



Individual Factors Affecting Research misconduct in Iranian Higher Education System

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ABSTRACT

Research misconduct is one of the problems that today's academic community is involved in and must recognize its causes and roots in order to provide solutions. In this study, we examine the individual factors affecting the Research misconduct. The research method is objective, applied and in terms of collecting data, is descriptive-causal. The statistical population of the study consisted of all faculty members, senior students and Ph.D. Students of Isfahan University of Isfahan (Isfahan University, Isfahan University of Technology, Art University and the University of Medical Sciences) were 20487 that 377 person were selected as the statistical sample using stratified sampling and through the Cochran sampling formula. To collect data, a questionnaire extracted from the interview is used. To analyze the data, structural equation modeling was used. The software used is Smart PLS2. The results of structural equation model showed that negative attitudes, Inability to Creativity, personality traits, lack of motivation, religious beliefs and individual disqualification have a positive and significant effect on research misconduct. According to the findings of this study, Individual injury to n research misconduct (negative attitude, Inability to creativity, personality traits, lack of motivation, religious beliefs, and individual disqualification), can be identified by identifying these factors. It provides solutions to reduce these injuries.

Keywords: Research, Research Misbehavior, Ethics in Research

JEL Classification: I23

1. INTRODUCTION

Research is a step any researcher takes to clarify an ambiguous issue to find an exact and logical response to solve it. Ethical issues exist in all types of researches and it is inevitable to face them. Sometimes, the researcher can control the ethical challenges but sometimes, it is not controlled due to the lack of prediction of such issues. Indeed, the research process creates tension among the researchers to achieve the research purpose on one hand and keeps the rights of participants on the other hand. Ethic refers to the true performance and avoidance of damage. Damage can be avoided or reduced by applying suitable ethical issues (Zadeh et al., 2015).

In each society, its growth depends upon research and there is a direct relationship between scientific growth in each society and research in it. The comparative studies in research shows that the

countries developing their fundamental, applied and development researches can prosper their society. One of the main functions of duties of universities is dedicated to research because if we accept that research in a country is based on three principles of research management, researcher and research tools, the universities in the position of the centers with three principles can use some activities including the determination of the required research issues of society, determination of research priorities, acceptance of required researches of other organizations, education of students with research skills in the labor market, organizing, supervision of research activities can manage knowledge and information in society (Ishaqi and Mohammadi, 2015). In an international society, research is an inseparable part of the life of people and this thought that each problem in society has an optimal solution is possible only via scientific research and this emphasizes on the significance of research and researcher more. The education of researcher labor mastering all research skills needs considerable materialistic and

spiritual investment. If the researchers and students are equipped with these skills in the universities, there is great saving from economic aspects (Zamani and Tabatabai, 2010).

Indeed, research is one of the necessities of development and it is the most important competitive advantage and survival condition in the current intense world. The global experience shows that there is a direct relationship between the economic, social and cultural development indices with the intellectual capital and knowledge capacity of the countries. Indeed, the main key word of the era of knowledge is the research and production capability. Knowledge can be produced, we can convert the produced knowledge and use it. The most important knowledge activity in the present world is production of new knowledge via research and innovation. Thus, one of the most important policies of developed and developing countries is investment on the research infrastructures in which the researchers can produce knowledge well with the maximum efficiency and meet the knowledge demands of society. On one hand, the development of research capacity and knowledge production on one hand requires the education of the motivated researchers, workshop and laboratory advance equipment and also financial resources to pay the research costs and also on the other hand, it requires the observation of the principles and values that are much important than human and physical resources to promote the research. Today, one of the most important issues in science production processes is observing the scientific norms as some of the theorists believe that without observing scientific norms, scientific communities are not formed and the science production process is also disturbed. Great studies have been conducted regarding the scientific norms from different angles with different titles in the scientific references. For example, searching reality is one of the most important scientific norms. If we believe that the philosophy of research is production of new knowledge and innovation, we cannot translate or rewrite the work of others with the research title or we cannot publish the results of the work of others for ourselves. Indeed, the researcher is committed to detect reality and publish the results honestly by relying on his own capability, strength, motivation and research morale and some of the systematic planning can be also used (Dariyani, 2009. p. 3).

In a research, it is shown that about 40% of students have fabricated the data in writing the thesis. These theses with fabricated data can be used as a basis later due to the lack of information of researchers. Thus, not considering this fact can impose unavoidable damage on the academic community. The findings achieved based on the manipulated data are a great threat to the scientific dignity and academic perfection. Thus, to protect the scientific dignity and jobs in higher education system of Iran, the Universities should consider some rules to avoid fabrication and manipulation of scientific data and find a solution to internalize the ethical and professional values (Amiri et al., 2009).

Although Plagiarism and research misconducts are not dedicated to Iran in scientific production, based on the evidences and the stress of promotion, insistence and obligation of authorities to publish papers as one of the indices of the evaluation of the performance of faculty members and management of universities, the lack of efficient and effective supervisory systems, easy access to most of the resources

via internet acting as a cutting edge, it is expected that in case of not using preventive actions, the research misconducts trend is increased in future. To do this, we should identify the factors increasing research misconducts to present some solutions to prevent it.

2. LITERATURE REVIEW

One of the important challenges in publishing the papers affecting the authenticity of the papers is research misconduct phenomenon or scientific misconduct (George, 2016; Gross, 2015). Indeed, scientific misconduct is not observing the scientific rules and it is defined as forgery and disturbance in education and science trend including fabrication, plagiarism and other non-ethical behaviors in research field (Anderson and Steneck, 2011). There are some phenomena disturbing the research and science trend in the society and they are considered as misconduct and can reduce motivation of research among the elites of society. Misconduct in researches is not a new issue and it has not a long history in accordance to the researchers. Some of the researchers consider its history as the history of science. Misconduct has many different degrees and it is starting from its simple form such as observation, false analysis and interpretation and it leads gradually to plagiarism and forgery finally. Indeed, scientific misconduct is defined as forgery and disturbance in education and science process and it includes fabrication, forgery and plagiarism and other non-ethical behaviors in scientific-professional researches (Samadi et al., 2013).

Research misconduct is the opposite of the definition of research ethics but the general health institute of US has presented another definition: Forgery, falsification, plagiarism in the patent of others or false report of the tests, the effect of giving subjective assumptions in conclusion, false report of the results and charts and emphasizing on some special items and generally, the lack of honesty, illogical influence in the order of the name of writers, etc. (Sponholz, 2000).

Scientific misconducts are full definition of all violations occurred in research field and sometimes, some terms including academic falsification, scientific dishonesty and academic dishonesty are used for these violations. In different resources, these violations are divided into different types. The study of different researches shows that these three main types are scientific and research misconduct, plagiarism, fabrication and falsification (Enjoo, 2011).

Indeed, the ethnicity of each paper is its main aspect (Mohan et al., 2015). Honesty is the main aspect of publication ethics. It is expected that the researchers observe ethical codes "good scientific practice" (Masic, 2012). In other words, a good paper should be free from any non-ethics including the violation of copyright, bias in presenting the results, not expressing the conflict of benefits, fabrication, falsification, etc. (Al Lamki, 2013). Boquiren et al. (2006) the editor in chief of psychosomatic researches likens the paper to a child, in which the authors of paper are the parents of that child to make the best for the correct education of the child and they should verify the ethnicity of all components of the paper.

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and gradually, it leads to plagiarism and finally forgery. Indeed, scientific misconduct is defined as forgery and disturbance in educational and scientific process and it includes fabrication, forgery, plagiarism and other non-ethical behaviors in scientific and professional researches (Petrovecky and Scheetz, 2001).

3. RESEARCH ACCOMPLISHED

1. Motallebifard et al. (2013) in a research (research ethics in higher education: Individual features and professional responsibilities of researchers" among 37 lecturers and students of post-graduate students of state Universities of Tehran, found that improving the research ethics among the scientific community requires considering the required infrastructures and quality of research. In their study, they found that ethical responsibilities of researchers can be divided into two types: (1) Individual features (e.g., commitment, honesty, motivation, strength and patience, collaboration morale and team work in the research), (2) Professional responsibilities of researchers (e.g., responsibility to society, sponsors, co-workers, subjects, subject of research, other researchers, collection and analysis of data and publication of findings).
2. Zamani et al. (2012) in a study "Identification and prioritization of the effective factors on plagiarism of the students of Isfahan University" found that degree orientation and considering the score is the first and the most important effective factor on plagiarism of students. Other effective factors include the lack of self-efficacy among the students during the research and writing the scientific reports, the lack of suitable mechanisms to detect and punish the plagiarism agents, socio-cultural factors, inadequate previous teaching about the references and identification of different types of plagiarisms in high school or informal education, the lack of detection of plagiarism of students by the professors and not reacting to it, pressure factors, inadequate education in University to identify and prevention of plagiarism, the lack of fear of punishment and blame and the existence of cyber space.
3. Nasab et al. (2016) in a research "Evaluation of the barriers to research from the view of nurses and midwives working in educational hospitals of Shiraz in 2009" showed that individual barriers (lack of time and lots of work, family responsibilities, lack of adequate advantage, not mastering English language, being far from the academic centers, social responsibilities, inadequate knowledge in research, unfamiliarity with statistical principles, inadequate motivation, inability in using computer, being useless for the patient, indifference to the research issue) can affect research process.
4. Mark et al. (2007) in a study evaluated the effective factors on research misconducts and found that some factors including personal and professional stresses, organizational climate, job insecurity, personal limitations and personal attributes were effective on research misconduct of the researchers.
5. Mitchell and Carroll (2008) in a study "research misconduct in specified Ph.D.: Some issues for students and supervisors" found that the lack of knowledge and perception of transfer and special cultural issues are the factors affecting research misconduct.
6. Dawson and Overfeld (2006) considered the most important reason of plagiarism as inadequate information about the concept of plagiarism and the lack of ability in writing papers and researches.
7. Taylor et al. (2009) in a research showed that financial problems and benefit attitudes were the main factor of copy right.
8. Lawrence (2011) in a study "Evaluation of the report of ethical principles and conscious satisfaction in the published papers" found that of 50 papers with human subjects in Cairoptic as published in 2008, there was the ethical committee in 44 papers and in 28 papers, conscious satisfaction was observed.
9. Chakraborti et al. (2012) in a study "Identification of the barriers to do research from the view of medicine students" as conducted as temporary among 422 students, showed that individual, materialistic factors, the lack of supervision and a coordinating institute were considered as the barriers from the students.
10. Guraya et al. (2014) in a research "ethics in medical researches" found that ethical committees in research should observe ethical issues in presentation, evaluation, results, application of findings, observations of patient, information of patient, conscious satisfaction form in order that the researchers can observe ethical issues in their research.

4. RESEARCH HYPOTHESIS

1. Lack of individual qualification have affect on research misconduct.
2. Negative attitudes have affect on research misconduct.
3. Inability to creativity have affect on research misconduct.
4. Religious beliefs have affect on research misconduct.
5. Personality traits have affect on research misconduct.
6. Lack of motivation have affect on research misconduct.

5. METHOD

This research is applied in terms of purpose and descriptive and causal in terms of data collection. The statistical population includes all faculty members and PhD and MA students of Universities of Isfahan (Medical science University of Isfahan, Industrial University of Isfahan, art University, Isfahan University) and based on the latest statistics, it is 20487. Of the mentioned statistical population, a sample of 377 is selected by using Cochran's formula and random sampling method.

The applied measure of study is the questionnaire of individual factors effective on research misconduct including 25 close questions and it is evaluated based on a five-item Likert scale (very low=1, Low=2, average=3, much=4, very much=5). These factors include low scientific qualification, negative attitude, Inability to Creativity, religious beliefs, personality traits, lack of motivation. For the validity of questionnaire, the experts of management are used. To evaluate the reliability of questionnaire, Cronbach's alpha is used as 0.75, 0.83, 0.86, 0.91, 0.79 and 0.74. To analyze the data, descriptive statistics and inferential statistics such as structural equations modeling are applied. The applied software in this study is Smart PLS2.

6. RESULTS

In responding the study hypotheses, the structural equations modeling is applied and the results are shown in Table 1.

As shown in the above Table 1 and Chart 1, study hypotheses regarding the effect of each of factors (low scientific qualification, negative attitude, inability to creativity, religious beliefs, personality traits, lack of motivation) on the research misconduct are significant with the probability 0.99. Thus, H0 is rejected and H1 is supported. The highest effect is dedicated to personality traits and the lowest value of the effect is dedicated to inability to creativity.

R2 test indicates us how much the independent variables predict the behavior of dependent variable. If the number of independent variables is higher than 5, this value is as follows: This value is 0.25 weak, 0.50 average and 0.75 strong. As the achieved R2 is 0.462, it is at average level.

F2 test evaluates the effect size of each of variables alone. The standard of this value is as follows:

This value is 0.02 weak, 0.15 average and 0.35 strong. Based on the results of this study, the effect size of each of variables is weak.

Q2 test states whether the quality of prediction is high to support or reject the hypotheses or not. The standard of this value is as follows: This value is 0.2 weak, 0.15 average and 0.35 strong. Based on the results of study, the prediction quality of study variables affecting the research misconduct is average. Also, the prediction quality of study variables affecting the weak supervision is above average.

To verify the quality of model, we go to Geo test. The standard of this value is as follows: This value is 0.1 weak, 0.15 average and 0.35 strong. Based on the results of study, the general quality of model is strong.

Table 1: The validity and reliability of study variables

Construct	AVE	CR	Cronbach's alpha
Negative attitude	0.73	0.89	0.82
Religious beliefs	0.72	0.89	0.81
Lack of motivation	0.61	0.86	0.88
Lack of scientific qualification	0.59	0.88	0.83
Inability to creativity	0.65	0.85	0.73
Personality traits	0.73	0.84	0.73
Research misconduct	0.051	0.9	0.88

AVE: Average variance extracted, CR: Composite reliability

Table 2: The results of path coefficient and significance and quality of effect model and study variables on each other

Construct effect	direct effect	Path coefficient	T value	Significance level	R2	F2	Q2	Geo
Negative attitude	Research misconduct	0.19	3.482	0.01	0.462	0.04	0.19	0.55
Religious beliefs		0.132	2.193	0.05		0.02		
Lack of motivation		0.174	3.28	0.05		0.03		
Lack of scientific qualification		0.131	2.713	0.01		0.02		
Inability to Creativity		0.116	2.453	0.05		0.01		
Personality traits		0.213	4.265	0.01		0.05		

7. DISCUSSION

The results showed that lack of scientific qualification had significant impact on research misconduct. The results of study were consistent with the previous results.

Here, the results of study are consistent with the findings of Love and Simmons (1998) and they showed that qualification in doing the scientific works was having the positive impact on plagiarism among the MA students. The results of study are also consistent with the findings of Dawson and Overfeild (2006) and in their study considered the most important reason of plagiarism as the lack of adequate information about the concept of plagiarism and the lack of required ability in writing the papers and research. The results of study are consistent with the findings of Nasab et al. (2016) and they showed that individual barriers (lack of mastering English, inadequate knowledge in research, unfamiliarity with statistical principles) can affect the research process.

The results showed that negative attitude had a significant impact on research misconduct. In other words, we can say the higher the negative attitude of the researchers, the higher their research misconduct.

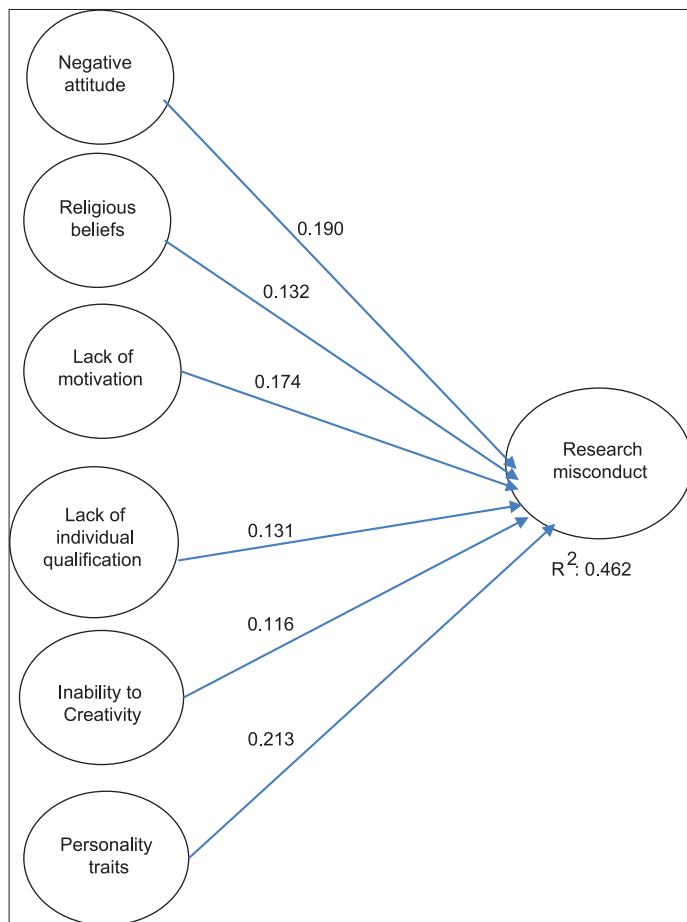
The results of study are consistent with the findings of Love and Simmons (1998) and they showed that personal attitudes (positive or negative attitude to plagiarism) were the factors having positive impact among MA students.

The results were consistent with the findings of Taylor et al. (2009) and they showed that benefit attitudes of people were the main factor of violation of copy right.

The results are consistent with the findings of Abbaszadeh et al. (2016) and in a study, it was shown that individual factors (happiness, instrumental attitude to research and religiosity of the researchers" were the enticement of not following the ethical criteria of research and normalization of scientific abnormalities was the main issue.

We can say, when the researchers have negative attitude to the research, plagiarism and lack of ethics in research are common and negative attitude can cause that the researchers don't take the research work as serious and they don't many any efforts to improve their research.

The results showed that inability to creativity had a significant impact on research misconduct. In other words, we can say

Chart 1: The structural equations modeling at estimation of path coefficients

the higher the inability to creativity, the higher their research misconduct.

The results are consistent with the finding of Khosrowan et al. (2015) and in a research they showed that in the stage of selection of research subject, some factors such as the selection of repetitive subject, lack of consistency of research topic with the current policies, not mentioning the inconsistent information with the opinion of students are the factors affecting the ethics in the research.

We can say, not taking the risk of doing new subjects, lack of curiosity, searching, hard working in research can lead to repetitious works and writing poor papers and this can avoid presenting creative items. Indeed, one of the challenges of post-graduate students is the selection of research subject to write thesis. This selection is an important decision as the success of the students of this level depends upon this selection considerably. Normally, they search new and authentic issues in their research and they are concerned about the repetitious nature of their study subject. This concern is increased when they encountered tens or hundreds of published papers about any searching subject. It seems that they have conducted researches about everything already and there is no new subject anymore. The supervisors are not intended to guide repetitious subjects and they are encouraged to propose new and authentic subjects. If a new issue comes to their mind,

they are concerned about its method and the lack of existence of review of literature. This leads to weeks and months of wondering to select the subject as the student is involved in a wide spectrum of subjects in which repetitious issues with research background can be seen but new subjects are encountered with unpredicted difficulties. The results showed that religious beliefs had no significant impact on research misconduct. The results of study are not consistent with the results of previous study.

The results are not consistent with the findings of Froughi et al. (2016) and in a study, they showed that effective beliefs on nursing professional ethics were formed and it was based on the combination of two minor theme. The minor theme divided the general values based on five primary themes (belief in the inherent dignity of the patient, the love toward people, attitude and behavior with the patient as the family members, effective spiritual ethical beliefs on care, contentious and commitment of nurse) and minor theme divided the special values into three primary theme (recognition of supporting the rights of patient, the existing ethical challenges of the profession, avoiding the non-professional relations and misuse of the patient). Abbaszadeh et al. (2016) in a research not consistent with the findings of this study showed that that individual factors (happiness, instrumental attitude to research and religiosity of the researchers" were the enticement of not following the ethical criteria of research and normalization of scientific abnormalities was the main issue.

Values are created inside a person as a value system and they can be the basis of judgment and decision making in different affairs. By creating attitude, values can lead to behavioral bias. On one hand, religious belief can affect the scientific belief. The scientific evidences that are produced are with the thought values of scientists and owners of knowledge. In our Islamic community, there are basic assumptions as our belief and they form our values and now the values can determine the direction of our move and they form our behavioral models to avoid being out of the circle of values and ethics.

The results showed that personality traits had significant impact on research misconduct. In other words, if the negative personality trait of a researcher, the higher his research misconduct. The results are consistent with the findings of Mark et al. (2007) and in a research they showed that some factors as personal and professional stresses, organizational climate, job insecurity, and personal limitation and personality traits were effective on research misconduct of the researcher. We can say the results are consistent with the findings of Motallebifard et al. (2013). In a research, they found that ethical responsibilities of researchers are divided into individual traits (e.g., commitment, honesty, motivation, strength and patience, collaboration and team work in research), 2) Professional responsibilities of researchers (responsibility to society, sponsors, co-workers, subjects, research subject, other researchers, collection and analysis of data and publication of findings) and if there are not such responsibilities, people are intended to research misconducts.

We can say that the people with psychopathic personality trait have much experience in some emotions as anxiety, anger or

depression. These people have low emotional stability, they are worried, nervous, depressed, stressful, shy and hasty. They have negative attitude to work and research. Indeed, they do plagiarism more. The researchers with extroversion, agreeableness and flexibility are those who believe in their success in future and they are interested in the development of their activity and work. They empathy with others, they love others and help them. All these factors cause that a person shows low research misconducts. The results showed that lack of motivation had significant impact on research misconduct. The results are consistent with the findings of Nasab et al. (2016) and in a study, it was shown that the individual barriers (lack of adequate motivation) and organizational barriers (lack of motivation by authorities) were effective on performing research. Those with inadequate motivation to perform research, don't work with other researchers, they don't consider the findings of thesis and research as applied and they feel that they waste their time in University. These factors can lead to the lack of adequate creativity and they search for repetitious issues for the subject of their papers.

8. CONCLUSION

Based on the results of this study, all individual factors (low scientific qualification, negative attitude, inability to creativity, religious beliefs, personality traits, lack of motivation) have positive and significant impact on research misconduct and the highest effect is dedicated to personality traits and the lowest impact is dedicated to inability to creativity. We can say, the researchers without the required efforts in their research works, avoid the authentic research works and don't accept the responsibility of their research works and they do research misconducts as these people are less responsive and don't accept the decision of their decisions, they are not sensitive and ethic-based, honesty is not important form them, they don't work hardly to do all their tasks and they are not good at their responsibilities.

It is proposed that:

- Educational workshops are held for post-graduate students to be familiar with the different types of plagiarism. The papers should be accepted in scientific and research journals based on the correct report of all stages of research and observation of ethical issues in research.
- Legal ratification for the post-graduate students in which the students can attain the conscious consent from the participants and present a detailed explanation of this achievement in their study.
- As ethical commitment is taken after the end of report for the thesis from the students, it is required to observe this issue before the final verification of the research proposal.
- Regarding all students, an ethical review of research ethics can be presented during the work.
- The research centers and universities can improve the knowledge and skill of the researchers and sponsor organizations and consider the ethics in their research and improve the members of ethics committee and consider the required solutions regarding the implementation of relevant educational programs. Holding educational workshops of

ethics in research and planning to teach ethics electronically and this can be a good method to observe ethical issues in all behavioral sciences researches.

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