Cartas al editor

Defining a good research question using the PICOT and FINGER format

Definiendo una buena pregunta de investigacion usando el formato PICOT y FINGER

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In Bolivia, research is poorly standardised[1-3], starting with the research question that is reflected in what is described in the objectives of the study[4], in original articles or review articles, which are the two types of papers that must report their general objective in the last paragraph of the introduction section, which is why we want to introduce the PICOT[5,6];and FINGER format[6], both internationally standardised, in books and scientific articles, focused on teaching research in health sciences, to generate good questions for research, and thus good scientific articles.

To highlight the following: if research questions are formulated using the PICOT and FINGER[7], format; the type of study, universe, sampling calculation, type of sampling, inclusion and exclusion criteria, study variables, statistical analysis and ethical considerations can be correctly identified, and similar articles can be searched to support the study that is to be carried out[5].

For all that mentioned, the following should be emphasised, the PICOT format [5,7], is an acronym indicating necessary elements that the research question should contain: P (Population: Helps to identify Universe and Sample) , I(Intervention and/or Exposure: Describes whether the research will be with intervention or observation of the study event.), C (Comparison: Identifies whether there will be two or more groups to be evaluated in relation to the type of study, not always mandatory to describe, especially in cross-sectional studies.), O (Outcome: Describes how the results will be measured.), T(Time: States the time spent on the research.).

Table 1 summarises the most frequently asked questions that the researcher should answer if using the PICOR format to generate research questions.

Key questions to be answered when working with the PICOT framework (population, intervention, comparator, outcome, and time frame) in a clinical research design

Component	Related questions
Population	-What is the target population?, Is the target population narrow or broad?, Is the target population vulnerable?, What are the eligibility criteria?, What is the most appropriate recruitment strategy?
Intervention	-What is the intervention? (treatment, diagnostic test, procedure), -Is there any standard of care for the intervention?, -Is the intervention the most appropriate for the study design? -Is there a need for standardizing the intervention? -What are the potential side effects of the intervention? -Will potential side effects be recorded? -If there is no intervention, what is the exposure?
Comparator	- How has control intervention been chosen? Are there any ethical concerns related to the use of placebo? Has a sham intervention been considered? Will statistical analyses be adjusted for multiple comparisons?
Outcome	- What are the secondary outcomes? Are the outcomes exploratory, explanatory or confirmatory? Have surrogate and clinical outcomes been considered? Are the outcomes validated? Have safety outcomes been considered? How are the outcomes going to be measured? Will the dependent and independent variables be numerical, categorical or ordinal? Will be enough statistical power to measure secondary outcomes?
Time frame	- Is the study designed to be cross-sectional or longitudinal? How long will the recruitment phase take? What is the time frame for data collection? Have frequency and duration of the intervention been specified? How often will outcomes be measured? Which strategy will be used to prevent/decrease dropouts?

TABLE 1:
Picot format.

Fandino W. Formulating a good research question: Pearls and pitfalls. Indian J Anaesth [Internet] 2019 [cited 2020 nov 29];63: 611-6. Available at: https://www.ijaweb.org/text.asp?2019/63/8/611/264195

The FINGER format[6,7]is an acronym that helps to elucidate whether the research question is: F (Feasible: indicating whether it will have the participants, human and financial resources and reasonable time to be completed), I (Interesting: the interest that the scientific community could have in the proposed study), N (Novel: new scientific findings), G (Good: enhances career/line of research), E (Ethical: ensuring that the risk to participants is low/acceptable, this always reviewed and endorsed by a team of ethics experts), E (Ethical: ensuring that the risk to participants is low/acceptable, this always reviewed and approved by a team of ethics experts) and R (relevant: for the improvement of clinical practice and the future of research). Table 2 provides a summary and brief recommendations of the FINGER format.

Component	Criteria
Feasible	-Ensures the appropriateness of the research design -Ensures adequate funding -Strategically recruits the target population -Targets an attainable sample size -Prioritizes measurable results -Optimizes human and technical resources -Optimizes human and technical resources
Interesting	-Attracts the interest of leading investigators and the research community - Attracts the attention of readers -Presents a different perspective on the problem
Good	-For your career, it fits into your professional development plan.
Novel	-Provides various findings -Generates new hypotheses -Resolves a gap in the existing literature -Extends or refutes previous findings
Ethical	-Complies with local ethics committees. -Protects the fundamental principles of ethical research -Low/acceptable risk to participants
Relevant	-Generates new knowledge -Contributes to improving clinical practice -Provides a precise answer to a specific research question.

TABLE 2
Main characteristics of the FINGER criteria (feasibility, interest, novelty, ethics and relevance) in order to formulate a good research question.

Patino CM, Ferreira JC. Developing research questions that make a difference. J. bras. pneumol. [Internet]. 2016 [cited 2020 Nov 29]; 42 (6): 403-403. Available at: https://doi.org/10.1590/s1806-37562016000000354.

Hopefully, this will open a debate about the importance of using international standards from undergraduate research to medical residencies and postgraduate health sciences [8,9] in Bolivia.

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