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Utilisation Of Health Information In The Mental Healthcare System

Suma V. Madhavan , Research Scholar, Mahatma Gandhi University School of Behavioural Sciences
Prof. (Dr.) Rajeev Kumar N, Department of Psychology, Mahatma Gandhi University, School of Behavioural Sciences

Abstract

A Mental Health Information System (MHIS) is designed to systematically collect and analyze data on mental health services and population needs, aiming to enhance care effectiveness and ensure equitable service delivery. It provides timely information to support informed decision-making for improving care quality.This study examines health information use within Kerala's progressive mental health care system, utilizing records, surveys, and interviews to understand utilization among caregivers and decision-makers.Data were organized in Microsoft Excel and analyzed with SPSS version 23, using descriptive statistics, Chi-square tests, and Fisher's exact tests to explore relationships between categorical variables. Data visualization, such as histograms, highlighted key trends and patterns.

Keywords: Health information, Management, Mental Health, Mental Health Care Establishments.

Introduction

Information plays a pivotal role in decision-making within the mental health system, serving as a crucial resource for policymakers to optimise the allocation of limited resources. It also empowers healthcare managers to effectively monitor and evaluate the quality of services provided to patients. In today's landscape, characterised by constrained budgets and increasingly decentralised healthcare systems, the demand for high-quality, actionable data has never been more essential.

The implementation of a Mental Health Information System (MHIS) offers a multitude of benefits. For instance, it facilitates strategic planning by providing accurate performance metrics that are necessary for informed decision-making. These metrics can include service utilisation rates, demographic data of service users, and details about intervention outcomes, all of which are vital in understanding community needs.

Moreover, the MHIS functions as a comprehensive delivery tool, establishing systematic records of service user requirements and the interventions they receive. This systematic approach not only promotes transparency but also drives quality improvement initiatives that align with evidence-based best practices.

Beyond these operational advantages, the MHIS enables the measurement of key performance indicators (KPIs) such as recovery rates, client satisfaction levels, and treatment adherence. These indicators are critical for assessing the clinical effectiveness of mental health services, identifying areas for enhancement, and ultimately refining service delivery in ways that better meet the needs of individuals seeking mental health support. By harnessing the power of data, the mental health system can significantly improve outcomes for both service users and the community at large.

Materials and Methods

The investigator conducted a structured survey targeting 117 mental healthcare professionals and a comprehensive analysis of the documentation practices within 520 psychiatric inpatient medical records, utilising a detailed checklist across various mental health care systems in Kerala. The purpose of this survey was to collect quantitative data about their experiences, challenges, and perceptions related to mental health services. This study aimed to identify trends and insights regarding the use of health information within the mental health care system.

To assess how health information is utilised by caregivers and decision-makers, a tailored survey questionnaire was developed. This multifaceted approach allowed for a comprehensive understanding of current practices and attitudes toward health information utilisation.

The collected data were systematically organised using Microsoft Excel and subsequently analysed with SPSS version 23, a statistical software recognised for its robust analytical capabilities.

Result and Discussion

Analysis of the documentation practices of Health Information at various Mental Healthcare centres in Kerala

After a comprehensive analysis of the documentation practices within 520 psychiatric inpatient medical records, utilising a detailed checklist across various mental health care systems in Kerala, the Medical Records Department effectively manages the Health Information System by ensuring an exceptionally high standard of data integrity and completeness.

The findings reveal that nearly 100% of the data entered in the patients' medical records is meticulously filled out. Notably, the Medical Record Number (MRN) demonstrates 100% accuracy, signifying that each patient's medical record is uniquely and correctly identified without any discrepancies. Furthermore, fundamental demographic details—including age, gender, educational qualification, Mental Health Act (MLC) status, and general consent—are comprehensively documented in all the reviewed medical records.

In terms of disease history, the documentation includes thorough accounts of patients' chief complaints, admission and discharge dates, history of present illness, past illnesses, physical and mental health history, and family medical history. Importantly, details regarding the patients' interpersonal relationships and behavioural patterns within their families are also captured fully. Diagnostic details are robust, featuring elements such as the nature of trials conducted on patients, both general and systemic examinations, mental status evaluations, diagnostic formulations, and final diagnoses, all of which are consistently recorded.

Treatment information, including the treatment plan, discharge summary, and outcomes, is comprehensively documented, reflecting meticulous adherence to documentation standards. Remarkably, 98% of the files include essential elements such as Signature/Authentication, along with the Date and Time of every entry, and the use of approved abbreviations and symbols. Some discrepancies in this area may stem from technical issues or clerical errors during data entry.

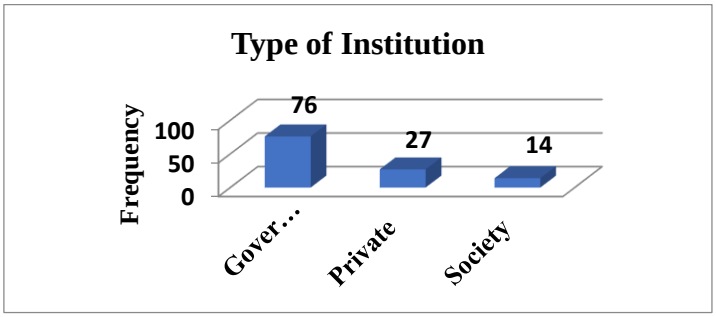
However, the documentation of procedural codes and patient follow-ups shows certain gaps, with 90% of files adequately completed in these aspects. The errors associated with procedure codes can be attributed to the Medical Records Department staff's lack of familiarity with coding standards. In regard to follow-up documentation, some challenges arise from factors such as patients not returning for scheduled follow-ups, or the absence of responses during attempted telephonic outreach.

It is significant to note that only 2% of the files include diagnostic codes. This limitation could be a direct result of insufficient training or a lack of awareness regarding current coding methodologies among the staff. Many staff members appear to be unfamiliar with the latest coding systems or have not yet adapted to new coding requirements.

Table 1: Frequency and Percentage Distribution of the Type of Institution

Type of Institution	Frequency	Percentage
Government	76	65
Private	27	23
Society	14	12
Total	117	100

The study included a total of 117 participants: 76 healthcare professionals from the government sector, 27 from the private sector, and 14 from healthcare establishments under society.

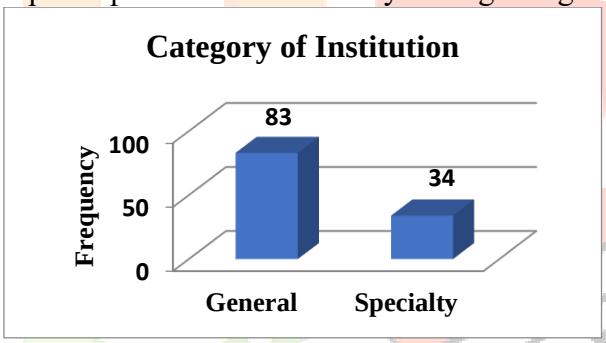


Graph 1: Graphical Representation of the Type of Institution

Table 2: Frequency distribution of type of institution and category of institution

Type of Institution	Category of institution		
	General	Specialty	Total
Government	63	13	76
Private	20	7	27
Society	14	0	14
Total	97	20	117

The government sector has 63 professionals from general hospitals with psychiatry departments and 13 from speciality healthcare systems. Among private healthcare professionals, 20 are from general hospitals and 7 are from speciality facilities. All participants from the Society belong to a general hospital.

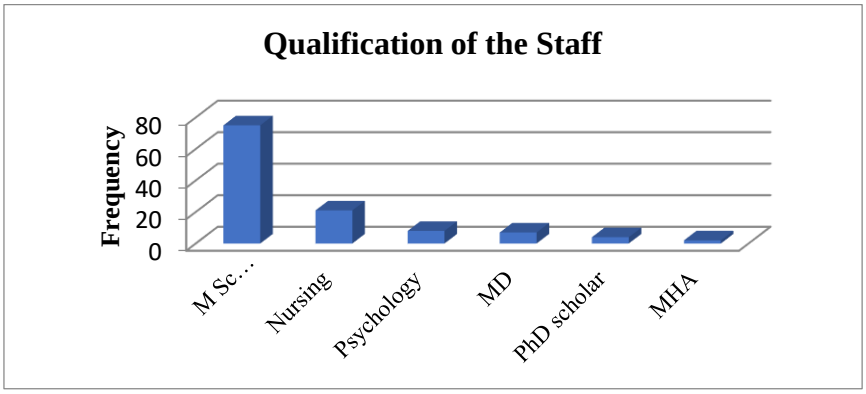


Graph 2: Graphical representation of the category of institutions

Table 3: Frequency and percentage distribution of Qualification of the staff

Qualification	Frequency	Percentage
M. Sc. Medical Documentation	75	64.1
Nursing	21	18
Clinical Psychology	8	6.8
MD Psychiatry	7	6
PhD scholar	4	3.4
MHA	2	1.7
Total	117	100

Among the 117 participants in the study, 75 had a M.Sc. in Medical Documentation, 21 were nursing professionals, 8 were clinical psychologists, 7 held an MD in Psychiatry, 4 were PhD holders, and 2 were MHA qualified.



Graph 3: Graphical representation of Qualification of the staffs

Table 4: Type of institution and Question: How effectively is the mental health information being utilised?

Type of Institution	Question					Fisher Test	P-Value
	Not Using Effectively	Slightly	Moderately	Effectively	Total		
Government	5	20	36	15	76	4.515	0.602
Private	3	7	11	6	27		
Society	1	7	5	1	14		
Total	9	34	52	22	117		

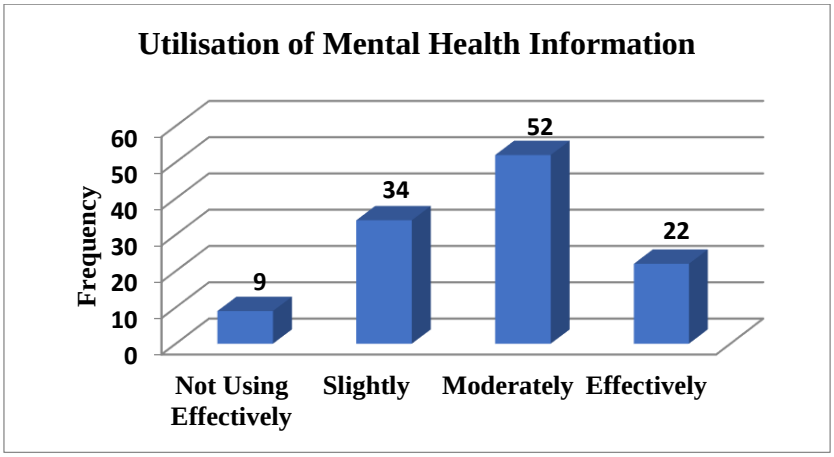
The table presents the aggregated responses from participants across various institutions regarding their perceptions of mental health information utilisation.

In a government institution comprising 76 participants, a significant portion—36 respondents—identified that mental health information is utilised at a moderate level. Meanwhile, 20 indicated that it is only slightly utilised, 15 reported effective usage, and a small cohort of 5 believed it is not utilised effectively at all.

Within the sphere of private institutions, 27 professionals were surveyed. Here, 11 indicated a moderate level of utilisation for mental health information, while 7 noted a slight utilisation. Additionally, 6 participants acknowledged its effective use, and 3 felt it fell short of effective utilisation.

In institutions affiliated with the Society, the responses were less diverse; 5 individuals reported moderate utilisation, 7 acknowledged slight usage, while only 1 participant cited effective use, and another 1 mentioned ineffective utilisation.

The statistical analysis employed a Chi-Square test, yielding a value of 4.515 with a p-value of 0.602. Given that the p-value exceeds the threshold of 0.05, we fail to reject the null hypothesis. This result indicates that there is no significant association between the type of institution and the effectiveness of mental health information management utilisation.



Graph 4: Graphical representation of utilisation of mental health information

Findings

In evaluating the overall documentation practices of the staff, it is evident that almost 100% demonstrate a strong understanding of proper patient documentation management. The only area of concern lies in knowledge pertaining to diagnostic coding, underscoring a critical need for enhanced training and awareness initiatives focused on this specific aspect. Addressing this gap will be vital for maintaining accurate and comprehensive patient records moving forward.

In a comprehensive survey conducted among 76 participants in a government institution, findings revealed varied perceptions regarding the utilisation of mental health information. Specifically, 36 respondents indicated that such information is used to a moderate extent, while 20 participants noted that its usage is only slightly prominent. Furthermore, 15 individuals characterised the utilisation as effective, contrasting with the 5 who expressed that it is not used effectively.

In parallel, a separate survey involving 27 professionals from private institutions provided additional insights. Among these respondents, 11 felt the mental health information was utilised moderately, 7 perceived its use as slight, and 6 professionals acknowledged its effective application. However, 3 individuals indicated a lack of effective utilisation.

Turning to institutions affiliated with the Society, the responses varied further. Out of 13 participants, 5 reported that mental health information is utilised moderately, 7 described its usage as slight, with only 1 respondent characterising its application as effective, and another mentioning ineffective use.

Statistical analysis of the data through a chi-squared test yielded a value of 4.515, accompanied by a p-value of 0.602. As the p-value exceeds the significance threshold of 0.05, we accept the null hypothesis. This outcome suggests that there is no significant association between the type of institution and the effectiveness with which mental health information management is utilised.

Conclusion

Developing information systems requires considerable effort and resources, often demanding collaboration across various departments and stakeholders. It is essential to recognize that these systems are inherently dynamic; they will adapt to changing organizational needs, technological advancements, and user feedback over time. To initiate this process effectively, it is advisable to start with a manageable dataset that captures the core requirements of the organisation, while also being mindful of the necessary compromises among the diverse interests of stakeholders. These interests can vary widely, encompassing operational efficiencies, user experience, regulatory compliance, and budget constraints.

Achieving consensus among stakeholders is crucial and can be facilitated by the understanding that striving for an unattainable notion of perfection may ultimately impede progress. Instead, adopting a mindset focused on iterative improvement allows for gradual enhancements while maintaining momentum in the project timeline.

The design of the information system should prioritise flexibility and scalability, enabling easy integration of new features or modifications as organizational capabilities expand. This is especially relevant in industries where rapid technological changes are commonplace. Regular meetings of a dedicated subgroup tasked with monitoring progress will help evaluate the utility of the system, ensure alignment with organizational goals, and address any emerging challenges promptly.

As technology continues to advance rapidly, organisations that have not yet embraced digital solutions are increasingly likely to transition to computerised processes in the near future. This shift necessitates an understanding that no information system is ever truly complete; rather, it exists within a framework of continuous improvement and adaptation. The key takeaway is that organizations should view the development and implementation of their information systems as an ongoing journey rather than a finite project, fostering a culture of agility and responsiveness.

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