

INTEGRITY SHOTS; CONTEMPORARY INDIGENOUS RESEARCH TO RECONCILE WITH STANDARDS (PART 2)

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In the first part of the script, we explored the need for researching integrity in research and mapped out what psychiatric community can do to implement the scientific integrity in research. In continuation to the previous, this part focuses upon identifying the loop holes in integrity of research that we had been receiving in past seven years as editors. Integrity in research implies that planning, implementation and analysis of the research projects be honest and replicable¹. We see many shared values² of scientific research being ignored not at these three steps but also while reporting and publishing as well.

Conceptualization of the research is not problem based; rather most of the research we receive is credit based. An honest research is triggered by a research question that current body of knowledge is unable to answer or an unusual observation that is not explained better in existing literature. What we have observed is that our researchers are keen at replicating any research that suits them and could earn them credit void of the fact that the research was originally needed or not. Here, the rationale does not guide the research but it is the research that needs a rationale and hence rationale is engineered on purpose. The need based conception of research makes the scientific inquiry an artificially fostered process only instrumental to increase the list of publications in spite of a scholarly discovery adding new knowledge to the existing literature.

These originality compromised projects are usually planned haphazardly ignoring standard practices in research methods. It is the research question that deems which research method would serve the purpose best but common practices ignore research methods at this stage and revisit later after study is complete and write up is under process. The protocol of the project nominates a method for ethical review but it is not inculcated in planning. A research method is not only instrumental in deciding sampling frame, sampling technique, and number of sample but also guides which factors/variables to control or record in order to plan a fair investigation into facts and how it would be done (what tools to use and how). It also suggests which type of statistics would suit the data being collected and how to report findings while write up. But unfortunately method is not considered at these steps rather being used as only a label for research and not implemented in its true spirit. Reading research methods and assigning one suitable to your project is one thing but understanding research methods and training oneself to work and report within the boundary of that method is altogether another matter often overlooked in mentoring research.

Besides, in a number of manuscripts we had received, the choice of method is not discovery oriented; most of the methods currently being used are either descriptive (describing the presence or

magnitude of variable) or co relational (observing the co occurrence of variables). The descriptive studies are usually labeled as prevalence studies but these do not report true prevalence in community as the sampling methods used by those studies may not guarantee access to the true representative sample of the population under study as such studies usually rely upon convenient sampling techniques. Co relational studies only assert a co occurrence, a definite cause and effect relationship or impact may not be established when working within these methods yet studies employing these methods report a cause and effect relationship and build implications likewise. At times we see studies conclude on the basis of conjecture of the results than true findings, due to this, the objectives, results and conclusion falls apart. What is to highlight at the most is that we lack far behind the other countries in research because we are reluctant for true experiments or interventional studies due our easy going and quick approach to research. Lack of behavioral laboratories and equipment is also contributing to this deficiency yet it is not related to integrity of research but more concerned with the integrity of the researcher.

Coming back to integrity of research, we see that even good protocols are carelessly implemented by very junior members who do not understand the responsibility and its implications in research. Research and publication is the highest form of responsibility, it carries more burden of responsibility than teaching, training and mentoring. It is because recipient of teaching, training and mentoring are limited in number and process is not only slow but reckonable and repairable as well whenever needed or possible. On the other hand a published manuscript addresses masses as early as it is published and becomes commodity of public to be accessed by anyone who wants without chances of reckoning or repair. Secondly, teaching, training and mentoring is meant for novices who may not rapidly spread the learnt content to others while published materials are meant for learned peer community who is at an influential position to not only propagate the finding but implement the finding in their own teaching, training and mentoring. Hence the principal investigators must assume the responsibility to them and avoid relying upon juniors for responsibility.

Once data are collected, it is relied upon as it is. Data cleansing is an important helpful step in restoring integrity in research. Most of the statistics rely upon measures of central tendency which are badly affected by out liers. If data are not cleansed properly, these out liers sabotage the authenticity of inference drawn and findings of study. In similar scenarios basic assumptions of the statistical techniques used are not met; for example all parametric statistics assume that data are normally distributed. In case data are skewed the results of statistics are not reliable because the statistical test should not have been used in the first place. Local studies seldom report figures on

normality of data. Similarly, chi square statistics is not suitable for small samples particularly when variables are divided into many levels, but local studies do not mind the number of sample and subdivision of variables when applying chi square statistics.

Use of statistical package for social sciences (SPSS) is inevitable for contemporary research. Identifying the type of variable and entering this variable with right label of measure when adding to SPSS is yet another overlooked step in terms of responsibility. Checking the right option of type of measure is important because the SPSS program deals with the variable as per type of measure. New researchers confuse the type when entering variables or do not check any option.

Accuracy in representing one's contributions to study and its credit is another area where research integrity is suffering badly. As per fair conduct, researchers will not report the work of others as if it were their own or rewrite their phrases as such; a practice known to be plagiarism. Furthermore, they should be honest with respect to the contributions of colleagues and collaborators. Decisions regarding authorship are best anticipated at the outset of projects rather than at their completion³. In publications, it is not permissible to gift contribution of the work to members who were not directly involved in the project practically.

These instances are not willful misconduct but lapses left in learning and training of careful and responsible evidence based approach into facts. In other words it is a mentoring failure and it is not only restricted to our part of the world; around the world these instances are being reported. A survey with more than 50 % response rate reported 8.7 % scientists complained about observing integrity misconduct in past three years; a total of 256 incidents were reported⁴. A conservative extrapolation from findings to all DHHS-funded researchers predicts that more than 2,300 observations of potential misconduct are made every year. Not all are being reported to universities and few of these are being reported to the office of research integrity⁴. As hinted earlier this is a mentoring failure. Literature cited that a study found only 34 % scientists reporting that they had been mentored keenly and trained to mentor others⁵. It has long been recommended that mentors specifically need to become more aware of their roles in establishing and maintaining research rules and minimizing opportunities to commit research misconduct⁶. It takes leadership to promote a culture of responsibility and integrity in research. National Research Council has urged, "Scientific community as a whole should seek to evoke the highest possible standard of research behavior. When institutions committed to promoting integrity in research support those standards, the likelihood of creating an environment that advances responsible research practices is greatly enhanced. It is essential that institutions foster a culture of integrity in which students and trainees, as well as senior researchers and administrators, have an understanding of and commitment to integrity in research"³. National Institute of Health has recommended, "Research institutions should provide students, faculty, and staff with educational opportunities related to the responsible conduct of research. These are mandatory for those involved in clinical research"⁷.

In Pakistan, Higher Education Commission has taken up the task to restore research integrity but it is every body's job who is involved in planning, evaluating, implementing, analyzing, reporting, reviewing or publication of research. Making rules and regulations is one side of the coin that is the job of the authorities; what about

implementation at grass root level? It is our job and only we can do this. Let's inculcate a culture of research at undergraduate level with mentoring integrity as the main objective; though some medical institutions are encouraging their students to do research yet a new vow is needed to stand by standards. The responsibility relies more on the shoulders of the disciplines that teach ethics like departments of community medicine and behavioral sciences. What is important to stress upon is that research is not a matter of hurry; for example a group of third year medical students from FMU who wanted to do research took around two to three months to incubate their research problem and finalize the topic under the mentorship of department of Psychiatry and behavioral sciences only because we wished them to learn how an original idea is conceptualized and worked upon.

For this reason Pakistan Medical Commission (PMC) and Pakistan Medical Research Council (PMRC) should aspire to take lead in promoting integrity in research and devise ways of better monitoring of the whole process. These authorities are suggested to organize research honors and awards on regular basis for honest and integrated research works at national and provincial levels. The national pharmaceutical companies should come ahead with regular budget allocations for projects and awards for respective disciplines and be highlighted in the annual conferences. As talked earlier it is our job and only we can restore integrity in research.

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