





## A program for dentistry students to improve the writing skills of dental record

Programa de escritura para estudiantes sobre la redacción de historias clínicas estomatológicas

Programa de redação para alunos sobre a redação de histórias médicas odontológicas

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### ABSTRACT

**Introduction:** the correct writing of medical records is essential for the correct treatment of patients. **Objective:** to assess how a writing program aimed at writing clinical histories favors written communicative competence in students of Dentistry at the Universidad de Ciencias Médicas in Camagüey. **Method:** a pre-experimental study was carried out from March to December 2020 in students of dentistry career at the Clínica Estomatológica Provincial Docente "Ismael Clark y Mascaró", located in the faculty with the same name. The population studied involved a total of 101 fifth year students and 30 of them were selected as sample. The method of interview was conducted on 10 professors. The study took place in three moments: Diagnosis, Intervention and Evaluation. The workshop procedure was chosen as the organizational

form. Descriptive statistics were used for data processing. **Results:** the application of rules, coherence, cohesion and the interviews quality were affected by the students unfamiliar practice on the writing process and because the short time of procedures limits reading and correction. **Conclusions:** assess of the program proposed has made the possibility of getting to know the difficulties presented by the students. It promotes knowledge and awareness of the processes involved in writing and giving respect for each recursive moments through which writing takes place.

**Keywords:** writing; medical history; stomatologists

**RESUMEN**

**Introducción:** la correcta redacción de las historias clínicas es imprescindible para ofrecer un tratamiento óptimo a los pacientes. **Objetivo:** evaluar en qué medida un programa dirigido a la redacción de historias clínicas favorece la competencia comunicativa escrita en los estudiantes de la carrera Estomatología de la Universidad de Ciencias Médicas de Camagüey. **Método:** se realizó un preexperimento en el periodo de marzo a diciembre de 2020 a estudiantes de la carrera de Estomatología de la Clínica Estomatológica Provincial Docente “Ismael Clark y Mascaró”, ubicada en la facultad antes mencionada. La población estuvo constituida por los 101 estudiantes de quinto año y una muestra de 30 de ellos. Se aplicaron entrevistas a 10 docentes. El estudio tuvo lugar en tres momentos: Diagnóstico, Intervención y Evaluación, se eligió el taller como forma organizativa. Se usó la estadística descriptiva para el procesamiento de los datos. **Resultados:** la aplicación de las normas, la coherencia, la cohesión y la calidad de las entrevistas estaban afectadas porque los estudiantes desconocían el proceso de redacción y porque el poco tiempo limita la lectura y corrección. **Conclusiones:** la evaluación del programa permitió conocer las dificultades que presentan los estudiantes. Propicia el conocimiento y concientización de procesos que intervienen en la escritura y el respeto a la recursividad de cada uno de los momentos por los que esta transcurre.

**Palabras clave:** redacción; historia clínica; estomatólogos

**RESUMO**

**Introdução:** a escrita correta das histórias clínicas é essencial para oferecer um tratamento ideal aos pacientes. **Objetivo:** avaliar em que medida um programa de escrita de histórias clínicas favorece a competência comunicativa escrita em estudantes da carreira de Estomatologia da Universidade de Ciências Médicas de Camagüey. **Método:** foi realizado um pré-experimento de março a dezembro de 2020 para alunos da carreira de Odontologia da Clínica Estomatológica Provincial Docente “Ismael Clark y Mascaró”, localizada na referida faculdade. A população foi composta por 101 alunos do quinto ano e uma amostra de 30 deles. Foram aplicadas entrevistas a 10 professores. O estudo ocorreu em três momentos: Diagnóstico, Intervenção e Avaliação, sendo a oficina escolhida como forma de organização. A estatística descritiva foi utilizada para o tratamento dos dados. **Resultados:** a aplicação das normas, a coerência, a coesão e a qualidade das entrevistas foram afetadas porque os alunos desconheciam o processo de escrita e porque o pouco tempo limitava a leitura e a correção. **Conclusões:** a avaliação do programa permitiu conhecer as dificuldades apresentadas pelos alunos. Promove o conhecimento e a sensibilização dos processos envolvidos na escrita e o respeito pela recursividade de cada um dos momentos por que passa.

**Palavras-chave:** escrita; história clínica; estomatologistas

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## INTRODUCTION

Communication is an essential process in the development and evolution of human beings. Reading, writing, listening and speaking are four basic communicative skills that allow them to observe, interpret, understand, manage information and, from the establishment of relationships with personal, social and academic experiences, build new knowledge.

School institutions, from elementary school to university, provide students with tools related to the mastery of the mother tongue, but there are countless complaints from teachers regarding the deficiencies of their students. This also happens at the middle, high school and higher education levels, where it is taken for granted that they have already learned to read and write and other skills related to the subject at another time. Of course, listening and speaking skills are also neglected.

The purpose of General Education is for students to learn to write evaluations, comments, short narratives and descriptions, as well as texts in which they offer their opinion regarding a topic suggested by the teacher. All of this is decontextualized from the different spheres of language use. Evidently, it is up to the university level to guide the first ones in the adequate use of the language within the context of the profession they have chosen; because prior to this stage, most of them have not taken notes to make a reading report, have not read several sources to adopt a position regarding a scientific topic; nor have they written an essay, an interview, a report or any other discursive genre.<sup>(1,2,3)</sup>

The training process in the universities of medical sciences is no stranger to the aforementioned. It is worth reflecting on the fact that most of those who enter them have been patients, have been admitted and have been subjected to long interrogations that lead to the diagnosis of the disease they were suffering from at the time they were consulted. They may have seen documentaries, movies and series related to the profession they wish to practice; however, they are not prepared to establish the role of physicians or stomatologists and, associated to this, to write medical records (HC), which, besides having a legal character, are documents "of communication that have the particularity of being part of the understanding of the disease"<sup>(4)</sup> so it is a process of certain complexity for the students.

From interviews with teachers of the Faculty of Stomatology, belonging to the University of Medical Sciences of Camagüey, and from the review of clinical histories written by fifth year students, it was found that the former provide information to the others on how to organize and prioritize the ideas in this type of text; however, it is insufficient due to the process of education at work, where there is interaction with the patient and there is little time to devote to writing and its specificities.

As for the organization of the information collected from the interview to make up the history of the current disease, sometimes it lacks essential aspects, oriented in the Semiology and Propedeutics course, and although not ignored by the student, it lacks the required depth such as: when the symptoms appeared, how long ago, how often they were felt, where they radiate to, under what conditions they are relieved, how long they last and what other symptoms are associated with them. In view of this situation, the scientific problem is: How to favor the writing of clinical histories in Stomatology students?



Uribe and Martínez Medina<sup>(4)</sup> allude to the slow and uninterrupted process in which students gradually appropriate the structure of the history, turning it into their own way of organizing the symptoms of people's diseases. So the theory and practice of medical sciences are intertwined; without forgetting, of course, the mastery of the resources and rules governing the correct use of language in this context: lexicon, spelling, syntax, in addition, the requirements of verbal and extraverbal communication, empathy, assertiveness; the establishment of intertextual relationships.

Taking into account what has been described above; in addition to the atypical conditions during the years 2020 and early 2021 due to the scourge of the pandemic generated by the SARS-CoV-2 virus, which has complicated the educational teaching process, especially in the activities of education at work in Stomatology; as well as the incorporation of new teachers to the classrooms and the need to integrate inter and transdisciplinary processes in the improvement of such processes, in this case with the Spanish Department of the University of Camagüey; the researchers proposed as an objective to evaluate to what extent a program aimed at the writing of clinical histories favors the written communicative competence in the students of the Stomatology career of the University of Medical Sciences of Camagüey.

## METHOD

The research took place between March and December 2020, at the Faculty of Stomatology of the Universidad de Ciencias Médicas de Camagüey. In order to carry it out, a pre-experiment was performed.

The 101 students in their fifth year of the course were taken as population. A group of 30 students was chosen as a sample, representing 29.70% of the total enrollment, located in the "Ismael Clark y Mascaró" Provincial Stomatological Teaching Clinic, installed in the Faculty itself. Their assignment was due to the fact that they constituted the largest number of students grouped to perform the professional practices, to the fact that they had a better knowledge of the characteristics of the patients attending the institution, since they have interacted with them from the third to the fifth year; and as a consequence, it was possible to review several of the clinical histories written by them.

The research team was made up of a teacher with a degree in Spanish and Literature and three PhDs in Stomatology, since they agreed with the *Writing Across the Curriculum Writing in Discipline* movements<sup>(1,3,5)</sup> which advise that the teaching of writing is not only the task of the language teacher, and that each discipline and subject in the university has its own methods for teaching and learning this skill.

The researchers proposed the following rubric to evaluate the extent to which a program aimed at writing medical histories favors written communicative competence in Stomatology students at the Medical Sciences University of Camagüey.



Criteria	Performance levels		
	Regular	Good	Excellent
Regulations Spelling (omissions, additions, substitutions) Lexicon (barbarisms, solecisms, amphiboly, unnecessary repetitions)	Makes three or more errors	Makes one or two errors	No errors
Cohesion Substitutions (anaphoric and synonymic) Ellipsis (nominal and verbal) Order of sentence elements	Repeats the same word more than once, does not use cohesive resources. Makes two or more errors in the order of sentence elements.	Repeats the same word once, does not always use cohesive resources. Makes an error in the order of sentence elements.	No errors
Coherence Structure (logical order) Thematic progression (theme and remainder)	Ideas are repeated, which affects thematic progression. The ideas expressed are disconnected from each other, which affects the logical order.	He only repeats the ideas once, so his message progresses and respects the logical order of what he wants to express.	No errors
Quality of the interviews Order of questions Time to ask them Assertiveness Empathy	Disorganized questions, gives the patient little time to answer, and omits important data for the history of the current disease. In the treatment does not consider the individuality of the patient.	All the questions are correctly organized; but it omits an important piece of information for the history of the current disease. It takes into account the individuality of the patient	No errors

The study took place in three moments, namely: Diagnosis, Intervention and Evaluation.

In the first, interviews were conducted with the 30 students in the group, the consultations made to patients by the students were observed; in addition, clinical histories written by the students were reviewed to diagnose the state in which the development of their writing was in. Then, it was explained to them that they would be part of an experimental study intended to evaluate the extent to which a program aimed at the writing of clinical histories favors their development.

During the intervention, the program was taught (in the Supplementary file, at the end) and was structured in three topics: the first dealt with the study of discursive genres in the university, the clinical history as a discursive genre specific to the field of medical and stomatological sciences, the interview, empathy, essential skill, lexis and spelling, pre-writing phase. The second contributed to the organization of ideas in the text; textualization phase. The third showed how to revise, to correct and self-correct the writing of the CH, through each of the phases through which it passes. The workshop was chosen as the organizational form.



The evaluation of the development of the students' HC writing skills was carried out as follows: before starting the program, each student was assigned a patient to interview and write the HC, which was then handed to the researchers, who reviewed it and pointed out the errors made in relation to lexis, metalanguage, thematic progression, coherence, cohesion and organizational elements such as: general aspects, interrogation, physical examination, diagnosis, treatment plan, evolution and procedure.

After the planned workshops, the procedure described above was repeated. This time, however, the students self-reviewed and self-corrected their writing before submitting it. For this purpose, they took into account a self-evaluation rubric for each stage of the writing process, see:

Pre-writing: Do the questions I address to the patient lead to accurate answers to make the diagnosis, How much do I know about the symptoms the patient presents? Do I master the metalanguage of my specialty, Do I know how to establish cause-effect-consequence relationships linked to the patient's condition and personal data?, Do I know how to organize all the information provided?

Textualization: How do I organize the ideas that the patient confesses? Do the words used correspond to the context? What cohesive resources should I use to achieve cohesion between the ideas? Have I managed to correctly establish the semantic organization relationships? Is the vocabulary I use adequate? Are all the data to be collected in the CH present in this text?

Revision: Is the spelling of the words correct? Is there a relationship between the ideas and between each of the parts that make up the HC? Will those who read this text understand the information presented in it?

## RESULTS

As described above, the evaluation of the proposed program had two moments: one before and one after its implementation. The following tables show the status of the proposed dimensions.

Table 1 shows the evaluation of the regulations governing the delivery of the program topics. In relation to the rules governing the use of language, 5 students (17%) repeatedly omitted the spelling accent or tilde in the pre-program exercise. Of these, 2 (7%) forgot it only once in the post-program exercise. When asked to self-evaluate this aspect, they expressed that they do not always make such rules conscious, since they have to write very fast and several patients attend the consultation.

The correct use of the lexicon was higher after the program, since only 2 students (7%) made mistakes. However, initially, the writing of 12 of them (40%) was insufficient, since inaccuracies were observed, such as: use of the relative adverb "*where*" whose antecedent was not related to a place. Excessive and vicious use of the verb forms "*present*" and "*refer*"; as well as the adverb "*referring*". The action of the latter was subsequent to that of the verb of the main sentence.



Amphibology is another of the deficiencies that affected the prose of future stomatologists, as can be read in the following example: "Patient who comes to consultation, twenty-eight years old...". In this case, the disorder in the syntax causes confusion, since it is not known which of the two nouns the prepositional group complements.

**Table 1.** Evaluation of regulations before and after the delivery of program topics.

Regulations	Before		After	
	Students 30		Students 30	
	No.	%	No.	%
Spelling (omissions, additions, substitutions)	5	17	2	7
Lexicon (barbarisms, solecisms, amphiboly, unnecessary repetitions)	12	40	2	7

The formal and semantic macrostructures of the previously written clinical histories were affected, because, as shown in Table 2, some of the students biased the discourse, expressed the ideas in a disjointed manner, they wasted the use of synonymous substitution, endophoric references and ellipsis. An example of this is the following history of the current disease: *"Patient who comes referring to discomfort in chewing, refers to dental loss due to caries. He has not prosthesis, he has not seen a dentist for ten years, it is decided to admit him for a better study and treatment"*.

The deficiencies are related to several causes: first, during the interviews, questions such as: where exactly is the discomfort, when and how did it begin, where does it radiate to, at what times of the day is it stronger, and with what is it relieved, were omitted. Second: lack of knowledge of cohesive resources and discourse markers that facilitate discourse organization and thematic progression, and third: not all students are in the habit of rereading and self-correcting what they write.

**Table 2.** Evaluation of cohesion and coherence before and after program delivery (n=30)

Cohesion	Before		After	
	No.	%	No.	%
Substitutions (anaphoric and synonymic)	13	43	2	7
Ellipsis (nominal and verbal)	7	23	1	3
Order of sentence elements	15	50	1	3
<b>Coherence</b>				
Structure (logical order)	27	90	5	17
Thematic progression (theme and rheme)	24	80	3	10



In the interviews initially observed, it was found that 43% of the future stomatologists who took part in the research did not organize their interrogation in such a way that the patients' answers would facilitate the narration of the history of the current disease; as well as the necessary establishment of relationships between this, the pathological history, the habits, the diagnosis of the ailment and its follow-up. After participating in the workshops, they understood that a good diagnosis depends on the assertive and empathic communication established between the physician and the patient; as a consequence, they realized the need to give patients time to express their discomfort, without interrupting and without showing signs of impatience (Table 3).

**Table 3.** Evaluation of the quality of the interviews before and after the program

Quality of interviews	Before		After	
	Students 30		Students 30	
	No.	%	No.	%
Order of questions	13	43	2	7
Time to ask them	13	43	2	7
Assertiveness	5	17	4	13
Empathy	5	17	3	10

## DISCUSSION

The drafting of the CH is a complex process involving the physician and the patient. The former asks the necessary questions in order to gradually shape the history of the disease<sup>(4)</sup> and the latter expresses his or her discomfort. "The doctor-patient relationship is made of clinical history, of its physical or virtual sheets, of its questions and answers, of what is included or omitted, of words and hands, of the body and the symptom."<sup>(4)</sup> The physician must know his science, as well as his own skills. Beside, a command of the language and of essential social skills, such as assertiveness and empathy to adapt to the socio-cultural and affective context from which the patient comes

This research shows that, although the students mastered the skills and knowledge of the specialty, as well as what was oriented by the teachers in their own subjects, they made mistakes in the writing of the HC, related to the rules governing the use of language, with the organization of ideas and with the use of the information obtained from the interview and physical examination of the patients. In addition, they were not in the habit of revising and correcting what they had written.

This situation varied according to the students' attendance to the planned workshops. Both those whose difficulties were minimal at the time prior to the implementation of the program, and those who did present serious difficulties in writing and understood that the process of writing the HC plays an important role in order to provide effective and quality care to patients. For this reason, we agree with Francisco Local, *et al.*<sup>(6)</sup> who in their text Evaluation Guide for the practical exam of the Clinical Surgery course, consider among the general aspects the use of adequate terms, spelling and legibility. They also consider that the findings should be mentioned and their location, size and color should be





described. Knowledge in which the students also presented difficulties, since they lack experience to communicate clearly and effectively with patients,<sup>(7)</sup> with the help of the questions that lead to the discovery of syndromes: What? Where? When? How was it modified, changed or relieved? Why?<sup>(8)</sup>

In order to show the organization of ideas in this type of text, the researchers took to the workshops clinical histories with some difficulties to analyze and amend them. Also, correctly written models were proposed and the rubric for self-revision and self-correction of the writings was discussed with the students with the intention of favoring awareness of everything involved in the writing process. On the other hand, in order to contribute to their familiarization with the lexicon of the specialty, they were asked to elaborate a glossary of terms with interactive characteristics, which is considered a scientific novelty. The glossary was placed in the Faculty's repository (<https://uvs.ucm.cmw.sld.cu>), so that it may serve as reference and work material for those who are enrolled and/or will be enrolled in the following years.

At the same time, students were motivated to pay attention to the quality and effectiveness of the writing, since the treatment and evolution of the disease depend on it. They were taught to adopt the reader's perspective, which, in this case, are other specialists who interact with the patient; thus, the HC should tell the history of the disease in a coherent manner and should clearly state the patient's background, habits, diagnosis of the disease, its evolution and the treatment plan.

In short, developing habits, skills and responsible behavior with regard to the use of language in future stomatologists should not only be limited to the field of consultation and the impeccable drafting of the HC, but should also extend to the field of research, a situation in which physicians should communicate the results of their studies in writing to an even larger universe of recipients.

## CONCLUSIONS

The evaluation of the program allowed knowing the difficulties presented by the fifth year students of the Stomatology career in the written communicative competence during the writing of the CH. In addition, it promoted the knowledge and awareness of the processes involved in writing, as well as the respect for the recursiveness of each of the moments through which it takes place.

One of the principles that have been discussed for some years is that the teaching of writing is not exclusive to teachers specialized in language, so this program offers a simple way for both student tutors and those who teach the subject of Clinical Propedeutics and Oral Semiology to guide, execute and control the process of writing CH.

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**Conflict of interest:**

The authors declare that there are no conflicts of interest.

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**Complementary file (Open Data):**

[Programa de escritura para la redacción de historias clínicas estomatológicas](#) (Program for dentistry students to improve the writing skills of dental record)

