ASSESSMENT OF HEALTH INFRASTRUCTURE AND MENTAL HEALTH CARE IN CALABAR FEDERAL NEUROPSYCHIATRIC HOSPITAL

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ABSTRACT

The study on Assessment of health infrastructure and mental health care in Calabar Federal Neuropsychiatric Hospital highlights the critical role of infrastructure in delivering effective mental health services. The study adopted a mixed-methods approach, as well as quantitative and qualitative methods. Data was collected from the staff in Calabar Federal Neuropsychiatric Hospital with a staff strength of 221 purposively chosen for the study. The 4-point Likert scale structured questionnaire was used. Data collected was analyzed using the Chi-square (X^2) test statistical tool. The findings revealed that adequate health infrastructure, public awareness and attitudes, stigma and cultural perceptions significantly enhance the quality of mental health care services which is grossly inadequate in Calabar Federal Neuropsychiatric Hospital with Chi-square (X^2) (16.4869; 12.8236 & 13.9596 respectively) against the critical value of 7.82 at 0.05 level of significance. Thus, the study recommended that the government and relevant stakeholders should prioritize the renovation and expansion of hospital facilities, launch public awareness campaigns, allocate a sufficient budget to maintain the hospital's infrastructure, and recruit and train more mental health professionals.

KEYWARDS: *Assessment, Health, Infrastructure, Mental Health, Neuropsychiatric, Hospital, Calabar.*

1. INTRODUCTION

Mental health is commonly viewed as a state of ones well-being that enables the person to cope with the various stresses of life. Mental health is a complex and multidimensional concept that can be defined in different ways depending on the empirical frame used (Manwell et al., 2015). According to the World Health Organization (WHO), mental health is "a state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively, and is able to make a contribution to his or her community" (WHO Africa, 2022b). However, mental health is not only determined by individual factors, but also by the social, spiritual and physical environments in which people live. A trans-domain model of health proposed by Manwell et al., 2015 suggests that health is a dynamic process that involves interactions between different domains of human experience, such as biological,

psychological, social and environmental factors.

The causes of mental illnesses are complex and multifaceted, involving a combination of genetic, biological, environmental, and psychological factors (Das, 2014; World Psychiatry, 2018). Genetic predisposition plays a significant role, as certain mental health conditions can be experienced by members a particular family, suggesting an inherited susceptibility. Biological aspects, such as brain chemistry imbalances and hormonal fluctuations, also contribute to the development of mental illnesses. Environmental factors, including exposure to trauma, occupational stress, family challenges, and social or cultural expectations, can trigger or exacerbate mental health issues. Psychological elements, like coping skills and personality traits, influence how individuals handle stress and life challenges, potentially impacting their mental well-being. It's important to note that these factors can interact in complex ways, and what causes mental illness in one person may not in another.

Globally, mental disorders are common, affecting one in four people in their lifetime, and 350 million are living with depression (WHO, 2019). It is estimated that there are approximately 322 million people with depressive disorders (4.4% population prevalence) and 254 million people with anxiety disorders (3.6% population prevalence) worldwide (Maddock et al., 2021). In 2019, global health estimates indicated that over 125 million people in Europe had mental health conditions, representing 13% of the population. This includes adults with depression, anxiety disorders, and psychosis, as well as children and adolescents with developmental and behavioural disorders (WHO Europe, 2022). Southeast Asia faces major public health challenges due to chronic shortages in mental health services and human resource. The estimated prevalence rates of depressive and anxiety disorders in the WHO Southeast Asia region are 27% and 23%, respectively.

In Africa, over 54 million people are battling with various mental health issues with little or no help (Moffet, 2019). However, there is little or lack of awareness, resources, and services for mental health in many parts of Africa, where millions of people engulf with various types of mental disorders (Moffet, 2019). Mental health disorders are a major public health concern in Africa, affecting millions of people and impacting their well-being, productivity and social functioning. According to the World Health Organization (WHO), about 100 million people in Africa suffer from clinical depression, including 66 million women, making it the most prevalent mental illness in the continent (Mayberry, 2021).

In Nigeria and Calabar Federal Neuropsychiatric Hospital in particular mental health is grossly underestimated due to lack of infrastructural facilities. Health infrastructure serves as the foundation for effective healthcare delivery systems, encompassing facilities, equipment, and human resources that support health services (World Health Organization [WHO], 2010). In regions such as Cross River State, Nigeria, where socioeconomic and infrastructural disparities influence health outcomes, the state of health infrastructure significantly impacts the ability to address both physical and mental health needs.

Research conducted by Patel et al. (2018) underscores the scarcity of psychiatric hospitals, community-based mental health centers, and trained professionals in LMICs. For instance, in sub-Saharan Africa, there are fewer than 1.4 mental health workers per 100,000 people, compared to over 70 per 100,000 in high-income countries (WHO, 2021). This disparity underscores systemic inequities in mental health service provision. In high-income countries, although the infrastructure is comparatively better, gaps remain. Thornicroft et al. (2016) found that even in well-resourced nations, rural and

underserved communities often lack access to mental health services. This highlights a geographic imbalance in the distribution of mental health infrastructure.

The adequacy of mental health infrastructure involves not just physical facilities but also the availability of qualified professionals, medications, and support systems. A study by Vigo, Thornicroft, and Atun, (2019) revealed that while some countries have sufficient facilities, they lack adequately trained staff to meet patient needs. This shortage of human resources is particularly acute in LMICs, where psychiatrists, psychologists, and social workers are in limited supply. The quality of infrastructure is another concern. Research by Semrau et al. (2019) found that many mental health facilities in LMICs are outdated and fail to meet basic standards for patient care, including hygiene, privacy, and safety. Additionally, stigma and discrimination within health systems often discourage individuals from seeking care, further undermining the adequacy of available infrastructure (Clement et al., 2015).

Despite these challenges, innovative interventions have shown promise in addressing infrastructure gaps. For example, task-shifting approaches, where non-specialist health workers are trained to deliver basic mental health services, have proven effective in several LMICs (Patel et al., 2018). Similarly, telemedicine and mobile health technologies are emerging as viable solutions to extend mental health services to remote areas (Torous et al., 2020).

Corrigan et al. (2002) demonstrated that public stigma is associated with reduced help-seeking behaviors, as individuals fear being labeled as "mentally ill" and experiencing discrimination. Similarly, self-stigma reduces self-esteem and diminishes individuals' confidence in their ability to recover, as evidenced by Vogel et al. (2006). Both types of stigma contribute to a treatment gap, with many individuals choosing to avoid or delay accessing care. Anti-stigma interventions, such as education campaigns and contact-based strategies, have been shown to mitigate these effects. Clement et al. (2013) conducted a systematic review highlighting that interventions reducing stigma can increase help-seeking intentions and improve attitudes toward mental health care.

Regrettably, mental health care, in particular, remains under prioritized globally and Nigeria in particular. According to the WHO (2021), mental health conditions account for a substantial proportion of the global disease burden, yet they receive little attention in health planning and funding. Cross River State faces unique challenges in this regard, including limited facilities, inadequate staffing, and pervasive stigma surrounding mental illness. These factors hinder the state's ability to provide equitable and effective mental health care services.

In spite of its importance, mental health care in Cross River State faces several persistent challenges. For instance, health facilities in the state often lack the physical and technological resources necessary to support comprehensive mental health services (Federal Ministry of Health [FMOH], 2018). Furthermore, the state has a critical shortage of trained mental health professionals, such as psychiatrists, psychologists, and social workers (Gureje, Oladeji, and Kola, (2015). Cultural misconceptions and stigma surrounding mental illness discourage individuals from seeking care (Abasiubong, Ekott, and Bassey, 2007). Mental health care receives limited attention in state health policies and budgets, resulting in insufficient funding for program development (WHO, 2021). Rural areas in the state are disproportionately underserved, with limited access to mental health care facilities and resources (Gureje & Lasebikan, 2006). These challenges contribute to a significant treatment gap, with many individuals unable to access the care they need. This gap exacerbates the social and economic burden of untreated

mental health conditions in the state, for which this research seeks to explore.

1.1. Aim and objectives of the study

This study aim to investigate the state of health infrastructure and its impact on mental health care delivery in Calabar Federal Neuropsychiatric Hospital. Specifically, the study seeks to;

1. Evaluate the availability and adequacy of health infrastructure for mental health care in Calabar Federal Neuropsychiatric Hospital.
2. Identify Public awareness and attitudes as barriers to access to mental health care delivery in Calabar Federal Neuropsychiatric Hospital.
3. Assess stigma and cultural perceptions on the utilization of mental health services in Calabar Federal Neuropsychiatric Hospital.

1.2. Research Hypothesis

- Adequate health infrastructure does not significantly enhance the quality of mental health care services in Calabar Federal Neuropsychiatric Hospital.
- Public awareness and attitudes do not have a significant negative impact on access to mental health services in Calabar Federal Neuropsychiatric Hospital.
- Stigma and cultural perceptions do not have a significant negative impact on the utilization of mental health services in Calabar Federal Neuropsychiatric Hospital.

1.3. Study area

Mental health services in Cross River State, Nigeria, are primarily provided by the Federal Neuropsychiatric Hospital in Calabar (Figure 1). This hospital, established in 1903, is the first mental health facility in Nigeria and offers comprehensive psychiatric services, including in-patient, out-patient, and community mental health services (FNPH, 2024). The hospital serves not only Cross River State but also neighbouring states and even the Republic of Cameroon, and accessibility can be a problem due to long travel distance. There is presently no published information about the staffing of the Federal Neuropsychiatric hospital in Calabar, though it is generally believed to be understaffed due to the continual surge of health workers to better employment offers abroad. Mental healthcare seekers walk, cycle or drive while some may have a combination of either two or more. While the population have the liberty to use any form of road transport, the roads in some localities are in deplorable states, thereby impeding timely accessibility and utilization of healthcare (Ekanem, Aboh, and Okolisah, 2017).

Neuro psychiatrist has 18 consultants, 24 doctors, 44 Lab scientists, 26 pharmacists, 27 records officers, and 82 nurses. Thus, on the whole, the hospital has a total of 221 staff furthermore, the hospital has 152 active beds, one ward for females, 36 bed spaces, and 1 borehole.

Figure 1: Image of frontal view of Federal Neuropsychiatric Hospital
Source: FNPH, 2024

2. METHODOLOGY

The study adopted a mixed-methods approach, combining quantitative data collection through surveys and qualitative insights from interviews and focus group discussions. This research design was adopted since the study seeks to know the opinions, attitudes, and beliefs of the respondents on the impact of health infrastructure on mental health care in Calabar Federal Neuropsychiatric Hospital. Data for this study was collected from the staff in Calabar Federal Neuropsychiatric Hospital with a total staff strength of 221 purposively chosen for the study. The 4-point Likert scale questionnaire was used. Each item required the respondent to indicate the frequency of his various acts under Strongly Agreed (SA), Agreed (A), Disagreed (D), and Strongly Disagreed (SD). The questions reflected the research question earlier raised to guide the study in achieving its objectives and analysis using the Chi-square (X^2) test statistical tool.

3. RESULTS

This section describes the mental illness diagnoses by LGA provided as location address. The finding in this section satisfies Research Question 4 (What is the prevalence of mental illness by LGA in Cross River State?). Table 1 and Figure 2 are representations of mental illness cases across various Local Government Areas (LGAs) by gender. The LGA with the highest reported cases is Yakurr, with 51 cases, constituting 10.5% of the total cases. In contrast, Bakassi reports the lowest number of cases, with only 4 cases, making up 0.8% of the total.

TABLE 1: Mental illness in LGA by Gender

LGA	Gender		Total	Percent
	Female	Male		
Abi	20	17	37	7.6
Akamkpa	13	14	27	5.5
Akpabuyo	12	14	26	5.3
Bakassi	2	2	4	0.8
Bekwarra	11	10	21	4.3
Biase	12	24	36	7.4
Boki	22	21	43	8.8
Calabar Municipality	8	8	16	3.3
Calabar South	10	10	20	4.1
Etung	8	5	13	2.7
Ikom	11	27	38	7.8
Obanliku	3	7	10	2.0
Obubra	17	15	32	6.6
Obudu	17	19	36	7.4
Odukpani	26	16	42	8.6
Ogoja	9	15	24	4.9
Yakurr	21	30	51	10.5
Yala	4	8	12	2.5
Total	226	262	488	100.0

Source: Author's analysis (2024)

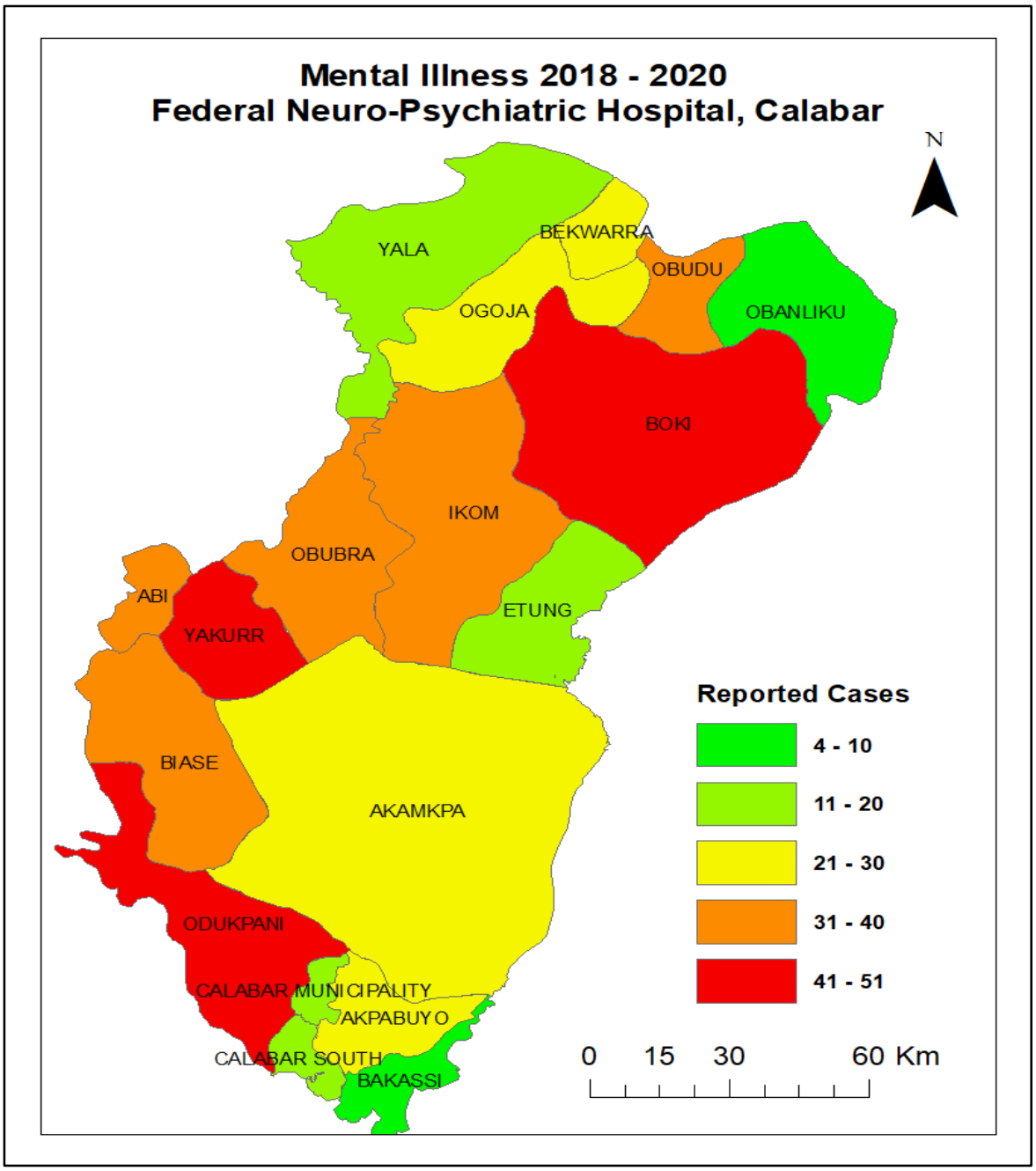

Figure 2: A map showing the prevalence of mental illness across LGAs in the State
Source: Author's analysis (2024)

The result below reveals that calculated value (16.4869) is greater than the critical value of 7.82 at 0.05 level of significance with 3 degrees of freedom. Since the calculate value is greater than the critical value, the null hypothesis was rejected while the alternate hypothesis which states that; adequate health infrastructure significantly enhances the quality of mental health care services in Calabar Federal Neuropsychiatric Hospital was accepted. From the analysis, it shows that adequate health infrastructure has influence on quality of mental health care services.

TABLE 2: Determination of Chi-square analysis of respondents perception of adequate health infrastructure

Cell	O	E	O-E	$(O-E)^2$	$\frac{(Fo - Fe)^2}{Fe}$
1	15	24	-9	81	3.3750
2	45	36	9	81	2.2500
3	40	28	12	144	5.1429
4	30	42	-12	144	3.4286
5	18	17.2	0.8	0.64	0.0372
6	25	25.8	-0.8	0.64	0.0248
7	7	10.8	-3.8	14.44	1.3370
8	20	16.2	3.8	14.44	0.8914
					X^2 = 16.4869

Source: Author's analysis (2024)

From the data analyze below, the result shows that the calculated value of 12.8236 is greater than the critical value of 7.82 at 0.05 level of significance with degree of freedom of 3. With this result, the null hypothesis was rejected, while the alternate hypothesis which states that; public awareness and attitudes have a significant negative impact on access to mental health services in Calabar Federal Neuropsychiatric Hospital was accepted.

TABLE 3: Determination of Chi-square analysis of respondent's perception of public awareness and attitudes

Cell	O	E	O-E	$(O-E)^2$	$\frac{(Fo - Fe)^2}{Fe}$
1	31	26.4	4.6	21.16	0.8015
2	35	39.6	-4.6	21.16	0.5343
3	15	26	-11	121	4.6538
4	50	39	11	121	3.1026
5	20	18	2	4	0.2222
6	25	27	-2	4	0.1481
7	14	9.6	4.4	19.36	2.0167
8	10	14	-4.4	19.36	1.3444
					X^2 = 12.8236

Source: Author's analysis (2024)

From the data analyze below, the result shows that the calculated value of 13.9596 is greater than the critical value of 7.82 at 0.05 level of significance with degree of freedom of 3. With this result, the null hypothesis was rejected, while the alternate hypothesis which states that; stigma and cultural perceptions have a significant negative impact on the utilization of mental health services in Calabar Federal Neuropsychiatric Hospital was accepted.

TABLE 4: Determination of Chi-square analysis of respondents perception of stigma and cultural

Cell	O	E	O-E	$(O-E)^2$	$\frac{(Fo - Fe)^2}{Fe}$
1	40	34.8	5.2	27.04	0.7770
2	47	52.2	-5.2	27.04	0.5180
3	10	17.2	-7.2	51.84	3.0139
4	33	25.8	7.2	51.84	2.0093
5	17	10.8	6.2	38.44	3.5593
6	10	16.2	-6.2	38.44	2.3728
7	13	17.2	4.2	17.64	1.0256
8	30	25.8	-4.2	17.64	0.6837
					$X^2 = 13.9596$

Source: Author's analysis (2024)

4. DISCUSSION

The study on health infrastructure and mental health care in Calabar Federal Neuropsychiatric Hospital underscores the critical role of health infrastructure in mental health services delivery. From the study it was discovered that adequate health infrastructure significantly enhances the quality of mental health care services in Calabar Federal Neuropsychiatric Hospital. This is the reverse at Calabar Federal Neuropsychiatric Hospital where available infrastructure facilities are grossly inadequate to scatter for the teeming population in the state. The Calabar Federal Neuropsychiatric Hospital is established to provide services to Cross River as well as the neighboring state. However, the facilities available in the hospital is grossly inadequate to rendered effectiveness and efficiency of services to the people, thus, undermining the usage of the hospital. Furthermore, an interview with Chief Medical Director of Hospital revealed that the number of staff and equipment such as wards, medical equipment, consultation rooms, electronic health record systems, recreational areas, patient feeding other inadequate. This supported the study of Patel et al. (2018) underscores the scarcity of psychiatric hospitals, community-based mental health centers, and trained professionals in LMICs. For instance, in sub-Saharan Africa, there are fewer than 1.4 mental health workers per 100,000 people, compared to over 70 per 100,000 in high-income countries (WHO, 2021). This disparity underscores systemic inequities in mental health service provision. Furthermore, Vigo et al. (2019) revealed that while some countries have sufficient facilities, they lack adequately trained staff

to meet patient needs. This shortage of human resources is particularly acute in LMICs, where psychiatrists, psychologists, and social workers are in limited supply. The quality of infrastructure is another concern.

Furthermore, the study revealed that public awareness and attitudes have a significant negative impact on access to mental health services in Calabar Federal Neuropsychiatric Hospital. This implied that the lack of awareness of the public on the benefit of psychiatric health care hinders the effective utilization of the hospital. In the same vein, an interview revealed that the lack of general public awareness and attitude to mentally ill persons further hinder the utilization of mental health care services in the area. This is similar to the study of Wang et al. (2007) reported that enhanced mental health literacy is associated with higher rates of help-seeking behavior, emphasizing the importance of educational interventions. Similarly, Jorm et al. (2006) found that individuals with a limited understanding of mental health disorders often fail to identify symptoms of depression or anxiety, leading to underutilization of available services. Corrigan et al. (2012) demonstrated that public education initiatives could significantly enhance understanding of mental health conditions, thereby encouraging earlier intervention and reducing the treatment gap.

Lastly, the study revealed that stigma and cultural perceptions have a significant negative impact on the utilization of mental health services in Calabar Federal Neuropsychiatric Hospital. This entails that stigma and cultural perceptions of mentally ill persons influences the level of utilization of mental health services in Calabar. This supported the study of Corrigan, Watson, and Barr, (2002) demonstrated that public stigma is associated with reduced help-seeking behaviors, as individuals fear being labeled as "mentally ill" and experiencing discrimination. Similarly, self-stigma reduces self-esteem and diminishes individuals' confidence in their ability to recover, as evidenced by Vogel, Wade, and Haake, (2006).. Both types of stigmas contribute to a treatment gap, with many individuals choosing to avoid or delay accessing care. Patel, Chatterjee, Chisholm, Cohen, De Silva, and Van Ommeren, (2010). noted that in South Asian communities, mental health conditions are often attributed to supernatural causes, leading to delays in seeking biomedical treatment. Similarly, Cheng, Brien, and Budgazad, (2018).found that in East Asian cultures, the value placed on maintaining social harmony often results in the concealment of mental health struggles to avoid “losing face.” Culturally adapted interventions have shown promise in addressing these barriers. Therefore, the study revealed health infrastructure has a significant impact on mental health care service delivery.

5. CONCLUSION

Assessing health infrastructure and mental health care in Calabar Federal Neuropsychiatric Hospital highlights the critical role of infrastructures in rendering effective mental health services. Findings reveal that while the hospital provides essential services, several infrastructural deficits and decay hinders effective health care delivery, such as outdated facilities, inadequate patient accommodation, and limited resources. The challenges encountered by the hospital also underscore the broader systemic issues in mental health care, including inadequate financing, the stigma surrounding mental illness, and the shortage of skilled mental health professionals.

6. Recommendations

Based on the findings the following are the study recommendations:

- That government and other critical stakeholders should prioritize the funding and infrastructural

development of mental health facility in Cross River State to reflect current realities and enhance service delivery.

- Embark on aggressive public awareness campaigns to reduce the stigma surrounding mental health and encourage individuals to seek early treatment..
- Establish mechanisms for regular assessment of the hospital's infrastructure and services to ensure continuous upgrade.
- Recruit and continuous training and retraining of existing mental health professionals, including psychiatrists, psychologists, and psychiatric nurses, to address staff shortages.

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