International Journal of Community Research http://www.arpjournals.com
ISSN: 2315 – 6562 **E-ISSN: 2384 - 6828**

PUBLIC HEALTH ASPECTS OF MENTAL HEALTH CARE: IMPLICATIONS AND RISKS IN A STATE OWNED SOUTHERN NIGERIAN PSYCHIATRIC HOSPITAL

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ABSTRACT

Public health issues appear often ignored in hospital settings and lack of public health infrastructure like basic hygiene facilities, being part of basic human requirement, affects the quality of life and patient's physical and mental health states and outcomes. This cross-sectional descriptive study examined the often-neglected public health aspects of mental health care as exemplified by the risks associated with environmental health neglect in a state-owned psychiatric hospital in South-south Nigeria. Data was collected using the National Health Management Information System-based Health Facility Daily Attendance Register (Version 2013), while Hospital In-patient Facilities Checklist (for Psychiatric Units) was used for facility assessment and its compliance to standards. The data analysis was done using SPSS software Version 17. Results showed deficiencies in environmental health infrastructure like absence of toilet facilities, window panes and mosquito nets and protocol/facilities for handling sharps, as well as lack of bed-sheets or laundry facilities and inadequate beds; with many patients lying on the ground. The common infections recorded in the hospital were malaria (13.5%), acute gastroenteritis (9.4%), and those affecting the skin (8.5%). Thus, new policies that would favour good infrastructure and high standard of environmental hygiene in psychiatric hospitals are suggested to improve patient outcome.

Key Words: Public, health risk, neglect, psychiatric hospital.

Received: 25th November, 2015 Accepted: 23rd January, 2016 Published: 31st January, 2016

INTRODUCTION

The United Nations has declared that access to sanitation and good public health, is a human right that applies in times of peace and in emergencies (Public Health Guide for Emergencies, 2015). The term sanitation, is used in a broad sense and considers excreta disposal, vector control, solid and medical waste management and drainage. The term hygiene includes practices related to water hygiene (e.g. keeping water supplies safe), personal hygiene (washing hands), domestic hygiene (e.g. food safety) and environmental hygiene (e.g. keeping household environments free of excreta and solid waste) (Public Health Guide for Emergencies, 2015). Mental Health on the other hand is defined as a state of well-being in which every individual realizes his or her ownpotential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community (WHO, 2014). Poorly managed medical waste in hospital environments poses disease and injury risks to staff, patients and visitors (Public Health Guide for Emergencies, 2015) and the public health implications of these risks are enormous.

Public health issues in mental health hospitals, like in other centers, are often played down because of the embarrassment that they evoke (Kemp, 2015).

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Related to this is the fact that lack of toilets and other good hygiene facilities, ignores a basic human requirement, affects quality of life, encourages unhygienic practices, reduces independence, contributes to mental health problems and results in infections (Kemp, 2015). It is noteworthy that those who make do without toilets continue to jeopardize public health and safety for millions worldwide (WHO, 2015). Though taken for granted in the West, toilets are a luxury for a third of the world's people who have no access to them, according to the World Health Organization and UNICEF (WHO, 2015). In many of such countries, women and girls are particularly disadvantaged as a result of multiple socio-cultural factors. Many today are denied access or lack the facilities and means to manage the simple biological necessities of defaecation and menstruation, and are often forced to adopt a range of coping strategies, with huge public health implications (Das *et al*., 2015). Those who make absence of sanitation facilities/latrines possible are usually not sensitive to the needs of women because reproductive tract infections are more common in women (Das *et al*., 2015).

In some hospitals, there are no functional toilets and patients urinate and defecate in the wards and archaic practices like shaving of head (for both male and female patients) and chaining of disruptive patients outside the ward/cell in unfavorable weather conditions were still prevalent at in some settings (Thirunavukarasu, 2010). The bed-to-patient ratio is also dismal. The overall ratio of beds to patients was 1:1.4, indicating that many patients still sleep on the floor (Thirunavukarasu and Thirunavukarasu, 2010). It is noteworthy that of all human excreta, faeces pose the greatest hazard to health. One gram of fresh faeces from an infected person can contain about 10^6 viral pathogens, 10^6–10^8 bacterial pathogens, 10^4 protozoan cysts or oocysts, and 10–10^4 helminth eggs (Mara *et al.*, 2010). With the public health system in a general state of disrepair, those with mental illness are particularly at risk, as there is still little education and research about such conditions (Deutsche Welle, 2014).

Ageing and crumbling infrastructure continue to pose a huge challenge, owing to the gross neglect suffered by mental health hospitals over the years. Roofs with gaping holes, broken down toilet facilities, consulting rooms and wards in catastrophic conditions remain common place (Apau, 2013). Improvements in good hygiene and one or more of the three components of good health have the potential to substantially reduce the severity of various mental health morbidities while enhance the quality of life of huge numbers of people, especially in developing countries (Feachem *et al.,* 1993).

The health consequences of poor sanitation and neglect of public health include, but not limited to: diarrhoeal and other tropical diseases, acute respiratory infections, typhoid fever, malaria, scabies, undernutrition, urinary tract infections and viral hepatitis, among others (Feachem *et al.,* 1993). It is also documented that much of the cause of many of those diseases is the condition of lavatories and the bad habit of disposing of excreta anywhere and everywhere (Harris, 2015). There are both clinical and non-clinical views in favor of the argument that poor sanitary conditions can impact individual's physical and mental health, as well as the wider population's environmental health (National Assembly for Wales, 2012). These facts are plain enough, even if the means of redressing them have not been. It is considered that the existing poor sanitary infrastructure at the study area significantly contributed to the withdrawal of the accreditation for post-basic psychiatric nursing training of the hospital by the Nursing and Midwifery Council of Nigeria.

There is dearth of published research in public health aspects of mental health care in this part of the country, a situation believed to have contributed to the continued exclusion of the 28-year old Psychiatric Hospital, Eket from previous mental health situation analyses in Nigeria – to the extent that it was not even mentioned among the mental health institutions in the report of that analysis (Health Leadership and Advocacy Programme, 2012). Going by the available literature, the public health correlates of mental health has been under-studied in this area. Therefore, this study seeks to analyze and document the current status of public health within the domain of mental health care in Psychiatric Hospital, Eket, Akwa Ibom State, with a view to drawing the attention of the responsible authorities for action. The findings from the study are also expected to challenge policy makers who exclude mental health from the overall concept of health while allowing positive

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revolutionary steps to be taken for the benefit of present and future patients of the index institution. With this rationale in mind, the study set out to address three (3) hypotheses:

1. Public health issues are often neglected in psychiatric hospitals.

2. The neglect public health aspects of mental health care usually come with huge consequences.

3. Failure of public health in mental health homes reflects a failure of government's role as well as failure of corporate social responsibility from big private sector corporations.

MATERIALS AND METHODS

Study Location: The study was conducted in a 74-bed Psychiatric Hospital, a secondary health care facility in Eket that was carved out of Immanuel Hospital (where it was formerly a Unit in Internal Medicine) and established as a full-fledged hospital in 1987. It has 18 beds in 4 female wards and 5 male wards. It is the only psychiatric hospital in Akwa Ibom state and serves the state and some of the South-south Nigeria states. Eket has an estimated population of 204,890 based on figures from Nigeria's 2006 census (National Population Commission, 2011). Medical records of all 870 patients that presented at the centre over a 3-month period (May-July 2015) were reviewed. The study was of a cross-sectional descriptive design.

Data Collection: Patients' records as documented in the National Health Management Information System (NHMIS) Health Facility Daily Attendance Register (Version 2013) were reviewed in terms of out-patient, in-patient and specialist care and outcomes. The Hospital Inpatient Facilities Checklist (for Psychiatric Units) was used to access the facility and its compliance to expected standards.

Ethical Considerations: Written approval for the study obtained from the hospital's Management as well as the Akwa Ibom state Hospitals Management Board (HMB) – the hospital's supervising Board. Confidentiality of all collected data was observed.

Statistical Analysis: The Statistical Package for the Social Sciences (SPSS) software Version 17.0 was used for analyzing the data. Frequencies and proportions were used in presenting the descriptive statistics.

RESULTS

Data obtained using the Hospital Inpatient Facilities checklist for psychiatric unit as shown in table 1, showed a number of unpleasant findings. Of the proposed 72 beds in the hospital, only 6 (8.1%), with a shortfall of 68 (91.9%) beds. There were no laundry services, no toilet facilities and non-functioning plumbing systems. The ceilings were broken and open and there was no separation of adult, adolescent and paediatric patients in the wards. No specialized services were available for the elderly and children especially the adolescents who may be involved in substance abuse.

DISCUSSION

The results are in line with those of earlier studies (Deutsche Welle, 2014; Apau, 2013; Daily Independent, 2014) indicating that the implementation of the right to health for people with mental disabilities is far from being achieved in Eket, South-south Nigeria. This is about the first study of this nature in that 28 year-old center emphasizing public health dimensions of mental health care in this part of the country. This is also consistent with earlier observations that there have been fewer studies on the topic in low and middle income countries despite the considerable burden of mental disorders in Africa in general and Nigeria in particular, with their potential impact on development (Sharan *et al*., 2009). Therefore, the findings from this study may well serve as a baseline for further research on the topic. Similarly, our findings corroborate with previous findings in other countries and contribute additional evidence to the body of knowledge on the adverse impact of poor status of public health on mental health care outcomes.

In Nigeria, public sector allocation to mental health care is small, with a widely held belief that only lip service is paid to the issue of improving the mental

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health care structures and services (Becker and Kleinmain, 2015). Less than 3% of Gross Domestic Product (GDP) is spent on the health sector, out of which less than 1% is allocated to mental health institutions and services (Becker and Kleinmain, 2015). Though the World Health Organisation recommended 5% of the GDP for the health sector, many countries actually allocate up to 15% (WHO, 2008). The very low level of expenditure on psychiatry in Nigeria, coupled with an obsolete mental health and public health policies and laws, manifest in the abysmal decay of infrastructure, poor level of hygiene, as exemplified by the observed state of affairs at the study site.

Only limited efforts have been made to set-up sharps waste management plan for low level health facilities (LLHFs) like the present study site. In particular, the management of sharps waste from mass and routine injection activities remains problematic as there is evidence that significant quantities of disposable or auto-disable syringes and needles are not properly handled (Tabowei *et al*., 2014). The same could be said about this psychiatric hospital, in which sharps waste management is poor, thereby putting the workers, the public and the environment at risk of exposure to blood borne pathogens. It is also a sad reminder of failure of government at the state level and the near failure of corporate social responsibility by the big multinational oil companies operating in that oil rich city, whose neglect has left the hospital grossly deficient in minimally acceptable infrastructure standards.

TABLE 1: FACILITY COMPLIANCE USING THE HOSPITAL INPATIENT FACILITIES CHECKLIST

S/N	ITEM	OBSERVATION(S)
	PSYCHIATRIC NURSING UNIT	
1.	Privacy	Non existent
2.	Staff protection	No pepper spray, no security trained personnel
3.	Adult and paediatric patients separated in different wards	No
4.	Emergency drugs and tray	Non existent
5.	Use of physical restraint and chains	Yes
	ARCHITECTURAL REQUIREMENTS	
1.	Ward door to toilet.	Nil
2.	Bathtub or shower for each bed	Nil
3.	Patient storage wardrobes and shelves	Nil
4.	Seclusion	9 out of 10 wards
5.	Location.	Nursing station far from wards. No direct observation from nursing station
6.	Beds.	6(8.1%) out of 74 possible beds, leaving a shortfall of 68 (91.9%) beds
7.	Walls, ceiling and floor designed to withstand direct or forceful impact	Nil
8.	Lightening systems.	No bulbs in wards and no electrical switches or receptacle

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	SUPPORT AREARS FOR STAFF	
1.	Staff Offices.	2 consulting rooms, 1 offices each for psychologist, occupational therapists, social worker and pharmacy technician
2.	Staff lounge services	Nil
3.	Staff toilet	Only 1
4.	Staff storage location and closets for staff personal effects	Nil
	ELECTROCONVULSIVE THERAPY.	
1.	Availability	Yes (Donated by Exxon Mobil, Qua Iboe Terminal, EKET)
3.	In Use	No (No room available for its use)
4.	Procedure room	Nil
5.	Pre-procedure room	Nil
6.	Recovery room	Nil
	Emergency equipment storage	Nil
	SURFACES	
1.	Floors.	Broken, firm and slip resistant
2.	Fire Extinguisher	Nil
3.	Switch board location	Nil
	PLUMBING SYSTEM	Broken down/absent
	PATIENT BED ROOM	
1.	Capacity(maximum of 2 patients normally)	Average of 8 per ward
2.	Single/Private room(s)	Nil
3.	Multiple bed room wards	10
4.	Patient toilet	Nil
5.	Bed sheets	No single bed sheet found
6.	Waste disposal bins	Nil
	SUPPORT AREAS FOR PSYCHIATRIC NURSING	
1.	Space for counters	1
2.	Hand washing station	Bucket and basin used.
3.	Nursing staff offices	3 nursing stations for 10 wards
4.	Medication safety zone	Nil
5.	Sharp containers	Nil for 10 wards and 3 nursing stations
6.	Kitchenette	Nil
7.	Refrigerator	Nil
8	Water supply	Good (Donated by Rotary club and Exxon Mobil)
9.	Mosquito Nets	Nil
10.	Waste disposal bins	Nil

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	SUPPORT AREAS FOR PATIENTS AND VISITORS	
1.	Visitors room	Nil
2.	Dinning room	Nil (Lining up of patients for feeding)
3.	Patient Laundry	Nil
4.	Patient storage facilities (Closets and lockers)	Nil
	CALL SYSTEMS.	
1.	Emergency call numbers buttons	Nil
2.	Muster point	Nil
	ARCHTECHTURAL DETAILS	
1.	Emergency room	Nil
2.	Special consideration given to injury and	
3.	Suicide prevention	Nil
4.	Ceiling.	Broken with no consideration for security of inmates, wit high probability for escape
5.	Windows	No glass or wooden cover (open with public health implications)
6.	Medical Laboratory	Nil

TABLE 2: MORBIDITY RATES AMONG THE PARTICIPANTS (N=870)

Variable	**Frequency (n)**	**Percentage (%)**
Malaria	118	13.5
Acute GE	82	9.4
Pneumonia	20	2.3
Skin infections	74	8.5
Tonsillitis	12	1.4
Typhoid Fever	47	5.4
Helminthiasis	13	1.5
Hepatitis	5	.6
RVD	20	2.3
PID/STD/UTI	30	3.4
URTI	49	5.6
No Infections	400	46.3
Total	**870**	**100.0**

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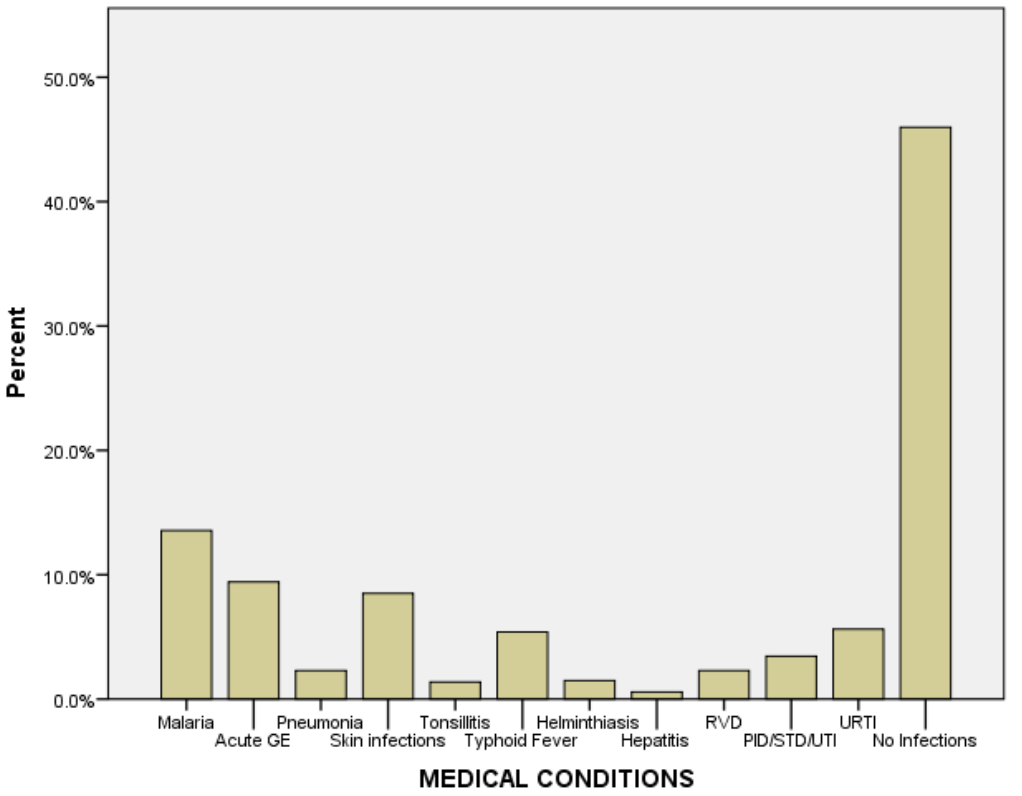

FIGURE 1. BAR CHART SHOWING MORBIDITY PATTERNS AMONG PARTICIPANTS

Beyond the expected roles of both the government and the private sector, a policy intervention that promotes a cultural revolution within the community/city has become imperative as the tool required to change people's attitudes and perspectives towards issues of sanitation and hygiene with a view to improving public health practices in mental health settings. A call for a state of emergency in the public health aspects of psychiatric care especially within the Psychiatric Hospital, Eket is in order; given the size of the observed high burden of public health risks within that facility. Findings from the present study also support a call for increased human capacity building for mental health care services and research. Finally, increased advocacy for mental health care has become necessary in other to improve political commitment towards addressing the common public health inadequacies around mental health facilities and care.

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RECOMMENDATIONS

Both human and medical wastes should be managed and disposed of properly at all times in medical facilities in order to maintain high standards of hygiene. Every health care facility, especially those saddled with mental health care, needs to develop a policy for maintaining public health standards, with appropriate legislative instrument to protect such policies. More so, governments should also come up with and enforce policies that demand targeted corporate social responsibility initiatives from multi-national corporate organizations towards the maintenance of certain public infrastructure within their areas of operation. Essentially, steps to ensure that every tier of government in Nigeria performs it public health function will make especially psychiatric hospitals safer for workers and their patients.

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CONCLUSION

Public Health risks and consequences that impact on mental health homes should be matters of tremendous concern and should be discussed regularly at the highest level. Poor hygiene has serious effects on the health of patients, their response to treatment and eventual lifestyle. Good infrastructure and facilities for maintenance of hygiene in health facilities should be the norm of our policy makers based on strong and clear cut strategies, enabled by sufficient budgetary allocation to this hospital, which is largely responsible for the mental health care of its catchment area and beyond. Overall, implementing our recommendations will require inter-sectoral collaboration with clear-cut strategies in order to forestall possible infectious disease outbreaks. Locally, a policy that seeks to promote cultural re-orientation at the centre has the potential to change people's attitudes toward sanitation and hygiene with improved mental health care processes and results.

LIMITATIONS.

This is a cross-sectional study, with its inherent inability to establish temporality. Certain baseline records could not be obtained as there is a poor facility inventory-keeping at the hospital, with no records for previous public budgetary allocations to the centre or corporate social responsibility towards the facility from the multi-national oil companies operating in the area.

CONFLICT OF INTEREST.

The authors confirm that there are no conflicts of interest.

FUNDING

None declared.

ACKNOWLEDGEMENTS

We are sincerely grateful for the assistants rendered by individuals encountered in the course of data collection, data analysis and manuscript revision.

REFERENCES

Apau P. (2013). Acra Psychiatric Hospital. Speech delivered on the visit of the minister in Feb 2013. Mental Health News. Accessed 27/8/2015 from Available from www.accrapsychiatrichospital.org.

Becker, A. and Kleinmain, A. (2015). An Agenda for closing Resource Gaps in Global Mental Health: Innovation, Capacity building and Partnerships. *Harv Rev Psychiatry*; 20 (1): 3-5.

Daily Independent (2014). All Africa -World Mental Health Day: Nigeria, mental illness as a Time bomb.

Das, B., Das, P., Misra, P., Padhi, B., Sahoo, K., and The SHARE Research Consortium (2015). Social and Psychological Impact of Limited Access to Sanitation. Research Briefing Note. p.1-4. Accessed 29/9/2015 from Available from www.wssce.org.

Deutsche Welle (2014). Indian women in mental hospitals worse than animals. Human Rights Watch Report; pp. 1-4.

Feachem, R., Bradley, D., Garelick, H. and Mara, D. (1993). Sanitation and Disease. Health Aspects of Wastewater and excreta Management. Chichester: John Wiley and Sons. p. 326.

Harris, G. (2015). Poor Sanitation in India May Afflict Well Fed Children with Malnutrition. The New York Times Company.

Kemp, G. (2012). Closing Public Toilets: Is This The Way Forward?. The British Toilet Association. 2012, p 1-6. Accessed on 27/9/2015 from www.bitloos.co.uk.

Mara, D., Lane, J., Scott, B. and Trouba, D. (2010). Sanitation and Health. Research Matters. *PLOS Med*; 7:11.

Mental Health Leadership and Advocacy Programme (UI +WHO) (2012). Mental Health Situation analysis in Nigeria. 1-19.

National Assembly for Wales (2012). Public Health Implications of Inadequate Toilet Facilities: Report of Evidence; pp. 1-22.

National Population Commission. Eket Local Government Population. 2011. Accessed on 20/7/15 from from www.citypopulation.de

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Indexed By: *African Journal Online (AJOL); Texila American University; Genamics; Scholarsteer; EIJASR; CAS-American Chemical Society*; and *IRMS Informatics India* (*J-Gate)*

Public Health Guide for Emergencies (2015). Water, Sanitation and Hygiene in Emergencies. The John Hopkins and the International Federation of Red Cross and Red Crescent Societies. pp. 372-442.

Sharan, P., Gallo, L., Gureje , O., Lamberte, E., Mari, J. and Mazzotti, G. (2009). Mental Health resources in low and middle income countries of Africa, Asia, Latin America and the Caribbeans. The British Journal of Psychiatry: The Journal of Mental Science. 2009; 195: 354-63.

Tabowei, B, Kombo, B. and Mukoro, G. (2012). The handling of Sharp Objects in a local Setting. *The Internet Journal of Health*; 13: 1-4.

Thirunavukarasu, M. and Thirunavukarasu, P. (2010). Training and National deficits of Psychiatrists in India -A critical analysis. *Indian J. Psychiatry*; 52:83-88.

WHO (2008). The global burden of disease: 2004 update. Geneva, 2008.

WHO (2014). Mental Health: A State of Wellbeing. WHO Update, 2014.

WHO (2015). Billions have no Access to Toilets. The Guardian, July 1.

AUTHORS CONTRIBUTIONS

All the authors involved in this study played significant roles during the study design, literature search, data collection, data analysis and manuscript drafting/revisions.

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