Comparative Evaluation Of The Efficacy Of Gmhat-Pc Critical Care Pathways And Contemporary Care Of Mental Disorders In Improving The Quality Of Care And Satisfaction Among Patients With Common Mental Disorders

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Abstract

Background: World Health Organization reported that mental and behavioural disorders account for about 12 percent of the global burden of diseases. A shortage of mental health workers has increased over time and due to limited availability of mental health education and awareness, it has created a healthcare crisis. Mental illness is still widely stigmatized in India, and many people with mental health issues are reluctant to seek help due to the fear of being judged or discriminated against. This makes it difficult to raise awareness about mental health and to encourage people to seek treatment. In India, there is a shortage of mental health professionals with only one psychiatrist per 100,000 people and one mental health worker per 10,000 people. And, in world 970 million people struggle with some mental illness or drug abuse. 1 in 4 people will be affected by a mental illness at some point in their lives. 14.3% of deaths worldwide, or approximately 8 million deaths each year, are attributable to mental disorders.

Objectives:

1. To assess the quality of care and satisfaction among patients with common mental disorders before the intervention in psychiatry units.

2. To implement the care as per the GMHAT-PC critical care pathways while caring the patients diagnosed with common mental disorders in experimental group.

3. To implement the contemporary care while caring the patients diagnosed with common mental disorders in control group.

4. To assess quality of care and satisfaction among patients with mental disorders after the implementation of GMHAT-PC critical care pathways.

5. To identify the relationship between quality of care and satisfaction in patients with common mental disorders.

6. To associate the findings with selected demographic variables.

Study design: It is a two arm trial, interventional hospital based study.

Setting: This study will be conducted in selected hospitals of Wardha district, Maharashtra, India.

Methodology: The participants will be 200 patients suffering with common mental disorders with stratified random sampling technique; participants will be allocated to control and experimental groups through randomization.

1. Experimental group will receive GMHAT-PC critical care pathways.

2. Control group will receive contemporary care and treatment. The experimental group will receive care for the first seven days and then supervise for the next two months. The outcome will be obtained during the intervention on every 15th day in three phases. After intervention, the primary outcome will be GMHAT-PC will be determined by critical care pathways. The secondary outcome i.e. quality of care and satisfaction will be measured after implementation of care pathways.

Expected results: Utilization of GMHAT-PC critical care pathways in clinical settings, improvement in quality of care and satisfaction.

Limitations: Only trained nursing personnel will be included from selected research centre of the University.

Conclusion: This study result will contribute GMHAT-PC critical care pathways for nursing personnel as a standardized pattern for individualized & quality care to patients with common mental disorders.

Keywords: Global Mental Health Assessment Tool-Primary Care (GMHAT-PC), Critical Care Pathways, Quality of Care, Satisfaction

Introduction

Mental disorders are among the leading causes of non-fatal disease burden in India, but a systematic understanding of their prevalence, disease burden, and risk factors is not readily available for each state of India. Mental health problems are represented with main diagnoses like depression, schizophrenia bipolar-affective disorder , amongst the ten leading causes of disability worldwide.[1] Globally, majority of those who need mental health care worldwide lack access to high-quality mental health services. Stigma, human resource shortages, fragmented service delivery models, and lack of research capacity for implementation and policy change contribute to the current mental health treatment gap.[5] The burden of mental disorders is likely to have been underestimated because of inadequate appreciation of the inter-play between mental illness and other health disorders. Globally, Schizophrenia has a point prevalence of approximately 0.45 per cent, a lifetime expectancy rate of 0.7 per cent and is one of the top 15 causes of disability. Psychiatric epidemiology has gone through various stages of growth over the past five decades in India. Many epidemiological studies conducted in India on mental and behavioural disorders report varying prevalence rates, ranging from 9.5 to 370 per 1000 population.[2] Currently, the entire world is experiencing shortage of medical experts trained in mental health as well as a lack of investment in community-based mental health facilities.[6]

Mental health is critically important to everyone, everywhere. All over the world, mental health needs are high but responses are insufficient and inadequate.[7]Reports from the Indian Union Ministry of Health and Family Welfare, the country needs around 13,000 psychiatrists. To achieve an ideal ratio of psychiatrists to population is about 1:8000 to 10,000 but currently has just about 3,500 which is about one psychiatrist for over 2 lakh people .with regard to other mental health professionals the ratio is even worse-the need of clinical psychologists is 20,000 and there are only 1000 available, for psychiatric social workers, the requirement is 35,000 but only 900 are available for psychiatric nurses, we need 30,000 and only 1500 are available.[8]

Currently, the entire world is experiencing shortage of medical experts trained in mental health as well as a lack of investment in community-based mental health facilities. In low-income countries, the ratio of mental health professionals is often as low as 2 workers per 1, 00,000 population, while the number of mental health professionals for the same population size goes up to 70 in high-income countries. This is in stark contrast to what has been envisioned as desirable for needs, given that one in each 10 people is estimated to require mental health care at a point of time.[9]

The National Survey of Psychiatric Morbidity in the UK found a population prevalence of probable psychotic disorder of 5 per 1000 in the age group 16 to 74 years (Singleton et al., 2003)[14].

A study conducted by Priyanka Sharma in the year 2017 on One in seven persons in India suffers from mental disorders: ICMR study varying severity in 2017, with depression and anxiety disorders being the most common mental disorders affecting 45.7 million and 44.9 million people each in the country, noted the findings of a first comprehensive study done by Indian Council of Medical Research (ICMR) on disease burden due to mental disorders in India. The research has shown that there is a significant increase in the incidence of mental health disorders in India over the years. The ICMR findings have clearly noted that approximate 197 million persons, roughly one in seven Indians, suffered from any kind of mental disorders of the year 2017. These include depression, anxiety disorders, schizophrenia, bipolar disorders, idiopathic developmental intellectual disability, conduct disorders, and autism[16]

In 2019, WHO conducted a systematic review and meta-analysis on prevalence estimates on mental disorders in conflict setting? In this systematic review and meta-analysis, they updated a previous systematic review by searching MEDLINE (PubMed), PsycINFO, and Embase for studies published between Jan 1, 2000, and Aug 9, 2017, on the prevalence of depression, anxiety disorder, post-traumatic stress disorder, bipolar disorder, and schizophrenia. The result stated the prevalence of mental disorders (depression, anxiety, post-traumatic stress disorder, bipolar disorder, and schizophrenia) was 22·1% (95% UI 18·8–25·7) at any point in time in the conflict-affected populations assessed. The mean co morbidity-adjusted, age-standardized point prevalence was 13·0% (95% UI 10·3–16·2) for mild forms of depression, anxiety, and post-traumatic stress disorder and 4·0% (95% UI 2·9–5·5) for moderate forms. The mean co morbidity-adjusted, age-standardized point prevalence for severe disorders (schizophrenia, bipolar disorder, severe depression, severe anxiety, and severe post-traumatic stress disorder) was 5·1% (95% UI 4·0–6·5).[17]

According to global burden of diseases study across states of India article published on Feb, 2020. The study assessed the heterogeneity and time trends of mental disorders across the states of India. They grouped states on the basis of their Socio-demographic Index (SDI), which is a composite measure of per-capita income, mean

education, and fertility rate in women younger than 25 years. They also assessed the association of major mental disorders with suicide deaths& calculated 95% uncertainty intervals (UIs) for the point estimates. The result shows that one in seven Indians was affected by mental disorders of varying severity in 2017. The proportional contribution of mental disorders to the total disease burden in India has almost doubled since 1990. Substantial variations sexist between states in the burden from different mental disorders and in their trends over time. These state-specific trends of each mental disorder reported here could guide appropriate policies and health system response to more effectively address the burden of mental disorders in India.[3]

A cross-sectional study carried out on mental health status of farmers in Maharashtra (2020).300 household were selected from probability proportional samples size. The result shows that majority (58%) farmers showed signed of distress. the study concluded that immediate clinical and non-clinical interventions should be mitigate .[11]

Family caregivers play a curial role in supporting and caring for their mentally ill relatives. Their struggle for facing stigma, economically support, stress etc and shouldering care giving burden is marginalized, undervalued, and invisible to medical services.[12]

A cross-sectional study carried out on Stigma and burden of mental illness and their correlates among family caregivers of mentally ill patients structured interview questionnaire was designed to collect socio-demographic data of both patients and their caregivers. Stigma scale for caregivers of people with mental illness (CPMI) was used to assess the affiliate stigma, while the associative stigma was assessed by the explanatory model interview catalogue stigma scale (EMIC-Stigma scale). The caregivers' burden was assessed using Zarit burden Interview, and Modified Attitude toward Mental Illness Questionnaire was used to assess caregivers' knowledge and attitude towards mental illness. Results shows Bipolar disorder (48%) and schizophrenia/other related psychotic disorders (42.8%) were the most common mental illnesses among the study patients. The mean scores of CPMI total scale, EMIC-Stigma scale, and Zarit Burden scale were 56.80 ± 7.99, 13.81 ± 5.42, and 55.20 ± 9.82, respectively. The significant correlates for affiliate stigma were being parents of patients (ß = 4.529, $p < 0.001$), having higher associate stigma (ß = 0.793, $p < 0.001$), and aggressive behavior of mentally ill patients (ß = 1.343, $p = 0.038$). The significant correlates for associate stigma of the study caregivers were being caregivers' relatives other than parents (ß = 1.815, $p = 0.006$), having high affiliate stigma (ß = 0.431, $p < 0.001$), having poor knowledge and negative attitude towards mental illness (ß = − 0.158, $p = 0.002$), and aggressive behavior of mentally ill relatives (ß = 1.332, $p = 0.005$). The correlates for the high burden were being male (ß = 3.638, $p = 0.006$), non-educated caregiver (ß = 1.864, $p = 0.045$), having high affiliate stigma (ß = 0.467, $p < 0.001$), having high associative stigma (ß = 0.409, $p < 0.001$), having poor knowledge and negative attitude toward mental illness (ß = − 0.221, $p = 0.021$), seeking traditional healers and non-psychiatrist's care from the start (ß = 2.378, $p = 0.018$), and caring after young mentally ill relatives (ß = − 0.136, $p = 0.003$).The study conclude that caregivers suffered from stigma and a high level of burden. Psycho-educational programs directed toward family caregivers are highly recommended.[12]

The most common issues faced in psychiatric nursing practice were that "mental health care users deny mental illness" and the challenges associated with exposure to patients' unpredictable behaviour. A range of health, social care and other services are involved when children and young people (CYP) and adults with care and support needs move into or out of inpatient mental health hospital settings from community or care home settings. The population experiencing transitions into and out of mental health inpatient hospital services are vulnerable in a number of ways. For example, transitions are associated with suicide and people with severe mental health disorders often have other conditions, such as learning disability or dementia, which make it difficult for them to advocate for their own needs.[4]

Mental Health by virtue of its ability to deal with human thoughts and emotions is a vital resource for our development, and its absence represents a great burden to the economic, political, and social functioning of human beings, society and nation. Thousands of mentally ill people remain untreated, unable to work, and in poverty or in mental institutions.[7]

Recently as national digital health mission launched by MOHFW government of India aim to accelerate and involve technology in the field of health. The National Digital Health Mission (NDHM) aims to develop the backbone necessary to support the integrated digital health infrastructure of the country. It will bridge the existing gap amongst different stakeholders of Healthcare ecosystem through digital highways. Incremental developments have taken place within healthcare industry, with IT playing an increasingly significant role in development of healthcare system[10].So, researcher felt the importance to evaluate efficacy of GMHAT-PC

critical care pathways and compare with contemporary care on quality of care and satisfaction among patients with common mental disorders.

Materials and methods:

Study design: - Two arm trail, interventional hospital based study

Study setting: The study will be conducted in selected hospitals of Wardha district, Maharashtra, India.

Sample: Patients with common mental disorders

Sample size calculation: Sample size formula with calculation

The formula used for sample size is

$$n = Z_{\alpha/2}^2 * p * (1-p) / MOE2,$$

Where, $Z_{\alpha/2}$ is the critical value of the Normal distribution at α/2 (e.g. for a confidence level of 95%, α is 0.05 and the critical value is 1.96),

MOE is the margin of error,

p is the sample proportion

For our calculations,

$Z_{\alpha/2}$=1.96

P=0.14286

MOE=0.075

The sample size, n comes to be 83. Considering dropouts, consider 100 in each group.

Hypothesis:

H$_1$: There may be significant improvement in quality of care among patients with common mental disorders after implementation of GMHAT-PC critical care pathways.

H$_2$: There may be significant improvement in satisfaction among patients with common mental disorders after implementation of GMHAT-PC critical care pathways.

Sample size: 200 (100 in experimental & 100 in control group)

Sampling procedure: Stratified random sampling

Inclusion criteria:

- Adults of 18 years and above.
- Both male and female patients with common mental disorders
- Patient who can understand and converse in Hindi or English or Marathi.

Exclusion criteria:

- Patient who are critically ill and uncooperative.

Data collection tools:

- Structured Socio demographic sheet to collect the socio demographic data of the study.
- Standardized Quality of care Inventory was modified according to study and it was taken from RAND quality of care assessment tool. Tool was reliable as reliability was calculated by Karl Pearson coefficient correlation by test retest method and r score was 89.
- Standardized Patient satisfaction Scale By Grant M Marshall and Ron D. Hays
- Reliability of tool is as below-

Internal Consistency Reliabilities and Correlations PSQ-18 Subscales

Subscale	Internal Consistency Reliabilities PSQ-18
General Satisfaction	0.75 (2)

Technical Quality	0.74 (4)
Interpersonal Manner	0.66 (2)
Communication	0.64 (2)
Financial Aspects	0.73 (2)
Time Spent with Doctor	0.77 (2)
Accessibility and Convenience	0.75 (4)

Intervention protocol: GMHAT-PC Critical care pathways is as under –
Critical care pathways of Nursing care of patients with depressive disorders
Pathways of Care in Primary Care Mental Health

Window J DEPRESSION

Window J-1 Depression : General Instructions
Window J-2 Depression :The stepped-care model
Window J-3 Depression :Instruction to Patient regarding medication
Window J-4 Depression :Treatment-medication
Window J-5 Depression :Work and Social Behaviour
Window J-6 Depression : Follow-Up Guidance

CRITICAL CARE PATHWAYS OF ANXIETY DISORDER:
- Window K- 1 General Anxiety Disorder Instructions to the interviewer
- Window K-2 General Anxiety Disorder Treatment-General
- Window K-3 General Anxiety Disorder Treatment-acute period
- Window K-4 General Anxiety Disorder Treatment: longer term choice
- Window K-5 General Anxiety Disorder Treatment: Cognitive behaviour therapy
- Window K-6 General Anxiety Disorder Treatment: medication
- Window K-7 General Anxiety Disorder Treatment: if best unavailable

CRITICAL CARE PATHWAYS OF PSYCHOTIC DISORDER
- Window G1 Psychotic Disorder

Delusional- definition
Hallucination- definition

- Window G2 Psychotic Disorder
Treating Schizophrenia

The GMHAT-PC generates this and management guidelines for every patient.

Data collection management and analysis methods:

Section I: The study shall be conducted only after the approval of the IEC. Permission to conduct the study shall be taken from relevant stakeholders. Written informed consent shall be taken from the participants. Patients who fulfill inclusion criteria shall then be assigned to the experimental and control group. The baseline parameters of each participant shall be assessed i.e. Socio demographic variables, Quality of care inventory and patient satisfaction questionnaire (PSQ-18)

Section II: The participants from the experimental group shall then be given GMHAT-PC critical care pathways (pathways of care in primary care mental health – psychotic disorders, depression and general anxiety disorder) intervention will be given to experimental group alteast for seven days. And, post-test will be done in three observations every after 15 days. Control group will receive contemporary care and treatment.

Each participant will be guided to follow the instructions. The GMHAT PC critical care pathways generated for each patient shall be taken as hard copy. Each one shall then be coded with the code number. The critical care pathway so generated shall be handed over to all the nursing staff involved in the care of the patient. They shall be told to follow the critical care pathway for the patients while rendering care.

Section III: Critical care pathways intervention protocol is for one week followed by post test for every 15 days.

Outcome measures:
1. **Primary outcome:** effectiveness of GMHAT-PC critical care pathways and compare with contemporary care on outcomes of quality of care and satisfaction among patients suffering with common mental disorders.
2. **Secondary outcome:** health care providers will utilize GMHAT-PC critical care pathways as individualized care which will promote quality of care and satisfaction for patients.

Statistical analysis: descriptive (mean, percentage, standard deviation), inferential, comparative statistics and Correlational statistics are planned for data analysis.

Results:
1. Improvement in quality of care and satisfaction.
2. Positive or negative correlation between quality of care and satisfaction.

Discussion:
A correlation study will support the present study. A total of 270 patients were included after obtaining informed consent a good amount agreement was present between the diagnosis made by consultant and GMHAT- PC. The tool was feasible to use as it took on average 13 minutes for its application. The GMHAT-PC should have a sensitivity of 98.18% & specificity of 72.22%. It was concluded that use of such tools could be helpful in identification of mental disorder in primary care. The findings of this study are encouraging and appear to support the view that with minimum training, one can use the computer-assisted program GMHAT/PC in different cultures in making a valid assessment and diagnosis of mental disorders.[10]

The conclusion of the study will be reinforced by another study in which the researcher determine that health care givers and administrators are considered as health care professionals. The form of hospital services, their organization, development, operation and administration have undergone significant differentiations during the last 20 years. Public dissatisfaction with the traditional role of hospitals has grown vastly which may be attributed to the implementation of issues such as changed quality of life and cost-effectiveness, wide media coverage of system inadequacies, increased demands and awareness of patient's rights, limited resources in the era of expensive hi-tech medical support systems and traditional approaches of regulatory bodies. Hospitals across the country are searching for effective quality improvement strategies. Implementation of care pathways in the hospital management will improve the quality of care, standardization of care processes, bring into limelight the existing flaws, suggest ways for future improvements, help to utilize resources in a cost effective manner which is essential both in developed as well as developing countries. In this review attempts have been made to highlight on the strategic points like the implementations and utilities of clinical care pathways and its role in the control of emergency medical cases like strokes, importance of timelines and key performance indicators of health administrators, effectiveness of clinical decision making of medical professionals and their overall contribution in the quality improvement of health care and thus hospital management, which will support the present study.[13]

Conclusion:

After the completion of data collection, the conclusion will be drawn from the statistical analysis. The researcher expects participants who intervened with GMHAT-PC critical care pathways to benefit more than those who intervened with contemporary care. The findings of this study will help to improve the quality of care and satisfaction among common mental disorders.

Consent And Ethical Approval

The institutional ethics committee approved the present study of DMIMS, Wardha (DMIMS (DU)/IEC/2021/623). Written consent will be taken from the participant for participation in the study. Patients will be instructed that their participation in this study is entirely voluntary and they opt out at any moment. Throughout the study, confidentiality will be maintained. The study findings will be disseminated to participants and published in a SCOPUS or PUBMED indexed Journal.

Competing interests:

Authors have declared that no competing interests exist.

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