



## Discussion Kernel

## Criteria to select a research “topic” for postgraduate and doctoral studies in ayurveda

Sathya N. Dornala<sup>a,\*</sup>, Snehalatha SN. Dornala<sup>b</sup><sup>a</sup> Resident Medical Superintendent (RMS), Swami VivekanandAyurvedicPanchakarma Hospital, Dilshad Garden, Delhi, India<sup>b</sup> Dept of Kaumarbhritiya, VYDS Ayurved Mahavidyalaya, Khurja, UP, India

## ARTICLE INFO

## Keywords

Ayurveda

TOPIC

Pragmatic

Objectivity

Dissertation

Thesis

## ABSTRACT

A research topic is a subject or problem that an investigator is interested in research. The starting point of any research project that is successful is a well-defined subject of research. The selection of topics is an ongoing approach in which investigators analyse, describe, classify, and refine their ideas. For the ease of selection of topics particularly in the field of Ayurveda, Authors have created an acronym ‘TOPIC’ as a guiding tool for the selection of the area of research. The components of the TOPIC criterion are Textual & Time-bound; Objectivity & Outcome measures; Planning & Pragmatic; Innovative & Interesting and Contemporarily relevant & Consent, highlight useful points for the easy selection of the topic for the research by the novice.

## 1. Introduction

Dissertation or thesis submission is a statutory and obligatory requirement for the acquisition of a postgraduate or doctoral degree in Ayurveda like in other fields of science. The very purpose of induction of the said mandate of research submission is to create an opportunity to get exposure to conduct research on their areas of interest so that scholars understand their research potential and take up a career in research in the future, but no way to expect major research breakthroughs. Ultimately exposure to research is likely to make the physician more rational, logical, and responsible.

A research topic is a subject or problem that an investigator is fascinated with researching on. A well-defined topic of study is the starting point of any research project that is successful. The selection of a topic is a continuous handle in which researchers investigate, identify, characterize, and refine their ideas [1].

Once a scholar gets admitted into the Ayurveda PG/PhD studies he or she is supposed to submit a synopsis of proposed research work within 6 months from the date of admission. To write a synopsis it is essential to choose or select a topic i.e., disease and/or drug/panchakarma therapy; cause and effect relation of nidana to vyadhi; decoding the Sanskrit verses/concepts in the contemporary knowledge, identification, and standardization of herbs/minerals with the application of latest technology; evaluation of quality, safety, stability and efficacy of the formulations based on advanced pharmaceuticals etc. Once the topic is

finalized a brief review of research will be done to understand the current status and trend of the topic under consideration so as to find out the gaps in the existing knowledge and further formulate a research question.

Two decades back, when I was admitted into MD Ayurveda, the very first step was a few scholars were chosen by the Head of the department for his guide ship, and the remaining scholars by the Associate and Assistant professors. I had been asked by my Guide to submit the synopsis within two weeks without giving any orientation about ‘how to write the synopsis’. Further, I had been asked to come up with three to five topics of your interest from the samhitas for the research, will discuss and finalize one topic for the synopsis. Then I had consulted my seniors who had already submitted a synopsis and some who were already doing research, for guidance about the selection of the topic, but of no use. The fundamental question roaming in my mind was what are the different aspects/criteria to be considered while selecting the topic? In most cases, scholars submit their synopsis by copying from here and there without proper planning, and get frustrated while doing research and writing the thesis and couldn’t complete it in time due to misguidance/misplanning while selecting the topic, further writing the synopsis based on the topic. Scholars when they start doing research based on the synopsis submitted will come to know the lacunae and misplanning while writing the synopsis. Scholars do the research and submit the thesis by deviating from the project in the synopsis, knowing the fact that, nobody is going to cross-check the synopsis.

\* Corresponding author.

E-mail address: [rasayana@gmail.com](mailto:rasayana@gmail.com) (S.N. Dornala).<https://doi.org/10.1016/j.jaim.2024.100978>

Received 27 December 2022; Received in revised form 14 May 2024; Accepted 15 May 2024

Available online 5 July 2024

0975-9476/© 2024 The Authors. Published by Elsevier B.V. on behalf of Institute of Transdisciplinary Health Sciences and Technology and World Ayurveda Foundation This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Even after two decades also the same situation prevails in almost all Ayurveda postgraduate institutions with may be very few exceptions. As of date, there are no laid down criteria for the selection of the topic of PG/PhD studies in Ayurveda. None of the scholars are aware of the criteria or prerequisites to be kept in mind while planning for the selection of the topic. Scholars who completed their post-graduation in Ayurveda are eligible to become teachers. Recently passed-out scholars also couldn't guide their students in the selection of the topic and write topic-specific synopsis.

Considering the ambiguous situation of the scholars in the field of Ayurveda PG/PhD education, we have searched online for guidance and clarity, and found different criteria i.e., FINER criteria for the development of a good research question, PICOT criteria for constructing the framework of the study or research process, SMART criteria for formulating research objectives; but none of these criteria solves our purpose i. e., criteria for the selection of the topic for PG/PhD research in Ayurveda.

Then we have analysed the necessary criteria/pre requisites to be considered while choosing the topic for PG/PhD studies in Ayurveda and arranged them systematically, coincidentally it has lead to an acronym 'TOPIC'. It will be useful as a guiding tool for the selection of the area of research in Ayurveda, particularly for PG/PhD studies. The below-given components of this TOPIC criterion highlight useful points for the easy selection of the topic for the research. All the components of the criteria to select a research topic are given in [Table 1](#).

- Textual & Time-bound
- Objectivity & Outcome measures
- Planning & Pragmatic
- Innovative & Interesting
- Contemporarily relevant & Consent

1.1. Textual

Hundreds of clinical conditions, thousands of symptoms, and lakhs of recipes are described in many ayurvedic samhitas or texts. Descriptive, narrative, expository, and argumentative way of presentation is available in various samhitas in an encoded manner. Translational research in ayurveda is to decode the knowledge from books to the bedside or concepts to the clinic either by literary and observational research or by intervention trials. Being scholars, instead of searching for the newer formulation, it is essential to substantiate the fundamentals and formulations available in different samhita by re-appropriation or re-validation, or research synthesis [2]. The object of research in Ayurveda treatises is to investigate scientific advances and opportunities in the fundamental concepts of Ayurveda, to replace faith and suppositions with scientific reasoning supported by facts and figures [3].

1.2. Time-bound

As a part of the Postgraduate/doctoral program in Ayurveda, the candidate gets a maximum of 18 months (even 12 months or less than that where newer formulations are chosen for the study) for dedicated research in three years of course duration. Scholar is allowed to initiate the PG/PhD research only after clearing the first year research methodology and statistics paper and in the remaining two years of course duration, scholar is supposed to submit the thesis minimum of six months before the completion of course tenure of three years. Scholar needs minimum of three months to compile the data, organize the data, analyse the data and to present the same in the thesis form. For example, if a scholar interested to select a topic related to HIV/AIDS with an ayurvedic drug intervention; where in most of the time will go in recruiting the study participants, and completion of study duration with drug intervention, where scholar will not able to complete the study within available time period of maximum of 18 month. So selection and

**Table 1**  
Criteria to select a research “topic”.

Components		Criteria	Examples/Description
T	Textual	Based on Ayurvedic treatises	Selection of a formulation and/or procedure from Ayurvedic reference texts.
	Time bound	Maximum available time period is 18 months	Such a topic should be chosen for the study so that study can be completed with data compilation, data analysis and the presentation in thesis form
O	Objectivity	To bring objectivity to subjective concepts or phenomenon described in Ayurveda	Prakriti assessment scale, Agni assessment scale, Swasthya Assessment Scale etc.,
	Outcome measures	End result of conducting research on a particular topic & to assess a patient's current status.	PASI scoring, WOMAC scoring, UPDRS, AGREE II etc.,
P	Planning	Biostatistician is the architect of the research planning. So it is essential to include the biostatistician at the level of planning for synopsis.	Biostatistician should be consulted for the suitable research design, outcome measures and sample size calculation related to the topic concerned etc.,
	Pragmatic or Practical	Based on practical rather than theoretical considerations.	Examples are, studies on benefit of Langhana in Jwara in Community based trials, Ayurvedic Dinacharya through Longitudinal studies etc.,
I	Innovative	To improve or to replace something	Novel methods such as Single-patient (n-of-1) trials or adaptive clinical trials to conduct research, Patient-centered outcomes research etc.,
	Interesting	Dependent on self-motivation and corresponds to more practical and broader interests	Ayurvedic pharmacology and phamacognosy & Network pharmacology; Quality control and standardization research etc.,
C	Contemporarily relevant	Integrative model of understanding and healthcare is more relevant.	Integrative studies of Ayurveda/Yoga and Modern medicines for the better patient outcomes in chronic conditions such as Arthritis, Psoriasis, Diabetes etc.,
	Consent	Agreement of the supervisor/guide is utmost important while selecting the topic.	As per the ethics of research, patient consent is very important.

planning should be done accordingly. The very purpose of the research is to make the scholar acquainted with the process of research i.e., from the inception of a research idea to implementation and operational issues and till its completion.

1.3. Objectivity

The distinction between learning in Ayurveda and modern medicine is so huge that the understanding of science, elucidation of information, and its application is profoundly subjective in Ayurveda, whereas it is exceedingly objective in modern healthcare. So the very purpose of research in ayurveda should be to bring objectivity to subjective concepts or phenomena described in Ayurveda. An example of Objective research is to measure the temperature with a thermometer that reliably reports the value. We can trust the thermometer's report. Other examples include objectivising Ayurvedic subjective parameters such as Prakriti (Prakriti assessment scale), Agni (Agni assessment scale), Swasthya (Swasthya Assessment Scale) etc., Objective research can be

defined as research that is: (a) unbiased or impartial, (b) value-free (unaffected by moral, economic, social, political, or religious values), (c) reliable or trustworthy, or (d) factual or real [4]. Objectivity can be achieved only when appropriate outcome measures are chosen for the topic.

#### 1.4. Outcome measures

“When you can measure what you are speaking about, and express it in numbers, you know something about it, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind; it may be the beginning of knowledge, but you have scarcely, in your thoughts advanced to the stage of science.” (William Thomson aka Lord Kelvin) This particular quote is quite contextual for ayurvedic research.

An outcome measure is an instrument or a tool used to determine the current status of a concept or a patient. It is the result of researching a particular topic. Outcome measures (also called events or endpoints or effect measures or measures of effect) are variables that are monitored during a study to document the impact that the health of a given population is affected by an intervention or exposure under the study. Outcome measures incorporate qualitative aspects such as the functional status of the patient, restoration of function, and quality of life, as well as quantitative mortality, morbidity, and health status measures.

Ayurveda specific objective outcome measures mentioned for many conditions/diseases in various Ayurvedic treatises, but all most all of them are qualitative in nature and needs to be quantified by giving them rating/scores to the different items and further needs to be established, then only they will become authentic to be used as tools for measuring outcomes. Disease/condition/concept specific instruments/tools/scales of contemporary science such as PASI scoring, WOMAC scoring, UPDRS, AGREE II etc, may be incorporated/integrated for ayurvedic studies as outcome measures for the effective communication of the outcome results worldwide across all disciplines of sciences.

#### 1.5. Planning

Planning is pivotal to a research project because it identifies and helps define your focus, method, and goals while also outlining the research project from start to finish. Once the scholar identifies the topic and formulated a research question after having a preliminary search for information; it is essential to decide the methodology (operational and assessment methodology) with respect to the research question chosen and to evaluate the corresponding resources in terms of time, infrastructure, manpower (participants and guide/supervisor), and finances, etc.,. Biostatistician is the architect of the research planning. So it is essential to include the biostatistician at the level of planning for a synopsis, then only the scholar will learn the ultimate aim of the PG/PhD research.

Successful research relies on the inclusion and participation of the study participants. Selecting who and how many will participate in the research is a very crucial step in the research process, and needs careful consideration. The anticipated availability of participants and a guide or supervisors for the chosen topic are important. A research participant qualified by training and experience to investigate what is being studied and responsible for the smooth conduct of the study is a guide or supervisor or investigator. And human participants who are involved or proposed to be involved in the research are referred to as “subjects”. Diversity in research participation (*Prakriti*) is also an important aspect of Ayurvedic research.

For example, if a scholar identified a topic of his interest, then he has consulted a biostatistician for the suitable research design, outcome measures and sample size calculation etc., to establish the hypothesized work. Lets imagine the statistician suggested for minimum number of sample size for the study, and the scholar may not be in a position to find those number of sample size, then the scholar has to find an another topic. If scholar writes the synopsis without consulting a biostatistician,

then the circumstances makes the scholar to manipulate the sample size without actually involving them in the study. So it is a prerequisite to involve a biostatistician in planning stage itself.

#### 1.6. Pragmatic or practical

The word ‘pragmatism’ is originally derived from the Greek word “*pragma*”, which means action [5]. Pragmatic implies managing things sensibly and practically on a rational basis instead of hypothetical or theoretical contemplations. It provides an action-oriented, experience-based paradigm in which the object of the analysis is to help us answer the issues of how we experience and come to know the world in a real or practical sense. Pragmatic research in Ayurveda focuses on real-world effectiveness and applicability of Ayurvedic interventions in day-to-day clinical practice.

Examples are, studies on benefit of Langhana in Jwara on Community based trials, Ayurvedic Dinacharya through Longitudinal studies, Health Services research, Comparative effectiveness research, etc.

#### 1.7. Innovative or novelty

Innovation is defined as “An idea, practice, or object that is perceived as new by an individual or other unit of adoption” [6]. In scientific literature, novelty is an attempt to find an answer to an existing void in knowledge. Simply Innovation means to improve or to replace something. Usually, Innovation is of two types – incremental and radical. Incremental innovation is an improvement in an existing thing (e.g. product, process, or service), for example: New or novel methods such as Single-patient (n-of-1) trials or adaptive clinical trials to conduct research, Patient-centered outcomes research, study behaviors, using wearable to measure variables of the research, App based research etc. and radical innovation is finding an entirely new way of doing something, for example: *Anuvasan Basti* in escalating dose is an alternative for *Snehapana* before *Vamana* and *Virechana* [7]. Usually, innovative ideas evolve when people from other disciplines involve in the work i.e., multi or interdisciplinary research.

#### 1.8. Interesting

The interesting factor is highly dependent on self-motivation for a specific field or scientific topic. The primary thing is to discover what you consider curiously: it is very prodigious to carry out some kind of analysis, as you have probably already learned on your own. Indeed if the subject of your preference turns out uninteresting for a few individuals or institutions, that doesn’t mean it’s not at all kindle. To generate interest among them, attempt building a solid and fascinating rationale, and also it is necessary to check if your question relates to more realistic and broader interests, regardless of your motivation for a subject. With this in mind, it is possible to formulate a research question that generates interest both for you, the guide, and the scientific community.

For example, Ayurvedic pharmacology and pharmacognosy & Network pharmacology; Studies comparing the efficacy, safety, and cost-effectiveness of Ayurvedic therapies with mainstream medical approaches provide valuable insights into their potential role in integrative healthcare systems; Preventive healthcare research explores lifestyle modifications, dietary interventions, and Rasayana therapies to promote longevity and Immunity; Quality control and standardization research focuses on developing standardized protocols for cultivation, processing, and quality control of herbal medicines to meet international regulatory standards.

#### 1.9. Contemporarily relevant

An idea deemed relevant in the scientific fraternity is more likely to be discussed by a greater number of scientists and experts, driving the

advancement and fast dissemination of knowledge. An integrative model of healthcare is more relevant in the contemporary context, particularly in areas, where conventional effective care is not available, accessible, or affordable, can be the priority research area in Ayurveda [2] and also as adjuvant care for nutritional support and early recovery in chronic diseases [8].

### 1.10. Consent

Consent of the supervisor/guide is of utmost importance while selecting the topic. Dissertation/thesis work being the compulsory academic assignment scholar can't disobey the topic given by the guide, though the scholar is disinterested in the topic provided by the guide. Mutual agreement between the supervisor and scholar on the same topic will lead to serious research. Prior consent of the Supervisor/Co-supervisor and Head if involved from other interdisciplinary institutions is necessary to obtain while choosing the topic and while submitting the synopsis.

## 2. Discussion & conclusion

The whole essence of research in Ayurveda is four folded 1. Facts enumerated in Ayurvedic classics are revalidated, leading to the interpretation of fundamental principles 2. to discover more effective treatment options for both current and new diseases 3. to rationalize the therapeutic procedures methodically, and 4. To establish the dose, duration, indication, interactions, and side-effect profile of any given drug [9].

Keeping the idea of "topic" in mind, a scholar has to choose the topic sensibly and appropriately.

### Funding sources

None.

### Conflict of Interest

The authors whose names are listed immediately below certify that they have NO affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as

personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

### Declaration of generative AI in scientific writing

During the preparation of this work the author(s) used Chat GPT in order to know the different dimensions of the subject of the article. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

### Author contributions

Dr SND – Concept, drafting, and article writing, Dr SSND – article writing and proof reading.

### Acknowledgements

None.

### References

- [1] Liu Xun. Definition of research topic. Research topic. In: Allen Mike, editor. The SAGE encyclopedia of communication research methods. SAGE Publications, Inc; 2017. <https://doi.org/10.4135/9781483381411.n293>.
- [2] Rastogi Sanjeev, Bhattacharya Arindam, Singh Ram Harsh. Evidence building in ayurveda generating the new and optimizing the old could Be strategic. In: Kumar Suresh, editor. Ayurveda in the new millennium: emerging roles and future. CRC Press; 2020.
- [3] Chauhan A, Semwal DK, Mishra SP, Semwal RB. Ayurvedic research and methodology: present status and future strategies. Ayu 2015;36(4):364–9. <https://doi.org/10.4103/0974-8520.190699>.
- [4] Resnik DB. Objectivity of research: ethical aspects. International Encyclopedia of the Social & Behavioral Sciences 2001. <https://www.sciencedirect.com/topics/computer-science/objective-research>.
- [5] Kaushik Vibha, Christine A. Walsh pragmatism as a research paradigm and its implications for social work. Research Soc. Sci. 2019;8:255. <https://doi.org/10.3390/socsci8090255>.
- [6] Rogers Everett M. Diffusion of innovations. fifth ed. New York: Free Press; 2003. ISBN 0-7432-2209-1. OCLC 52030797.
- [7] Kadus PA, Vedpathak SM. Anuvasan Basti in escalating dose is an alternative for Snehapana before Vamana and Virechana: trends from a pilot study. J Ayurveda Integr Med 2014 Oct-Dec;5(4):246–50. <https://doi.org/10.4103/0975-9476.147445>.
- [8] Dornala SN, Dornala SS. Clinical efficacy of Bhringarajasava as Naimittika Rasayana in Rajayakshma with special reference to pulmonary tuberculosis. Ayu 2012;33(4): 523–9. <https://doi.org/10.4103/0974-8520.110536>.
- [9] Baghel MS. Need of new research methodology for Ayurveda. Ayu 2011;32(1):3–4. <https://doi.org/10.4103/0974-8520.85711>.