

# Assessment of a consultation-liaison psychiatry and psychology health care program

## Avaliação do programa assistencial de um serviço de interconsulta psiquiátrica e psicológica

Paola BA Andreoli e Jair de J Mari

*Departamento de Psiquiatria da Escola Paulista de Medicina, Universidade Federal de São Paulo. São Paulo, SP, Brasil*

### Keywords

Mental health services. Services evaluation. Quality of health care. Psychiatry. Psychology. Consultation-liaison.

### Descritores

*Serviços de saúde mental. Avaliação de serviços. Qualidade dos cuidados de saúde. Psiquiatria. Psicologia. Interconsulta.*

### Abstract

#### Objective

To investigate the relevance of subjective criteria adopted by a psychiatry and psychology consultation-liaison service, and their suitability in the evaluation of case registries and objective results.

#### Methods

Semi-structured interviews were conducted and all supervisors of the university hospital service were interviewed. Routinely collected case registries were also reviewed. Standardized assessment with content analysis for each category was carried out.

#### Results

The results showed distortions in the adopted service focus (doctor-patient relationship) and consultant requests. This focus is more on consulting physician-oriented interventions than on patients.

#### Discussion

Evaluation of the relevance of service criteria could help promoting quality assessment of the services provided, mainly when objective criteria have not yet been established to assure their suitability.

### Resumo

#### Objetivo

*Investigar a pertinência dos critérios subjetivos adotados por um serviço de interconsulta psiquiátrica e psicológica e sua adequação na avaliação dos registros e resultados objetivos obtidos.*

#### Métodos

*Foram realizadas entrevistas semi-estruturadas com todos os supervisores do serviço estudado de um hospital universitário, e revisados os registros de caso coletados rotineiramente no serviço. Foi realizada avaliação formal por meio de análise de conteúdo para cada categoria.*

#### Resultados

*Os resultados mostram distorção entre o foco adotado pelo serviço (relação médico-paciente) e a demanda dos consultantes. Esse foco direciona para maior predomínio de intervenções direcionadas aos médicos consultantes do que aos pacientes.*

### Correspondence to:

Paola B.A. Andreoli  
Universidade Federal de São Paulo, Departamento de Psiquiatria – EPM  
Rua Botucatu, 740, 3º andar  
04023-900 São Paulo, SP, Brasil  
E-mail: pbandreoli@psiquiatria.epm.br

Study undertaken at the "Hospital São Paulo", with the cooperation of the "Departamento de Psiquiatria, Universidade Federal de São Paulo".  
Research Grant from CNPq (Process n. 524482/1996-9).  
Based in a thesis presented to "Departamento de Psiquiatria da Universidade Federal de São Paulo", for obtaining a Master's Degree in Mental Health, 1998.  
Edition supported by Fundação de Amparo à Pesquisa do Estado de São Paulo (Fapesq – Process n. 01/01661-3)  
Received on 6/3/2001. Reviewed on 15/1/2002. Approved on 14/2/2002.

### **Conclusão**

*A avaliação da pertinência dos critérios adotados pelo serviço pode servir ao propósito de promover análise da qualidade do serviço prestado, principalmente em casos em que não se possuem ainda critérios objetivos que possam atestar sua adequação.*

## **INTRODUCTION**

The adequacy of the criteria adopted in evaluative research studies on consultation-liaison psychiatry services has developed from strictly epidemiological or managerial measures (cost-effectiveness) to the more subjective ones. These studies are aimed at dealing with the diversity of the studied objectives – the patient, the physician and the relationship between both of them. As the concept of health expanded, the criteria for evaluating health services began to include ideas, such as “to tranquilize, soothe and comfort and also, to deal with life-threatening, acute conditions”.<sup>2</sup>

The criteria adopted in the evaluative research on psychiatric consultation-liaison services are divided as follows:

- 1) Those aimed at investigating issues, such as the institutional impact of interventions, due to insufficient focus both on the procedure and outcome measures;<sup>12,16</sup>
- 2) Those aimed at investigating the medical and economic features of such interventions according to clinical decisions and outcomes.

The first set of studies aims at investigating the prevalence of psychiatric disorders in a general hospital setting (strictly epidemiological). It is also concerned with describing patients' profile. The criteria indicate the emphasis given to the descriptive aspects of ideas and concepts used in consultation-liaison health care.<sup>12,16</sup>

The second set could be classified into a category of clinical decision-oriented studies, describing the patient's clinical treatment, educational programs and health care program functions. Such studies aim at investigating treatment effectiveness and the clinical management of psychiatric conditions at general hospitals.<sup>10,12</sup> Although establishing objective criteria may be attempted by means of standardized diagnoses and treatment, they lack the appropriate measures for other intangible benefits, such as minimizing the pain inflicted on the patient and a good doctor-patient relationship.

The third set of studies is more recent and focuses on an outcome-oriented research, by linking concepts' qual-

ity, keeping the beneficiary satisfied and understanding the market theories. One of the most commonly used criteria in these studies is the length of hospital stay, which provides the features of a psychiatric consultation-liaison service from the hospital administration's standpoint, with cost reductions for the hospital stay.<sup>6,17</sup> Another criterion used is compliance and observation of the psychiatric and psychological recommendations, showing that there are positive associations between the intervention adopted by the physician, the timing and the type of recommendation.<sup>9,15,19</sup>

Another aspect focusing on the effectiveness of the psychiatric consultation-liaison intervention is an evaluation of the impact on the consultation procedure due to a change in attitude by the medical team. This often occurs upon admission to the general hospital, after identifying and managing the patient's psychiatric and psychological disorders.<sup>18</sup> Despite the methodological difficulties encountered in determining and measuring such criteria regarding their reliability and validity, these studies aim at emphasizing the importance of the evaluation procedure and the efficacy of interventions provided by the consultation-liaison psychiatry.

The “health care quality” equation, however, comprises a much broader reach. It requires the understanding of the organization, its objectives, the purpose of its services as well as its outcomes, from a managerial standpoint to that of the conceptual adequacy and relevance of health care programs. In the present study, the concern is about the standardized evaluation of the health care program in a psychiatric consultation-liaison service due to the variety of management seen in this area and the urgent need for a better knowledge of both this service's clinical effectiveness and what is being provided as a health care service.

Thus the present study aims at evaluating the quality of the interviews provided in a psychiatry and psychology consultation-liaison service by means of a standardized assessment. It was carried out a comparison of qualitative data collected while investigating the criteria established by supervisors and coordinators and of descriptive data, obtained from an evaluation of the clinical and demographic variables of the beneficiaries of the studied service.

## METHODS

### Location of the study

The present study was performed at a psychiatric consultation-liaison service in a university hospital, São Paulo, Brazil. This service was established in 1977 and was initially structured according to a proposition by Argentinean researchers,<sup>5</sup> of assisting the doctor-patient relationship during a clinical-situational diagnosis.<sup>11</sup>

The evaluated psychiatric consultation-liaison service takes care of all psychiatric/psychological consultation requests for inpatients at the studied service. The university hospital comprises 41 wards: 19 clinical wards, 12 surgical wards, 8 intensive-care units (ICU), of which 7 are specialized and one is general adult ICU, 2 wards for kidney and medulla transplants and one emergency unit. There are 631 beds financed by the government's Unified Health System (SUS) and 23 private beds.

The team of supervisors comprises five psychiatrists and two post-graduate fellow physicians (one psychologist and one psychiatrist). The interviews for the present study were only obtained from the five supervising psychiatrists (the five key informants). The consultation-liaison service also has psychiatry and psychology trainees.

### Procedure

In order to gain access to the structure, conception and planned objectives of the psychiatric consultation-liaison health care program, a semi-structured questionnaire was obtained by interviewing key-informant staff-members of the studied service. From August to October 1996, the researchers have conducted 30-minute-interviews with all supervisors (psychiatrists and psychologists).

The qualitative data analysis of the interviews was strictly categorized into four main themes (Bardin)<sup>4</sup>: a) theoretical and objective referential (plan and conceptualization); structure (instrumentation); c) procedures (follow-up); d) outcomes (efficacy of the program).

The standardized or internal evaluation of services, as proposed by Aguilar & Ander-Egg,<sup>1</sup> focused initially on issues related to the plan and conceptualization of the psychiatric consultation-liaison health care program.

An assessment of the psychiatry/psychology con-

sultation-liaison service's case registry files was also performed to investigate the relevance of quantitative data (gender, age, reasons for the request, etc.) regarding the conceptualization and underlying objectives. Data collection was obtained from case registry files of all inpatients seen at the service from June 1 1996 to May 31 1997. The sample totaled 185 registrations, and during that same period the rate of referrals was 1.2%.<sup>3</sup>

For quantitative description of the consultation-liaison psychiatry and psychology service, data related to case registries were entered and analyzed using simple frequency tables and chi-square significance tests.

## RESULTS

The results obtained are divided into three parts: a) theoretical and referential objectives; b) health care services and its beneficiaries; c) management of treatment and diagnostic procedures.

### Theoretical and referential objectives

Upon establishing the objectives of the health care program of the evaluated psychiatric consultation liaison service, it was found that health care services were predominantly directed towards the consulting physician. The acceptance of such services is due to the focus on doctor-patient relationship and that is why such programs are referred to as "medical psychological consultation liaison."

"The Argentinean author and his colleagues made an acceptable proposition, upon defining the basic task of a consultation liaison as 'to assist the assistance' or giving assistance when assisting the physician. This means cooperating with the caring task, working together with the medical staff."<sup>5</sup>

It is also very similar to the focus proposed by Ferrari et al,<sup>5</sup> in that:

"A consultation-liaison always comprises the semiology of the psychological aspects in a doctor-patient relationship, which means understanding how the condition occurred and how it is being handled. (...) The physician's abilities as a psychotherapist or teacher are always involved in a consultation-liaison and this is one of its most important objectives." (p.50-51)

Consultation-liaison always comprehends semiology of the doctor-patient psychological field; i.e., it means understanding how the condition occurred and how it is conducted (the pedagogic or psychothera-

peutic aspect of the physician is always part of a consultation-liaison, and this is one of the most important objectives of consultation-liaison”) (p.50-51).

*This really sounds more like a medico-psychological intervention, since both the medical and the psycho-dynamic aspects are taken into account. Using the term ‘medico-psychological’ therefore seems to be more appropriate.*

The service is considered by its supervisors as having a strong psychoanalytical background, where the relationships between the patient, the physician, and the health care personnel, as a whole, take place. The supervisors believe that the problems — and their solutions — are present in the doctor-patient relationship that, in turn, calls for working with the transference and counter-transference phenomena, resulting in the request for a psychiatric consultation-liaison evaluation.

*The reference seems to be psychoanalytical. Whenever the work is related to ideas, transference, regression, defense mechanisms and so forth, the reference has to be psychoanalytical.*

*An enormous amount of material is collected on a subjective level. At times, it is not even conscious and requires further elaboration, or careful consideration. This makes the patient, the doctor, and the health team suffer. The concept of the alpha function, Bion’s “reverie”, can contribute towards supplying a theoretical structure, making it possible to hear, to think, to be open. This is a matter that is worth thinking about.*

The objectives established are preferably directed towards working with the consulting doctor by interventions in the doctor-patient relationship and orienting the physician, particularly to what concerns supplying psychotherapy treatment (latu sensu).

### Care services and its beneficiaries

Identifying the request may vary: from the request for diagnostic elucidation to that of a given intervention in the doctor-patient relationship.

*Well, the request is usually linked to the “psy” area... the psychological or psychiatric area. For problems at an emotional or psychological level, the hospital’s personnel does not have the necessary qualification, involvement or understanding to feel safe about handling cases that are slightly more complex.*

*Perhaps several situations may in fact be considered as real ones, but instead they are looked upon as depression, and yet they are not. These situations are reactivated at a given moment, such as experiencing a disease and hospitalization. It’s common when the patient cries, he or she is already depressed.*

Despite the patient’s care is a clear demand this is not as strength as of this service or institutional interventions or work of the health team.

*It seems safe to say, from a teaching standpoint, that this area has been quite reasonably covered. Perhaps what this consultation-liaison service really lacks is conferring some assistance to the hospital... caring for the patient. The teaching area appears to be slightly better as compared to the health care one.*

Focusing on the doctor-patient relationship could be problematical when the basic task of the consultation-liaison is not the patient’s psychiatric or psychological treatment as such. It is, however, to provide psychotherapy or psycho-pedagogic assistance at a level that corresponds to the patient’s relationship with his physician.<sup>5</sup>

The psycho-pedagogic care for physicians is briefly described in the following comment:

*Educational assistance for professional development in psychology... its presence and inclusion in the care giving task... This also includes the aspect of an educational background for doctors and nurses.*

Providing services that are intended for the consulting physician, helping to deal with doctor-patient relationship situations, or identifying and treating the most common psychiatric disorders at a general hospital are two singular aspects of the psychiatric consultation-liaison intervention.<sup>8</sup> Even so, these may not be clearly presented to the beneficiary in question, or rather, the consulting physician. This is shown in the following comment:

(Question: Are the objectives of the psychiatric consultation-liaison understood by its beneficiaries?)  
*Perhaps not. Or, perhaps not quite. In fact, they do not understand enough of it. If it were so, the consultation-liaison would be a great success and the beneficiary would be on another level, even regarding the doctor patient-relationship itself. It has been overlooked, it is really a weak point in the consultation-liaison...always having to start from scratch.*

## Therapeutic management and diagnostic procedures

The use of diagnostic procedures and the management of treatment and medication refers to a broader reach. Both the diagnosis and the management of medication are always described as the groundwork of the main intervention carried out either by the physician or during the relationship, as shown in the following comment:

*The diagnosis is important, but it refers to something more comprehensive. What are the repercussions of the patient's diagnosis and disease of this on this more comprehensive scope?*

This refers to the situational diagnosis in the concept theories given above.<sup>5</sup> The care process is very similar in all descriptions. However, three controversial points must be presented: a) establishing management, b) period of care and, c) discharge.

Three of the five supervisors believe that, in some situations, discharge is forced. An example is given with the following comments:

*This is not a discharge. It is more like the end of a consultative task. The intervention is made and then it is concluded, without the patient being discharged, because the latter is something that occurs independently.*

*The concept of discharge depends on several associated factors. For example, the reason for hospital admission could be one criterion for discharge.*

However, two other supervisors believe this conduct is not clear:

*A difficult question to answer is whether there is a special procedure for discharging a patient. Some cases may be difficult to solve and present a problem for the consulting physician. Sometimes the cases are so difficult that they are a source of concern for the consultation-liaison psychiatrist. Others may take longer to treat due to the very nature of the request.*

*In a consultation-liaison, discharging the patient does not seem to occur so frequently. This is not usually a problem that is easily solved. In most cases, the patient's discharge from the consultation-liaison may coincide with the hospital*

*discharge... but for the staff this can be mere the beginning of the process of the patient's comprehension.*

The time it takes to implement management, the time spent with the patient and with his or her discharge seems to be dictated by the problems imposed on the established relationship. This seems to indicate that the patient and his or her physician cannot always be helped during that particular stay in hospital. Besides, the problem resulting from the request for a psychiatric consultation-liaison is not always considered as being limited to the hospital stay. That is to say, the reason for the request is related to a disease course, which does not disappear upon admitting the patient to the hospital.

### The case registry: what the service does?

The investigation performed during the present study included 185 patients treated over a one-year period, from June 1996 to May 1997. The average age of the patients was 42 years (SD = 20; median age = 40 years old) and the gender distribution was 47% females and 53% males ( $X^2 = 1.946$ ; g. l. = 3;  $p = 0.58$ ). In this sample, 75% of the patients were white, 42% married, 30% were actively employed, 36% unemployed, and 34% other (students housewives or retired). Forty-three percent of these patients were born in the city of São Paulo and 70% had not had previous contact with psychiatric services. Eight percent were illiterate, 81% had access primary school education (complete or incomplete), and 11% had either not completed or had graduated from high school or college.<sup>3</sup>

On average, the patient was seen over a 9-day period (SD = 10 days, median = 5 days) and 64.4% of the cases fell within or below average. A closer examination of the data showed that 33 of the cases were seen over a period of more than 20 days and 9 of these cases were seen over an even longer period (over 50 days), thus significantly increasing the average stay in hospital to 9.5 days during the same period.<sup>3,\*</sup>

The consultation-liaisons were requested for patients who had been in hospital for an average period of 13 days. The time elapsed from the request to care was one day.

In the chi-square test, there were no statistically significant differences in any of the above variables.

Since there were several problems in the recording

\*Data officially supplied by the Medical and Statistical Archives Service (SAME) of the Hospital São Paulo.

(over 60%) of psychiatric diagnoses, these were excluded from the service's profile report. A closer examination of such records showed that several diagnoses had been incorrectly recorded and had therefore been classified as unreliable data to be excluded from the analysis.

It should be noted, however, that the incidence of patients who had previously contacted the mental health services was 30.3% of the treated patients.

In 56% of the cases a first year resident doctor made the requests, most of which came from medical wards (59%). The psychiatric consultation-liaison was mainly requested by physicians for assessment and management (80%) of inpatients who had been hospitalized for an average period of 13 days.

In accordance with the model adopted by the consultation-liaison psychiatrists, the management of choice is mostly directed towards the physician (89%). This is followed by the management of drug prescriptions (40%), family intervention (18.8%), patient's referral to psychotherapy (13.5%) and meetings with the attending team (12.9%). The management of referrals most frequently adopted was: discontinuation of the consultation-liaison with no referral after discharge from hospital (54%), discharge from hospital without discontinuing the consultation-liaison (35%), referrals to psychiatric services (12.5%) and psychotherapy (5.4%).<sup>3</sup>

### **Standardized analysis: conceptualization and health care**

The differences between understanding a health care program in theory and at the clinical practice is demonstrated by the high incidence of requests of psychiatric assessment and therapeutic management (80%) and the percentage of cases in which the consulting physician effectively provides care such as: drug prescription (40%) and patient's assistance (13.5%). Such dissimilarity can contribute towards a lack of definition as to the targeted results with the intervention provided by this service. This can be noted from the lack of reliable diagnoses recordings and a focus directed towards the doctor-patient relationship.

Due to unsolved problems related to recording psychiatric diagnoses, they cannot be used in the description of the service profile. This makes the operability of the outcome measures difficult for the patients and keeps the provision of services away from the required by the beneficiary patient-oriented care program.

In fact, the focus is on the doctor-patient relationship (89%), and caring for the patient is not the strongest aspect in this intervention. Furthermore, less assistance is provided to the patient (13.5%).

A longer hospital stay of inpatients admitted during the same period (9.5 days) seems to suggest another important aspect mentioned by the supervisors: the lack of strict parameters for determining therapy, prognosis and discharge (as shown above).

### **DISCUSSION**

The combination of both medical and psychological concepts,<sup>5</sup> or psychiatry consultation and liaison,<sup>10</sup> and the integration of two different outlooks results in the widening of one of the patient-oriented care models to create a new one. This second model takes into consideration a set of factors involving the binomial disorder/healing and doctor/patient relationship that exert an influence on hospital admissions. Hence, establishing the criteria for an intervention assessment is a complex task. As a result, the assessment in this study was first based on the plan and conceptualization of the service, comparing this with the data provided in the case registry files.

According to Pincus,<sup>13</sup> the true potential of the consultation-liaison psychiatry services is systematically minimized due to little or no knowledge regarding either the planned objectives or the targeted market. From the perspective of institutional resources, the consulting doctor considers the psychiatric or psychological care as one of the assignments of the consultation-liaison psychiatry services. However, during the elaboration of the evaluated psychiatric consultation-liaison health care program, this sort of assistance proved to be incipient and out of focus. It impairs comprehensiveness and acceptance of the service, increasing the disparity between the hospital's objective demand and the service's goals. This leads to a more negative assessment of the clinical effectiveness of the program.

The lack of definition of the parameters to be used in therapeutic management is another important factor related to the clinical effectiveness of the interventions recommended for this health care program and reduces the likelihood of its acceptance. Some studies suggest that when psychiatric management is indicated at the beginning of the consultation-liaison care, this tends to coincide with a greater compliance on the part of the consulting doctor. This does not occur in psychological or psychosocial management, which appear to be having more acceptance and compliance if the

indication is made while the patient is receiving care. This shows that, when such an indication is made for the doctor as a beneficiary, this care must also be extended to the patient.<sup>9,14</sup>

The longer hospital stay could be explained due to the severity of the pathology of the established relations, thus prolonging the treatment and making the case more difficult to be taken care of. It could also be due to the patient's severe psychiatric/psychological pathology, corroborating the idea that such disorders increase the average length of the hospital stay.<sup>6,7,17</sup>

Assessing is more than assigning a value to a certain intervention. It is also "the process designed to determine how much of the previously defined objectives were achieved."<sup>1</sup> In this sense, a formal assessment of the consultation-liaison psychiatry service studied was considered as the basic parameter. This might explain the inconsistencies of operability of concepts in the elaboration of a health care program proposition for physicians and their patients. It further explains why the service was unable to achieve many of its proposed goals until the natural termination of the program — of health care.

Evaluating the internal coherence of the programs can be useful for a closer contact with the health care procedure, which has long been overlooked by traditional assessment studies. Starting anew in search of criteria and parameters to assess these services may be still possible. The results derived from this evaluation may contribute towards a better knowledge of

the study's objectives. Besides, such results can provide a closer look at the service's *modus operandis*, i.e., a full understanding of the meaning of quality in consultation-liaison psychiatry.

The standardized evaluation of a service enables one to get a better insight of goals, process and outcome. It may also provide subsidies for researching and developing criteria that may be used as parameters to study the adequacy of the programs in relation to their objectives.

Moreover, the use of a qualitative approach when investigating the theoretical references and objectives of the consultation-liaison psychiatry programs is an attempt to recall the association between the underlying elements and health care provided. The study of service records provides a description of the feasibility of the objectives and concepts in question, showing how this link is established in the daily routine of care practice.

The combination of conceptions, as proposed in the consultation-liaison psychiatry programs, shows that clinical practice is far from offering a coherent integration between consultation and liaison. This promotes a skewing towards any of the ends of the proposal (physician/patient/institution or other), minimizes its effectiveness and the institutional impact that could be otherwise achieved. A program that offers a service with ill-defined objectives makes the beneficiary's understanding more difficult and its success out of the question.

## REFERENCES

1. Aguilar MJ, Ander-Egg E. *Avaliação de serviços e programas sociais*. Petrópolis: Vozes; 1995.
2. Akerman M, Nadanovsky P. Avaliação dos serviços de saúde mental: avaliar o quê? *Cad Saúde Pública* 1992;8:361-5.
3. Andreoli PBA, Martinez DJ, Mari JJ. Avaliação da padronização dos registros de caso de um serviço de interconsulta psiquiátrica. *Bol Psiquiatr* 1999;32:26-32.
4. Bardin L. *Análise de conteúdo*. Lisboa: Edições 70; 1977.
5. Ferrari H, Luchina N, Luchina IL. *La Interconsulta médico-psicológica en el marco hospitalario*. Buenos Aires: Nueva Visión; 1980.
6. Fulop G, Strain JJ, Vita J, Lyons JS, Hammer JS. Impact of psychiatry comorbidity on length of hospital stay for medical/surgical patients: a preliminary report. *Am J Psychiatry* 1987;144:878-82.
7. Fulop G, Strain JJ, Fahs MC, Hammer JS, Lyons JS. Medical disorders associated with psychiatry comorbidity and prolonged hospital stay. *Hosp Commun Psychiatr* 1989;40:80-2.
8. Houpt JL. Products of consultation-liaison psychiatry. *Gen Hosp Psychiatr* 1987;9:350-3.
9. Huyse FJ, Lyons JS, Strain JJ. The sequencing of psychiatry recommendations: concordance during the process of a psychiatry consultation. *Psychosomatics* 1993;34:307-13.

10. Lipowsky ZJ. History of consultation-liaison psychiatry. In: Lipowsky ZJ. *Textbook of consultation-liaison psychiatry*. Washington (DC): American Psychiatry Press; 1996.
11. Martins LAN. Consultoria psiquiátrica e psicológica no hospital geral: a experiência do hospital São Paulo. *Rev ABP-APAL* 1989;11:160-4.
12. McKegney FP, Beckhardt RM. Evaluative research in consultation-liaison psychiatry - review of the literature: 1970-1981. *Gen Hosp Psychiatry* 1982;4:197-218.
13. Pincus HA. Marketing consultation- liaison psychiatry. *Gen Hosp Psychiatry* 1987;9:347-9.
14. Popkin MK, Mackenzie TB, Hall RCW, Garrard J. Physicians' concordance with consultants' recommendations for psychotropic medication. *Arch Gen Psychiatry* 1979;36:386-9.
15. Popkin MK, Mackenzie TB, Callies AL. Consultation-liaison outcome evaluation system. *Arch Gen Psychiatry* 1983;40:215-9.
16. Rundell JR, Wise TN. Consultation-liaison psychiatry research In: Rundell JR, Wise TN *Textbook of consultation-liaison psychiatry*. Washington (DC): American Psychiatry Press; 1996.
17. Saravay SM, Lavin M. Psychiatry comorbidity and length of stay in the general hospital. *Psychosomatics* 1994;35:233-52.
18. Vaz E, Salcedo A. Model for evaluating the impact of consultation-liaison psychiatry activities on referral patterns. *Psychosomatics* 1996;37:289-98.
19. Wise TN. Segmenting and assessing the market in consultation-liaison psychiatry. *Gen Hosp Psychiatry* 1987;9:354-9.