



INDEX OF ATTITUDE TOWARDS SCIENTIFIC RESEARCH IN PERUVIAN PSYCHOLOGY STUDENTS

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ABSTRACT

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The attitude towards scientific research of university students is a determinant index of the education quality in an institution, and it is fundamental to consolidate the profession as a science. The aim of this study was to describe the attitudes towards scientific research of the Peruvian students of the professional program of psychology. The research approach was quantitative, non-experimental design of basic and field type. The sample consisted of 546 undergraduate students of the professional program of psychology. A sociodemographic form and the Index of Attitude towards Research were used to collect information. The results show that psychology students have an unfavorable attitude towards research. Likewise, they have a low opinion about their self-assessment of research skills, the quality of human resources in teaching research and the promotion of research by the university where they study. In conclusion, it is essential to promote strategies to improve students' attitudes towards research, reinforcing the quality of research courses and selecting teachers with knowledge of research and potential for scientific production.

Contribution/Originality: This study allowed us to know the attitudinal perception that university students of psychology had towards scientific research. Its contribution will allow the implementation of university policies that include the development of scientific competencies in students' education.

1. INTRODUCTION

In the field of psychology, practice of research is vital to consolidate the profession as a science (Covarrubias, 2009) and the attitudes of students and professionals influence the development of research, considering that knowledge is always under construction and it is necessary to be willing to continue the development of scientific knowledge (De las Salas, Perozo, & Lugo, 2014).

In Latin America more students have favorable attitudes towards research, however, the percentage of those with an unfavorable attitude is still significant (Palacios, 2021). In the Peruvian context, there exists research studies on the subject with diverse results. On one hand, studies reveal that students show favorable attitudes, such as the one conducted by Loayza-Rivas (2021) and Olivera (2020) about psychology students, and Mercado (2017) about medical students. On the other hand, there are studies that reveal unfavorable attitudes, such as the one conducted by Gálvez, Gonzáles Hernández, and Monsalve Menor (2019) about nursing students, and Arellano-Sacramento, Hermoza-Moquillaza, Elías-Podestá, and Ramírez-Julca (2017) about stomatology students. In addition to them, there are studies that reveal a neutral attitude (Cruz, Pinedo, & Lescano, 2021).

Despite the advances and notorious efforts of researchers to quantify this phenomenon, it is still necessary to analyze the attitudes towards research in future mental health professionals, given that in the current Peruvian context, there is no development of critical thinking and evidence-based decision making to avoid the lack of empirical basis in the psychologist's practices in various fields (Barros & Turpo, 2020; Moriana & Gálvez-Lara, 2020).

Taking into account these needs, knowing about the attitudes that psychology students have towards research is fundamental for the development of knowledge and for solving problems in mental health research priorities (Mamani, Carranza, Caycho, Corrales, & Mejía, 2021) since the purpose is to develop and disseminate information and knowledge to be able to analyze, pay attention and provide solutions to the problems of each locality and improve teaching practice (Pereyra-Elías, Huaccho-Rojas, Taype-Rondan, Mejia, & Mayta-Tristán, 2014) issues in which little or no progress has been made and the results so far are discouraging due to the existence of a limited scientific production (Gálvez et al., 2019).

If we refer to the causes of the limited scientific production in universities, specifically to students themselves, we could first point out the lack of motivation of students, demonstrated in their unfavorable attitude, low energy and no tendency to research (Arteaga & Alvarado, 2016; Caregnato, Santin, Del Valle, & Takayanagui, 2021). The fact is that the hours to train professionals are mainly of a formative-assistance type which are not sufficient to train research students, and are inadequate ways of teaching research. Another reason, and no less important, is the curriculum of universities which, in most cases, does not give importance to research courses, i.e., there are several courses in the curriculum, however, they do not teach, for example, how to write, let alone how to publish a scientific article, since they are mainly focused on assistance training.

Therefore, the need for this study was fundamental because although research has been developed at national and international levels, there are few studies on the attitude towards research among the Peruvian psychology students. Their results provide updated and objective information, and suggest that Peruvian universities with psychology schools should strengthen teaching strategies related to research and thus students have better attitudes towards scientific research. Therefore, the aim of this study was to analyze the index of attitude towards scientific research among Peruvian psychology students.

2. LITERATURE REVIEW

In order to know and deepen the understanding about the attitude towards scientific research of higher education students, it is important to take into account the theoretical aspects that are related. Research is the act to carry out and execute academic and experimental activities in an organized, systematized and planned manner, since its purpose is to increase the knowledge of a specific specialty (Arellano-Sacramento et al., 2017). Thus, scientific research is considered as a sequence of facts that will occur intentionally, with the purpose of acquiring knowledge and solving problems. Owing to this, we can explain different manifestations of the environment around us to benefit the community (Acón-Hernández, Fonseca-Artavia, Artavia-Chávez, & Galán-Rodas, 2015; Arellano-Sacramento et al., 2017) and thus support the increase in the socio-economic level of the population (Araoz, Amesquita, Ramos, & Uchasara, 2021).

Attitudes towards research, conceptualized as a psychological tendency or predisposition to react in a certain way to the application of the scientific method (Green, Bretzin, Leininger, & Stauffer, 2001; Mamani-Benito & Apaza, 2019), are vital to boost scientific production (Luna-Solís, 2015). In addition, teaching formative research to university students has the purpose of making them aware that they can develop the necessary capacities for constant learning of knowledge and skills related to professional training. Formative research is directed by the teacher, and students are the agents who develop research (Hernández, Marino-Jiménez, Forton, & Sánchez, 2020; Miyahira, 2009). Therefore, the student's attitude towards research is a determinant index of motivation for research and the quality of education in an institution because if students have positive attitudes, they will have predisposition to research, as well as they will develop abilities and skills for knowledge elaboration in a proactive and dynamic way (Papanastasiou, 2005; Rojas, 2009).

The attitude towards research of university students is also influenced by the structure and methodology of training and research centers. The strategies used by institutions to publicize the scientific activities they develop are determinant in the quality and relevance of their research systems, giving level and value to the development of research in universities (Rojas, Méndez, & Rodríguez, 2012). In addition, there are certain factors that could contribute to an unfavorable or favorable attitude towards research of students that should be taken into account by universities (Rojas-Solís, Espinosa-Guzmán, Espíndola-Larios, & Hernández-Rosas, 2021). The current reality of university students shows us that they are not motivated or are not interested in searching for information in scientific articles or other reliable sources. Finally, there is no constant training for students that could encourage research attitudes (Rodríguez-Espinar, 2015). There is no doubt about the importance of the attitude towards research at the undergraduate level. Private universities in Peru and Latin America should seek to promote high-level research, allowing students to consider research as a necessary component for the development and innovation of their profession (Palacios, 2021).

Table 1. Characteristics of the study population (N=546).

Gender	Frequency	Percentage
Male	157	28.8
Female	389	71.2
Total	546	100
Age		
18-22	377	69
22 and older	169	31
Total	546	100
Type of university		
Private	432	79.1
Public	114	20.9
Total	546	100
Mode		
Virtual synchronous	522	95.6
Virtual asynchronous	24	4.4
Total	546	100
Main source of professional financing		
Parents/family members	441	80.8
Own funds	56	10.3
Scholarship or similar	32	5.9
Credit/loan	8	1.5
Other	9	1.6
Total	546	100

3. METHODOLOGY

3.1. Type and Design of Research

The current research is descriptive because it describes the most important characteristics of the attitude towards research of the Peruvian psychology students. The research adopted a non-experimental design because no manipulation of variables was carried out, and a transversal approach, because the collection of information was carried out in a single period of time (Hernández, Fernández, & Baptista, 2003). It also belongs to the field type of research because its purpose was to gather information about reality in order to increase scientific knowledge.

3.2. Sample

The sample consisted of 546 university students of the psychology program from the current enrollment, identified by means of convenience sampling technique. In Table 1, the participants of this study are mostly females, 71.2 percent. Likewise, with respect to age, a higher percentage (69 percent) of them are in the range of 18 to 22. Another most outstanding characteristics is the type of university, the private institution being the one with the highest percentage (79.1 percent). The main source of financing for the profession were parents and relatives with 80.8 percent. In relation to the mode of study, the virtual synchronous mode stood out with 95.6 percent.

3.3. Instrument

The questionnaire applied was adapted from different sources (Blanco & Alvarado, 2005; Denofrio, Russell, Lopatto, & Lu, 2007; Rojas, 2010) and presented 19 items related to the General Index of Attitude towards Research, and three dimensions of Self-Assessment (SA), Faculty Impact (FIP) and Institutional Impact (IIP). In addition, questions about other aspects related to student attitudes towards research and evaluation of the quality of education that students receive at their universities were considered. In addition, sociodemographic questions were taken into account to better understand the characteristics of the population studied (See Table 1).

As the questionnaire was an instrument derived from several sources and adapted to the contexts under study, it was statistically validated. The items were found to have a high reliability with a Cronbach's Alpha of 0.92, a value that showed the reliability of the instrument applied.

3.4. Data Analysis

For data analysis, the Statistical Package for Social Sciences (SPSS V. 25.0) and Microsoft Excel were used. The analysis was performed with tables showing frequencies, percentages, central tendency, dispersion curves and cut-off points. In addition, Cronbach's Alpha reliability analysis was used for validation.

4. RESULTS

With respect to the index of Attitude Towards Research (ATR), Table 2 shows that psychology students had an unfavorable attitude towards research (74.0 percent).

Table 2. Levels of the index of attitude towards research.

Levels	Frequency	Percentage
Low	404	74.0
Medium	114	20.9
High	28	5.1

Table 3 refers to the indicators of attitude towards research, which reveals that in all the three dimensions: Self-assessment (SA), Faculty impact (FIP) on research training and Institutional Impact (IIP), students showed a low level in the development of research with 46.2 percent, 33.3 percent and 46.2 percent, respectively.

Table 3. Indicators of attitude towards research.

SA level	Frequency	Percentage
Low	252	46.2
Medium	123	22.5
High	171	31.3
FIP level	Frequency	Percentage
Low	200	36.6
Medium	148	27.1
High	198	36.3
IIP level	Frequency	Percentage
Low	228	41.8
Medium	168	30.8
High	150	27.5

Table 4 provides information on students' knowledge about research. When asked about the research system of their university, they admitted that they had a moderate knowledge of scientific research (49.6 percent). As to whether they think that students at your university are trained in scientific research, they answered at a moderate extent, with 55.5 percent. Likewise, it can be observed that students answered at a moderate and large extent when asking whether they know about if their university promotes research, with percentages of 42.7 percent and 40.8 percent. In addition, there is a low tendency to participate in research groups or research projects in the universities where they study, since the students indicate that they do not know the groups, 32.2 percent. It is also observed that the quality of scientific training in their academic program is adequate with 52 percent. Finally, it is also found that students are more willing to engage in research to a moderate extent, 37 percent and to a large extent, 35 percent.

Table 4. Percentages according to students' knowledge on research.

Students' knowledge on research			
		Number	Percentage
1. Do you know the research system of your university?	Do not know	67	12.3
	To a small extent	147	26.9
	To a moderate extent	271	49.6
	To a large extent	61	11.2
2. Do you think that students at your university are trained in scientific research?	Do not know	8	1.5
	To a small extent	96	17.6
	To a moderate extent	303	55.5
	To a large extent	139	25.5
3. Do you think that your university promotes the development of scientific production?	Do not know	11	2
	To a small extent	79	14.5
	To a moderate extent	233	42.7
	To a large extent	223	40.8
4. Are you familiar with the research incubators or research projects at your university?	Do not know	101	18.5
	To a small extent	176	32.2
	To a moderate extent	205	37.5
	To a large extent	64	11.7
5. Do you think that the quality of scientific training in your academic program is adequate?	Do not know	18	3.3
	To a small extent	87	15.9
	To a moderate extent	284	52
	To a large extent	157	28.8
6. In your particular case, would you like to be a researcher/scientist in the future?	Do not know	39	7.1
	To a small extent	114	20.9
	To a moderate extent	202	37
	To a large extent	191	35

Table 5 presents an overall evaluation of the quality of university education on a scale of 0 to 10. The finding for statement 1 reveals that students perceive an average quality of 7.72. In statement 2, the average quality of the program in which the students are enrolled is 7.56. Statement 3, which asks if it is related to the curriculum, shows an average of 7.41. In statement 4 about teachers, the average quality is 7.98. In statement 5 it is observed that the quality of fellow students is 7.23 on average. Likewise, statement 6 on the opinion of the welfare services offered by the universities shows a value of 7.08. Statement 7 is related to infrastructure and shows an average of 7.14. Statement 8 regarding the opportunities provided by universities to do research shows the lowest average of the statements, i.e. 6.91. Finally, statement 9 on scholarships and recognition provided by the universities shows average results of 6.93.

Table 5. University quality evaluation

University quality evaluation	Average
1. The university where I am currently studying	7.72
2. The program in which I am enrolled	7.56
3. My curriculum	7.41
4. My teachers	7.98
5. My fellow students	7.23
6. The welfare services of my university	7.08
7. The infrastructure of my university	7.14
8. My university's research opportunities	6.91
9. Scholarships and awards for students	6.93

5. DISCUSSION AND CONCLUSION

The study of attitudes towards research is a topic of great interest for formative research (Mamani, 2011). As far as it is known, the predisposition of psychology students to do research determines the future application of the scientific method in the professional field they would work (León, 2016) to become a professional and develop their intervention through action-research mechanisms (Hernández, Saavedra-López, Calle-Ramirez, & Rodríguez-Fuentes, 2021). Therefore, the purpose of the study was to analyze the index of attitude towards scientific research in the Peruvian psychology students.

Among the main findings was the students' low willingness to scientific research. This finding differed from studies conducted in similar populations, such as that of Loayza-Rivas (2021) in a private university in metropolitan Lima and that of Olivera (2020) with graduates from another private university. However, it is consistent with studies that included populations from other programs, such as the study by Gálvez et al. (2019) in nursing students at the Universidad Señor de Sipán, and the study by Arellano-Sacramento et al. (2017) in students in the ninth semester of stomatology at a private university in Lima.

The differences observed may be due to the fact that on many occasions psychology students tend to have different experiences in teaching research, they are being more favored when research teachers demonstrate experience and current scientific production. In addition to this, the perception of disconnection between the content of research courses and their applicability to their professional field may also have an influence (Landa-Blanco & Cortés-Ramos, 2021) generating little interest in learning and applying the scientific method to solve practical problems in society, even when research priorities in the country are a guideline (Mamani-Benito et al., 2021). Another interesting finding has to do with the fact that students have a low opinion on the following: self-assessment of research skills (Self-Assessment dimension [SA]), the quality of human resources in research teaching (Faculty Impact [FIP]) and the promotion of research by the university where they study (Institutional Impact [IIP]). In this regard, this negative self-perception had already been reported in other studies, for example, in dentistry students, where knowledge of research methodology, scientific writing and information search was regular (Castro, Sihuay-Torres, & Perez-Jiménez, 2018). In relation to the quality of human resources, the negative

opinion on teachers corroborates studies that have analyzed the scientific production of teachers in the field of social sciences and health, where it has been noted that a high percentage of them have no scientific production (Mamani 2019; Pereyra-Elías et al., 2014). There is also a negative opinion on the promotion of research by the university, together with the opinion that there are few opportunities for undergraduate research. In this regard, it is necessary to clarify that in Peru, higher education institutions are still improving educational quality indicators, in which research is a fundamental pillar (Medina, 2018). Thus, institutional licensing has been key for university managers to increase funding for research projects, promote the creation of research groups and other strategies to give greater impetus to the practice of research at an undergraduate level (Mayta-Tristán, Toro-Huamanchumo, Alhuay-Quispe, & Pacheco-Mendoza, 2019).

As for the practical implications, at the beginning, this manuscript aimed at recognizing the low scientific activity of Peruvian university students as a problem to be studied. Although the findings do not directly solve this problem, it is important to highlight that they do contribute to the understanding of the importance of attitudes towards research in the university education of future mental health professionals, who are expected to develop skills for the practice of research, thereby ensuring that the techniques they apply in counseling, accompaniment and therapy are based on empirical evidence and not on pseudoscientific foundations.

Since 2014 there has been a transition stage to the achievement of minimum standards for the university quality certification, having as main need the promotion of scientific research in universities. The findings presented have practical impacts on the management of the training of professionals with research skills in psychology. It is necessary to promote strategies, reinforcing the quality of research courses (La Cruz-Vargas, Correa-Lopez, Alatriza-Gutierrez, & Sanchez, 2019) selecting teachers with scientific production (Bustos-González, 2019; Sánchez-Duque, Gómez-González, & Rodríguez-Morales, 2017). In addition, it is important to apply the principles of formative research, encouraging students to ask and answer their own questions based on meaningful learning (Hurtado, Baños, & Silvente, 2015). Despite the interesting results, the study had the following limitations. First, the sampling applied was non-probabilistic, therefore, the results could not be generalized to the total population of psychology students in Peru. In future, it is recommended that probability samples should be taken and that university students from other provinces be included. Second, being a descriptive study, it was not possible to analyze some factors associated with unfavorable attitudes towards scientific research. Therefore, it is recommended that future studies could apply analytical and/or explanatory methods to increase the understanding of the associated factors. In conclusion, the fact that more than 70 percent of those surveyed showed a low level of attitude towards research is an alarming indicator. It is expected that future mental health professionals demonstrate direct contact and show more interest in scientific research, given the value that this would build a professional profile for proposing solutions to Peru's health problems. The participants recognized deficiencies with respect to their research skills, and refer to a passive role of the university in the eagerness to promote research, a fact that shows showed that the problem of low scientific activity among university students is a structural problem.

Finally, although it is not correct to think that the majority of students should be willing to commit themselves to university scientific production, it is expected that universities, have better pedagogical and didactic elements to encourage scientific training.

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