EDITORIAL

Planning a research project: The seven As checklist

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The Journal of Pakistan Medical Association (JPMA) has repeatedly drawn attention to the need for robust medical research in Pakistan and beyond.[1] Editors and reviewers contribute to the growth of research by suggesting tips for research methodology, medical writing and medical ethics, and sparing print space for letters and reviews on this topic.[2-4] Many times, however, we find that the research question itself is not properly formulated.

Various acronyms and memory aids have been proposed to help design a good research protocol and ensure appropriate selection of topic. The acronym PICOT represents the sections that must be presented in a complete research question.[5] FINER is a reminder of the characteristics that a good research question must possess.[6] As per FINER, any project should be feasible, interesting, novel, ethical and relevant.

We suggest a 7A checklist (Table), which must be fulfilled before embarking upon any research project. These seven As help ensure that an appropriate question is formulated is chosen for research. The 7A list provides guidance to ensure that research work has a long lasting impact, beyond the setting in which it is conducted. The first A, **Attractiveness**, is the most important. The proposed study question should correspond to a field of medicine which is of interest to the researcher. Working on a subject which is not interesting, is a confirmed way of creating an inefficient (and unhappy) worker. Interest alone is not enough, however.

Table: The Seven As Checklist.

Availability/Accessibility
Affordability
Accuracy
Advantage (utility)/Appropriateness
Attractiveness
Appreciation/Awareness
Acceptability

Appreciation/awareness implies that the researchers must appreciate the finer nuances of the topic being considered. A broad topic, e.g., "pregnancy in diabetes", must be fine tuned to a focussed entity, such as "glycaemic control after antenatal corticosteroid therapy in gestational diabetes mellitus". The next A, **Availability/Accessibility**, suggests that clinical material should be available, and accessible, in abundance, if a particular research question is to be answered correctly. Not only that, the proposed study/intervention should be **Affordable**, as well as **Accurate**. A question which needs expensive investigations to answer, or for which accurate technology is not available, may not be the right one to ask. For example, planning a large community survey using expensive hormonal assays makes no sense. It may be a better approach to validate economical, surrogate metabolic markers of these hormones in a smaller study and then use these markers in the larger survey.

Acceptability and **Advantageousness** are important factors that include Ethics in their ambit. Whatever research question is proposed should be socially and ethically acceptable. A simple project comparing self-administered Ferriman-Gallwey scores (for estimation of severity of hirsutism) with investigator administered scores, will be socially beneficial, especially for a population which observes purdah. A question which involves unacceptable risk to the participants, or which touches grey areas of ethics (e.g., foetal gender determination) are best avoided.

The seven As encompass almost all the points listed in PICOT and FINER. Population corresponds to **Availability/Accessibility**; Intervention to **Affordability**; Comparison to **Accuracy**; Outcome to **Advantageous**; while time is included in **Availability**, **Accessibility** and **Affordability**. Similarly, the FINER points are all included in our 7 As. The seven As score over earlier acronyms by highlighting the need to frame socially relevant community-centric, community-oriented research questions, which have clinical or public health importance. A good question, when asked, should lead to an answer

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which helps improve the health status of the community that we serve. Our acronym also highlights the need to consider **Affordability**, especially in a developing world context, and assess Accuracy of planned investigations and interventions, before embarking on any scientific project.

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