-partum mother and baby unit due to high patient turnover and limited mental health professionals. Mulago Specialised Women and Neonatal hospital was more measured and particular, about receiving and caring for appropriate admissions and patient numbers. The fellows felt the national mother and baby unit for postpartum psychosis could be based in this facility.

11. THE SUSTAINABILITY PLAN

11.1 There is an ethical problem of asking people to open up about their mental distress, their personal details documented (raising recovery expectations) and making no attempt to alleviate that suffering. The fellows felt that the ultimate quality improvement would be to establish talking therapies to address mild to moderate mental health problems at Gombe Hospital.

11.2 To make sustainable change requires working within existing generic structures, using generic staff. It was decided to identify a few committed hospital staff and to provide them with quality mental health training. After some consultation with mental health professionals it was agreed that the WHO approved MhGAP training would be

ideal. This would be followed by further instruction to effectively facilitate talking therapy sessions. The work of this cohort of health care workers would then be supervised and monitored for effectiveness. VHTs would also receive training to enable them to recognise mental health conditions in the community and be able to refer appropriately to Gombe Hospital.

During antenatal or post-natal clinic assessments, women meeting certain mental health criteria would be identified and offered available group therapies. Women would be discharged if on assessment they had achieved the stated “recovery” criteria.

11.3 The Fellows were encouraged to pursue this training strategy guided by the study of Gladys Nakidde on Maternal Mental Health Screening And Management By Health Workers In Southwestern Uganda[17]. “Medical staff especially midwives lacked specialized training in screening and managing women with maternal mental health problems. They screened and managed MMH problems solely based on history and physical examination, and they referred nearly every mother displaying signs of mental illness because they felt ill-prepared to handle them. On the other hand, medical staff with some level of specialized training in mental health particularly staff working in mental health units, were more likely to use a mental health screening tool in addition to history and physical examination; and to treat any women exhibiting signs and symptoms of maternal mental problems without referring them. Lack of in-service training on maternal mental health, poorly coordinated referral systems, reluctance of mentally ill to visit medical facilities, scarcity of mental health specialists, and shortage of relevant medications were identified as the major challenges.” The results suggested that specialized training in mental health, and particularly maternal mental health, is essential for the effective screening and management of maternal mental health conditions. The Fellows decided the MH Gap training would improve the situation for perinatal women in Gombe Hospital.

11.4 MH GAP TRAINING FOR HOSPITAL STAFF AND VHTS 29-30 JANUARY AND 5 – 7 FEBRUARY 2024

The Fellows commissioned two seasoned MH Gap trainers with experience working at Butabika Hospital. They had trained generic staff all over Uganda. The training of 12 health care workers at Gombe Hospital and 12 Village Health Team members was intended to create a strong knowledge foundation for staff at the hospital as well as the Village Health Teams. This would fundamentally empower healthcare workers and enable them to identify common mental health conditions amongst the general population and those who come to the hospital. The trained hospital staff might also in time be able to offer talking therapy support to patients, and to facilitate group therapy for some patients.

11.5 THE COLLABORATIVE STEPPED CARE MODEL

Stepped Care is a system of delivering and monitoring mental health treatment so that the most effective, yet least resource intensive treatment, is delivered first, only “stepping up” to intensive / specialist services as required and depending on the level of patient distress or need. Stepped care provides a framework for the care of

[17]Nakidde et al. BMC Pregnancy and Childbirth (2023) 23:477. Maternal mental health screening and management by health workers in southwestern Uganda: : a qualitative analysis of knowledge, practices, and challenges.

individuals with significant mental health concerns that uses limited resources to their greatest effect on a population basis. Stepped care requires treatments of differing intensity. For example, there are less intensive treatments such as brief therapies, group treatments and self-help approaches (e.g. bibliotherapy) to more intensive treatments such as counselling, interpersonal therapy etc. For some individuals, lower levels of care would never be appropriate or may not be preferred by the consumer. Thus, stepped interventions offer a variety of treatment options to match the intensity of the patient's presenting problem as well as potential patient preference.

Stepped care models also provide information to aid clinicians in decision making regarding selection of treatment strategies that are most appropriate for an individual client. The model is founded on the following beliefs:

- People should not have to wait for psychological service
- Different people require different levels of care
- Finding the right level of care often depends on monitoring outcomes
- Moving from lower to higher levels of care based on client outcomes often increases effectiveness and lowers costs overall[18]

STEPPED CARE MODEL

	Who is responsible for care?	What is the focus?	What do they do?
Step 5:	Inpatient care, crisis teams	Risk to life, severe self-neglect	Medication, combined treatments, ECT
Step 4:	Mental health specialists, including crisis teams	Treatment-resistant, recurrent, atypical and psychotic depression, and those at significant risk	Medication, complex psychological interventions, combined treatments
Step 3:	Primary care team, primary care mental health worker	Moderate or severe depression	Medication, psychological interventions, social support
Step 2:	Primary care team, primary care mental health worker	Mild depression	Watchful waiting, guided self-help, computerised CBT, exercise, brief psychological interventions
Step 1:	GP, practice nurse	Recognition	Assessment

Source: Centre For Innovation Campus in Mental Health

After some inquiries the fellows identified somebody with potential interest in engaging with the project. Professor Eugene Kinyanda (Professor of Mental Health at Medical Research Council and senior investigator scientist) has conducted mental health trials (HIV +D, Ebola +D) in rural parts of Uganda and successfully established the Collaborative stepped care model in these settings. As someone with an interest in perinatal mental health, he expressed interest in getting involved with this project, with a view to incorporate the Stepped Care Model at Gombe Hospital and community.

[18] Centre for Innovation in Campus Mental Health, www.campusmentalhealth.ca

Ebola+D Mental Health intervention:

(Collaborative stepped care intervention)

Ebola +D intervention involves:

Step 1: Health talk (to create mental health literacy) & Screening for psychological stress (lay health workers)

Step 2: Psychoeducation (lay health workers)

Step 3: Providing Problem Solving Therapy (lay health workers)

Step 4: Provide antidepressant therapy (clinician)

Step 5: No response or high risk of suicidality or severe mental illness (refer to mental health worker)

- Supervisors by health facility-based staff
- Clinicians prescribing antidepressant medication
- Referral & support by Mental Health Department at MRRH

MRC/UVRI and LSHTM Uganda Research Unit

The above model was used in the Ebola +D trial. A similar approach could be adapted to our project to incorporate mental health services at various levels. VHTs would be trained to identify and managed low severity mental health conditions and be supported by staff at health facilities who will be trained to supervise them.

The ambition is for the collaborative stepped care intervention to be implemented by Professor Kinyanda and his team, funds permitting. The Ugandan Ministry of Health are very supportive of Ugandans in the Diaspora returning to work in Uganda and to contribute to strengthening the health system. NHS England are extremely keen to continue collaborating with the Ugandan Ministry of Health and other key stakeholders in Uganda. It is hoped that these Fellowships will be resumed in the near future to facilitate this.

11.6 Gombe Project at 6 months

There is a proven need to identify perinatal mental health conditions. Generic healthcare staff are best placed to assess patients during the ordinary course of their work in the hospital.

The most appropriate tool to use in assessments remains unclear. WHO approved tools are not always most suited to rural women in low income settings with low academic achievement.

The establishment of a service to address mild to moderate perinatal mental health in Gombe Hospital is desirable and achievable. Twelve generic healthcare staff and 12 village health team members have successfully attended the MH Gap Training and are keen to learn more.

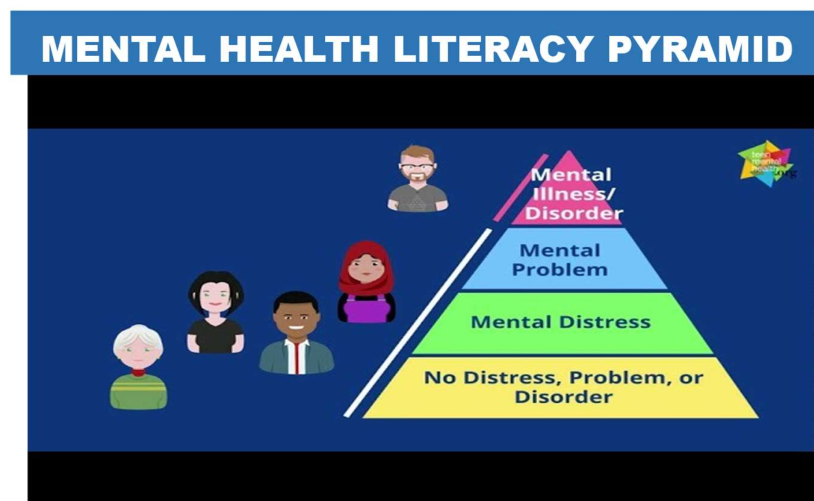
There is a need to develop a process by which those trained can gain skills to effectively facilitate group therapy sessions. There is also a need for them to be professionally supervised on a regular basis.

It is hoped that the MRC will be able to support this project and guarantee its sustainability.

12. MENTAL HEALTH

12.1 Mental illness is a spectrum of conditions whose impact on individuals can range from mild, to moderate to severe. Mention of mental illness frequently focuses on serious conditions such as schizophrenia, bi-polar disorders and chronic depression which severely affect an individual's functioning in the community. The treatment of serious mental illness includes psychotherapy to explore thoughts, feelings, behaviours, and seeks to improve an individual's well-being. Psychotherapy paired with long term medication is the most effective way to promote recovery from serious mental illness.

Most of us will suffer mild to moderate mental health conditions at some point in life, commonly anxiety and depression. These conditions are a health burden but often do not impede day to day functioning. Significant levels of anxiety and depression in the population can be effectively improved by use of a range of psychological therapies. The National Health Service in the UK has developed a Talking Therapies programme designed to deliver evidence-based talking therapies for people with common mental health problems. When patients begin treatment, they are clinically assessed for scores of anxiety and depression and those who score highly are considered a clinical case. The recovery rate is considered the proportion of people who start treatment with a high score, and complete treatment having reduced their score to below the clinical threshold.[19] Talking therapies are preferred by many clinicians and patients over the use of medium to long term medication, with the inherent adherence issues and costs of medication.



12.2 Voice of Professionals in the Health System

A few in depth interviews were undertaken with medical professionals to bottom out Ugandan specific issues. The project required more granular information about recruitment, system capacity to deal with mild, moderate and severe mental health conditions. There was need to understand staff training, the different mental health staff groups, remuneration and career opportunities. The referral and management

[19]www.nuffieldtrust.org.uk/resource/improving-access-to-psychological-therapies-iapt-programme

systems required clarity as well as the availability and role of talking therapies in patient recovery. The selection of professionals included midwives, psychiatric nurses, forensic nurse, clinical psychologists and psychiatrist (see Appendix 5). Their views are in specific categories and included in this report in italics and in a different font from the main report.

12.3 Prioritisation of Mental Health

Worldwide mental health stigma is matched by poor funding when compared to national funds invested in physical health conditions. In the UK the Department of Health has made some attempt to have parity of esteem between the funding for physical and mental health conditions at national level. The low prioritisation given to mental health is acutely felt by Ugandan patients and mental health staff. This inherent lack of concern is reflected in the fact that mental health wards were at the time converted to COVID wards, with little consultation, and many have never reverted back to being mental health wards. Another example is the psychiatric Bosa Unit at Mulago Hospital, which had over 70 mental health beds for many years. A decision was made with little consultation and the 70 were converted to orthopaedic beds, leaving the psychiatric unit with just 4 beds. The outrate this has caused amongst staff and patients continues 3 years on with scant actions to reverse it. Mental health is on the periphery of Government priorities, with the adage; “mental illness does not kill” (oblivious to the suicides and other killings by people who are mentally unwell and untreated). There has been an increasing epidemic of drug and alcohol dependence amongst middle class adolescents. This has made Parliament more aware of the need for mental health services. The COVID pandemic saw a steep increase in drug induced mental illness. Marijuana was mistakenly considered a prevention medicine and the leaves were frequently taken as tea, which caused a huge increase in marijuana use.

In a 2022 study a systematic review to determine the prevalence of mental disorders among children and adults in Uganda found that overall and with moderate level of certainty, the prevalence of any mental disorder in Uganda was 22.9%, in children and 24.2% in adults. The prevalence of anxiety disorders was 14.4% in children and 20.2% in adults. Eating disorder and psychotic syndrome disorder were also reported. The findings suggest that depression and anxiety disorders are common mental disorders in Uganda, affecting approximately one in four persons.[20]

The capacity of mental health system to care for the population is limited by the number of mental health specialist establishments and mental health staff numbers. Uganda has just 62 psychiatrists—approximately one psychiatrist per 1 million population. These psychiatrists are mostly located in urban centres and are employed as university lecturers and researchers, leaving few to serve as clinicians.[21]

12.4 An Overwhelmed Mental Health Service

There is inadequate mental health provision across the country with few specialist hospitals. Those that do exist are mainly located in the capital Kampala. The ratio of patient to mental health professional is needless to say woefully inadequate. There should be 1 Nurse to 5 patients at Butabika, however there are currently 3 nurses to 160 patients. Inappropriate patients and stable

[20] Prevalence of Mental Disorders in Uganda: a Systematic Review and Meta-Analysis, John Nelson Opio[1], Zachary Munn[2], Edoardo Aromataris[2] pubmed.ncbi.nlm.nih.gov/34427855/

[21] Thelancet.com. Psychiatry Volume 9 October 2022

patients should be swiftly discharged to improve the ratio. Many patients do not meet the criteria for a National Referral Hospital. Some patients have reduced symptoms that can be managed in the community, other people are ready for discharge but remain on wards for social reasons like lack of funds to pay for transport home.

The numbers come with unintended negative consequences, and of significant concern is bed lice. They lead patients to try and escape, even forensic patients try to escape the bed lice. Regarding nutrition, this has been given specific focus and the diet has improved. When it comes to medication: old generation drugs are used, new generation drugs are expensive, eg. there is no clozapine used at Butabika, the National Referral Hospital.

12.5 Mental Health Recovery

"Patients require good psycho education at the initiation of mental illness treatment to effectively manage their expectations of recovery. They must appreciate that symptom remission is not necessarily equal to recovery. Good counselling especially for mild and moderate conditions can certainly lead to recovery. It is crucial to include close relatives in the discussions because they are the source of community support. Some patients and carers expect immediate recovery from chronic conditions. There needs to be a redefining of recovery, people with mild to moderate conditions on the one hand and on the other people with long term chronic conditions. They should all be supported to accept their condition.

Recovery is about the triggers and stress management. There is a rule of 30% i) Complete recovery ii) Chronic condition with long term medication iii) drug resistance and constant changing of medication. A lot of depression is about poverty, what is recovery from poverty? Health workers can see recovery as equal to symptom remission, the rest happens in the community. To be fair, health workers understand dispensing medication better than recovery. They crisis manage systemic problems. Supervision is poor and many patients are treated by trainees"

The psychiatrist said, "as far as the Ministry of Health is concerned, mental health medication is for life whether one has mild, moderate, severe or the severest conditions. It is assumed that patients will remain on maintenance treatment for life. They may get a drugs holiday for 3 months, but as far as I am concerned the majority of symptoms return and relapse is common".

12.6 The Psychiatric Clinical Officer

The PCO is a category of mental health worker who has become the backbone of the Ugandan mental health system. Most mentally ill patients will see a PCO, even at Butabika the national referral hospital. The country has always had a chronic shortage of psychiatrists and a need to decentralise mental health services to increase access

to care across the country. In 1979 Dr Bbosa set up the Psychiatric Clinical Officers Training School at Butabika Hospital.

Uganda currently has 62 psychiatrists to a population of 44 million. General Hospitals, Health Centres 4, 3, 2 and 1 do not have a psychiatrist attached but rather psychiatric clinical officers.

Originally health workers eligible to train as PCOs included registered general nurses, clinical officers, occupational therapists etc. However, from 2012 direct entrance to Clinical Psychiatry started, aimed to attract A level students with medical certificates. After 3 years study they are awarded a diploma in clinical psychiatry.

Gombe District Hospital has just a PCO and a psychiatric nurse to manage all mental illness that presents at the hospital. The hospital does not have an allocated psychiatrist from Region or Butabika, to support the two mental health workers with their most challenging cases. The mental health clinic is held on Wednesdays only, and on the other days Hilda (psychiatric nurse) works on the paediatrics ward (which she really enjoys) and Musa (PCO) on the TB ward. Based on the number of young people in the population, Gombe Hospital needs an accessible youth friendly mental health service.

12.7 Clinical Psychology

A perplexing Ugandan idiosyncrasy is the lack of priority given to Clinical Psychology in the mental health system . It is not considered fundamental in the care system, and is generally under valued across the country. This is evident in the Government psychology posts allocated in the health system and the training offered at university. The curriculum of the BA Applied Psychology is lagging behind current international standards. The Ugandan university qualification is considered to be more theoretical than practical. There is no national body of psychologists, like the British Psychological Society in the UK. Such a nationally recognised Psychological Society would require an Act of Parliament. One lone clinical psychologist working in an institution said the challenges of the position were:

- *Difficulties linking with other clinical psychologists to find out how they are managing*
- *Lack of mentorship – it would be useful to have someone at work within Clinical Psychology, that they were able to speak with about work*
- *Accessing mental health assessment tools*

The number of Government psychologists is low in Butabika, which should ideally have 3 – 5 clinical psychologists per 200 bed ward. Psychologists that are not absorbed by the Ministry of Health end up in civil society, private hospitals, non government organisations, teaching, rehabilitation centres for addicts, and many simply leave the country. TPO as a mental health organisation has the highest number of psychologists, due to lobbying done by UNHCR. There was apparently an organisational restructure about 10 years ago, increasing system capacity by allocating more Clinical Psychology posts. However, the restructure was never implemented because of budget issues.

12.8 Remuneration of Mental Health Workers

The remuneration of mental health staff in the voluntary sector can be fairer than in the Ugandan health system. TPO work to the Integrated Support and Assurance Process (ISAP) pyramid of service provision. The structure and salaries are much better than

the Government salary scales. Seniority and qualifications should determine one's pay scale with each year attracting an annual increment. Mental health comes with inherent life threatening risks which simply go unappreciated. The current pay rankings are:

Rank	Role	Education Level	Monthly
1	Mental Health Attendant	O level	314,000/= (£65)
2	Enrolled Nurses	Nurse training	613,000/= (£128)
3	Nursing officer or psychiatric nurses	Nurse training plus	850,000/= (£177)
4	Psychiatric Clinical Officer	A level + Training	800,000/= (£165)
5	Senior Clinical Psychologist	University, Masters	700,000/= (£147)
6	Consultant Psychiatrist	University, Masters	7,000,000 (£1,470)[22]

The difference in rates of pay indicates inherent legacy issues, in that the years and quality of study between a Clinical Psychologist and a Psychiatrist have many similarities. A qualified clinical psychologist can earn 700,000/= (£147) and a qualified psychiatrist 7 million shillings (£1472) per month. The differentiation of service entry by people having taken arts or science degrees is an absolute nonsense. There is no degree in Clinical Psychology, people study applied psychology The PCO earns more than the clinical psychologist even though the PCO has not attended university. Each year universities churn out psychologists.
The mental health nurse at Gombe qualified as a Registered Nurse with a diploma but years later still receives an Enrolled Nurse's salary (U7). A PCO salary scale is U5, with the next potential pay grade U4. The mental health nurse and PCO are paid as clinicians, not as mental health specialists. The grade U4 is for staff with a Bachelors degree in psychiatry, it is a doctor's grade. The whole system is very unsatisfactory and frustrating after years and years of hard work, dedication and studying for higher qualifications. It was only the Consultant Psychiatrist that thought remuneration was satisfactory. "Butabika pay is ok, they get their salaries on time, people do not suffer."

12.9 Mental Health Medication

"Professionals often do not explain long term medication to patients in a way they can understand. Mental health patients are notorious for non adherence to medication. Patients' lack of insight about their illness and regular medication. Uncomfortable side effects are a common factor associated with non-adherence. In Uganda most first generation medication is free in Government hospitals. First-generation antipsychotics are dopamine receptor antagonists (DRA) and are known as typical antipsychotics. Second-generation antipsychotics are serotonin-dopamine antagonists and are also known as atypical antipsychotics.

Some first generation medicines are unsuitable for patients, but because that is all that is available or affordable, mental health professionals simply continue

[22] Circular Standing Instruction (CSI) No. 1 of 2022, Salary Structure for Financial Year 2022-23. COM/96/153/01 dated 01 July 2022

increasing the dose, unable to change it to something more effective. Second generation drugs are too expensive for patients to pay for privately. On discharge a patient is referred to the Regional or District Hospital and health centres, for regular medication, but this can prove expensive. Yet if they do not adhere to medication they find themselves back at Butabika, and this phenomenon is expensive for the public purse. And so the revolving door, of patients being admitted, treated then discharged, patients non adherence to medication, relapse which returns them to hospital for treatment, year in year out."

12.10 Patient Management

Patient management systems and pathways were not uniform across different districts. Primary and community care should effectively deal with patients suffering mild to moderate mental health conditions. In the Ugandan system this would be HC3, 4 and the General Hospital. However, mental health structures were not necessarily in place at HC3, HC4, General and Regional Hospitals. General Hospitals do not have specialists attached to them and there is no psychiatrist at Gombe, despite the huge population covered. Mental Health is managed by a PCO and a mental health nurse. Where the two are unable to handle a case, patients referrals should be to Masaka Regional Hospital. However, Masaka Regional Hospital has several PCOs but not an allocated psychiatrist. So for mental health patients at Gombe Hospital there is little alternative but to refer to Butabika, the national referral hospital. This is a waste of resources, as most of these conditions would be best managed at regional hospital level.

12.11 **Stigma**

Across the world mental health carries with it social stigma which encourages denial in affected families, discourages symptom recognition, and referral to professional services in a timely manner.

"Mental health stigma is huge in the Ugandan community, it is evident in the way people talk about mental illness. Even mental health staff are stigmatised, as though mental illness is contagious. Many rural people identify mental illness with witchcraft, patients are hidden away, to avoid family stigmatisation. Care givers initially resort to priests, sheiks, and other religious leaders to come and pray for the home. The family may also turn to herbal medication and traditional healers. The first attendance at hospital is often after months and months of unsuccessful treatment at traditional healers, churches, mosques all who treat "bad spirits tormenting loved ones".

Mental health is misunderstood especially things like suicide, panic attacks, obsessive compulsive disorders and other mild to moderate conditions. However, the biggest stigma is against people suffering from schizophrenia who experience visual or audio command hallucinations, but also forensic patients who have a history of violence. Before discharge of forensic patients, their local community has to be sensitised. Much sensitisation is required for the community to feel safe and social inclusion given a chance. However, the patient must keep their side of the social contract and take their medication. Patients

who kill relatives (children, partners etc) can be totally rejected by communities."

12.12 **Improving Mental Health Awareness**

"National Mental Health Awareness campaigns can reduce stigma. Disseminating information effectively, engaging the use of local radio, community workers, religious leaders, schools, investing in music dance and drama. To be effective awareness raising campaigns require consistency, intensity, frequency and regular assertion by leaders. Dual approaches (top down and bottom up) would efficiently carry the message. A national awareness media campaign on the one hand, and on the other, work with community and religious leaders, village heath teams, general hospitals, health centres and secondary schools. Training up Village Health Teams would be particularly relevant in rural villages. Ordinary people do not recognise mental health conditions, they often do not have the language to articulate their experiences. There is colloquial use the phrase "I have a lot of stress". "Stress" needs to be unpacked so people recognise what is going on within them, whether they are experiencing anxiety or depression. Hospital staff themselves are often so over worked and ideally need a counsellor in who to confide about their work frustrations, insomnia, family and relationship problems. More mental health professionals should move out of hospitals and to talk to people in the community. "

13. SPECIALIST HOSPITALS: MENTAL HEALTH AND WOMEN'S HEALTH

13.1 Butabika National Referral Hospital

This institution is meant to deal with the most complex, serious mentally ill patients in the country. The original bed capacity of Butabika is 500, but the average number of inpatients is about 1200. Staff capacity is 13 psychiatrists (3 of who are in management), 5 psychologists, 220 psychiatric nurses and 16 psychiatric clinical officers.

For Butabika to improve patient flows would require stricter filters of patient admissions, tighter control of length of stay, and strict patient discharge options. The ambiguous qualifying criteria for admission to Butabika leaves the hospital managing mild, moderate, severe and highly complex mental health cases. No hospital can be efficient, nor have capacity to effectively deal with the most complex mental illness, whilst also attending to people with mild to moderate conditions. The one common comment from Butabika staff was that there were too many patients, and the nurse to patient ratio was well out of kilter.

The cost of a bed night in a UK hospital is a known calculation in the NHS system. This is closely managed and on the date of admission a discharge date also is entered onto the system. Patients are admitted for the minimum time required to achieve "recovery". They are then discharged and for further recovery to community mental health teams. This is up to 60% cheaper than funding an inpatient bed. The daily cost of patient care in the Ugandan mental health system is difficult to ascertain and there does not appear to be a systematic way of protecting the public purse. Of concern to Butabika was the cost of food, water and medication for inpatients … not the cost of accommodation and attention of professional therapists.

Female Forensic Patients

"There are 7 long stay female forensic patients with nowhere to be discharged to. Some patients arrive in Butabika directly from court. They stand trial and are observed to have mental health issues, so are brought to Butabika for stabilisation before returning them to court. Some come from home, and are brought in by the police. Some patients come from prisons, where they break down, are treated and then returned to prison. Some patients simply require assessment and if they do not meet the high criteria of a national referral hospital, should be referred elsewhere.

Women Who Kill have significant difficulties planning to return to their communities, which out right reject them. They tend to receive no visitors and totally lose contact with home. There should be a hostel to help de-congest Butabika, so patients can be stepped down before being settled in the community."

Most patients should be more appropriately dealt with at District or Region, rather than congesting inpatient beds in Butabika. Many patients ready for discharge (who no longer meet the criteria for treatment at a national referral hospital), remain in hospital. Some of the reasons given were that there was nowhere to discharge them to, families might abandon especially forensic patients. Some patients no longer met the criteria for a national referral hospital, although they required further treatment in the community, however there was inadequate capacity to step them down (eg. hostel accommodation, or sheltered housing). The Deputy Executive Director mentioned the new approved national health structure which would see more psychiatric staff in General Hospitals at HC3 and HC4 to manage mild to moderate mental health conditions leaving Butabika to deal with the most complex patients.

13.2 The visit to **Bosa Mental Health Unit at Mulago** was eye opening. There were hundreds of patients waiting to be seen, many sitting in corridors, who had been waiting many hours. The Bosa Unit had 1 psychiatrist, 5 PCOs, 2 psychologists, an occupational therapist and speech and language therapist. There were also 14 psychiatric nurses and many assistant nursing officers. This hospital unit used to have 70 beds, which had been re-allocated to orthopaedic trauma. There were now only 4 inpatient beds available and if required they would refer patients to Butabika. They received referrals from Mulago hospital ward, the police would bring patients, other health units would refer, there was also a walk in clinic. So there was very little control over number of patients presenting on any one day, some were known to the service and many others not at all. Some attend for the first time, with no medical history notes for guidance. Bosa Ward deals with bipolar, schizophrenia, generalised anxiety, post traumatic stress disorder, depression and substance misuse. Wednesday was allocated to the treatment of epilepsy, which was the highest number of patients this very very busy mental health unit was dealing with, epilepsy. Epilepsy is a neurological condition. A small number of PCOs see patients on a one to one basis and prescribe (at times without patient notes), as they move along the queue.

13.3 **Kawempe National Referral Hospital –** should be a centre of excellence in managing the most complex child births in the country. It offers a range of women's reproductive services, however they are nationally known for labour and delivery of

babies. This specialist institution exhibited little control over quality of patient admissions and from whence they came. Women turn up and if they are in labour are admitted, deliver their babies and are discharged. Normal deliveries are discharged within 24 hours, those requiring an operation discharged within 72 hours, and women with complications perhaps for up to 7 days. With a bed capacity of 120, they reportedly deliver about 70-100 babies a day (above the bed capacity). The private wing has 7 rooms. This hospital is staffed by 200 midwives, 2 psychiatric nurses 17 obstetricians. There were 4-5 HIV counsellors, and full HIV testing was done on the ward for all women, an initiative of Makerere University and Johns Hopkins University. Staff admitted observing many women with perinatal mental health challenges, and indeed the previous month they had referred 8 women to Butabika. Some women were suicidal, others tried to kill their babies, or abandoned their babies. The hospital has a teenage pregnancy clinic on a Thursday. As a result of the huge numbers and speed of turnaround with limited resources, this hospital could not follow up mothers at 6 days, 6 weeks and 6 months for post natal care. Paper records were in use, systems were not digitised, but they did record vital statistics.

13.4 **Mulago Specialised Women and Neonatal Hospital**, is less than five years old. With 450 beds it deals with gynaecology, maternal foetal medicine, neonatology, post natal, infertility. It has 11 theatres, an intensive care unit, and admits emergency referrals mainly from Kawempe National Referral Hospital. The hospital has one clinical psychologist post, who works alone and not part of a multi disciplinary mental health team.

13.5 Multidisciplinary Team Working

The management of patients with serious mental illness by a multidisciplinary team (MDT) is considered the gold standard for patient care. The MDT system brings together professionals from different disciplines to decide upon the best possible treatment plan for the individual, based on available evidence. A mental health MDT can be made up of psychiatrist, psychologist, mental health nurse, allied health professionals (occupational therapy, physio therapy, speech and language therapist). However it is constituted, its basic aim is to meet regularly to review each patient and work out an effective treatment plan, and make appropriate referrals to specialist services if required. The MDT system is not a thing in Ugandan health facilities visited by the fellows, apart from Butabika Hospital.

In interview professionals said:

"Few mental health facilities are able to offer multi disciplinary working. Voluntary sector organisations can be structured much more satisfactorily. The Trans cultural Psychosocial Organisation (TPO) is a Non-Governmental Organization that started its work in Uganda as Institute for Psychosocial and social ecological Research (IPSER) in 1994 with a study commissioned by UNHCR on the mental health and psychosocial issues affecting South Sudanese. The organisation is currently found in areas where there have been incidents of high community trauma – caused by war, drought or famine. Over the years, TPO Uganda's program has expanded to cover mental health and psychosocial support, social protection interventions, child and adolescent focused programs as well as economic empowerment programs for women and vulnerable households. TPO Uganda is currently present in 56 districts of Uganda, spread across seven sub-regions of Acholi, Lango, Teso, Karamoja sub-region, South West, West Nile and

Central Uganda. TPO works in a cohesive MDT type structure with 6 clinical psychologists and 4 PCOs as well as social workers. Staff are trained in Cognitive Behaviour Therapy to help people recover from trauma and depression. TPO provides many group talking therapy sessions in the 55 Districts in which they operate. They use the WHO approved tools of SR20, PHQ9, GAD7, DSMV which have been translated into Swahili, Arabic, and the translators are psycho social assistants. This is certainly not the norm in Government facilities."

Appendix 1

THE NATIONAL HEALTH SERVICES

A. NATIONAL HEALTH SERVICE – ENGLAND AND WALES

1. The National Health Service Act came into effect on 5 July 1948 and provided for the establishment of a comprehensive health service for England and Wales. The service began in 1948 to provide everyone in the UK with healthcare based on their needs, and not on their ability to pay. Virtually the entire population is covered, and health services are free except for certain minor charges.

2. NHS England as an organisation oversees the work of the NHS and:

(1) Sets direction
(2) Allocates resources
(3) Ensures accountability
(4) Supports and develops people
(5) Mobilises expert networks
(6) Enables improvement
(7) Delivers services
(8) Drives transformation

3. Health Resources

The NHS aspires to deliver high quality services for all, by ensuring that the healthcare workforce has the right numbers, skills, values and behaviours to support the delivery of excellent healthcare and health improvement to patients and the public. The NHS works with partners to optimise the use of digital technology, research and innovation, and to deliver value for money and increased productivity and efficiency. The NHS is responsible for running vital national IT systems which support health and social care, and the collection, analysis, publication and dissemination of data generated by health and social care services to improve outcomes for patients.

4 The British Health System

The NHS England *Operating Framework* describes six long-term aims:

i. Longer healthy life expectancy for all
ii. Excellent quality, safety and outcomes.
iii. Excellent access and experience.
iv. Equity of healthy life expectancy, quality, safety, outcomes, access and experience.
v. Value for taxpayers' money.
vi. Support to society, the economy and environment.

B. THE UGANDAN HEALTH SERVICE

5. The Ugandan health service began with an array of hospitals built across the country by different missionary and religious organisations during the colonial. Mengo Hospital is the oldest in Uganda, established by Albert Ruskin Cook in 1897 by the Church Missionary Society. Over time there developed a high standard of healthcare and relatively large spending on the health sector. The hospitals, health posts and dispensaries in rural areas were integrated into a well staffed health service network. The annual supply of highly educated health workers and medical professionals graduating from Makerere University were in the early days fully absorbed into the

health system and offered attractive remuneration. This was unfortunately disrupted by the political upheavals of the 1970s.

6. The population has grown exponentially, to approximately 41.6 million with an annual growth rate is 3.3%. Nearly half the population (49%) is currently under the age of 15 years, with 75% being 25 years or younger. The country has a high fertility rate of 5.4% and consequently continues to experience a high child and adolescent dependency ratio. There was an increase in the number of mental health conditions reported from 491,013 to 550,373 in year 2020/21 . Mental health conditions contributed 1.2% of all out patient attendances. [i]

7. Universal Health Coverage – The Aspiration

The Ugandan government aspires to reach Universal Health Coverage (UHC) by 2030. The current per capita allocation for health is 62,031 shillings, or 17USD (2019/20 fiscal year)[i]. This falls short of the World Health Organisation recommendation of a per capita allocation to health of 46USD to achieve Universal Health Coverage by 2030. It also translates into high out-of-pocket expenditure for patients. Meanwhile, the health sector continues to face challenges providing quality and accessible healthcare services. Generally, health sector budgets influence the availability of medicines, supplies, equipment, and transportation to bigger health facilities. This in turn has a direct impact on quality of care. The total government expenditure on health as a percentage of GDP is 7.2% for the financial year 2019/20, which is below the Abuja Declaration target of 15% of national budget being allocated to Health. To balance this gap in funding, there is high dependence on development partners, who contribute about 43% of the necessary Health funding. The population is left out-of-pocket and expected to cover 38.4% of medical costs. The rural poor can often not afford to meet these out of pocket medical costs, which can affect their ability to access appropriate care. When patients at Gombe are referred to the Regional Referral Hospital at Masaka, many do not attend their appointments as they cannot afford the transport.

8. National Quality Improvement Framework & Strategic Plan (2021-2025)

The Ministry of Health is committed to accelerate attainment of universal health coverage with a focus on primary healthcare by the year 2030. This work includes reducing neonatal, infant, under-five and maternal mortality.[i] As a quality improvement piece, this where the Gombe Hospital Perinatal Mental Health project sits.

9. According to the Service Availability and Readiness Assessment (SARA) Report 2019, there are critical gaps in the availability of priority services and inadequate capacity of facilities to provide them. Health facilities have a 52% capacity to provide general services according to the report[i]. In addition, the 2019 MoH Client Satisfaction Survey revealed a 25% satisfaction rate among clients, indicating a need to focus the Health Sector Quality Improvement Framework and Strategic Plan on enduring systems issues that continue to impact availability and quality of care.

10. Structure of The Ugandan Health System (Appendix 1)

The Ugandan health system is made up of both private and government funded facilities. The government regulates operations of all healthcare facilities. Private companies tend to invest in hospitals, clinics, and pharmacies. There is no national health insurance coverage, however there is private health insurance provided by insurance companies. Currently, Ugandan health facilities are classified into seven

levels based on the services they provide and the catchment area they are intended to serve. The health facilities are designated as Health Centre level one (HC I) to Health Centre Level four (HC IV); General hospital, Regional Referral hospital and National Referral hospital.

At District level, HC1 is staffed by Village Health Teams (VHTs). These are volunteer community health workers, many not medically qualified, but who have credibility in their communities. They are given basic training to deliver predominantly health education and prevention services. In Gombe they are expected to support the health care system with resolving or treating children under the age of 5 for conditions including malaria, pneumonia, diarrhoea, vaccinations and TB. They are considered able to make effective health visits to families and advise and treat a few conditions.

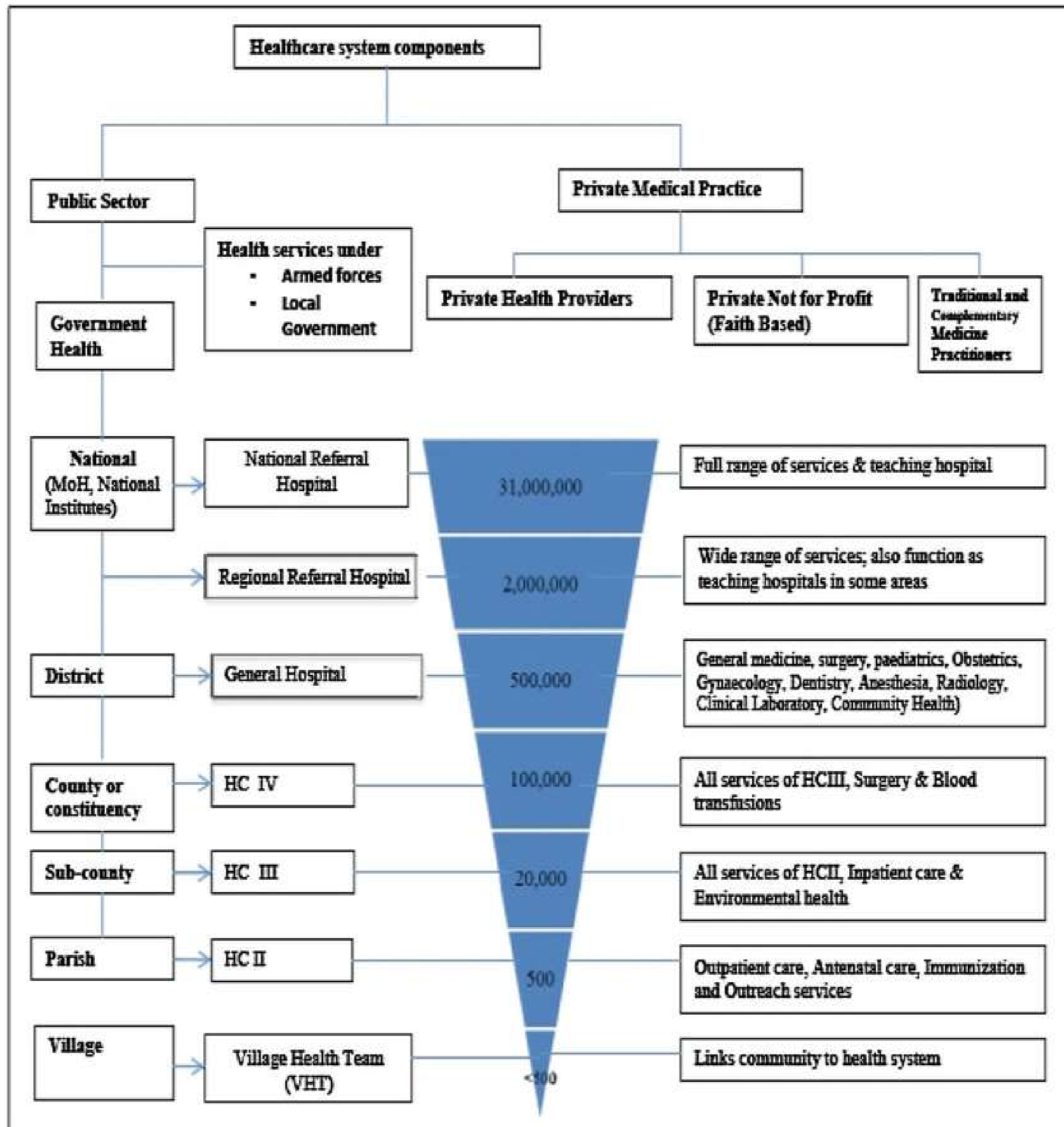
Health Centre II is an out patient service run by a nurse and intended to serve 5000 people. Next in level is Health Centre III, managed by a Clinical Officer and serving 10,000 people. It provides simple diagnostic, and maternal health services and expected to deal with mild to moderate conditions as well as ante natal and post natal care. Health Centre IV is run by a medical doctor and provides surgical services, preventive, promotive, outpatient, curative, maternity, in patient, laboratory, ultrasound, emergency, mortuary services. It should have the capacity to provide blood transfusions and comprehensive emergency obstetric care. Many do not in fact have the resources to provide to this capacity.

Government hospitals are divided into three categories: district general hospitals, regional referral and finally national referral hospitals. District general hospitals are staffed with general doctors. Regional referral hospitals are teaching hospitals and have specialists in specific fields. There are five national referral hospitals: Mulago, Butabika , Kawempe, Kiruddu, and Naguru, located in Kampala. Research or teaching hospitals provide comprehensive specialist services. It is only in hospitals (primarily located in urban areas) that offer tertiary and specialised care. There are five specialised hospitals: Mulago Super Specialised Hospital, Mulago Women and Neonatal Specialized Hospital, the Regional Paediatric Surgical Hospital (Entebbe), the Uganda Heart Institute and the Uganda Cancer Institute[i]

Traditional and complementary medicine practitioners are an integral part of the local culture and Ugandan health care system. They are many and distributed across the country so are an opportunity towards a sustainable source of health care and knowledge base about illness and specific health conditions. Traditional healers include herbalists, spiritual healers, bone setters, traditional birth attendants, hydro therapists, and traditional dentists .[i]

Appendix Ia

STRUCTURE OF UGANDAN HEALTH SYSTEM



APPENDIX II

ENGLISH AND LUGANDA SELF REPORT QUESTIONNAIRE 20

	Question	Yes	No
1	Do you often have headaches? *Otera okubobbebwa oba okulumizibwa omutwe bulikisera?*		
2	Is your appetite poor? *Oyagala okulya?*		
3	Do you sleep badly? *Obulwa otulo?*		
4	Are you easily frightened? *Okangibwa kangibwa mangu?*		
5	Do your hands shake? *Emikono gitera okukankana?*		
6	Do you feel nervous, tense or worried? *Owuliranga totereera oba nga weeralikirira?*		
7	Do you often experience constipation, heart burn or bloating of the stomach after having your meals? *Olubuto lukuzimba oba lukwokyerera nga olidde emmere, oba olwawoo kugenda emanju?*		
8	Do you have difficulties with your thinking, for example do you think too much? *Ofuna obuzibu mukulowoza, gezanga, okulowoza enyo?*		
9	Do you feel unhappy? *Oli munakuwavu?*		
10	Do you get a feeling of wanting to cry but you cannot? *Ofuna embeera eyokwagala okukaba nayenga tosobola?*		
11	Do you find it difficult to enjoy your daily activities? *Osanga obuzibu mu kunyumirwa emirimu gyo, oba ebintu ebirara byokola buliijo?*		
12	Do you find difficulty in deciding on what activities you will perform on a given day? *Osanga obuzibu mu kusalawo kubyoba ogenda okukola mulunaku?*		
13	Do you have trouble completing your daily tasks? *Osanga obuzibu okutukiriza emirimu gyokola bulijjo?*		
14	Are you unable to play a useful role in life? *Tokyalina kyamugaso kyona kyosobola kutukiriza mu bulamu bwo eri abantu bo?*		
15	Have you lost interest in things? *Tokyalina ky'onyumirwa mu nsi?*		
16	Do you feel that you are a worthless person? *Muli owulira nga tokyalinamugaso?*		
17	Has the thought of ending your life been on your mind? *Ekirowoozo eky'okweggya mu bulamu bw'ensi kyali kikujjidde?*		
18	Do you feel tired all the time? *Bulibudde owuliranga olimukoowu?*		
19	Do you have uncomfortable feelings in your stomach? *Olubuto lwo lutera okugulumbagulumba?*		
20	Are you easily tired? *Okowa mangu?*		

APPENDIX III

GENERALISED ANXIETY DISORDER 2-ITEM (GAD-2)

Generalized Anxiety Disorder 2-item (GAD-2)

Share

The Generalized Anxiety Disorder 2-item (GAD-2) is a very brief and easy to perform initial screening tool for generalized anxiety disorder.[1]

Over the **last 2 weeks**, how often have you been bothered by the following problems?

1. Feeling nervous, anxious or on edge

○ 0	○ +1	○ +2	○ +3

2. Not being able to stop or control worrying

○ 0	○ +1	○ +2	○ +3

GAD-2 score obtained by adding score for each question (total points)

Interpretation:

A score of 3 points is the preferred cut-off for identifying possible cases and in which further diagnostic evaluation for generalized anxiety disorder is warranted. Using a cutoff of 3 the GAD-2 has a sensitivity of 86% and specificity of 83% for diagnosis generalized anxiety disorder.

Performance as Screening Tool for Anxiety Disorders

Although designed as a screening tool for generalized anxiety, the GAD-2 is also performs reasonably well as a screening tool for three other common anxiety disorders—Panic Disorder, Social Anxiety Disorder, and Posttraumatic Stress Disorder.[1]

Performance of GAD-2 as Screening Tool for Anxiety Disorders[1]
(Using GAD-2 Score Cut-off of ≥3)

Test	Sensitivity	Specificity	Positive Likelihood Ratio
Generalized Anxiety Disorder	86%	83%	5.0
Panic Disorder	76%	81%	4.1
Social Anxiety Disorder	70%	81%	3.6
Post-Traumatic Stress Disorder	59%	81%	3.1
Any Anxiety Disorder	65%	88%	5.2

Sources

1. Kroenke K, Spitzer RL, Williams JB, Monahan PO, Löwe B. Anxiety disorders in primary care: prevalence, impairment, comorbidity, and detection. Ann Intern Med. 2007;146:317-25.

Acknowledgement

The GAD-2 was based on the GAD-7, which was developed by Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke and colleagues, with an educational grant from Pfizer Inc. No permission required to reproduce, translate, display or distribute.

This calculator operates entirely from your device.
No input variables or data is transmitted between your computer and our servers.

APPENDIX IV

GENERALISED ANXIETY DISORDER 7-ITEM (GAD-7)

Mental Health Screening

- Anxiety: GAD-2
- Anxiety: GAD-7
- Dementia: IHDS
- Depression: PHQ-2
- Depression: PHQ-9
- PTSD: PC-PTSD-5

Substance Use Screening

- Alcohol: AUDIT-C
- Alcohol: CAGE
- CAGE-AID
- Drug Use: TICS
- Opioid: Risk Tool

Clinical Calculators

- APRI Calculator
- BMI Calculator
- CrCl Calculator
- CTP Calculator
- FIB-4 Calculator
- FEPO4 Calculator
- GFR Calculator

Generalized Anxiety Disorder 7-item (GAD-7)

Share

The Generalized Anxiety Disorder 7-item (GAD-7) is a easy to perform initial screening tool for generalized anxiety disorder[1].

Over the **last 2 weeks**, how often have you been bothered by the following problems?

1. Feeling nervous, anxious or on edge

○ 0	○ +1	○ +2	○ +3

2. Not being able to stop or control worrying

○ 0	○ +1	○ +2	○ +3

3. Worrying too much about different things

○ 0	○ +1	○ +2	○ +3

4. Trouble relaxing

○ 0	○ +1	○ +2	○ +3

5. Being so restless that it is hard to sit still

○ 0	○ +1	○ +2	○ +3

6. Becoming easily annoyed or irritable

○ 0	○ +1	○ +2	○ +3

7. Feeling afraid as if something awful might happen

○ 0	○ +1	○ +2	○ +3

GAD-7 score obtained by adding score for each question (total points)

Interpretation:

When screening for anxiety disorders, a score of 8 or greater represents a reasonable cut-point for identifying probable cases of generalized anxiety disorder; further diagnostic assessment is warranted to determine the presence and type of anxiety disorder. Using a cut-off of 8 the GAD-7 has a sensitivity of 92% and specificity of 76% for diagnosis generalized anxiety disorder.[2,3]

The following cut-offs correlate with level of anxiety severity:

- Score 0-4: Minimal Anxiety
- Score 5-9: Mild Anxiety
- Score 10-14: Moderate Anxiety
- Score greater than 15: Severe Anxiety

Based on a recent meta-analysis, some experts have recommended considering using a cut-off of 8 in order to optimize sensitivity without compromising specificity[2].

Performance as Screening Tool for Anxiety Disorders

APPENDIX V

PATIENT HEALTH QUESTIONNAIRE-2 (PHQ-2)

Mental Health Screening
- Anxiety: GAD-2
- Anxiety: GAD-7
- Dementia: IHDS
- Depression: PHQ-2
- Depression: PHQ-9
- PTSD: PC-PTSD-5

Substance Use Screening
- Alcohol: AUDIT-C
- Alcohol: CAGE
- CAGE-AID
- Drug Use: TICS
- Opioid: Risk Tool

Clinical Calculators
- APRI Calculator
- BMI Calculator
- CrCl Calculator
- CTP Calculator
- FIB-4 Calculator
- FEPO4 Calculator
- GFR Calculator

Patient Health Questionnaire-2 (PHQ-2)

Share

The PHQ-2 inquires about the frequency of depressed mood and anhedonia over the past two weeks. The PHQ-2 includes the first two items of the PHQ-9.

- The purpose of the PHQ-2 is to screen for depression in a "first-step" approach.
- Patients who screen positive should be further evaluated with the PHQ-9 to determine whether they meet criteria for a depressive disorder.

Over the **last 2 weeks**, how often have you been bothered by the following problems?

1. Little interest or pleasure in doing things

○ 0	○ +1	○ +2	○ +3

2. Feeling down, depressed or hopeless

○ 0	○ +1	○ +2	○ +3

PHQ-2 score obtained by adding score for each question (total points)

Interpretation:

- A PHQ-2 score ranges from 0-6. The authors identified a score of 3 as the optimal cutpoint when using the PHQ-2 to screen for depression.
- If the score is 3 or greater, major depressive disorder is likely.
- Patients who screen positive should be further evaluated with the PHQ-9, other diagnostic instruments, or direct interview to determine whether they meet criteria for a depressive disorder.

Operating Characteristics of PHQ-2 as a Screener for Depressive Disorders in 580 Patients Who Had an Independent Mental Health Professional Interview

Major Depressive Disorder (7% Prevalence)

PHQ-2 Score	Sensitivity	Specificity	Positive Predictive Value (PPV*)
1	97.6	59.2	15.4
2	92.7	73.7	21.1
3	82.9	90.0	38.4
4	73.2	93.3	45.4
5	53.7	96.8	56.4
6	26.8	99.4	78.6

Any Depressive Disorder (18% Prevalence)

PHQ-2 Score	Sensitivity	Specificity	Positive Predictive Value (PPV*)
1	90.6	65.4	36.9
2	82.1	80.4	48.3
3	62.3	95.4	75.0
4	50.9	97.9	81.2
5	31.1	98.7	84.6
6	12.3	99.8	92.9

Notes:

- *Because the PPV varies with the prevalence of depression, the PPV will be higher in settings with a higher prevalence of depression and lower in settings with a lower prevalence.

Sources

Kroenke K, Spitzer RL, Williams JB. The Patient Health Questionnaire-2: Validity of a Two-Item Depression Screener. Medical Care. 2003;41:1284-92.

APPENDIX VI

PATIENT HEALTH QUESTIONNAIRE-9 (PHQ-9)

Mental Health Screening

- Anxiety: GAD-2
- Anxiety: GAD-7
- Dementia: IHDS
- Depression: PHQ-2
- **Depression: PHQ-9**
- PTSD: PC-PTSD-5

Substance Use Screening

- Alcohol: AUDIT-C
- Alcohol: CAGE
- CAGE-AID
- Drug Use: TICS
- Opioid: Risk Tool

Clinical Calculators

- APRI Calculator
- BMI Calculator
- CrCl Calculator
- CTP Calculator
- FIB-4 Calculator
- FEPO4 Calculator
- GFR Calculator

Patient Health Questionnaire-9 (PHQ-9)

Share

The PHQ-9 is a multipurpose instrument for screening, diagnosing, monitoring and measuring the severity of depression.

Over the **last 2 weeks**, how often have you been bothered by the following problems?

1. Little interest or pleasure in doing things

○ 0	○ +1	○ +2	○ +3

2. Feeling down, depressed or hopeless

○ 0	○ +1	○ +2	○ +3

3. Trouble falling asleep, staying asleep, or sleeping too much

○ 0	○ +1	○ +2	○ +3

4. Feeling tired or having little energy

○ 0	○ +1	○ +2	○ +3

5. Poor appetite or overeating

○ 0	○ +1	○ +2	○ +3

6. Feeling bad about yourself - or that you're a failure or have let yourself or your family down

○ 0	○ +1	○ +2	○ +3

7. Trouble concentrating on things, such as reading the newspaper or watching television

○ 0	○ +1	○ +2	○ +3

8. Moving or speaking so slowly that other people could have noticed. Or, the opposite - being so fidgety or restless that you have been moving around a lot more than usual

○ 0	○ +1	○ +2	○ +3

9. Thoughts that you would be better off dead or of hurting yourself in some way

○ 0	○ +1	○ +2	○ +3

PHQ-9 score obtained by adding score for each question (total points)

Interpretation:

- Total scores of 5, 10, 15, and 20 represent cutpoints for mild, moderate, moderately severe and severe depression, respectively.
- Note: Question 9 is a single screening question on suicide risk. A patient who answers yes to question 9 needs further assessment for suicide risk by an individual who is competent to assess this risk.

APPENDIX VII

PROFESSIONALS GIVEN IN DEPTH INTERVIEWS

Name	Professional	Location	Years of Experience
Leticia Birungi	Clinical Psychologist	Trans cultural Psychosocial Organisation	4
Alice Nansamba	Nurse Officer, Midwife	Gombe	21 years
Hilda Awulira	Mental Health Nurse	Gombe	14 years
Gladys Nansubuga	Psychiatric Nurse, in Charge of Forensic Unit, Kirinnya Ward	Butabika	29 years
Joshua Ssebunnya	Clinical Psychologist	Medical Research Council	19 years
James Nsereko	Clinical Psychologist	Butabika	17 years
Jacqueline Nakitende	Clinical Psychologist	Women's and Neonatal Hospital	17 years
Irene Apio Wengi	Consultant Psychiatrist	Butabika	19 years