Research methodologies to assess teaching in psychiatric residency: a literature review

Metodologias de pesquisa para avaliação do ensino na residência de psiquiatria: uma revisão da literatura

Ibiracy de Barros Camargo and José Onildo B Contel

Mental Health Doctorate Program of the Ribeirão Preto Medical School of the University of São Paulo. Ribeirão Preto, SP, Brazil

Abstract

Objectives: Research methodologies in psychiatry have followed both the changes in mental health care and the need of updating programs of medical residency. To identify empirical articles in the indexed literature from 1997 to 2002, with the aim of analyzing and discussing methodological aspects of research dealing with the description and assessment of residency programs in psychiatry.

Method: The bibliographic survey was performed using MedLine, PsycLit, Web of Science, and Lilacs. Twenty-one articles were identified.

Results: Nineteen studies were characterized as exploratory-descriptive and two as experimental. Data collection used questionnaires in 12 of them, and combined techniques in the other seven and the two experimental studies had data collected by tests applied before and after the teaching intervention. Most of the subjects were residents and program directors. Fifteen studies used statistical analysis.

Conclusions: All the articles outlined the problems based on literature reviews. Most of the studies made use of standard techniques of social research and only two used experimental procedures. Only three studies employed external measures in order to establish correlations with the collected data. Procedures to validate and assess the reliability of the instrument by means of pilot-studies were absent in 11 studies, what may indicate methodological biases.

Keywords


Resumo

Objetivos: As metodologias de pesquisa na psiquiatria têm acompanhado tanto as transformações nos sistemas de atendimento à saúde mental como a necessidade de atualização dos programas de residência médica. Identificar, analisar e avaliar na literatura indexada entre 1997 e 2002 artigos empíricos relativos à avaliação de programas de residência em psiquiatria.


Resultados: 19 estudos caracterizam-se como descritivos exploratórios e dois, experimentais. Em 12, a coleta de dados utilizou questionários, em sete, técnicas combinadas e, nos dois estudos experimentais, os dados foram coletados por meio de testes aplicados antes e depois da intervenção. Residentes e diretores de programas constituíram a maioria dos sujeitos. Em 15 trabalhos, a análise de variáveis utilizou procedimentos estatísticos.

Conclusões: Todos os artigos delinearam os problemas com base em revisão da literatura. A maioria dos trabalhos utilizou técnicas comuns na pesquisa social e apenas dois empregaram recursos experimentais. Somente três estudos utilizaram medidas externas para estabelecer correlações com os dados coletados. Procedimentos de validação e aferição de confiabilidade do instrumento, por meio de estudos-piloto, não foram realizados em 11 estudos, o que pode indicar vieses metodológicos.

Descritores

Introduction

The role of the research methodology in psychiatry has undergone recent modifications and knowledge originated from research had become increasingly crucial for psychiatrists. The reviews that have teaching in psychiatry as their object of study have become relevant to assess its current state. The concern with research has been constant in the field of Psychiatric Residency teaching, in the several rotations of the Services of the Program of Psychiatric Residency (MRP) of the Clinical Hospital of Ribeirão Preto.

The authors suppose that a similar concern may be present in many of the 45 MRP, accredited by the National Commission of Medical Residency. Researches about quality, program content and teaching methodology in MRP will be essential for the development of Brazilian psychiatry.

The complexity of a research project recommends that its development be preceded by certain precautions, such as a review of the literature which sums up the scientific breakthroughs, generates knowledge and creates hypotheses. Its advantage is to apprehend what is the most current and valuable in the scientific research, immediately divulged for professionals all over the world.

Objectives

To identify empirical articles in the indexed literature between 1997 and 2002 aiming at analyzing and discussing methodological aspects of researches focused on the description and assessment of residency programs in psychiatry.

Method

The bibliographical research was performed with the indexes MedLine, PsycLit, Web of Science and Lilacs with four sets of keywords: 1) training, academic psychiatry, skills; 2) training, medical education, skills; 3) medical training, residency, psychiatry; 4) residency, psychiatry, knowledge. Review articles and those about teaching on non-psychiatric residencies and on medical graduation were excluded.

Results

We found 21 articles about the chosen subject, 19 of which described researches about existent programs and two described experimental methodologies.

Exploratory descriptive studies

Out of 19 articles, 15 obtained data regarding the quality and features of functioning of MRP and four developed or tested instruments to assess the quality of the programs.

Experimental studies

One of the articles tested the efficacy of the Problem-Based Learning, and other verified the efficiency of a training about cultural sensitivity.

Research outlining and formulation of hypotheses

Eleven studies had not outlined their researches based on pilot studies, whereas nine had done it and one was presented as a pilot.

All articles outlined the research issues based on a review of the literature, eight of which had explicitly divulged their hypotheses and 13 had not.

Data collection

Among the 19 exploratory descriptive studies, used the questionnaire as a sole instrument, with a predominance of shipment, whereas seven used combined techniques, such as questionnaires, phone or face-to-face interviews, PRITE examination and evaluation card of the resident by professors.

The two experimental studies collected data by means of pre-tests or post-tests using questionnaires and Likert attitudes scale.

Subjects

Subjects used in the researches reported in the articles were: residents in 10 studies, program directors, in 7, preceptors and residents, in two; directors and residents, in one and patients professors and residents, in another one.

Data analyses

In 15 studies, the analysis of inter and intra group variables used statistical procedures (ANOVA, Chi-square, Kappa, Mann-Whitney U Test, among others), while six presented variables using only percentage distribution.

Inter group, intra group and external comparisons. Eighteen studies performed the analysis of variables by means of intra group and inter group comparisons. In three studies PRITE exams were used as external comparisons.

Discussion

Psychiatric residency occurs in a sequential number of years, being four in the US and Europe and two, exceptionally three, in Brazil.

All articles assessed teaching results or characteristics of MRP profiling from the design of the expected sequential progress. This characteristic favor transversal, and longitudinal studies and intra and inter group comparisons. In the US external comparison using the PRITE Exam, noted in three articles, provided an objective external measurement of the resident’s performance.

Methodologically, the use of external comparisons is an advance as it utilizes more than one measure instrument, besides those developed within the local investigation of MRP, to check the focused variables.

The analyzed articles depict researches conducted by means of common techniques in the area of social research. The fact that we found only two experimental studies might be an indication that current researches do not dare to present and test the validity of new modes of teaching psychiatry, focusing mainly in the description of what is already existent.

In some studies it was possible to detect traces of methodological flaws. In one study, the title of the article was too...
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<tr>
<td>Carney CP et al, 2002</td>
<td>Combined internal medicine/ psychiatry and medicine practice/ psychiatry training programs 1999-2000: perspectives of residents.</td>
<td>To assess points of view of residents enrolled in the programs about training experiences and plans for the future.</td>
<td>111 residents, being 86 in psychiatry/ internal medicine and 25 in psychiatry/family medicine.</td>
<td>Questionnaires sent in up to 3 mailings, about demographic factors, opportunities and experience of combined training.</td>
<td>The degree of satisfaction of residents with the training was high. Respondent subjects plan to insert combined practical abilities in a future work situation.</td>
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<td>Greenberg WM et al, 2002</td>
<td>A survey of addiction training programming in psychiatry.</td>
<td>To exam in 50 residency programs the current state of the training on substance dependence and the impact of the new criteria established in January 2001.</td>
<td>50 Program Directors, proportionally chosen, among 7 geographic areas of the APA.</td>
<td>Questionnaire applied by phone or face to face, mainly with closed questions on the teaching of substance dependence in residency.</td>
<td>Ninety-four percent of the 50 studied programs meet the new requirements, being 31 in full and 19 in partial rotations.</td>
</tr>
<tr>
<td>Houghtalen RP et al, 2002</td>
<td>Residents’ morning report in psychiatry training – description of a model and survey of resident attitudes.</td>
<td>To describe factors which optimize or harm the learning in the transmission of morning shift, focused on the presentation of cases and in the training in evidence-based decision-making.</td>
<td>Fifty-five residents, divided in three groups, being 17 from the first, 20 from the second and 18 from the third postgraduate year, in the rotations of a Psychiatric Ward and Interconsultation.</td>
<td>Questionnaire adapted from Ways et al, with 17 items, to be answered in 5 minutes to assess attitudes and satisfaction with the format and facilitating factors for the learning.</td>
<td>There is an agreement between the three groups of subjects as to the validity of the training model. Attributes of the professors may contribute positively or negatively with the learning.</td>
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<td>Margariti MM et al, 2002</td>
<td>Toward a European harmonization of psychiatric training in Greece: the prospects of residency training in Greece.</td>
<td>To describe the characteristics of the residency program and to make a comparison between them and with the official demands in Europe and the US.</td>
<td>Fourteen residency programs, being 6 in Universities, 5 in general hospitals and 3 in psychiatric hospitals.</td>
<td>Questionnaire based on 5 describing topics of official requirements. Face-to-face interview with a duration of approximately 90 minutes.</td>
<td>Disagreement with official requirements. Huge teaching variability between institutions. Inadequate rotations. Residents used as cheap manpower.</td>
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<td>Sudak DM et al, 2002</td>
<td>Readiness of psychiatry residency training programs to meet the ACGME requirements in cognitive-behavioral therapy.</td>
<td>To assess the willingness to teach cognitive-behavioral therapy in the psychiatric residency, before the official requirements of January 2001.</td>
<td>Eighty-four directors of adult residency programs.</td>
<td>Questionnaires with eight items. Double shipment by mail. Assessment of the required hours, theoretical information, supervision and experience in the cognitive-behavioral area.</td>
<td>The trust of directors in the training was related to the accrediting ofoprophers and to supervising hours. Absence of obligatory training in almost half of the investigated programs.</td>
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<tr>
<td>Yudkowski R et al, 2002</td>
<td>Two perspectives on the indicators of quality in psychiatric residencies: program directors’ and residents’.</td>
<td>To verify if the group of directors and the group of residents agree about the relevant indicators of quality in the domains of context, content, culture and consequences of MRP programs.</td>
<td>Two hundred and thirty-four MRP directors and 180 psychiatric residents.</td>
<td>Forty-one-item questionnaire, related to the quality indicators of psychiatric MRP transformed in Likert Scale with 7 anchors, being 1= least important and 7= most important.</td>
<td>The 2 groups do not agree regarding quality indicators of MRP, as they concentrate in different foci. Different groups such as future employers could have quite different priorities.</td>
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<tr>
<td>Dobscha SK &amp; Ganzini L, 2001</td>
<td>A program for teaching psychiatric residents to provide integrated psychiatric and primary medical care.</td>
<td>To investigate the satisfaction among patients, residents and professors, in a 12-month integrated outpatient service.</td>
<td>Twenty-three patients, 7 residents, 6 professors.</td>
<td>Scale of the American Society of Anesthesiologists (ASA) adapted with Likert scale with 5 anchors with higher counting showing higher satisfaction.</td>
<td>Integrated attention of patients with clinical an psychiatric supervision generates satisfaction among residents and patients. Residents dedicated more time to their patients.</td>
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<tr>
<td>Doebbeling CC et al, 2001</td>
<td>Combined internal medicine – psychiatry and family medicine – psychiatry training programs, 1999-2000: program directors’ perspectives.</td>
<td>To study better combined MRP. To understand better the roles of directors in Internal Medicine/ Psychiatry and Family Medicine/ Psychiatry programs.</td>
<td>Thirty-two directors of 29 combined programs, being 29 males and 5 females, being 9 assistant professors, 17 associate professors and 5 full professors</td>
<td>Questionnaire developed to assess: demographical factors, content and information about the double training program. Shipment in up to three mailings.</td>
<td>It is necessary that more residents acquire aniduity of double training. Directors with doublecertificate. Wide variation of content. Mean life of programs is 5 years. Programs are mostlybased on Departments of Psychiatry.</td>
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<tr>
<td>Margariti MM et al, 2001</td>
<td>Psychotherapy in postgraduate psychiatric training: attitudes of residents.</td>
<td>To know the opinion of Greek residents about the psychiatric learning, articularly in psychotherapy.</td>
<td>Sixty residents, being 28 females and 38 males with mean age of 33.2 years.</td>
<td>Questionnaire with 80 educational objectives which correspond to 18 basic areas of know ledge and abilities in Psychiatry, to be applied in 15-20 minutes. Likert Scale from 1 to 9.</td>
<td>Ninety point nine percent of the programs train in psychoanalytical psychotherapy. This training does not perform researches as a heritage of Psychoanalysis, transmitted to young psychiatrists. Biopsychosocial aspects were also represented.</td>
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<td>Sierles FS et al, 2001</td>
<td>Psychometric properties of ABPN-Style oral examinations administered jointly by two psychiatry residency programs.</td>
<td>To assess the interclassifying and test-retest reliability. To assess the reliability and validity of the Oral exams of the American Board of Psychiatry and Neurology (ABPN).</td>
<td>Seventy-eight residents from all four postgraduate years were submitted to the exam from 1996 to 1997. Forty of them participated in both years. Forty-seven professors, in pairs, administered the exam.</td>
<td>Multidimensional assessment system in 1996 and 1997: 1) Oral Exams of the ABPN; 2) Quarterly assessment by pairs of Professors of the Programs and; 3) PRITE.</td>
<td>The variability in the reliability and validity between Programs 1 and 2 shows the need of a better standardization, especially of evaluators, before using them widely. Although questionable, oral exams help in the formation of residents.</td>
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<td>Elliott RL et al., 2000</td>
<td>Quality in psychiatric training: development of a resident satisfaction questionnaire.</td>
<td>To develop a questionnaire to assess the factors involved in the satisfaction of residents in the programs of psychiatric residency.</td>
<td>One hundred and eighty residents from all five postgraduate years of 16 programs. Coverage of all geographic regions of the US and one of Canada.</td>
<td>Pilot study to generate a questionnaire. A questionnaire transformed in a scale with 41 items related to the characteristics of residency programs, assessed by a 5-point Likert scale.</td>
<td>Development of a 10-item questionnaire to assess the satisfaction of residents. The satisfaction increases with higher learning opportunities and decreases with the perception of malfitration. The results reinforce previous studies.</td>
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<tr>
<td>Isaacs JH et al., 2000</td>
<td>A national survey of training in substance use disorders in residency programs.</td>
<td>To determine: 1. the quantity of formal training in residency on substance abuse disorders; 2. types and; 3. existent barriers in the treatment.</td>
<td>Seven hundred and sixty-nine directors of 7 different specialties in programs of medical residency in the US, including psychiatry.</td>
<td>Questionnaire with 24 multiple choice questions applied by phone for 15 minutes.</td>
<td>Psychiatry MRP had more chance of demanding rotations in substance abuse disorders. Main barriers: time for training and skill of professors.</td>
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<td>LoboPrabhu S et al., 2000</td>
<td>A cultural sensitivity training workshop for psychiatry residents.</td>
<td>To measure changes in abilities of residents for a sensitive cultural attention.</td>
<td>Twenty-four residents from all four postgraduate years</td>
<td>Four-hour pilot workshop about cultural sensitiveness. Results assessed by questionnaires applied before and after the workshop.</td>
<td>Significant improvement in the cultural sensitivity of residents. Brief and easily applicable model, among residents with overloaded agenda.</td>
</tr>
<tr>
<td>Yudkowsky R &amp; Shumartz A, 2000</td>
<td>Quality in psychiatric training: development of a resident satisfaction questionnaire.</td>
<td>To verify opinions of Directors and Service Chiefs of MRP on substance abuse disorders.</td>
<td>Two hundred and thirty-four subjects from 117 MRP in psychiatry, being 142 Directors and Service Chiefs.</td>
<td>Forty-one item questionnaire about Program Content, Quality of the Institution and Degree of Support in MRP Outpatient and Inpatient Services.</td>
<td>There was no significant variation between respondents regarding the factors determining the quality of programs of psychiatric residency.</td>
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<td>Albucher RC et al., 1999</td>
<td>Neurology training in psychiatry residency.</td>
<td>To assess the capability and self-confidence of residents from all four postgraduate years during the training period.</td>
<td>Thirty-two residents from all four postgraduate years, from 1996 to 1997.</td>
<td>Application of the Questionnaire of proficiency in Neurology. Psychiatry and Neuropsychiatry and PRITE Exam.</td>
<td>The performance in neurology declines at the end of the training. Specific training in neurology is needed.</td>
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<tr>
<td>Cali LC, 1999</td>
<td>Verificação do cumprimento das exigências feitas pela Comissão Nacional de Residência Médica nos Programas de Residência Médica em Psiquiatria do estado de São Paulo no ano de 1993.</td>
<td>To compare the standards of the National Committee of Medical Residency and to check if they are met in the programs of medical residency in psychiatry.</td>
<td>Seven preceptors and 12 from the second postgraduate year of 7 different programs.</td>
<td>Semi-structured interviews and questionnaires applied face-to-face in non-randomic samples.</td>
<td>The rules are not fully met and there are neither internal nor external formal or periodical assessments.</td>
</tr>
<tr>
<td>Cali LC &amp; Contel JOB, 1999</td>
<td>Estudo dos programas de residência médica em psiquiatria no Estado de São Paulo.</td>
<td>To compare the standardizations of the National Committee of Medical Residency and their compliance by the programs of medical residency in psychiatry.</td>
<td>Seven preceptors and 12 from the second postgraduate year of 7 different programs.</td>
<td>Semi-structured interviews and questionnaires applied face-to-face in non-randomic samples.</td>
<td>The resolutions of the CNRM are not fully met; there are modalities which are not required by the CNRM; To define more clearly certain modalities of training; to define the profile of the desired professional.</td>
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<tr>
<td>Schultz-Ross RA &amp; Kline AE, 1999</td>
<td>Using problem-based learning to teach forensic psychiatry.</td>
<td>To assess the effectiveness with the PBL in a pilot project about forensic psychiatry.</td>
<td>Twenty psychiatric residents from all four postgraduate years and 3 trainees in psychiatry.</td>
<td>Five-point Likert scale with application before and after the Course in an ordinal scale, ranging from 1=’none’ to 5=’high’.</td>
<td>Significant increase in testimony, civil liability and competence: high satisfaction with the format of the course; the format should be part of multicentric studies.</td>
</tr>
<tr>
<td>Woodman C &amp; Shultz SK, 1999</td>
<td>Faculty assessment of residents and the psychiatry resident in training examination.</td>
<td>To compare the PRITE results during 7 consecutive years, with a concurrent criterion of performance of residents assessed by professors.</td>
<td>Eighty-six residents from all four postgraduate years</td>
<td>PRITE and longitudinal follow-up with assessment of residents during rotations, monthly at the first and the second postgraduate years and semestally at postgraduate years.</td>
<td>The assessment of professors showed correlation with the PRITE exam and reinforces it as gold standard for concurrent assessment of performance of residents.</td>
</tr>
<tr>
<td>Ellis TE et al., 1998</td>
<td>Patient suicide in psychiatry residency programs.</td>
<td>To assess the current practices of training in the area of suicides and which arrangements and recommendations do residents receive from the MRP when their patients commit suicide.</td>
<td>Directors of 166 MRP, being 62.7% from general psychiatry and 32.3% from child psychiatry.</td>
<td>Checklist questionnaire with 2 pages to be filled up in 5 minutes, shipped by mail. Follow-up system to maximize answers.</td>
<td>One third of MRP provide residents with 2 to 3 session of post-suicide support. Counseling and therapy to the residents are recommended in 42.1% and demanded by 4.7% of the MRP.</td>
</tr>
<tr>
<td>Guillemin MIRALLES JL et al., 1997</td>
<td>Formación en adicciones en el programa mir (Médico interno residente) de psiquiatria en España. Resultados de una encuesta.</td>
<td>To provide an overall and updated view of the formation in drugs abuse and alcoholism.</td>
<td>One hundred and sixteen residents in psychiatry, from 54 MRP being 37 in General Hospitals and 17 in Psychiatric Hospitals.</td>
<td>Questionnaire shipped by mail, with one-month follow-up by phone and new shipment of the questionnaire in neglected cases.</td>
<td>There is a specific training only in 51.1% of MRP. The highest satisfaction of residents occurs in the Program on Alcoholism. Mainly biological orientation.</td>
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restrictive regarding the objectives of the research, which were much wider than analyzing the attitude of residents regarding psychotherapy. What we observe is the much wider opinion of subjects regarding the biological, psychological and social areas which compose the process of formation of psychiatrists.

One of the analyzed studies does not explicit the way in which subjects answered the questionnaire, what prevents conclusions regarding the homogeneity of the application procedures of the instrument and may have influenced the answers.

The most common methodological flaw was the absence of pilot studies to validate their research instruments in 11 articles, as they did not provide precision assurances of their instruments of data collection.

One article was developed with methodological strictness. Its outlying and the investigated theme were based on previous researches, using the same instrument and a significant number of respondents, with a wide support in theoretical and methodological references.

Conclusions
This review encompasses a wide gamut of aspects related to MRP in several countries. The wide range of themes suggests the lack of a common direction in the researches and a lack of focus and a dispersion of objectives, what suggests the inexistence of well-defined research lines. This varied description of MRP ends hampering the generalization of obtained results and the adoption of measures aimed at changing the psychiatric teaching.

The two studies of Brazilian authors may indicate that in Brazil there is still no consistent development of research lines in this field.

Most of the studies uses common techniques to social research and only two used experimental resources. The fact that only three studies used external measures may indicate that this procedure, although desirable from the perspective of its validity as an assessment instrument, be underestimated by the researchers in the field.

Referências
15. Dobscha SK, Ganzini L. A program for teaching psychiatric residents to provide integrated psychiatric and primary medical care. Psychiatric Services 2001;52:1651.


**Correspondence:**
Ibiracy de Barros Camargo  
Rua Rui Barbosa, 1661  
14015-120 Ribeirão Preto, SP, Brasil  
E-mail: ibiracy@uol.com.br