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District facility managers' perspectives of mental health information processing and utilisation at primary care level in the Western Cape

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Abstract

District health facility managers play a significant role in provision of primary health care (PHC) services, particularly in integration of mental health services into the PHC level and developing a district health information system, which includes an integrated mental health information system (MHIS). The aim of the study was to explore the views and involvement of district health facility managers in the mental health information processing and utilization in improving mental health service delivery within the context of PHC. The study employed a qualitative research approach. Fourteen facility managers were recruited using purposive sampling techniques, and interviews were conducted in 2012 and 2013. The interview data were analysed using thematic content analysis. The study identified that mental health information processing systems are fragmented and inadequate for decision making, and it was not known how to use mental health information. Lack of knowledge in information processing and utilization, as well as poor information infrastructure and networking was associated with poor understanding about mental health, not considering mental health as one of the priorities within the district health services, and lack of higher officials' interest in the mental health development programme. Also notable were the attitudes towards mental illness, which were a major problem. These findings have major implications, such as behavioral /attitudinal risk factors of higher officials, policy makers, and the community for MHIS development and interventions in the reduction of mental health problems in South Africa.

Keywords: Facility managers, perspectives, mental health, information processing, utilization, Western Cape.

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Introduction

District health facility managers play a significant role in provision of health care delivery in the primary health care (PHC) system. South Africa has a district health system, which is based on PHC. The concept of a district health information system (DHIS) comprises facility- based health information systems and district-based health information systems (Department of Health (DoH),

1998). According to the DHIS policy document, the facility-based information system feeds into the district-based health information systems, and facility managers are responsible for implementing DHIS policy. The requirements for developing a DHIS was to improve existing facility-based information systems; decentralise the responsibility of PHC to district level; support improved district health management and planning; and improve the health status of the community through having objective information on which to base decisions (DoH, 1998). The mental health service is integrated within the PHC system and provides services for more than 90% of the community with mental health problems. Hence the DHIS basically includes the mental health information system (MHIS) within the district administration.

The findings of a study conducted on indicators of quality of mental health care in the Western Cape indicated that there was low response rate due to lack of systems for gathering mental health information, and lack of transparency regarding mental health care (Lund, Stein, & Flisher, 2005). Furthermore, there were inadequate national indicators for the mental health service at PHC level; lack of accurate routinely collected data regarding mental health status, service provision and resources; and little use of data collected from services for mental health policy and planning (Lund, Kleintjes, Kakuma, Flisher & MHaPP Research Programme Consortium, 2010). Korkeila, Lehtinen, Biji, Dalgard, Kovess, Morgan and Salize (2003) state that indicators are not only for mental health policy formulation, but also for practical purposes. It is important to rely on the information available and enhance the visibility of mental health issues, as well as the need for infrastructure, process and outcome indicators (Korkeila et al., 2003; Perlman et al., 2013).

According to a World Health Organization (WHO) (2007) report, the mental health information in South Africa was not adequate enough to address the huge gap in providing reliable mental health information for policy formulation, decision making, and planning mental health services. The report further indicated that a lack of attention to mental health services could seriously compromise the achievement of the Millennium Development Goals in low- and middle-income countries (WHO, 2007).

An MHIS is central to inform sound policy formulation and appropriate mental health service planning. Flisher, Lund, Fund, Banda, Bhane, Doku, Drew, Kigosi, Knapp, Omar, Petersen, and Grew, (2007) indicated that mental health information on service utilisation was only available from four provinces in South Africa. Mental health records of diagnosis in outpatient facilities are not adequately kept, and even those that are kept are not used for service planning in South Africa (Flisher et al., 2007; Lund et al., 2008, Draper, Lund, Kleintjes, Funk, Omar & Flisher, 2009). It was reported that mental health information on vulnerable populations, such as females, children and adolescents suffering from

mental disorders was not available (Lund & Flisher, 2006). Despite the DHIS, the information on current service resources (budget, staff, facilities) and provision (admission, outpatients) is extremely irregular, and seldom available, reported or used for planning (Freeman & Pillay, 1997; Flisher et al., 2007).

Health information management and information sharing play critical roles in addressing the cost, quality and access challenges of the health care system (Vest, Zhao, Jaspersen, Gamm & Ohsfeldt, 2011). Health management information systems have multiple benefits, such as detecting and controlling emerging endemic health problems; monitoring progress; empowering individuals and communities with quality of services; strengthening the evidence base for effective health policies; enabling innovation through research; mobilising new resources; and ensuring accountability World Health Organization (WHO, 2005). In this regard the role of district facility managers is significant in developing and implementing district MHIS and policies to improve the outcome of health services in the district. The aim of this study was to explore district facility managers' perspectives on mental health information processing and utilisation for planning mental health services.

Methodology

A qualitative research approach was employed to conduct the study, which was carried out in the district of Cape Town in the Western Cape province of South Africa. Fourteen district health facilities were purposely selected from four sub-districts: Southern and Western; Klipfontein and Mitchells Plain; Khayelitsha and Eastern. Inclusion criteria were those participants who had worked in the position for at least six months and were working during the data collection time. The participants were facility managers or deputy facility managers. The aim of qualitative sampling is not to draw a representative sample from the study population, but to provide illumination and understanding of the complex social issues that are most useful for answering the humanistic questions 'why?' and 'how?'. Qualitative researchers recognize that some informants provide richer information than others, and thus they are likely to provide invaluable insight and understanding to the researcher (Green & Thorogood, 2004; Speziale & Carpenter, 2003). Therefore a purposive sampling technique was applied in this study as it is common in social sciences qualitative research, and helps the researcher to select participants that can provide rich information. Fourteen (14) facility managers were interviewed and data saturation was obtained at 12 interviews; consistency of the pattern was confirmed at 14 interviews. All interviews were tape-recorded with the permission of the participants.

Content thematic analysis was employed to analyse the data. The tape-recorded data were transcribed verbatim, and the text data were cleaned and prepared for the analysis. The huge volume of data had to be condensed and categorised into a

manageable size. The interview data and field notes were coded with letters and numbers and grouped according to similarities. Creswell (2009) states that in analysing qualitative data, the researcher engages in the process of moving in analytical circles rather than using a fixed linear approach. Dey (1993) notes that qualitative researchers “learn through practice”, and through qualitative data analysis one develops insight and intuition. Reading and rereading of the transcript numerous times took place to obtain a general overview of all the text, jotting down notes and reflective notes in the margin and/or highlighting text with different colours. This includes counting, connecting words or theme occurrence, and measuring information in the content. Translating participants’ ideas into metaphors and development of themes was done by immersion in the data to understand it and seek further explanations.

Establishing trustworthiness

Trustworthiness was ensured by credibility, transferability, dependability and conformability (Babbie & Mouton, 2001). The researchers were involved in the data collection process until data saturation; transferability was ensured by peer-reviewing of the analysis and probing for researchers’ bias, exploring meanings, checking the steps and process of analysis, use of the purposive sampling technique and leaving an audit trail to ensure credibility. The researchers also consulted expertise in the field to increase credibility of the study. Field notes and audio tapes were kept as evidence for interested researchers and inputs from peer and senior researchers were used to ensure dependability of the research. The data collection protocol was developed to keep an account of the data collection process and analysis and pilot tested to ensure clarity.

Ethical approval was granted by the University of the Western Cape approval members and DoH. Informed consent was obtained from the participants, who received an information sheet to read. The confidentiality and anonymity of the information was explained to the participants. The participants were also informed of the right to withdraw from the study at any time without prejudice, and were also informed that interviews would be tape-recorded.

Results

Three central themes emerged from the data and subthemes were generated (Table 1).

Table 1: Themes and sub-themes generated by the data

Themes	Sub-themes
1. Mental health information processing	1.1: Data gathering and flow management 1.2: Role of facility manager in Mental health information processing 1.3: Information feedback to information collectors
2. Use of mental health information for planning services	2.1: Use of data at facility level 2.2: Use of data at higher level 2.3: Mental health data not used
3. Challenges and opportunities	3.1: Lack of computer facilities for information processing 3.2: Lack of staff with adequate knowledge of information processing 3.3: Attitudes of staff to information gathering and processing 3.4: Impact of poor-quality information processing 3.5: Opportunities for information processing utilisation

Theme 1: Mental health information processing

Information processing is the movement of health-related data from where it has been collected to the end-point where it is utilised. It is the process of collecting, collating, transmission, analysis, dissemination and utilisation of the information. The participants reported that they have concerns about the problem of processing mental health information. At district health service level, mental health information is recorded by professional nurses who are providing mental health care. There are three sub-themes under this central theme: data gathering and flow; role of facility managers in mental health information processing, and feedback in information processing.

Sub-theme 1.1: Data gathering and flow management

Information gathering involves the type of information required to be collected using manual or electronic means, and is reported to higher level or for use in the facility. The participants reported that the information gathering was conducted based on the substructure office requirements. In this case the number of mental health clients' visits and statistics from gathering information, called the Routine Monthly Report form, comes from the substructure office. The substructure office is administratively responsible for managing the DHIS and transfers the information onto the computerised system to validate and finally report to the District Metro Health office. Some of the participants stated that "Patient information is collected manually and recorded on the file, computer is only for facility manager, and admin staff." The data collection instruments are spread

sheets with all the indicators in it. The monthly report is sent to the higher level by fax (monthly), but data were not captured on how many females and male were treated or age category. Both manual methods and email were used to send the reports to substructure office; some stated that use of electronic information processing and reporting was very limited: “The communication is mainly based on manual and less degree of electronic means.”

Sub-theme 1.2: Role of facility manager in mental health information processing

The role of facility managers in mental health information processing was mainly through validation of the information collected for reporting purposes. The monthly statistics collected are verified by the facility manager for gross differences. They look at the number of patients seen compared to the monthly target set, and reasons must be provided for discrepancies before the reports are sent to the higher level. The following extracts demonstrate the validation process: “My role with mental health information processing is by validating the collected information with the team, who collect and collate the information, to look at it, if the collected information is lower or higher than the target, and give justification, but validation is superficial I would say”. Extracts from another participant illustrate that:

I scrutinise the stat before it is sent to the head office, because we have an operational plan that we need to reach – are we on target, or below target? I checked and validate the data for the gaps and I signed off. For instance, if we provide services, but nothing is filled in, that is one gap; the other gap is the difference between the total, you know you looked at the last month and this month, why decrease or increase.

Sub-theme 1.3: Feedback to information collectors

The district health facility managers have meetings with substructure information officers every four months to discuss the feedback sent back from the provincial DoH information office based on the monthly report. The focus of the feedback is mainly to follow up on target achievement. This type of feedback also provides a platform to learn more from other health facilities that had done well in terms of achieving the target (number of patients seen per month in a facility) and reinforce the others to report more numbers of patients seen monthly. However, the facility managers have different views in terms of feedback. The following extracts demonstrate this: “Feedback comes every quarter at the PDR (plan do review) meeting where it is presented to us, where there are facility and operational managers from different facilities”. Another participant stated that: The data collected from district health services always flows upward to national, but no feedback is given back to the service level in terms of analysis of the data. Getting feedback becomes a problem in determining the service provision

because each level of health facility should get feedback on the service provision; they need to know if there are serious concerns, population at risk, area or case management.

Theme 2: Views of facility managers on use of mental health information for planning services

The study reveals that there was no routinely and adequately gathered mental health information that could be used for either decision making or planning mental health services. The following sub-themes explain the views of facility managers on the use of mental health information at facility level and higher level, or the lack of use of mental health information.

Sub-theme 2.1: Use of data at facility level

Common uses of information at facility level included determining the load of patients, which basically contributes to the head count. This was done by making comparisons of the staff's work, looking at the decrease or increase in number of patients, and reinforcing staff to work hard towards the target. The following are some of the extracts illuminating the view of the participants regarding use of the mental health information:

... we got four primary health care sisters, now if we collect this stat from each of them, they will see and then we draw like a graph and then it will print out for this month and the sister room 2 only did like 100 patients, where room 3 sister did 150 patients, and that sister did 70 patients, that will indicate who's actually working, but the staff didn't like this because it shows them that are not working. The issue mentioned earlier is critical, what types of patient arrive at our doorstep, what are we doing? What is my link between my facility and the community-based services? I need to filter down the information to that level. If the data are not translated or we don't draw meaning out of the data, it is just useless."

Sub-theme 2.2: Use of data at higher level

Facility managers reflected that information gathered at facility level was to be used by the higher-level officials, and sent back with feedback in terms of analysis results for implementation:

So now they are realising there is a gap in mental health and maybe that is why they are interested in the head count, because the head count indicates how much money that facility needs, so budget allocation is proportional to head count. The information required is set out for us by the substructure

Sub-theme 2.3: Do not use mental health data

The majority responded that they did not know what to do with the mental health information at facility level, because there was no mental health programme or agenda within the PHC priority areas. The following extracts demonstrate these views: “I don’t know what to do with the mental health data”, and:

I am not sure about mental health, you talking about mental health information use, is there something like that? I haven’t thought about the use of data, now I can see recording by age and gender, yes, the information is important in terms of epidemiological study. I don’t think we even do it for the big ones, but it is something we need to think about it.

Theme 3: Challenges and opportunities of mental health information processing

Some of the challenges experienced by facility managers were shortage of resources, such as computers for processing the information, and complete lack of staff with knowledge and skills to process and convert the data into useable form. Other challenges reported were the attitudes of staff, poor-quality information gathering and processing, and lack of organisational support for mental health services.

Sub-theme 3.1: Lack of computer facilities for information processing

The participants pointed out that the paper-based patient information recording system was tedious and time-consuming. They emphasised that a computer system for data collection would perform better in recording and processing the information:

There is no computer here for everybody ... Unfortunately because of financial constraints we can’t give everybody a computer and email address, even the doctors don’t have access to the computer.

Sub-theme 3.2: Lack of staff with adequate knowledge

There was a knowledge gap in terms of understanding the importance of information and skills to process the data gathered at facility services. This had impacted on the quality of information gathering and processing. The following extracts further illustrate the need for knowledge and skills in information processing:

Information officers were employed without any knowledge and skills in the health information management system, but they were given the task to just collect the data. They are not capable of interpreting the information; in terms of

their intellectual and educational abilities, this has a direct impact on the quality of information. You need to have proper people in place that have good understanding of how important the information collection and also working with the data, so that the data have meaning, and simplifying it for the people to use it at the ground floor.

The information officer can't even understand the mistakes. It is like here, if I make a mistake the patient dies, you know what I am saying. Because it is information and it is numbered, they don't see the importance of it, the value of it.

Sub-theme 3.3: Attitudes of staff in information gathering and processing

The participants reported that there were problems among some staff members who have negative attitudes to learning about information processing:

We got to do a lot of work around the buy-in of changing the mind-set of staff about the health information system and involvement and participation. As a manager I am interested in it but the nurses are not necessarily interested in the stats, I think this is where we have a problem.

Another participants stated that:

... administrative people we don't have a problem, but there is a problem with clinical people. They don't see the importance, but they tell us, we need more staff, we working too much. If you show them the information they collected and then they say, no that is not true. ... I think what is very important is staff ownership; the actual collector is the owner of the information, and if they take ownership of the role and responsibility, the information collected would be quality and accurate.

Sub-theme 3.4: Impact of poor-quality information processing on service delivery

The participants reported that collecting poor-quality or inaccurate information has a negative impact on service delivery. It affects planning and budgeting, taking preventive measures and getting a clear picture of what is happening in the services. Others disagreed that the quality of data processing affects quality of care provision:

Like I said, it is not through our data collections process that client end up in the mental health department. So I don't think it affects the outcome of care, because we are under the obligation to provide quality care. However, it does influence the awareness of mental health, it does affect ability to know how big the problem is.

Extract from another participant:

The director of substructure will say 'I won't give you more staff, because according to your stat you don't need more staff or resources, because you didn't reach target'. It does affect knowing what types of conditions are most common in the environment, that is where the gaps are. Properly collected data give you a lot of meaning, a lot of motivation, a lot of reason why this thing needs to be improved, what is the gap, what is the shortcoming.

Sub-theme 3.5: Opportunities for information processing and utilisation

Some health facilities had already started putting patient information on the computer. Others were in the process of buying computers for the staff. This was an indication of transformation of the manual-based information processing into a computer system (digital system).

Discussion

Mental health information processing

Capturing and processing patient information was fragmented and inadequate for decision making and planning. This was comparative with the findings of Omar et al. (2010) and the World Health Organization (WHO) (2004), indicating that there was a lack of sufficient and accurate information which policy formulation should be based on. The study illustrated that the lack of data on mental health services at PHC level is attributed to the lack of mental health indicators. Lund et al. (2010) noted that national indicators for mental health services were inadequate.

Feedback on information sent to higher level for analysis and planning the services was not available. The lack of feedback contributed to the dissatisfaction of the data collectors, and this in turn contributed to the poor quality of data gathering and processing.

Views of facility manager on the use of mental health information for planning services

At facility level mental health information was used to determine the patient load, staff and budget to request based on the number of patients on monthly record. Similarly, at higher level the information was used mainly for resource allocation to the facilities, which includes human resources and financial budgets. However, this study identified that there was lack of adequate knowledge about the use of information for service planning at facility level. Lund et al. (2010) identified little use of data collected at national level. Research findings have shown lack of knowledge leads staff members to develop indifference concerning the accuracy of data input, and suspicion and distrust

that information could be misused (Gianetti & Klinger, 1980). Moreover, mental health information processing for service planning never had been on the agenda in the district health system, because mental health was not taken as a public health priority.

The study reveals that there was little involvement of the facility managers in mental health information processing. Their involvement was basically through validating the monthly statistical report as well as allocation of tasks for information collection. Some of the facility managers also indicated that the verification process at facility level was superficial. The information validation system is one of the most important tools in information processing with regard to identification, costing, development and rationalisation of information resources and information services (Dubois, 1995).

Health records (both manual and electronic) rely on completeness and accuracy; however, knowledge about the accuracy of such health data is limited, and only few studies have been conducted on the accuracy of nursing records (Ehrenberg, Ehnfors & Smedby, 2001). In addition, the focus of many researchers is on the data entry, but not on the cause of inaccuracies in data. The participants believe that the way in which the information is being gathered and processed has an impact on patient treatment outcomes, while a few have different views with regard to impact of poor-quality information gathering and processing on quality of patient care. The participants believe that although information informs about the current situation and future vision, and assists in planning and adjusting service provision, it does not affect the quality of patient care and outcomes.

Comparing staff work may not be a good option to motivate the staff in gathering more information to meet the monthly target, because it affects the quality of care the patients receive. The health workers may assess a patient superficially and work faster to see more patients than others in a day. In this case, they may duplicate information gathering and reporting, and there is also a high possibility of missing or overlooking patient diagnosis, which is sometimes a life-threatening disease. People with mental conditions usually do not complain about their physical illness. That is why holistic assessments are very important when assessing mental health problems, as is providing proper management.

Challenges and opportunities in mental health information processing

Although computer facilities were not available to process information at the time of this study, health facilities had slowly started buying computers. There is an opportunity for the health facilities to start utilising computers for information processing in the near future. Networking and information flow connect the community, health facility and government together. The electronic health record (EHR) can be viewed by many users simultaneously and utilizes a host of information technology tools. Patients routinely review their electronic medical

records and are keeping personal health records (PHR) (Harman, Flite, & Bond , 2012). Transforming manual-based information processing into electronic information processing could enable the health care providers and health managers to have access to reliable shared health information in real time across the geographical health sector (Electronic Health Association, 2013).

Nevertheless, the major concerns of confidentiality and safety of patient information need to be addressed adequately. It is also important to emphasise the need for developing a technical and skilled human infrastructure for effective mental health information processing. Studies have shown that electronic recording system are advantageous in terms of collecting accurate and complete information, communicating with up-to-date information, reducing redundancy and increasing nurses' satisfaction (Darbuceana & Fox, 1994). Furthermore, information infrastructure has the ability to process information and support making decisions, and the capacity to monitor internal and external situations and quickly respond to or address problems (Darbuceana & Fox, 1994).

Mental health received low priority and operates in isolation within the district health system. Awareness about mental health should help to change the attitudes of some staff members, district managers and programme directorates. The DHIS is not new in South Africa; however, there is lack of understanding among the facility managers of the importance of the usage of health information. The lack of responsibility and ownership regarding capturing and processing information were among the challenges experienced by the facility managers. It was realised that empowering the facility manager on mental health information could improve the current problems, and mental health should be seen like any other physical illness.

Limitations

Literature information on mental health information processing systems was scarce; this might have affected the outcomes of the detailed literature review. This qualitative study was limited to a small study population, affecting the generalisability of the findings to similar populations. The subjectivity of the qualitative research also serves as a limitation, as the researchers were part of the research instrument. Nevertheless, all efforts were made to strengthen and ensure the rigour of the study.

Conclusions

This study has shown facility managers' perspectives of mental health information processing. The involvement of facility managers with mental health information processing and utilisation was limited to verification and reporting of the head count. This was also largely a reflection of the fact that mental health

was not seen as a public priority. To develop a sound and cost-effective mental health programme, adequate and accurate mental health information is vital. Information gathering, analysing and utilisation are the basis of this mental health programme development.

Empowering facility managers with knowledge and skills on mental health information processing and utilisation would strengthen the acceptance of mental health information processing to help them to plan effective mental health services. This could also assist in planning community mental health services, including a mental health awareness programme. Staff training to equip them with knowledge and skills about the information system may improve their attitudes toward gathering and recording accurate mental health information, and make them feel able to take the ownership of the information system.

Health indicators are vital for any country's development; hence the mental health indicators should be developed in South Africa. However, the routine monthly report of one indicator does not reflect the extent of the problem or the quality of mental health services. It is therefore essential to consider the importance of developing more mental health indicators, based on the current needs and requirements, and to gradually increase the number of indicators as the need arises.

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