Description

Flawed research, as opposed to deliberately fraudulent research, can be looked at from several angles:

- The original identification of the topic can be based on a poor literature review that places greater emphasis on a perceived gap in the existing research that may not be worthy of such emphasis
- The research protocol may be weakened by lack of experience among the research team
- The research protocol may be weakened by lack of funding and resources
- The research protocol is based on a flawed dataset
- The research results cannot be replicated
- The foundational research upon which this new study is to be based may have its own set of limitations that will only be exacerbated by a follow-on study
- The data collected from the study may be poorly analyzed, generating results that prompt others into follow-on research that carries those flaws forward into another research protocol

A Staggering Lack of Reproducibility

According to the *Economist*, in 2012, biotech research leader Amgen found that they could only reproduce six out of 53 “landmark” studies in cancer research. Again, the drug company Bayer found a replication rate of only 25 percent among 67 equally important research papers.

The significance of such poor results only increases when you consider what happens further down the chain when such flawed research is allowed to take place.

From 2000 to 2010, it is estimated that 80,000 patients participated in clinical trials, either as paid participants or volunteers, based on research that was later retracted after mistakes or improprieties were discovered.

It’s About Cold, Hard Cash!

These days, research funding is getting increasingly harder to find without turning to the “paid for performance” model of corporate research. So, to a corporate mind, the idea that studies based on flawed research must be completely written off, represents a critical waste of money!

In the world of research, prestige and competence carries significant weight in attracting funding, and subject matter experts to lead research departments. Therefore, any whiff of failure or incompetence can do serious damage. For that reason, rather than dealing with the potential embarrassment of acknowledging that the protocol was flawed from the outset, flawed research may get conveniently ignored.

In simple words, it’s about the cold, hard cash! It’s in this pursuit that groundbreaking research works are allowed to and continue to get published.

But then the cost of preserving fragile reputations is heavy. When a research that is known to be

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flawed is allowed to persist, it pollutes the oceans of data upon which new researchers are forced to depend to build their own careers.

The Solution is Simple: It’s Quality over Quantity

The only satisfactory solution to this problem has to be a return to the quality of research. Let us go back to that rigorous search for truth upon which all science is actually based.

A transition from “publish or perish” to “do quality research or perish” should lead researchers away from the temptation of open access with questionable peer review practices, and the full transparency of research protocols should increase the accountability of all research team members.

Will a few reputations get damaged? Probably, but for many research institutions and a large number of research journals, that damage may be long overdue.

Category

1. Publishing Research
2. Understanding Ethics

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