

# Editorial Aspect of the Methodology of the Dissertations at The Faculty of Medicine of Setif

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DOI: 10.29322/IJSRP.11.12.2021.p12011  
<http://dx.doi.org/10.29322/IJSRP.11.12.2021.p12011>

## Abstract- Introduction- objectives:

Being an original work, the writing and the elaboration of a thesis must resemble a research work, and must meet the fundamental requirement of an appropriate methodology given that it must constitute the culmination of in-depth and rigorous personal work. The precision of the description of the methods is fundamental and allows the possibility of reproduction of the work of the authors.

The aim of this work was to make a contribution to improving the quality of the scientific medical writing of the end of studies theses at the Faculty of Medicine of Sétif through an evaluation study, and an action of introduction to techniques and rules in this area, as well as an evaluation of its impact.

## Material and methods:

This is a comparative survey of the "before - after" type focusing on the study of the quality of scientific medical writing of the "methods" chapter of 109 end-of-study dissertations carried out at the level of the two medical departments. dental and pharmacy from the Faculty of Medicine of Sétif before and after a training session in the field and this during the academic years 2014 - 2015, for the first stage prior to training; and 2015 - 2016, for the second stage, after the training.

## Results:

Apart from the sample size and the statistical techniques used, the parameters relating to the methodological aspect were specified for three quarters to two thirds of the memories studied, and with significantly higher frequencies at the level of the pharmacy department giving odds- ratios varying between 7 and 14 ( $p < 1$  p. 1000).

## Discussion - Conclusion:

In addition to the clear predominance of clinical cases at the level of the dental department, the great diversity of the types of studies carried out was at the origin of that of the observed results. Despite a relatively satisfactory level of the editorial aspect of the methodology of the dissertations studied, the integration of training programs in the subject in the two cycles, graduate and post-graduate, is a necessity. It would constitute a means of learning, useful for the whole career of the students; and a means of development for professionals and teachers. It would certainly contribute to improving the quality of scientific texts, final theses, doctoral theses, communications and publications, and therefore to the promotion of scientific production.

**Index Terms-** Dissertation - Methodology - Medical writing - Sétif.

## I. INTRODUCTION

In order to promote the articulation between the achievements of training and professional experience, many training paths include in their program the completion of a thesis or a dissertation which is essential for obtaining the diploma. The dissertation is original work with the aim not to copy randomly compiled information from the literature, but to learn methods of reasoning in clinical medicine and simple methods of writing well. Learning which will be useful throughout the career [1-3]. It must make it possible to apply the scientific and clinical approaches learned during the studies. It is a school of methodology, writing and learning of literature analysis. Their writing and development must be like research work and must meet the fundamental requirement of an appropriate methodology since it must be the result of in-depth and rigorous personal work [1].

The appearance of the dissertations often remains mediocre, without real significance, akin to a work, sometimes very short, bringing together poorly exploited observations, presenting a compilation of works of little interest, and presented without real critical thinking; and, on the one hand, remains undeniably linked to an information deficit and a lack of methodological reflection and training in the practice of scientific writing [1,4]. On the other hand, the evaluation of manuscripts always remains focused much more on the content to ensure the accuracy, importance and originality of the published texts and their interest for the reader [5], while the editorial aspect and form are more or less ignored when the corresponding rules and techniques are not ignored. In the "Methods" chapter, precision should guide the inclusion and exclusion criteria of the study material; the description of what we sought to assess; and the criteria on which the results were judged, leaving no room for vagueness. The precision of the description of the methods allows the possibility of reproduction of the work of the authors [6]. Since the reintroduction of the realization of a dissertation or an exercise thesis in the cycle of graduation studies with a view to obtaining the diploma of Doctor of Pharmacy and Doctor of Dentistry [7, 8], what about the quality of the scientific writing of this type of production at the local level?

The objective of our work was to contribute to improving the quality of the scientific medical writing of the dissertations at the Faculty of Medicine of Sétif through an evaluation study, an initiation action. techniques and rules in this area, as well as an

assessment of its impact; and finally, a contribution to the establishment of objective criteria for the evaluation of the editorial quality of manuscripts.

## II. OBJECTIVE:

- Contribute to improving the quality of the scientific medical writing of the dissertations at the Faculty of Medicine of Sétif, in particular in their section reserved for the chapter of methods.

## III. METHODS:

### • Type of study:

This is a comparative study of the "before - after" type [9] relating to the study of the quality of scientific medical writing of the "methods" chapter of the dissertations. before and after a training session in the field.

### • Study population:

The study population is represented by all the dissertations produced at the two departments of dentistry and pharmacy of the Faculty of Medicine of Sétif, during the university years 2014 - 2015, for the first step prior to training; and 2015 - 2016, for the second stage, after the training. The study size was 109 research dissertations, 11 compilation dissertations, were dropped from the review.

### • Study variables:

The study of the various variables focused only on the quality and compliance with the rules of scientific medical writing. The study of the scientific content of theses was not addressed.

The variables studied are:

- Identification data: The academic year, the production department, the rank of the supervisor, the number of authors and the type of thesis.

**Table 1: Distribution of the dissertations according to the constituent elements the methodology and study protocol.**

Constituent elements	Yes		No		Total	
	Workforce (%)		Workforce (%)		Workforce (%)	
<b>Study type</b>	81 (74,3)		28 (25,7)		<b>109 (100,0)</b>	
<b>Study population / Target</b>	84 (77,1)		25 (22,9)		<b>109 (100,0)</b>	
<b>Sample size</b>	15 (17,8)		94 (86,2)		<b>109 (100,0)</b>	
<b>Variables studied</b>	87 (79,8)		22 (20,2)		<b>109 (100,0)</b>	
<b>Judgment criteria</b>	70 (64,2)		39 (35,8)		<b>109 (100,0)</b>	
<b>Techniques used</b>	76 (69,7)		33 (30,3)		<b>109 (100,0)</b>	
<b>Statistical tests used</b>	25 (22,9)		84 (77,1)		<b>109 (100,0)</b>	

**Table 2: Comparative study of the methodology and the study protocol according to the academic year.**

Variable	Academic year				p	OR	IC 95 %	FER (%)
	2014 – 2015 n <sub>1</sub> = 41	2015 – 2016 n <sub>2</sub> = 68						
<b>Study type</b>	28 (68,3)	53 (77,9)	NSD	-	-	-	-	-
<b>Study population / Target</b>	29 (70,7)	55 (80,9)	NSD	-	-	-	-	-
<b>Sample size</b>	9 (22,0)	6 (8,8)	NSD	-	-	-	-	-
<b>Variables studied</b>	32 (78,0)	55 (80,9)	NSD	-	-	-	-	-

- Study methodology and protocol: Study type and population, sample size, study variables, endpoints, techniques used and statistical tests.

### Statistical methods used

- Descriptive statistics techniques [10,11]:
- Tabular presentation.
- Graphic presentation.
- Reduction parameters (mean, standard deviation and range).
- Rules of statistical probability laws (Bernoulli law, binomial law and Laplace-Gauss law) [11,12].
- Parametric statistical comparison tests [13,14]:
  - Reduced deviation test for comparing proportions and means.
  - Chi-square test for the comparison of proportions.
  - Analysis of variance for the comparison of several means.
- Statistical comparison tests for small samples [13,14]:
  - Fisher's exact test for the comparison of proportions and distributions.
  - Student's test for the comparison of means.
- Measures of epidemiological association with 95% confidence interval (CI) by the exact method, in particular the odds-ratio (OR) and the etiological fraction of the risk (FER) [9,10,15].

## IV. RESULTS:

Apart from the sample size and the statistical techniques used, the other parameters relating to the methodological aspect were specified for three quarters to two thirds of the dissertations (Table 1). The study and comparison of the different distributions of parameters relating to the methodological aspect showed no statistically significant difference between the two years (Table 2). All the parameters related to the methodological aspect and the study protocol were significantly more frequently observed at the pharmacy department with a probability of error of less than 1 p. 1000, significant odds-ratios varying between 7 and 14 and attributable fractions of nearly 90% (Table 3).

<b>Judgment criteria</b>	22 (53,7)	48 (70,6)	NSD	-	-	-
<b>Techniques used</b>	27 (65,9)	49 (72,1)	NSD	-	-	-
<b>Statistical tests used</b>	6 (14,6)	19 (27,9)	NSD	-	-	-

**NSD:** Non-significant difference.

**Table 3: Comparative study of the methodology and the study protocol according to the department.**

Variable	<b>Département</b>		p	OR	IC 95 %	FER (%)
	<b>Dentistry</b> <b>= 33</b>	<b>n<sub>1</sub></b> <b>n<sub>2</sub> = 76</b>				
<b>Study type</b>	14 (42,4)	67 (88,2)	< 1 p. 1 000	10,1	3,8 – 26,9	90,1
<b>Study population / Target</b>	15 (45,5)	69 (90,8)	< 1 p. 1 000	11,8	4,2 – 33,3	91,5
<b>Sample size</b>	0 (0,0)	15 (19,7)	-	-	-	-
<b>Variables studied</b>	17 (51,5)	70 (92,1)	< 1 p. 1 000	11,0	3,7 – 32,2	90,1
<b>Judgment criteria</b>	8 (24,2)	62 (81,6)	< 1 p. 1 000	13,8	5,1 – 37,0	92,7
<b>Techniques used</b>	13 (39,4)	63 (82,9)	< 1 p. 1 000	7,5	3,0 – 18,7	86,6
<b>Statistical tests used</b>	0 (0,0)	25 (32,9)	-	-	-	-

publications, and therefore to the promotion of scientific production.

## V. DISCUSSION:

The comparability of our results remains limited due to the scarcity of work on the quality of medical writing. In addition to those having dealt with the difficulties of carrying out doctoral theses and dissertations [16-18], in particular the lack of training in research methodology [4]; most of the work has been devoted to their impact on scientific publication [19,20-29]. Applying only to so-called "original" articles [30], the variables in the section dealing with the methodology and the study protocol can only be studied on research dissertations as well as clinical cases which must also obey with the stereotyped structure, (IMRAD or similar structure) [6,31,32].

For this section, the results also showed significantly higher frequencies at the level of the pharmacy department and no significant difference by academic year. The two least frequently cited items were sample size first, because not all research dissertations were necessarily based on sample surveys [109,110]; and secondly, statistical techniques, the value of which is often overlooked, if not unrecognized.

As for the proportions observed for the other parameters, they can be explained by the diversity of the types of studies that were the subject of research dissertations, particularly the clinical case, which was the subject of the vast majority of dental medicine dissertations. Nevertheless, and because of this, it was difficult to make a precise assessment of the methodological aspect by dispersing the criteria relating to each type of study. The difference between the two departments with regard to the category of dissertations also means that most of the parameters studied in terms of methodology and study protocol do not necessarily relate to the clinical case.

Despite a relatively satisfactory level of the editorial aspect of the methodology of the dissertations studied, the integration of training programs in the subject in the two cycles, graduate and post-graduate, is a necessity. It would be a lifelong learning tool for students; and a means of development for professionals and teachers. It would certainly contribute to improving the quality of scientific texts, dissertations, doctoral theses, communications and

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