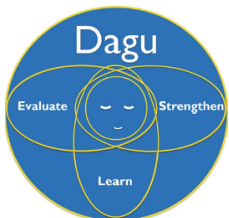


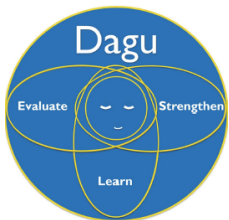
# Assisting the PhD student to formulate the research problem

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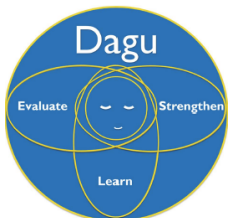
*Consider this, you who are engaged in investigation: If you choose to seek truth, cast aside: passion, accepted thought, and the inclination toward what you used to esteem, and you shall not be led into error*

Moses Maimonides; 12<sup>th</sup> century scholar, philosopher, and physician



*It is better with an approximate answer  
to a precise problem  
than an exact answer  
to a vague question.*

John W. Tukey (1915-2000)



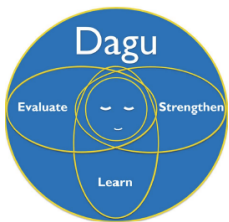
# The problem: judging its relevance, feasibility, acceptability and ethics

- *Relevance* How large is the problem? How serious is the problem? Who is affected? Has the problem been studied before?
- *Feasibility* Are there researchers and other personnel available? Is time available? Is equipment available? Are feasible research methods available? Are funds available?
- *Acceptability* Is the research acceptable to the community? Is it acceptable to policy makers and politicians? Is it acceptable to religious groups? Is it likely that results from the study will be accepted and applied?
- *Ethical consideration* Is the research acceptable to those being studied if considering basic ethical principles like respect for persons, beneficence, non-maleficence and justice? Can informed consent be obtained? Will health care be given to the community under study? Will the study protocol be examined by an ethical review committee?

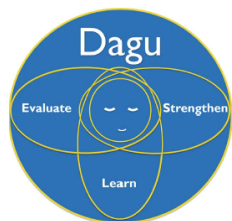
To assist the PhD student  
in problem formulation

*The problem statement must clarify:*

- Importance- needs to have theoretical or practical importance
- The type of research to be employed
- The population to be investigated and why this population was chosen
- The variables and how the variables are related and will be measured

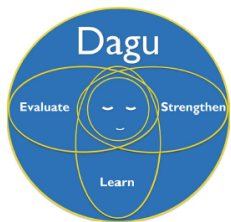


## To assist the PhD student in problem formulation



- **What is the overriding problem?** Neonatal deaths. Quality of care. Community involvement. Diarrhoea management. Health care staff performance. Antenatal care attendance..
- **Where is the problem found?** Health centres. Community. Regional health bureau. District hospital. Household...
- **What needs to be done to solve the problem?** Survey. Experiment. Focus group discussion. Randomised trial. Case study. Case-control study. Intervention...

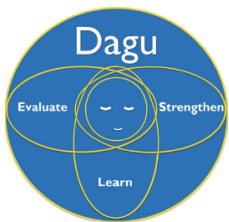
**To assist the PhD student  
in problem formulation**



- What is the overriding problem (in one sentence)?
- What is the population and sample that are affected by this problem?
- What type of study will this be?
- Will this study be qualitative or quantitative?
- What type of methodology will be used?
- What type of data will be collected?
- What possible outcomes are expected?

A research problem must pass the “**ROC**-test”!

- **R**esearchable – i.e. Doable. The problem can be answered by collecting and analysing data
- **O**riginal. Not just a repetition of what others have done. But – “essential health research” often needed even if not new
- **C**ontributory. Should make a difference for public health and welfare or clinical health





# The research protocol answers relevant questions

