

# Contribution of the Activities Diary to the pediatric teaching

*Contribuição do Diário de Atividades ao ensino de Pediatria*

*Contribución del Diario de Actividades a la enseñanza de Pediatría*

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## ABSTRACT

**Objective:** To describe the fifth-year medical students' self-evaluation based on the reflexive discourse of the Activities Diaries (portfolio) from the Pediatric Internship I and Child Care Rotations.

**Methods:** Cross sectional, qualitative and descriptive study using the collective subject discourse of the diaries used during the internship of the Medical School, in Catanduva, São Paulo, from January to November, 2011. The registered students' testimonials in the portfolio sections called self-assessment and students' impression were assessed according to their central ideas (discipline organization, breastfeeding outpatient clinic, number of admissions in the pediatric hospital ward and satisfaction with the Child Health training), related to the teaching of Pediatrics and Child Care. The portfolios with incomplete registers were excluded.

**Results:** The testimonials of 47 interns (75% of the students) were analyzed, and 21.3% of them expressed satisfaction with the discipline organization and 27.7% praised the inclusion of the breastfeeding outpatient clinics in the course. For 25.5% of the academics, the number of admissions in the pediatric wards was insufficient for an ideal learning; however, 70.2% were satisfied with the Child Health training.

**Conclusions:** This critical analysis allowed a summary of the reflections, suggestions and critics registered by the interns and can be used as a tool for improvement of the professional cycle.

**Key-words:** educational measurement; pediatrics; learning; teaching; internship and residency.

## RESUMO

**Objetivo:** Descrever a autoavaliação de estudantes do quinto ano de Medicina, a partir do discurso reflexivo dos Diários de Atividades (portfólio) do internato de Pediatria I e Puericultura.

**Métodos:** Estudo transversal, qualitativo do tipo descritivo, por meio do discurso do sujeito coletivo dos Diários de Atividades utilizados pela coordenadoria de internato do referido curso, localizado em Catanduva, São Paulo, de janeiro a novembro de 2011. Incluíram-se no estudo todos os depoimentos dos alunos, registrados nas seções do portfólio, denominadas autoavaliação e impressão do aluno, as quais contêm as ideias centrais (organização da disciplina, ambulatório de aleitamento materno, número de internações nas enfermarias pediátricas e satisfação com o estágio em Saúde da Criança) relacionadas ao ensino de Pediatria e Puericultura. Excluíram-se os diários com registros incompletos.

**Resultados:** Analisaram-se os depoimentos de 47 internos do quinto ano (75% dos discentes), sendo que 21,3% manifestaram satisfação quanto à organização da disciplina e 27,7% elogiaram a inclusão do Ambulatório de Aleitamento Materno na graduação. Para 25,5% dos acadêmicos, o número de internações nas enfermarias de Pediatria foi insuficiente para um aprendizado ideal; entretanto, 70,2% ficaram satisfeitos com o estágio em Saúde da Criança.

**Conclusões:** Esta análise crítica permitiu uma organização das reflexões, sugestões e críticas registradas pelos internos e pode ser utilizada como instrumento para aprimoramento do ciclo profissionalizante.

**Palavras-chave:** avaliação educacional; pediatria; aprendizagem; ensino; internato e residência.

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## RESUMEN

**Objetivo:** Describir la autoevaluación de estudiantes del quinto año de Medicina, a partir del discurso reflexivo de los Diarios de Actividades (cartera) del internato de Pediatría I y Cuidado del Niño.

**Métodos:** Estudio transversal, cualitativo de tipo descriptivo, por medio del discurso del sujeto colectivo de los Diarios de Actividades utilizados por la coordinación de internato del referido curso, ubicado en Catanduva, São Paulo (Brasil), de enero a noviembre de 2011. Se incluyeron en el estudio todos los testimonios de los alumnos, registrados en los apartados de la cartera, nombrados autoevaluación e impresión del alumno, los que contienen las ideas centrales (organización de la asignatura, ambulatorio de lactancia materna, número de internaciones en las enfermerías pediátricas y satisfacción con la pasantía en Salud del Niño) relacionadas a la enseñanza de Pediatría y Cuidado del Niño. Se excluyeron los diarios con registros incompletos.

**Resultados:** Se analizaron los testigos de 47 internos del quinto año (75% de los alumnos), siendo que el 21,3% manifestaron satisfacción respecto a la organización de la asignatura y el 27,7% elogiaron la inclusión del Ambulatorio de Lactancia Materna en la carrera. Para el 25,5% de los académicos, el número de internaciones en las enfermerías de Pediatría fue insuficiente para un aprendizaje ideal; sin embargo, el 70,2% resultaron satisfechos con la pasantía en Salud del Niño.

**Conclusiones:** Este análisis crítico permitió una tabulación de las reflexiones, sugerencias y críticas registradas por los internos en el Diario de Actividades y se puede utilizarlo como instrumento para perfeccionamiento del ciclo profesionalizante.

**Palabras clave:** evaluación educacional; pediatría; aprendizaje; enseñanza; internato y residencia.

## Introduction

The increasing demand for better life conditions in communities, the change in the epidemiological profile of diseases, the identification of risk factors and new physical and psychosocial diseases, and the development of increasingly more sophisticated and high cost technologies are some of the problems faced by healthcare professionals of the twenty-first century. In the international scenario, particularly in underdeveloped countries, in the last years there has been a growing interest in children's health<sup>(1)</sup>.

The current context of changes and challenges in training healthcare professionals requires alterations in different spheres — conceptual, interpersonal, social, institutional, and that of values, in order for the training of these professionals to take place in a solid and critical way and also to include the construction of as yet unknown alternatives<sup>(2)</sup>.

In this context, it is observed that the main concern of medical schools is teaching the theoretical background of prevalent childhood diseases. Their Epidemiology, Etiopathogenesis, Pathophysiology, diagnosis and treatment are studied on different occasions of medical training, from first to sixth year<sup>(1)</sup>. Based on this concern with teaching, the Pediatric course at the Medical School of Faculdades Integradas Padre Albino implemented the use of Activities Diary (reflexive portfolio) for intern students, in order to stimulate self-reflection and solidification of the content learned, as well as to know students' opinion on Pediatric training<sup>(3-8)</sup>. The use of the portfolio provides feedback about the information given to students, who, through this practice, are able to describe and discuss their performance in a certain situation or activity. This allows them to be aware of the learning process, because it highlights the dissonances between the intended result and the real one, besides providing data and allowing to review goals, methodology and contents<sup>(9)</sup>.

The Activities Diary was introduced to evaluate students and meet the proposal of internship, which contemplates a critical-reflexive nature, supported in the construction of knowledge from the questioning of reality, with the active participation of the intern in the learning process<sup>(10)</sup>. In this portfolio, the student documents, registers and structures actions, tasks, and learning itself, using a narrative discourse developed in a continuous and reflexive way about the experienced learning activities. Narration changes the way people understand themselves and others. By reading their own narratives, it is possible for future professionals to theorize their own experience<sup>(11,12)</sup>.

Medical education should be directed to the training of people and/or professionals who participate in the process of changing society in a critical and flexible way. So, the "reflexive culture" emerges in the educational scenario, which represents a new attitude towards educational situations and has reached its milestone in the Theory of Inquiry by John Dewey, focused on practical experiences and known as "doing and learning"<sup>(13-15)</sup>.

Based on the foregoing considerations, it was hypothesized that the introduction of a tool for intern's self-evaluation and reflection from the reflexive discourse point of view may contribute to improvement of the teaching of skills in

Pediatrics in the training of the generalist physician. Thus, this study analyzed the data registered in the Activities Diary of students participating in the internship course in Child Health I (pediatrics I and Child Care) at the Medical School of Faculdades Integradas Padre Albino, during a school year.

## Method

Cross-sectional qualitative study conducted at the internship coordination of the above-mentioned institution, located in Catanduva, northern São Paulo, Brazil. The qualitative methodology was considered appropriate for this study because it allows for the apprehension of the meanings, reasons and aspirations, attitudes, beliefs and values essential for describing and understanding phenomena involving human beings<sup>(16)</sup>.

Data registered in the Activities Diary of students of the first year of internship (fifth year of medical school), from January to November 2011, analyzing interns' self-evaluation and impressions on the training in Pediatrics I and Child Care. All testimonials presenting central ideas were included. Diaries that did not present these ideas or that did not have notes were excluded. The collective subject discourse (CSD) technique was used to know and describe interns' considerations about the training program and to evaluate their reflections<sup>(17-19)</sup>.

Sample power was not calculated due to the methodology employed. According to Fontanella *et al*<sup>(17)</sup>, "in qualitative studies, the question 'how many?' suggests a relatively secondary importance compared to the question 'who?', although, in practice, they represent inseparable strategies. After all, what is more significant in intentional or intended samples is not the final amount of their elements, but rather the way how the representativeness of these elements is conceived and the quality of the information obtained from them". CSD is a way of presenting results from qualitative investigations, with testimonials as the source of analysis, written in the first person singular, to express the thought of a community as if it was sender of a discourse. This technique allows to extract from the discourse of each individual words or expressions that reveal central ideas and summarize the discourse content<sup>(19)</sup>.

In order to analyze and present the results, the discourse of the very respondent was used, written in the first person singular, composed of key expressions (KE) that presented the same central ideas (CI) and the same anchorage (AC), observing with rigor the order of the following steps:

1) Repeated reading of the answers, which were literally transcribed only after better understanding of the general idea of the discourse.

- 2) General reading of the answers of each respondent, followed by separate reading of all answers for the question being analyzed.
- 3) Transcription of the answers for each question in ascending numerical order, highlighting KEs in italics.
- 4) Individual transcription of each CI with its respective KEs.
- 5) Extraction of the topic of each of the questions, grouping their respective CIs; finally, construction of CSDs separately from each CI, with its respective KEs.

After CSDs and KEs were summarized, research subjects were grouped into a database using the Epi-Info software, version 3.5.1. The project was approved by the institutional Research Ethics Committee, under the number CAAE 03172712.6.0000.5430.

## Results and Discussion

The study analyzed the self-evaluations of 47 fifth-year interns (75% of the students), complying rigorously with the described method. Next, CIs that appeared with a significant frequency were described, revealing similar thoughts among the subjects. As for the questions being evaluated, it was chosen to present results and discussion together, because this type of narrative favors the description of qualitative investigations. In order to facilitate understanding, the analysis was subdivided according to the question being analyzed<sup>(19-23)</sup>:

### Organization of the internship course

An organization is based on a group of people who perform tasks in coordination, acting in a given environment, to achieve a predetermined goal through the effective action of several means and resources, with or without leadership<sup>(24)</sup>.

The analysis of the texts showed that the KE "organization of the course" appeared in 21.3% of the narratives, which significantly expressed interns' reflection and could be pointed out as one of the strengths of the training in Child Health.

The training program is composed of practical activities at the hospital ward, outpatient clinic, urgency and emergency room, laboratory for child skill development, baby unit, maternity ward, obstetric center, child nutrition, as well as theoretical-practical activities, such as integrative clinical meetings, seminars, and theoretical classes. The internship program in Child Health has a total workload of 400 hours, 200 of which for fifth-year students and 200 for sixth-year students, with 13 professors actively involved in the course. Students are divided into pairs, which alternated between the different training activities, and the analysis of testimonials

revealed that the structure of the course reflects the organization invested and pleases students, generally speaking<sup>(25)</sup>: “it has an organized syllabus, in which the outlined goals are really met, both in the academic part of reviews of papers and in the classes taught, and in the practical skills acquired for the physical examination and for the understanding of the complementary tests requested and of the therapy chosen for each case” (Intern no. 37).

### Breastfeeding

The World Health Organization (WHO) recommends the practice of exclusive breastfeeding for six months and then the introduction of complementary food until two years of age<sup>(26)</sup>. A total of 22% of deaths of children under 12 years old could be prevented in the world every year with the practice of exclusive breastfeeding and breastfeeding until one year of age<sup>(27)</sup>.

In 2011, in order to meet the needs of the new syllabus of the fifth year of the Medical School, the internship program in Child Health was restructured. Given the importance of breastfeeding, one of the proposals was that interns perform practical activities at the Breastfeeding Outpatient Clinic, with the purpose of training professionals able to guide and stimulate newly-delivered mothers to adhere to this practice. This innovation was praised by 27.7% of subjects. This outpatient clinic is under the responsibility of an obstetric nurse, who, besides training undergraduate students, also evidences the importance of team and multidisciplinary work, respecting all the elements which compose the logistics of patient care. “Now I know what to say to a mother with difficulty in breastfeeding. I know how to teach what should be done in order for the newborn to suck more during the day than during the night. I know how to instruct on the best position to offer the breast and how to ‘grab’ appropriately for the baby to suck more productively” (Intern no. 9).

### Number of patients

An important finding registered in the portfolios was students’ dissatisfaction with the number of patients treated at outpatient clinics and hospital wards. For 25.5% of the interns, this number was insufficient for an ideal learning. It is known that many children’s complaints are related to climate and seasonal variations, as well as to periods of viral outbreaks, among others, and the number of consultations and admissions may vary according to the time of the year<sup>(28)</sup>. Datasus data from 2008 to 2011 show that the number of pediatric admissions in Catanduva

dropped from 1,847 to 1,581. This reduction of 16% in this three-year period is probably a reflection of the improvement in prevention and primary care of diseases, which contributed to the scarcity of patients at hospital wards<sup>(29,30)</sup>. “The hospital wards had a reduced number of admitted children, which, for our pair, was a bad thing, but that depends on the period of the year and on the diseases of the season, which, during our training, were not frequent, lucky for the children!” (Intern no. 19). “As for the wards of Hospital Escola Emílio Carlos, despite the reduced number of patients, training was compensated by the detailed discussion of the cases” (Intern no. 28).

### Satisfaction with the training program

The teaching plan outlined by internship course coordinators aims to develop skills and competences, as well as to deepen in practice the knowledge acquired in the training cycle of medical school, aiming for an ethical and high quality training for the generalist physician, which is necessary to train physicians to recognize and follow the child being treated, either at the outpatient level, in urgency and emergency services, or during hospital admission<sup>(25)</sup>. When looking for keywords related to satisfaction with the training program, it was observed that 70.2% of students commended the faculty and the structure of the program, which reflected in a successful achievement of the learning goals. “The training program in Pediatrics is very well formatted, counting on the really active participation of professors, a fact that grounds and materializes the theoretical knowledge on diseases, with all the complementary tests and conducts” (Intern no. 35). “In this month of activity, I was able to come across with the most frequent and common conditions in pediatric practice, having the opportunity to learn how to identify, and thus treat, them, and now I can state that I feel confident and capable of, in the future, dealing with cases similar to those I followed during my practice as an intern” (Intern no. 45).

The introduction of the Activities Diary in interns’ routine helped in the control of the quality of learning and in the organization of the internship, leading to improvements in the teaching-learning process. It is used as a tool for self-reflection, a vehicle for students to make criticisms and suggestions, and a feedback for professionals who deal directly with the students (professors and preceptors), allowing to improve the methods of knowledge transfer and to teach a more human doctor-patient relationship<sup>(31-35)</sup>.

It should be highlighted that this study has limitations with regard to its internal validity, since a representative



sample of only one clinic was analyzed<sup>(36)</sup>. As for limitations at the external level, foreign variables could not be controlled, insofar as the topic approached is influenced by subjective aspects, such as culture, education, feelings, emotions, beliefs and values — which influence intern's point of view. The external validity is also conditioned, because it was not possible to generalize locations or samples beyond

those studied, only allowing the transfer of conclusions to similar realities<sup>(37)</sup>.

Thus, this critical analysis allowed a summary of interns' reflections, suggestions and criticisms, and can serve as a model to mother and child, internship and medical school coordinators for improvement of the professional cycle<sup>(33-35)</sup>.

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