

## RESEARCH WRONGDOING AMONG MEDICAL TRAINEES IN NIGERIA

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### INTRODUCTION

Health research training has been recognized as an important component of medical education because the rapid expansion and progress in biomedical research is expected to transform medical care.<sup>1</sup> Studies have shown that research experience during medical school is strongly associated with postgraduate research initiatives<sup>2,3</sup> and future career achievements in academia.<sup>4</sup> The development of research capacity is imperative at the individual and institutional levels to attain a sustainable improvement in health research.<sup>5</sup> Various strategies are being employed for this purpose, which include mandatory and elective research assignments, trainee sections in indexed journals, organization of trainee scientific conferences, reviewing of medical curriculum to integrate capacity building for research and holding of workshops on different aspects of conducting biomedical research.<sup>6</sup>

With research playing a vital role in improving clinical practice, it is important that medical trainees to include both undergraduate and postgraduate students understand the role of research and what it takes in submitting articles for publication.

Concerns about research wrongdoing in biomedical research are growing in developing countries, where research ethics training and research regulatory systems are just emerging.

Research misconduct is commonly understood to include FFP - falsification (altering research processes, or recording or reporting wrong results), fabrication (inventing and recording or reporting results), and plagiarism (taking the words, ideas, or data of others or self and reporting them without giving due credit). However, recent trends have necessitated a broader definition of the term. In 2000, the U.S.A White House National Science and Technology Department released a policy document that defines research misconduct as “fabrication, falsification, or plagiarism in proposing, performing or reviewing research, or in reporting research results.” Other wrongdoings (e.g., stealing, intimidation, and discrimination) are left to be tackled through other official regulatory mechanisms.<sup>7</sup> The Wellcome Trust’s<sup>8</sup> definition includes in addition to FFP, deliberate, dangerous, or negligent deviations from standard research practices, failure to follow established

protocol such that it occasions harm, concealment of other researchers’ misconduct, and damage to someone’s research property. It excludes honest error and unskilled research. Research wrongdoing is a term that is becoming more widely used in the research ethics literature as it encompasses all unacceptable acts in research, including FFP.<sup>9,10</sup>

In a study in Africa, medical researchers in two states in Nigeria were interviewed on a wide range of research wrongdoings and potential predictors. About 22% admitted to at least one of fabrication, falsification, and plagiarism, the predictors of which were knowledge gaps in research ethics and pressure to publish enough papers for promotion. Acknowledging inadequate knowledge of research ethics was a predictor of admitting a wrongdoing.<sup>11</sup>

Some of several recent instances of research wrongdoing illustrate the seriousness of the problem. In 2006, the Seoul National University announced, after an investigation, that Woo Suk Hwang’s research publications on cloned human embryos were fabricated.<sup>12</sup> In the same year, Jon Sudbo admitted to fabricating data on 900 fictitious patients. Worse still, most of his more than 30 publications were found to have arisen from fabrication and falsification.<sup>13</sup>

Cases of research wrongdoing are often unreported. Nevertheless, a few surveys offer some insight into the prevalence of research wrongdoing. A pilot study of some U.S.A based clinical and biomedical research trainees showed that 15.1% of them admitted to past personal misconduct.<sup>14</sup> In one of the first empirical studies published in this field in this century, 5.7% of newly appointed medical consultants in the United Kingdom admitted past personal research misconduct.<sup>15</sup> A large survey of publicly funded researchers in the United States showed that 33% of the respondents said that they had engaged in at least one of the top ten misbehaviour in their study in the preceding three years.<sup>16</sup> While there are differences in the designs and specific variables used in these surveys, it remains important that they set out to measure the occurrence of research wrongdoing directly from researchers. However, little is known about research wrongdoing admission rates in developing countries.

Attention was recently drawn to knowledge gaps about the integrity of research conduct in Latin America at a bioethics meeting in the United States.<sup>17</sup> While the United States has experienced great milestones in research ethics development, including one in the 1980s when policy makers were most concerned with defining and investigating research misconduct<sup>18</sup>, developing countries have given less attention to this challenge and little is known about Africa in the literature on research wrongdoing.

Research misconduct and other unacceptable acts in research remain a major source of concern in modern biomedical research, casting doubts on the integrity of researchers and the validity of their research. These concerns have grown in recent times as the rewards from research have increased, and significant amounts of medical research and clinical trials have moved to developing countries where the regulatory environment is less rigorous. Despite these, there appears to be apathy to medical research amongst medical trainees hence many undergraduate and postgraduate students in the developing world have not been able to publish unaided and find it difficult to be involved in medical research. In addition, those who have involved themselves in one form of research or the other have been flawed with varying degrees of research wrongdoings and misconducts.

Also of note, is that there have been documented declines in the number of physician-scientists in the medical practice.<sup>19</sup> Postulated explanations for the decline include less financial incentive, family, ageing, brain drain, practice philosophy and inadequate exposure to research before career paths are determined<sup>20-22</sup> hence the need for good research practice and attitude to be inculcated early in them during the undergraduate times. The responsibility to combat this trend rests on future generations of healthcare professionals and it is therefore invaluable to evaluate medical trainees' attitudes towards biomedical research vis a viz identify the areas of research wrongdoing and develop ways of improving on it.

Few studies in various countries have attempted to evaluate and understand trainees' attitudes, practices, and determine the barriers and motivation towards medical research among medical undergraduates<sup>23, 24</sup> but none has sufficiently addressed research wrongdoing in its entirety.

The panacea will involve building of systems that support ethical research even at undergraduate levels, including skilled training and funding which can be replicated at the postgraduate level.<sup>25</sup>

Going forward, an attempt should be made to explore the burden of research wrongdoing among trainees and this involves exploring the explanatory variables linked with research wrongdoing and also answer these questions; What is the prevalence of research wrongdoing among medical trainees in Nigeria?, What are the factors that militate against practice of good ethical principles in biomedical research amongst medical trainees?, What are the factors that influence the attitude of medical trainees' towards biomedical research?

## CONCLUSION

Research wrongdoing remains a major source of concern in modern biomedical research, and casts doubts on the integrity of researchers and their work. These concerns have grown in recent times as the rewards from biomedical research have increased considerably.

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