Characterization of patients in psychiatric hospitalization units according to the degree of dependence on nursing care

CARACTERIZAÇÃO DE PACIENTES DE UNIDADE DE INTERNAÇÃO PSIQUIÁTRICA, SEGUNDO GRAU DE DEPENDÊNCIA DO CUIDADO DE ENFERMAGEM

CARACTERIZACIÓN DE PACIENTES DE UNIDAD DE INTERNACIÓN PSIQUIÁTRICA, SEGÚN GRADE DE DEPENDENCIA DE CUIDADOS DE ENFERMERÍA

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ABSTRACT
The objective of this study was to characterize the degree of dependence in relation to nursing care of patients hospitalized in a Psychiatric Unit of a teaching hospital, using the Instrument to Classify the Level of Dependence in Psychiatric Nursing. In total, 11.07 patients/day were classified in the Psychiatric Ward (EPQU) and 7.76 patients/day in the brief intervention Psychiatric Ward (EPIB). The average rate of bed occupancy in these units was 79.1% and 86.3%, respectively. Most patients were female (55.8%) and aged between 20 and 30 years (34.8%). The modest degree of nursing care prevailed both at EPQU (62.7%) and at EPIB (61.8%). The research permitted knowing this clientele’s demands of nursing care and provided elements that showed the need of new studies regarding the composition of the nursing staff at this unit.

RESUMO
Este estudo teve por objetivo caracterizar o grau de dependência em relação ao cuidado de enfermagem dos pacientes internados na unidade de psiquiatria de um hospital de ensino, utilizando um instrumento para classificação do nível de dependência em enfermagem psiquiátrica. Foram classificados 11,07 pacientes/dia na enfermaria de psiquiatria (EPQU) e 7,76 pacientes/dia na enfermaria de psiquiatria de internação breve (EPIB), sendo a taxa média de ocupação dos leitos nestas unidades de 79,1% e 86,3%, respectivamente. Houve predominância de pacientes do sexo feminino (55,8%) e de faixa etária entre 20 e 30 anos (34,8%). O grau discreto de cuidado de enfermagem prevaleceu tanto na EPQU (62,7%) como na EPIB (61,8%). A investigação possibilitou conhecer as demandas de cuidados de enfermagem dessa clientela e forneceu elementos que apontaram para a necessidade de novos estudos referentes à composição do quadro de pessoal de enfermagem para esta unidade.

DESCRIPTORS
Mental disorders
Mental health
Nursing care
Psychiatric nursing
Nursing staff

DESCRIPTORES
Trastornos mentales
Salud mental
Cuidados de enfermería
Enfermería psiquiátrica
Recursos humanos de enfermería

DESCRIPTORES
Trastornos mentales
Salud mental
Atención de enfermería
Enfermería psiquiátrica
Personal de enfermería

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INTRODUCTION

Dimensioning nursing staff in quantitative and qualitative terms is a process that depends on knowledge about the existing workload at the nursing care units of different health institutions. The workload is defined as the product of the mean daily number of patients attended, according to the level of dependence on the team or the type of care, and the mean nursing care time used per client, according to the dependence level and care delivered\(^1\).

Patients with different care requirements consume distinguished care quantities, which of course implies different resource (time, work, material etc.) absorption levels\(^2\).

Dimensioning the number of nursing workers needed for care at health services implies identifying and characterizing the clients in terms of care demands. One of the administrative tools used for this purpose is the Patient Classification System (PCS), considered as the first phase of the nursing staff dimensioning process, but also as a resource through which the productivity and costs of nursing services can be monitored\(^3\).

The PCS arose from health organizations’ requirement to rationalize work and, consequently, human and material resources, and attempts to classify patients based on the complexity of the daily care they demand from the nursing team, resulting in comprehensive attention to their needs. The application of this system provides the number of nursing work hours the patient in a given group needs.

A Patient Classification System (PCS) determines patients’ demands or requirements in terms of nursing care, based on their needs, appropriate nursing interventions and care priorities. Its result permits the acknowledgement of care level variations among different patients or for single patient on different hospitalization days\(^4\).

The main advantages of a patient classification system applied to nursing includes the provision of detailed and reliable information on nursing care requirements in the form of hours, and the parameters adopted to classify patients can be applied in different realities and contexts, generally including the client’s level of dependence/independence. These parameters are aimed at characterizing the critical aspects related to some of the patients (dis)abilities, such as feeding, movement and self-care and the need for nursing care. Some systems cover not only the diagnostic-therapeutic procedures nursing interventions), but also observation and relational activities\(^5\).

Over the years, research on patient classification systems in Brazil and around the world can be evidenced, providing support to nurses responsible for nursing human resource management in health institution, which can be considered a constant concern of Nursing due to its commitment to care quality as well as legal and occupational health issues\(^6\).

In this context, a study accomplished in Brazil evidenced the predominance of classification instrument for medical and surgical patients, which remain restricted to the identification of care requirements in terms of basic human needs, clinical assessment, medical assessment and/or including imminent death risk. The study also highlights that psychic aspects are not addressed, which makes it difficult to apply these instruments to psychiatric patients, as they do not cover their particularities\(^6\). The author developed the research based on her experience when she needed to structure an internment service for psychiatric disorder patients, facing a lack of bibliography about nursing staff dimensioning in this specialty and identifying the need for management research on how to calculate the professionals needed to deliver high-quality care to a psychiatric patient or even identify how many psychiatric patients a nursing team professional would manage to therapeutically attend.

The number of nursing professionals involved in care activities or assistance to mental patients, as well as their qualifications, are directly related with the team’s better performance and with improvements in hospitalized patients’ psychiatric condition. To determine the number of psychiatric nursing care hours, however, peculiar dimensioning is needed in view of psychiatric patients’ multiple and varied care demands.

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As for the structuring of care delivery to mental disorder patients, an increase was verified in the creation of psychiatric units in general hospitals, contributing to the establishment of a relation of inserting the mental patient into a treatment space that is preferably occupied by other patients with clinical conditions. This initiative derived from the guidelines of the Unified Health System regarding institutional conditions for the implantation of new health policies in Brazil, including mental health policies\(^7,8\).

In this context, nursing management needs to be equipped with elements to support human resource planning for care delivery to these clients, in view of the lack of specific legislation for this kind of units in general hospitals. In this perspective, the Psychiatric Nursing Dependence Level Classification Instrument\(^9\) was developed and validated, a pioneer support tool for psychiatric nurses in Brazil, allowing attended patients to recover and/or maintain maximum levels of autonomy and self-care, although they are still subject to the observation of the
nursing team responsible for their well-being inside the institution.

In view of the above, this study was performed as a consequence of professional activities at a teaching hospital, involving teaching, research and community service activities and the relevance of issues the nurse managers responsible for the psychiatric internment unit at the institution address in terms of staff, as well as the hospitalized patients’ characterized, which specific and complex nursing care demands.

The main goal was to characterize patients interned at the Psychiatric Unit of a Teaching Hospital, according to gender and age variables, and to classify them according to their dependence level on nursing care.

**METHOD**

A descriptive study with a quantitative approach was carried out. The place of study was the University of São Paulo at Ribeirão Preto Medical School Hospital das Clínicas (HCFCMP – USP), located in Ribeirão Preto, Brazil. The research was accomplished at the Psychiatric Internment Unit, comprising 23 beds, distributed between 14 beds at the Psychiatric Nursing Ward (EPQU), whose clients are patients over 13 years of age, with acute psychotic episodes and/or psychotic symptoms associated with organic illnesses; and 9 beds at the Short-Internment Psychiatric Nursing Ward (EPIB), for patients with acute episodes, over 12 years of age, which need short-term internment at a general hospital until they are forwarded to other public mental health network services or are discharged from hospital. Besides medical and nursing care, at this unit, occupational therapy and psychology activities take place.

Data were collected after obtaining approval for the research project from the Ethics Committee at the University of São Paulo at Ribeirão Preto Medical School Hospital das Clínicas (Protocol HCRP No 3557/2007).

To characterize the interned patients according to their dependence level on nursing care, the Psychiatric Nursing Dependence Level Classification System was used, which is structured according to the psychic aspects and needs of mental disorder patients. It comprises 11 critical care indicators, which are: care for appearance and hygiene, expression and thinking, mood, activities, social interaction, food and hydration, sleep, medication, eliminations, vital signs and other controls, complaints and somatic problems. Each of the indicators is scored from 1 to 3, aiming to identify the attended patients’ dependence level in terms of increasing complexity of the care needed, with level 3 indicating the highest level of dependence.

Patients were classified daily, scoring all indicators, according to the option that best described their nursing care situation. The sum of points corresponding to each of the 11 indicators classified patients in a certain care category: mild dependence level (11 to 18), intermediary dependence level (19 to 26) and full dependence level (27 to 33).

Assessment and classification took place daily, always in the afternoon, between 16 and 19h, in October 2007, totaling 30 consecutive days as recommended in literature.

The researchers collected the data. Besides subjecting the instrument structure to exhaustive analysis, they received specific training from the unit nurses, who possess long clinical experience in care delivery to these clients. This exercise granted them security to assess patients and classify them into the respective care categories, guaranteeing the standardization of data collection. Whenever necessary, the patient files were consulted, mainly the nursing notes. Based on the daily classification of patients hospitalized at this unit, the mean number of patients per care category was determined.

**RESULTS**

During the study period, in October 2007, 43 patients interned at the selected unit were classified. As for this population’s characteristics, the results according to the gender and age variables are shown in Tables 1 and 2.

**Table 1** – Distribution of patients hospitalized at the Psychiatry Unit of the University of São Paulo at Ribeirão Preto Medical School Hospital das Clínicas, according to gender - Ribeirão Preto, SP - 2007

<table>
<thead>
<tr>
<th>Ward</th>
<th>Gender</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPQU</td>
<td>M 7</td>
<td>F 10</td>
<td>17</td>
</tr>
<tr>
<td>EPIB</td>
<td>M 12</td>
<td>F 14</td>
<td>26</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>24</td>
<td>43</td>
</tr>
</tbody>
</table>

**Table 2** – Distribution of patients hospitalized at the Psychiatry Unit of the University of São Paulo at Ribeirão Preto Medical School Hospital das Clínicas, according to age range - Ribeirão Preto, SP - 2007

<table>
<thead>
<tr>
<th>Age Range</th>
<th>EPQU</th>
<th>%</th>
<th>EPIB</th>
<th>%</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 - 20</td>
<td>1</td>
<td>20</td>
<td>4</td>
<td>80</td>
<td>5</td>
<td>11.6</td>
</tr>
<tr>
<td>20 - 30</td>
<td>6</td>
<td>40</td>
<td>9</td>
<td>60</td>
<td>15</td>
<td>34.8</td>
</tr>
<tr>
<td>30 - 40</td>
<td>1</td>
<td>25</td>
<td>3</td>
<td>75</td>
<td>4</td>
<td>9.4</td>
</tr>
<tr>
<td>40 - 50</td>
<td>2</td>
<td>28.5</td>
<td>5</td>
<td>71.5</td>
<td>7</td>
<td>16.2</td>
</tr>
<tr>
<td>50 - 60</td>
<td>5</td>
<td>62.5</td>
<td>3</td>
<td>37.5</td>
<td>8</td>
<td>18.6</td>
</tr>
<tr>
<td>60 - 70</td>
<td>2</td>
<td>50</td>
<td>2</td>
<td>50</td>
<td>4</td>
<td>9.4</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>39.5</td>
<td>26</td>
<td>60.5</td>
<td>43</td>
<td>100.0</td>
</tr>
</tbody>
</table>
At this unit, women predominated with 55.8%. The patients’ age ranged between 12 and 69 years. The largest group was concentrated between 20 and 30 years (34.8%). In this group, the mean age was 37.4 years and the standard deviation 15.7 years.

The age range between 12 and 30 years represented 46.4% of all hospitalizations, i.e. almost half of the patients hospitalized at this unit during the study period. The group between 30 and 50 years of age, on the other hand, corresponded to 25.6% of the research population.

In view of these data, the patients were classified according to their dependence on nursing care. In total, 565 classifications of interned patients were performed, distributed between 332 at the EPQU and 233 at the EPIB. Table 3 presents the data for the study period.

Table 3 – Distribution of patients hospitalized at the Psychiatry Unit of the University of São Paulo at Ribeirão Preto Medical School Hospital das Clínicas, according to nursing care categories and type of ward - Ribeirão Preto, SP - 2007

<table>
<thead>
<tr>
<th>Ward</th>
<th>Mild</th>
<th>Intermediary</th>
<th>Full</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPQU</td>
<td>208</td>
<td>62.7</td>
<td>6.93</td>
<td>122</td>
</tr>
<tr>
<td>EPIB</td>
<td>144</td>
<td>61.8</td>
<td>4.80</td>
<td>71</td>
</tr>
<tr>
<td>Total</td>
<td>352</td>
<td>62.3</td>
<td>11.73</td>
<td>193</td>
</tr>
</tbody>
</table>

The results demonstrate that more than 60% of interned patients were classified under mild dependence on nursing care at the EPQU as well as the EPIB.

Almost all patients with full care requirements were interned at the Short-Term Psychiatric Nursing Ward, which can be considered an expected result, as patients with acute episodes are attended at this unit only.

The mean numbers of patients/day, which served as the base for calculating the mean occupancy rate, equaled 11.07 and 7.76 at the EPQU and EPIB, respectively. The mean occupancy rate exceeded 79% at the EPQU (79.1%) as well as the EPIB (86.2%).

DISCUSSION

At this unit, previous studies have already reported on the predominance of interned women, with percentages ranging from 51 to 56%. A research also performed at a psychiatric internment unit of a general hospital characterized the population hospitalized over a ten-year period, which comprised 47.1% of women. In a range of studies aimed at identifying a relation between gender and the presence of mental disorders, some appoint the existence of factors that, when associated, can interfere negatively in female psychological wellbeing, although there is no clear evidence regarding what factors are supposedly involved in the triggering of psychiatric disorders in women.

As for age, 11.6% of patients were between 12 and 20 years old. During this period, which corresponds to adolescence, people are going through a transition phase, demanding greater attention from parents and professionals dealing with these them, which may be associated with a greater need for distinguished nursing care hours.

The age range from 30 to 50 years, in which the study results found 25.6% of hospitalized patients, is considered a period of full maturity, when individuals are professionally defined and apt to get associated with other people in conditions of equality, in a phase that is considered very productive. Mental illness in people within this age range should be analyzed as a source of concern, in view of its consequences.

Describing the profile of female clients admitted to an internment service of a psychiatric hospital, a study accomplished through a ten-year review of patient files evidenced the predominance of patients hospitalized during their productive age (26-35 years) and indicated a strong association between predisposing biological factors and psychological factors related to work overload, professional, family and socioeconomic problems, which preferably affect this age range.

Based on the results regarding age characteristics, it can be asserted that, like in other studies, patients in this same age range predominated. In a study conducted in 2005 at the same institution, interned patients were distributed as follows: 34.6% between 20 and 34 years, 31.8% between 35 and 59 years and 14.9% was older than 60 years. In another research accomplished at a general hospital, the average age of patients at the psychiatric unit was 35.9 years, in line with the present study findings.

Based on the patients’ distribution across the psychiatric unit beds, the mean bed occupation rate was calculated, which expresses the ratio between the mean number of beds occupied by clients and the number of available beds in a given period. The mean occupancy rate at the Psychiatric Unit bordered upon 82%.

Bed occupancy was considered at the moment the patients were classified, without any correspondence with the hospital census on the same day. If the patient was
not present at the unit during data collection, the bed was considered vacant.

These conflicting figures, however, may be influenced by the fact that, during holidays and at weekends (from Friday till Monday morning), patients receive a discharge leave. This measure is one of the treatment strategies for patients in this specialty, as this unit is articulated with the psychiatric reform movement, which attempts to avoid prolonged hospitalizations, institutionalization and the loss of identity, social bonds and citizenship. Attempts are made to develop, in patients who already have a good relationship with their family and social context and who also display better disease symptom control, greater approximation and interaction with the environment. Thus, the nursing team not only needs to build up a good bond with the patient to guarantee care, but also establish solid links with the family, with a view to the continuity of extra-hospital care.

The analysis of the institution’s performance in terms of hospitalization bed occupancy revealed that rates at the psychiatry unit approached the levels found at medical units (range from 54.3 to 93.1%) and exceeded the percentages found at surgical units (range from 43.4 to 60.2%), according to a study accomplished at the same hospital. This can be analyzed as an expressive demand for hospitalization beds in this specialty at the institution, in view of the growing demand for psychiatric internment at general hospitals in Brazil. Psychiatric care restructuring implies integrated attendance to the population’s demands at different levels, guaranteeing a strategic role for general hospitals, as these represent a care proposal articulated with the broader psychiatric reform movement.

The present research results support the considerations in a similar study that sees psychiatric internment, despite the multiple controversies that surround it, as a fundamental therapeutic resource for many patients, mainly in the most severe conditions. In line with this assertion, a study identified that, in Ribeirão Preto, approximately 8.5% of hospitalization authorizations (AIH) paid for by the Unified Health System in 2002 were allocated under ICD-10 Chapter V, which refers to mental and behavioral disorders, representing the fourth place among the determining causes of hospitalization payment by the SUS.

As for bed distribution according to care category, the data shown in Table 3 display information for the Psychiatry Unit. Most patients who occupied the beds classified at this unit during the research period was mildly dependent on nursing care (62.3%). This percentage of classified patients reflects the characteristics of the research unit and is based on a classification instrument that was constructed using critical indicators that are essential for the classification of patients with psychiatric disorders, based on individualized nursing care needs, i.e. those considered as direct patient care. Although a more advanced discussion is available for patients in other specialties, little knowledge exists on how many psychiatric patients a nursing worker is able to therapeutically attend.

Another issue identified refers to the constant presence of relatives at the unit, which is an auxiliary patient treatment guideline the Psychiatry Service at this institution has adopted. For patients between 12 and 16 years of age, accompaniment during hospitalization has been compulsory; for patients between 16 and 18 and over 60 years of age, presence is optional and, in special cases, the health team itself requests the relative’s stay as a supporting therapeutic instrument. These family members, however, do not always have sufficient and adequate preparation and/or availability to collaborate with care, demanding additional work, particularly for Nursing staff at the unit, in view of their prolonged stay with the patients.

It should be highlighted that, during data collection, it was observed, among other organizational aspects at the unit, that nursing have the autonomy to allocate those patients considered more severe and complex in the rooms closest to the nursing station. This decision has facilitated the team’s surveillance work, mainly during shifts when less professionals are available to attend the entire hospitalization unit. The importance of a psychiatric unit’s physical design is clear, as the space reproduces the need for surveillance and control over psychiatric patients, which nursing has exerted for so long.

It should also be taken into account that other activities are part of the nursing team’s daily work, in view of this unit’s very peculiar characteristics, such as therapeutic groups, occupational therapy sessions, internal (hospital garden) and external walks (ecological parks in the city), during which the presence of nursing professionals is fundamental, consequently demanding a group of professionals compatible with these needs.

It was evidenced that the instrument used for psychiatric patient classification at this unit permitted the identification of these clients’ peculiar characteristics. It should be taken into account, however, that in order to use it, services should concentrate on the development of nurses’ observation skills and adopt criteria to monitor this process, in view of the fact that assessment indicators are somewhat subjective, as some are related with patient behavior and receive interference from the environment, nurse-patient relations, among other possibilities.

This study permitted identifying patients’ degree of dependence on nursing care, but also the existence of otheropathologies associated with the mental disorder in these hospitalized patients, who require distinguished care in view of their physical-physiological instability. As psychiatric nursing care peculiarities predominated in the adopted classification instrument, clinical assessment conditions need to be expanded, as these have undoubtedly demanded specific nursing care and clinical skills de-
The classification of psychiatric patients’ dependence level should be understood as the first step towards nursing staff dimensioning for this specialty at hospitalization unit. That is so because nursing management lacks elements to support the determination of nursing staff numbers, as there is no specific legislation in Brazil to support the structuring of psychiatric internment services. In this sense, to guide staff dimensioning for this specialty, Federal Nursing Council Resolution 293/2004 recommends that

for the sake of calculations, per bed, during 24 hours, psychiatric patient classification should be based on specific care characteristics and start one level higher in the PCS, that is, at the intermediary care level(3).

This recommendation can serve as a guide for health institutions, but literature has shown the importance of institutions’ developing specific studies in response to their reality in terms of knowledge on the component variables of nursing staff dimensioning.

**CONCLUSION**

Hospitalization is an action that requires specialized and intense treatment and, consequently, a proportional number of professionals responsible for patients, with a view to high-quality nursing care.

This study enhanced knowledge on clients attended at the Psychiatric Unit of HCFMRP – USP through the application of a patient classification instrument that characterized the dependence level on nursing care. Although patients with mild care dependence predominated, patients with intermediary and full dependence were also found, demanding distinguished hours of care at the same unit.

Despite hard work, it is only through systemized observation of reality that one can reach true knowledge on patients’ care demands and the time spent on nursing care. The patient classification method used showed to be adequate and replicable at other institutions, but its use requires specific skills, knowledge and clinical experience with this clientele.

This initial study permitted the clients’ characterization based on this perspective. It is relevant to the extent that it surveys characteristics that will permit adapting the nursing team to the needs met. Thus, the study provides support for nursing human resource planning and management at this unit, and also for further research on nursing clients and professionals.

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