



Science

## **PERCEPTION OF UNIVERSITY STUDENTS ABOUT SCIENTIFIC ACTIVITY**

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### **Abstract**

Scientific research is an indicator of the quality of processes in the university environment, so it must be increased by virtue of the results of the work carried out by research teachers and students. **Objective:** to know the perception of the students of the Faculty of Medical Sciences of the University of Guayaquil about the scientific activity.

**Methods:** theoretical and empirical level were used, a questionnaire with closed questions aimed at knowing the opinions on the research activity in this institution was applied.

**Result:** that of the sample analyzed 295 (36.3%) said they agreed with the training for the writing of scientific articles. 35.6% said they agree with the training on research projects.

**Conclusion:** that undergraduate research should be enhanced to ensure the formation and development of research skills in students.

**Keywords:** Scientific Production; Student Scientific Activity; Perception.

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### **1. Introduction**

Scientific production is an indicator of the quality of processes in the university environment, so it must be increased by virtue of the results of the work carried out by research teachers and students. The training of professionals endowed with research skills and abilities is one of the substantive functions of universities. The graduation profile of all medical science careers includes research as one of the qualities to which students must respond in the course of their career and once graduated.<sup>1</sup>

The universities framed in the fulfillment of their social function have a complex task given by training a competent professional who assumes research as part of their training and who learns to ask questions that they are able to solve through scientific research.

At present, it has become a necessity for students to acquire skills in scientific research that allow them to make research a routine practice in their daily work.<sup>2</sup>

Research is a strategy for the development of society, both have a common purpose given by the solution of problems through the use of the scientific method. Research practice constitutes a requirement of university education today. It is through scientific research that a professional with the necessary skills to solve the problems that arise in his practice is achieved.<sup>3, 4</sup>

The university student must have early contact with research activities, particularly those organized in research groups to acquire that kind of skill. On the other hand, research groups are potentialized with the presence of young students. In the curriculum of medical science careers there are subjects that are responsible for the formation of research skills in students since the early years of the career. However, they are not enough to train a professional with research skills. It is necessary that research be promoted from all subjects of the curriculum, and that teachers include it as transversal axes in the training of their students.<sup>5, 6, 7</sup>

## 2. Material and Method

This is a non-experimental descriptive research conducted at the Faculty of Medical Sciences of the University of Guayaquil to a group of students who have already completed the subjects Research Methodology I and II.

The sample consisted of a total of 812 students from the fourth semester onwards to whom a questionnaire was applied with closed questions aimed at knowing their perception of the research activity in this institution. The main variables present in the questionnaire included objective questions about participation in training on scientific writing, in research networks, knowledge about the lines of research, motivation, knowledge of the journals to publish and the dissemination of research activities, among other.

## 3. Results

Of the sample studied, 295 (36.3%) said they agreed with the training for the writing of scientific articles. Table 1 shows the students' perception of the training of scientific articles. The largest number of students felt that they agreed and strongly agreed with the same 36.3% and 32.4% respectively. To achieve the quality of any institution or process, permanent improvement must be an inseparable part of the procedures to be performed.

Table 1: Training on the writing of scientific articles

Items	No	%
Strongly disagree	77	9,5
Disagree	63	7,8
Indifferent	114	14,0
Agree	295	36,3
Strongly agree	263	32,4
Total	812	100,0

The 28.9% of the respondents said they agreed with the budget allocation for the implementation of projects, on the other hand, 27% agreed with the allocation of budgetary resources to publish. The 35.6% said they agreed with the training on research projects. (table 2)

Table 2: Perception on budget allocation for projects, articles and training on projects.

Items	Budget for projects		Budget for publishing		Training on projects	
	No	%	No	%	No	%
Strongly disagree	117	14,4	109	13,4	80	9,9
Disagree	73	9,0	80	9,9	53	6,5
Indifferent	186	22,9	203	25,0	109	13,4
Agree	201	24,8	201	24,8	281	34,6
Strongly agree	235	28,9	219	27,0	289	35,6
Total	812	100	812	100	812	100

It is clear that the perception of students about the empowerment of teachers in scientific research shows some dissatisfaction in this regard, as shown in table 3, only 33.1% of respondents said they strongly agree with this indicator. To reverse the above, strategies in teaching methods based on scientific research are required, to train and develop in students research skills that allow them to venture into the world of higher education scientific research and understand the phenomena of reality to which they will face once they graduate.

Table 3: Empowerment of teachers of scientific research

Items	No	%
Strongly disagree	78	9,6
Disagree	54	6,7
Indifferent	143	17,6
Agree	268	33,0
Strongly agree	269	33,1
Total	812	100,0

Source: data obtained from the survey

Table 4 shows that 34.1% of respondents reported agreeing with the operation of the laboratories, although it is true that there are laboratories for teaching in the Faculty of Medical Sciences, there is still a deficit of these For scientific research. At this time, a project for the strengthening of research laboratories that will expand their availability for researchers is approved.

Table 4: Laboratory operation

Items	No	%
Strongly disagree	112	13,8
Disagree	84	10,3
Indifferent	128	15,8
Agree	211	26,0
Strongly agree	277	34,1
Total	812	100,0

Source: data obtained from the survey

The motivation some authors define as "the dynamic root of behavior"; that is, "the internal factors or determinants that incite an action." <sup>8</sup>

It is a reality that motivation influences research, to the point of becoming one of the main causes of low student participation in research activities. However, lack of motivation is an important factor that should be given special attention by teachers. The motivation is also very close to the availability of students' time. Table 5 shows that there is a significant correlation between these two variables. It is evident that if the students had enough time to carry out scientific articles, participate in research projects, participate in national and international events, they could be more motivated to increase their scientific activity from undergraduate.

Table 5: Motivation, availability of time and dissemination of research activities

Motivation towards research Pearson's correlation	Correlación de Pearson	1	,799**	,787**
	Sig. (bilateral)	-	,000	,000
	N	812	812	812
Divulgación de las actividades de investigación Disclosure of research activities Pearson's Correlation	Correlación de Pearson	,799**	1	,767**
	Sig. (bilateral)	,000		,000
	N	812	812	812
Disponibilidad de tiempo para la investigación Availability of research time Pearson's Correlation	Correlación de Pearson	,787**	,767**	1
	Sig. (bilateral)	,000	,000	
	N	812	812	812

\*\* . The correlation is significant at the 0.01 level (bilateral)

#### 4. Discussion

Scientific activity in university students begins in the undergraduate. <sup>9</sup> Thus, in the curricula of medical science careers, the subject Research Methodology is included, which is responsible for providing the student with the necessary, but not sufficient, tools for the research activity. The training plan includes curricular strategies that contemplate the realization of projects and a research work at the end of the degree. But even so, these alternatives are insufficient to achieve in the student an empowerment of scientific activity. Numerous studies address the causes of low student scientific production in universities. <sup>10</sup>

Sometimes being the first author of a publication in itself can be the reason for the denial of publication. <sup>11</sup> refers to the probability that some journals disparage student work, to the point of rejecting them without reviewing them.

In the field of Medical Education, health research has been recognized as an important component in the training of students, being essential for scientific advancement and health care <sup>12</sup> However, there are few researches that students publish during their University education. In Latin America, student participation in scientific research is very low. In Peru the participation of students in the publication of articles in Peruvian medical journals is 4.5% . <sup>13</sup> And that is that the training in subjects related to the research methodology is perceived as deficient by medical undergraduate students in Latin America. <sup>14</sup>

Undergraduate research the training and development of research skills in students is enhanced. The research process begins in the undergraduate and must be continuous and systematic improvement through permanent improvement. In this way, experience is acquired, scientific criteria are generated, research habit and culture are formed, personal assessment is given to the work carried out<sup>15</sup>

Research, in Higher Medical Education, must begin in undergraduate. The training plan includes curricular strategies that contemplate the realization of a research project and its possible publication 16,17. But the number of articles published by students is very small.

The authors affirm that teachers in their daily practice must show ways of acting that allow them to enhance research from undergraduate, among which are indicated:

- Teach students to analyze concepts critically.
- Develop in students the logical thinking skills.
- Teach students to understand principles and generalizations.
- Form and develop cognitive independence
- Develop the ability to solve problems through scientific research

Teachers from the subject they teach should be to exercise in their classes the scientific method. The teachers' ways of acting should be aimed at training students in ways of thinking that they promote, the search for solutions, the formulation of problems, the generation of hypotheses and the interpretation of scientific results. Hence the concern of universities to improve their teaching methods

## **5. Conclusions and Recommendations**

Among the factors that influence the low student scientific production are lack of motivation, little time available and deficiencies in research management, as well as poor knowledge of the editorial process.

This makes it necessary for universities to direct their efforts to draw up policies and strategies that provide the necessary tools to enhance student scientific research.

Teacher improvement especially postgraduate studies are an effective and necessary way to equip teachers with investigative skills that enable them to navigate scientific activity and in turn create an investigative culture in which involve your.

Universities should establish management strategies that enhance the scientific production of training in the students since the early years of the career and develop in the students invetential compositions that allow them to resilver the problems that are present them in their professional practice.

## **Confidentiality**

The personal data of the patient have been protected as indicated by medical ethics

## Conflict of Interests

The authors declare that does not exist an interest conflict.

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