

Asking Research Questions?

PICOT criteria^{1,2} are often used to help describe the research question(s). Not all parts of it are applicable to all research questions or hypotheses, but it is often useful in framing and clearly identifying the research question(s) or hypothesis. In particular, time-frame may not be applicable.

PICOT Criteria

P	Problem or Population	What condition or disease, or what groups of people are you interested in?
I	Intervention	What treatment are you interested in?
C	Comparison	What are you comparing the treatment to? No treatment? Another drug? Psychotherapy?
O	Outcome	What result are you interested in? Pain reduction? Higher score on a Quality of Life scale? Greater range of motion?
T	Time-Frame	What is the time frame(s) for measuring the outcome(s)?

In the process of narrowing down your topic to a research question or hypothesis, you will want to continually assess whether it can in fact be answered. The FINER criteria³⁻⁵ are useful for determining if the research question or hypothesis can be answered. FINER is an acronym for feasible, interesting, novel, ethical and relevant. Once you have decided on the research question(s) or hypothesis, use the criteria to critically evaluate it.

FINER Criteria

	<i>Criteria</i>	<i>Questions to Ask</i>
F	Feasible	<ul style="list-style-type: none"> ▪ Is your research question feasible? ▪ In regards to time and money required, is it affordable? ▪ Is it manageable in scope?
I	Interesting	<ul style="list-style-type: none"> ▪ Is it interesting to the investigator?
N	Novel	<ul style="list-style-type: none"> ▪ Is the question novel? <ul style="list-style-type: none"> ▪ Does it propose to confirm or refute previous findings? ▪ Does it propose to extend previous findings? ▪ Will it potentially provide new findings?
E	Ethical	<ul style="list-style-type: none"> ▪ Can the research be conducted without violating ethical principles?
R	Relevant	<ul style="list-style-type: none"> ▪ Is it relevant to scientific knowledge? ▪ Is it relevant to clinical and health policy? ▪ Is it relevant to future research directions?

References

1. Richardson W, Wilson M, Nishikawa J, Hayward R. The well-built clinical question: a key to evidence-based decisions. *ACP Journal Club*. 1995;123(3):A12-A13.
2. Rios LP, Ye C, Thabane L. Association between framing of the research question using the PICOT format and reporting quality of randomized control trials. *BMC Med Res Methodol* [Internet]. 2010 Feb 5 [cited 2017 Jul 28];10(1):[8 p.]. Available from: <https://bmcmedresmethodol.biomedcentral.com/articles/10.1186/1471-2288-10-11>.
3. Hulley SB, Cummings SR, Browner WS, Grady D, Hearst N, Newman TB. *Designing clinical research*. 2nd ed. Philadelphia (PA): Lippincott Williams & Wilkins; 2001.
4. Hulley SB, Cummings SR, Browner WS, Grady DG, Newman TB. *Designing clinical research: an epidemiologic approach*. 3rd ed. Philadelphia (PA): Lippincott Williams & Wilkins; 2007.
5. Hulley SB, Cummings SR, Browner WS, Grady DG, Newman TB. *Designing clinical research*. 4th ed. Philadelphia (PA): Lippincott Williams & Wilkins; 2013.

To review various PICOT frameworks and examples that may be applicable to the study being considered, read: Davis KS. Formulating the evidence based practice question: a review of the frameworks. *Evid Based Libr Inf Pract*. 2011;6(2):75-80. Available from: <https://ejournals.library.ualberta.ca/index.php/EBLIP/article/view/9741/8144>.