

The perception of students as future pharmacists front the pharmaceutical assistance internship

Thays Thyara Mendes Cassiano¹ Isabela Motta Felicio² Renata Oliveira Nóbrega da Silva³ Sonaly Lima Albino4 Raquel Késsia Leite Santos⁵ Vanderleya da Silva Brito⁶ Natanael Teles Ramos de Lima⁷ Ivana Maria Fechine⁸ Francisco Patricio de Andrade Júnior9 Camila de Albuquerque Montenegro¹⁰

Abstract

To analyze the importance of the application of PC (pharmaceutical care) tools along the curricular internship, according to the point of view of undergraduates of Pharmacy course. And in parallel, to contribute to the dissemination and consolidation of the role of the Pharmacist in the clarification of doubts and identification of drug-related problems (DRP) and the guest for improvement of Pharmacotherapy of medicine users. A qualitative and descriptive research was carried out using a simple and objective questionnaire containing 14 questions about the perception of students as future pharmacists, from sixth to tenth semesters of the Pharmacy course in State University of Paraíba. The present study was approved by the Research Ethics Committee Involving Humans. The practice of Pharmaceutical Assistance internship offers good repercussions both for students and for the population assisted. In a sample of 100 students, 88% considered the internship as satisfactory, 76% said that the internship attended their expectations and 99% said that this allowed a better knowledge of pharmaceutical care. The supervised internship represents a beneficial relationship between students and the population, as well as provide a better theoretical and practical knowledge to the student, providing an extension of the student's vision over the area of professional performance.

¹ Farmacêutica - UEPB

² Farmacêutica -. UEPB

³ Farmacêutica - UEPB

⁴ Farmacêutica - UEPB

⁵ Farmacêutica, UEPB

⁶ Farmacêutica - UEPB

⁷ Doutorando em Farmacoquímica - UFPB

⁸ Docente - UFPB

⁹ Doutorando em Farmacologia. UFPB

¹⁰ Docente - UFCG. E-mail: camontenegro2502@gmail.com



Keywords: Pharmaceutical Care. Pharmaceutical Assistance. Pharmacy students.

Resumo

Analisar a importância da aplicação de ferramentas de CF (cuidado farmacêutico) ao longo do estágio curricular, segundo o ponto de vista de universitários do curso de Farmácia. E, paralelamente, contribuir para a disseminação e consolidação do papel do farmacêutico no esclarecimento de dúvidas e identificação de problemas relacionados a medicamentos (PRM) e a busca pelo aprimoramento da farmacoterapia dos usuários de medicamentos. Foi realizada uma pesquisa qualitativa e descritiva, utilizando um questionário simples e objetivo, contendo 14 questões sobre a percepção dos estudantes como futuros farmacêuticos, do sexto ao décimo semestres, do curso de Farmácia da Universidade Estadual da Paraíba. O presente estudo foi aprovado pelo Comitê de Ética em Pesquisa Envolvendo Seres Humanos. A prática do estágio de Assistência Farmacêutica oferece boas repercussões tanto para os estudantes quanto para a população atendida. Em uma amostra de 100 alunos, 88% consideraram o estágio como satisfatório, 76% afirmaram que o estágio atendeu às suas expectativas e 99% afirmaram que isso permitiu um melhor conhecimento da assistência farmacêutica. O estágio supervisionado representa uma relação benéfica entre os alunos e a população, além de proporcionar um melhor conhecimento teórico e prático ao aluno, proporcionando uma extensão da visão do estudante sobre a área de atuação profissional.

Palavras-chave: Cuidado Farmacêutico. Assistência Farmacêutica. Estudantes de farmácia.

Introduction

The medicines are today an essential part to the survival and well-being of the majority of the population. However, these are not always well used. According to WHO, more than 50% of the medicines are prescribed, dispensed and sold improperly, while more than 50% of patients use them wrongly. Thus, there is a need for implementation of health care services to the citizen which include the rational use of Medicines (RUM), as well as promote the completeness of the actions of prevention, recovery and rehabilitation of health (BRASIL, 2006; BRAHMA; MARAK; WAHLANG, 2012).

In this context, the Pharmaceutical Assistance (PA) is a service of great importance that can be performed by the pharmacist or other healthcare professional. According to resolution No. 338, of 6 May 2004, the National Board



of health, the PA can be defined as: set of actions aimed at the promotion, protection and recovery of health, both individual and collective, taking the medicine as essential input and in order to access and use your rational. This set involves the research, development and production of medicines and supplies, as well as your selection, programming, procurement, distribution, dispensing, quality assurance of the products and services, monitoring and evaluation of your use, in the interest of obtaining concrete results and improvement of the quality of life of the population (BRASIL, 1999; MIRANDA FILHO; ANDRADE JÚNIOR; MONTENEGRO, 2021).

Due to your range, the PA is a comprehensive, multidisciplinary character, intersectoral and multidisciplinary that has activities and functions which include: managing the process of acquisition, storage, distribution and dispensing of medicinal products; elaboration of technical and administrative rules and procedures; integration with other health professionals, service areas, etc; promotion of educational activities; development of studies and research; ensure quality of products, processes and results; promoting rational use of medicines (RUM), etc (BRASIL, 2006; COSTA et al., 2019; MIRANDA FILHO; OLIVEIRA et al., 2020; ANDRADE JÚNIOR; MONTENEGRO, 2021).

Among the actions taken by the Pharmaceutical Assistance included the pharmaceutical care (PC), activity carried out by the professional pharmacist who focuses mainly on the tripod "pharmacist-consumer-medicine". This is defined by resolution No. 338 as: a model of pharmaceutical practice, developed in the context of the Pharmaceutical Assistance and understanding attitudes, ethical values, behaviors, skills, and commitments co-responsibilities in disease prevention, health promotion and recovery, in an integrated manner to the health team. Is direct interaction of the pharmacist with the user, aimed at a rational pharmacotherapy and defined and measurable results, aimed at the improvement of the quality of life. This interaction should also involve the conceptions of its subject, respected their specificities bio-psycho-social, from the perspective of integrality of health (BRASIL, 1999; ANDRADE JÚNIOR et al., 2020).



The national curricular guidelines of the undergraduate course in Pharmacy are established in Resolution CNE / CES 2 of February 19, 2002, which define the training as generalist, humanistic, critical and reflective. From this, the graduating Pharmacy student will be able to act in various areas, from those related to drugs and medicines, as well as clinical and toxicological analyses and activities pertaining to food. One of the major areas for pharmaceutical professionals actuated one of the largest and most important is the attention to health, including the pharmaceutical care, aimed at prevention, promotion, protection and rehabilitation of health at both individual and collective (BRASIL, 2002).

From this vision, the prospect is of reorientation of the field of the professional pharmacist to obtain a humanistic profile training aimed at the health of the population rather than a mostly technical training (NICOLINE; VIEIRA, 2011).

In this context is the importance of the institution of the supervised internship in pharmaceutical care in the curriculum of the degree course in pharmacy as a beneficial relationship between students and the population. From this, there is a greater production of theoretical and practical knowledge from the direct contact of the student with the patient, as well as the expansion of the student's vision over the area of professional performance.

The quality of health care can be characterized according to the degree of professional competence, for efficiency in the use of resources, the risk that is provided to the patient, for the satisfaction of the users and the beneficial effect on health (PRAKASH, 2010). Given this, measure the perceptions of students facing the internship in pharmaceutical care is of great value for the quality of health care in order to know the difficulties and concerns of these lead to a greater knowledge and improvement of the internship and health in general.

In this way, the execution of a work like this is of great importance for patient as a whole, because this research and acquired knowledge will reach a greater professional competence to students and then future pharmacists. As well as a greater efficiency in the care process, and consequently the users will have better results in their treatment or cure, besides satisfaction, due to a greater adhesion



to the pharmacotherapy, for having acquired correct orientations directed to the RUM, as well as orientations for a better quality of life.

The objective of this study was to analyze the importance of the Pharmaceutical care internship in order to identify students' perceptions, taking into account their academic learning in comparison to what was experienced during the internship. Paying attention to the relevance of being in direct contact with the health system as well as with drug users.

MATERIAL AND METHODS

Outline of the study

We conducted a qualitative and quantitative and descriptive study by applying a simple and objective questionnaire which examined the perceptions of students while future pharmacists in front of the internship in pharmaceutical care, from August/2016 to February/2017, which took place in the basic unit of family health Adriana Bezerra, located in Santa Rosa, in the city of Campina Grande-PB.

Characterization of the study sites

The research took place in Campina Grande, municipality in the State of Paraíba in the Northeast region of the country. The city has a population of 402.912 in habitants distributed in 52 neighborhoods, totalling a land area of 594.182 km².

The research took place on campus I at the State University of Paraiba (UEPB). R. Baraúnas, 351 - Bodocongó, Campina Grande-PB, 58429-500.

The neighborhood of Santa Rosa is located in the West zone of the city, is the headquarters of the basic unit of family health Adriana Bezerra, Rua do Sol, s/n, Campina Grande-PB, where the internship is performed.



Population and sample

The sample consisted of 100 students of Pharmacy course at the State University of Paraiba. Including all students, who are properly enrolled between the sixth and tenth semester, and who have completed the curriculum component supervised apprenticeship in Pharmaceutical Assistance (with emphasis on pharmaceutical care).

Instrument and data collection procedure

As a tool for data collection, it was used a simple and objective questionnaire, containing the identification of participants and socioeconomic data, as well as questions drawn up specifically to achieve the objectives proposed by the study. The application of the questionnaire was given by direct approach in each class from the sixth through the tenth semesters of the Pharmacy course. The students answered concisely all the questions that have been made.

Data processing and analysis

Data were analyzed by the research team, observing compliance with the general and specific objectives as well as the alignment with the hypothesis. Microsoft Excel® 2010 was used for data processing.

Ethical Aspects

The researchers of this study applied the questionnaire to students of Pharmacy course at the State University of Paraíba (UEPB) requesting approval of the use of the data by filling the term of informed consent. The data collected were for specific use for this research and the identity of the patients was preserved.

The study was approved by the Committee of ethics in Research Involving Humans – CEP/UEPB, with Protocol number: 59295616.7.0000.5187.

The researchers were aware of all the rules imposed by resolution CNS 466/12, pledging to follow them and sending report to the CEP/CCS when the study was completed, or at any time, if the same were interrupted.



RESULTS AND DISCUSSION

The study was conducted with 100 students, with predominance of the female (65%), followed by the male (35%) and predominance of 22-25 age years.

In figure 1 it is possible to observe the percentage of students according to the area of professional interest.

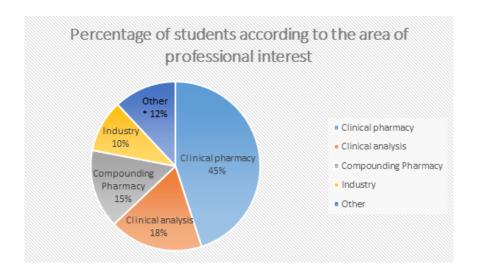


Figura 1 - Percentage of students according to the area of professional interest.

*Food and medicinal chemistry (N=2); toxicology, pharmacy oncology, crime lab, academic field, homeopathy (N=10).

In a comparison with the subject addressed in the classroom, 88% of total affirmed the existence of relation between what was experienced on internship and studied in class, yet 91% admitted having learned something else than studied in theory. This can be justified by the interest of the intern and the future professional for the search of knowledge that allows the students to develop and accomplish what is proposed to them in a more satisfactory way. The questionnaire also revealed that 95% of the students sought clarification in the literature for patients' doubts, in other words, the internship still allows them to leave their comfort zone and attend to the daily necessities, developing skills that theory would not be able to provide.



In table 1 it is possible to observe activities carried out by the students versus percentage (%) of interest on each of them.

Table 1 - Activities carried out by the students versus percentage (%) of interest on each of them.

Activies carried out on internship	Percentage (%)
Interview for the registration of patients	7
Verification of anthropometric measurements,	17
measurement of blood pressure and glucose	
Dispensation of medicines	43
Elaboration and promotion of lectures	11
None	2
All	20

The majority representative (99%) of students admitted having acquired better knowledge in pharmaceutical care after internship; 80% of the responses acknowledged that this was achieved in a ratio above 6, on a scale of 0 to 10, according to the questionnaire. 70% of them evaluated the internship's activities performed as good or great and 30% as regular. 89% did not indicate any improvement, but the rest pointed out topics such as interaction with other courses, more physical space, more equipment, increased workload for greater interaction with pharmacy and patients, for this purpose.

Finally, to 76% of respondents the internship attended expectations, for 7% the internship exceeded them and 17% were not satisfied. The majority, represented by 94% ranked it above 7 as importance for their professional qualification, 10% of them assigned maximum score, on a scale of 0 to 10.

Pharmaceutical assistance (PA) has crucial role in reordering of pharmaceutical services organization to ensure the access of services to users (SOARES; SILVA, 2013), the example of pharmaceutical care, which provides through a direct professional relationship – patient/trainee – patient, access to information that will improve your quality of life considerably. The internship is the practice in Pharmacy and is characterized by providing a direct relation between theory and professional practice, being so enjoyed as a perspective that aims to complement the formation of pharmaceutical, with technical practice, standards, rules and principles of the area in focus (CARRILLO, 2000; SATURNINO;



FERNÁNDEZ-LLIMÓS, 2009; ANDRADE JÚNIOR et al., 2020). This experience also backed the decision of the student in work in this area or do not follow the same career.

Observing figure 1, we see a greater number of students interested in Clinical pharmacy, a fact that indicates the growth of the area and change of polarity previously established by the Industry and Clinical analyzes. This change was due to the perception of the need for a responsible pharmacist at the time of dispensing, being closer to the patient and, from that moment, being able to identify the health needs of that user.

Clinical pharmacy means the set of activities performed by the pharmacist involved with medicines users and multidisciplinary team of health, aiming at the improvement of pharmacotherapy. In Brazil, it is considered clinical pharmaceutical services those addressed to the clinical management of medicines, which is aimed at different audiences and health care units, forming an efficient information network. The community pharmacies join a large part of the shares of pharmaceutical assistance and clinical management of medicines, being a place of clinical and technical support (CORRER; OTUKI; SOLER, 2011). Are available to the population to meet their health needs the following pharmaceutical services: dispensation, reconciliation of medications, management of health problems self-limited, pharmacotherapy follow-up, review of pharmacotherapy, and health education (CFF, 2013a; CFF, 2013b).

It is believed that the interest in the area is motivated by the evidence and growth that the clinical pharmacy has been having in recent years and mainly by the insertion of the curricular internship in Pharmaceutical Assistance (PA); with emphasis on Pharmaceutical Care; In this way, the curricular grid presents the theoretical view of the subject and in return, the accomplishment of the internship allows the first contact and practical perception of the services developed in the PC and PA.

The internship covers the various segments of the PA, giving room for research and management of medicines by the students, acting in the selection, programming, distribution and dispensing of medicines, as well as in monitoring



and evaluating user therapy, ensuring quality services and improving the quality of life of the population (BRASIL, 1990).

In table 1 it is observed the areas that students found greater affinity. The dispensation of medicines showed up as the thread with as many sympathizers. This fact can be justified by the insecurity of the student in direct contact with the patient, that although there is, this is minimal when compared to other activities, such as interviews, lectures and therapeutic accompaniment. Not having too much contact with patients during the graduation is a deficiency of the Pharmacy course, being the AF changing this. Paro and Bittencour (2013) highlight this issue in a study about the quality of life of the undergraduate health students, pointing out that the quality of life of pharmacy students is less impaired than other courses, because the curricular structure of the course does not demand quantity of internships and contact with patients as in other graduations, even by the own activities carried out in the pharmaceutical profession.

Another justifiable factor would be the opportunity to meet the daily life inside a pharmacy and apply certain knowledge seen in class, about the physical structure of the pharmacy, directions to users at the time of dispensing, reading prescriptions, calculating dose and quantity dispensed.

CONCLUSION

It is therefore concluded that the supervised internship in pharmaceutical care represents a beneficial and indispensable relationship between the students and the population. The same provides a better approximation between teaching and practice of pharmaceutical services; providing a magnification of the student's vision over the area of professional performance, taking him to a training beyond technical and a perception more humanized health. The results are a better understanding of the health system and improvements in the quality of life of medicines users.



REFERENCES

ANDRADE JÚNIOR, F.P. et al. The importance of pharmaceutical performance in orientation and reception to HIV patients: can we make a difference?. **Research, Society and Development**, v.9, n.9, 2020.

BRAHMA, D.; MARAK, M.; WAHLANG, J. Rational Use of Drugs and Irrational Drug Combinations. **The Internet Journal of Pharmacology**, v.10, n.1, 2012.

BRASIL. Ministério da Educação. 2002. **Resolução cne/ces 2, de 19 de fevereiro de 2002**. Disponível: http://portal.mec.gov.br/cne/arquivos/pdf/CES022002.pdf. Acesso em: acesso em 27 mar. 2021.

BRASIL. Ministério da Educação. **Lei 8080/1990**. 1999. Disponível:< http://www.planalto.gov.br/ccivil_03/leis/l8080.htm. Disponível em: acesso em 27 mar. 2021.

BRASIL. Ministério da Saúde. **Assistência farmacêutica na atenção básica**: instruções técnicas para sua organização. Ministério da Saúde, Brasilia, 2006, p.100.

CARRILLO, M. R. G. G. Pharmaceutical Education and the need for changes in the conception of the biochemical pharmacist career internship. **Revista de Educação Pública**. v.9, n.16, 2000.

CFF. Conselho Federal de Farmácia. **Nota Técnica:** Perguntas e respostas referentes às Resoluções do CFF nº 585 e nº 586, de 29 de agosto de 2013. 2013a. Disponível: https://www.cff.org.br/userfiles/file/pdf/Nota%20T%c3%a9cnica%20585%2058

https://www.cff.org.br/userfiles/file/pdf/Nota%201%c3%a9cnica%20585%2058 6.pdf.>. Acesso em: 27 de mar. 2021.

CFF. Conselho Federal de Farmácia. **Resolução nº. 585**, de 29 de agosto de 2013, que regulamenta as atribuições clínicas do farmacêutico e dá outras providências. 2013b. Disponível em:<https://www.cff.org.br/userfiles/file/resolucoes/585.pdf. Acesso em: 27 de mar. 2021.

CORRER, C. J.; OTUKI, M. F.; SOLER, O,. Pharmaceutical services integrated into the healthcare process: clinical management of medicines. **Revista Pan-Amazônica de Saúde**. v.2, n.3, 2011.

COSTA, M. F. D. et al. **Orientação sobre descarte de medicamentos em uma Unidade Básica de Saúde.** v.15, n.4, p. 387-403, 2019.

MIRANDA FILHO, J. P.; ANDRADE JÚNIOR, F. P.; MONTENEGRO, C. A. Cuidados farmacêuticos e os medicamentos isentos de prescrição: revisão



integrativa da literatura. *Archives of Health Investigation*, v.10, n.1, p.153-162, 2021.

NICOLINE, C. B.; VIEIRA, R. C. P. A. Pharmaceutical assistance in the Brazilian National Health System (SUS): Pharmacy students' perceptions. **Interface Comunicação, Saude, Educação.** v.15, n. 39, 2011.

OLIVEIRA, G. C. et al. Drug interactions guide – a tool in heath education. **Journal of Medicine and Health Promotion**. v.5, n.4, p.47-60, 2020.

PARO, C. A.; BITTENCOURT, Z. Z. L. C. Quality of life of the undergraduate health students. **Revista brasileira de educação médica**. v.37, n.3, 2013.

PRAKASH, B. Patient Satisfaction. **Journal of Cutaneos Aesthetic Surgery**. v.3, n.3, 2010.

SATURNINO, L. T. M.; FERNÁNDEZ-LLIMÓS, F. The Pharmacy School in Brazil: state of the art and perspectives. **Revista Brasileria de Farmácia**. v.90, n.3, 2009.

SOARES, C.; SILVA, G. A. Use of pharmaceutical care programs records of the Outpatient Information System for the assessment of patient's medication use and adherence. **Cadernos de Saúde Coletiva**, v.21, n.3, 2013.