

## **ASSESSMENT OF ADHERENCE RATE OF HIGHER EDUCATION STUDENTS IN PHYSICAL EDUCATION TO RESEARCH ETHICS IN ISLAMIC AZAD UNIVERSITY BRANCHES OF ISFAHAN PROVINCE**

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### **ABSTRACT**

This study aims to assess adherence rate of higher education students in physical education to research ethics in Islamic Azad University branches of Isfahan Province. Statistical population of this study included higher education students in physical education to research ethics in Islamic Azad University branches of Isfahan Province. Due to the limited statistical population, it is tried to select entire available people as sample. Therefore, 260 higher education students in physical education to research ethics in Islamic Azad University branches of Isfahan Province completed research ethics questionnaire (Nastran & Asadi, 2012). From among collected questionnaires, 142 people (including 73 men and 69 women were MA students in physical education, 64 people were MA students sport management, 48 people were MA students in sport physiology and 30 people were students in motor behavior) who fully responded to the questionnaire that these people were selected and investigated as research sample. After collecting questionnaires data were transferred to SPSS software and analyzed. Statistical data analysis indicated that adherence rate of higher education students in physical education to research ethics in Islamic Azad University branches of Isfahan Province in components of researcher ethics ( $t=80.19$ ,  $p=.001$ ), human subjects ( $t = 48.40$ ,  $p =.001$ ), as well as an overall score of Research Ethics ( $t = 92.39$ ,  $p =.001$ ) were significantly higher than average of community and this rate is estimated as high. Also, results of t-test indicated that there is no significant difference between men and women in terms of adherence to these ethical principles ( $t=1.91$ ,  $p=.058$ ) and both groups were loyal to ethical principles of research. A similar result obtained from comparison of people in different fields of physical education that results of variance analysis indicated that there is no significant difference between people in terms of adherence to ethical principles of research ( $F=1.22$ ,  $p=.298$ ) and all people are committed to ethical principles very much. Totally, results of this research indicates that higher education students of physical education to research ethics in Islamic Azad University branches of Isfahan Province including men and women in all majors were committed to ethical principles of research very much and conduct their research by paying attention to these principles.

**Keywords:** *Research Ethics, Researcher Ethics, Human Subjects*

### **INTRODUCTION**

Ethics and its spiritual approaches ensure well-being of people in all ages. Learning ethics and adherence to ethical principles has influenced individual and social life of people in all aspects and this emphasize on need for training and development of ethical standards among various classes of society (Khaleghi, 2010). When we speak about morality and virtue and immorality and vices in fact, we describe human behavior and consider them as moral or immoral behaviors. Today indifferent unions and levels of society, Ethics has allocated a more prominent position to itself than the last centuries, because almost in all areas, observance of ethical principles have been discussed and special attention has been paid to behavior of incumbents. Researchers are not separated from other classes and people who are in this field are committed to ethics and ethical principles. Observance of a series of ethical principles in the process of research, including purpose of study, method and research results is called research ethics (Mahmoodi, 2007). In fact, there is a legal, rational relationship that in line with it, authors and researchers are required to observe rights of owners and authors.

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In defining research it can be said that research is a step that researcher has taken to clarify ambiguous issue and find logical solution for it (Potaluppi, 2014). With development of science in the world, the need for research as a key to the development of science in society is growing day to day. As research is one of the indicators of development of country's scientific system, wide participation of countries in this field has always been accompanied by problems and difficulties. Doing researches in the field of physical education is also common and results of these studies have contributed greatly to the growth of the sport in each country. Development of physical education and sport of each country is considered as an indicator of development of developing countries.

Physical education is followed based on academic and practical training in training centers of the world and the need for studies and scientific research in this field is clear for all people more than before. Along with the development of areas of research and scientific studies in this area, the issue of research ethics is discussed as one of the main principles of research. Few studies have been conducted in relation to ethics and there is no reliable data in the field of research in physical education. Ethics in Research of physical education is said to a set of accepted behavioral principles and standards, that physical education researchers must follow them when conducting research on issues related to human (Asadi, 2012).

Research ethics is one of the areas which in recent decades has been of interest to researchers. By looking at conducted researches in Iran we can see that most of researchers focused in the field of medical ethics and few studies have been conducted in the field of humanities and social sciences. In a study by Tabei *et al.*, (2007) entitled "Ethics in Research" a study has been conducted for the first time by focusing ethics in research and without specific direction in various fields. Tabei *et al.*, have pointed out that growth and development of civilization is impossible without leading in the field of research and training a number of researchers is considered as one of the components of evaluation of success of educational system. Then they name knowledge, needs, motivation and thought as strengthening psychological steps in premier research systems. In this context, one of the most comprehensive available researches is a study by Khaleghi (2010) entitled ethics of research in social sciences which is unique in this field of research. Khaleghi mentions influencing factors on ethics of research in the field of social sciences and humanities and points to informed consent, anonymity, confidentiality, integrity and availability. He points out to good behaviors in research ethics including trust worthiness, courage, truth-seeking, criticizability, vitality and accountability that all are ideal ethical components in research. Study conducted by Nakhae *et al.*, (2010) entitled "disciplinary regulations of research misconduct" in the form of a qualitative study investigated unethical research behavior. This study considers sanctions and limitations and increase of research misconduct as two problems against increase of science in Iran which can undermine the Iranian researchers name in the international community.

He considers concerns of job promotion and insistence on publishing article as one of the main indicators of performance evaluation and subsidiary benefits for researchers' promotion are reasons of scientific fraud and copying research works of faculty members.

In the field of physical education and sport science with extraordinary sensitivity of ethics in research, no research is conducted yet and more attention to this field is needed. What is the main concern that encouraged the researcher to do this research is objective observations which indicate that most of higher education students of physical education have turned to immoral ways to publish an article and practically ignored value of research activity. Students' extreme efforts to strengthen their scientific and research resume as an important part of reaching higher levels has caused that ethical issues in research are ignored for the sake of their personal development and improvement of their academic qualifications. Knowing that higher education students of physical education in different fields to what extent were familiar with research ethics principles and follow these principles in their researches is an important step to develop research ethics in physical education. On the other hand setting up research ethics committees in physical education and its effect rate on becoming ethical research in physical education has great importance for students and researchers. Obviously by increasing ethics of research in physical education department of the country, citation of international community to this kind of research will increase. The subject of this research is in the field of research ethics in physical education and aimed to assess adherence rate of to

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higher education students of physical education of Islamic Azad University branches in Isfahan to the principles of research ethics.

## MATERIALS AND METHODS

### Methodology

This study is an applied study in terms of purpose and is a descriptive-explanatory study in terms of method which is conducted in form of survey method. Research population consists of master and doctoral degree students in physical education of Islamic Azad University branches in Isfahan who are 300 people. Due to the limitation of statistical population of study it was tried to examine all members of society as a sample. To this end, 260 higher education students of physical education in Islamic Azad University in Isfahan filled research ethics questionnaire. From among collected questionnaires, 142 people (including 73 men and 69 women were master degree students in physical education, 64 people were master degree students in sport management, 48 people were master degree students in sport physiology and 30 people were students in motor behavior) who fully responded to the questionnaire that these people were selected and investigated as research sample.

### Instrument of Measuring Variables

Individual researcher made questionnaire that was used to collect demographic information of subjects and includes questions related to gender, age, year of entry to university, academic orientation, level of education and research record.

Research ethics questionnaire based on researcher ethics and human subjects (Nastaran and Asadi, 2012). Content validity of this questionnaire was approved in study by Nastaran and Asadi, also Cronbach's Alpha has reported to be equal to 0.86. Method of scoring this questionnaire is Likert five values.

### Statistical Methods

In this study inferential and descriptive statistics were used as follows. In order to organize, summarize, categorize and describe sample size, descriptive statistics (frequency, mean, percentages, standard deviation, and drawing tables) were used.

In order to evaluate normal distribution of scores, Kolmogorov-Smirnov test was used and to evaluate homogeneity of variances Levine test was used. Also to examine research hypotheses and considering the normal distribution of data, independent t-test was used and also ANOVA was used to compare people based on demographic characteristics. Also one-sample t-test was used to compare obtained scores with society mean. Significance level for all statistical methods is considered  $p \leq 0.05$  and to do statistical calculations SPSS 16 was used.

## RESULT AND DISCUSSION

### Findings

As specified in Table 1. The mean of obtained scores in components of research ethics, human subjects and research ethics are presented.

**Table 1: Description of obtained scores in components of research ethics**

Component	Mean of scores	Standard deviation	Number of respondents
Researcher ethics	101.37	4.36	142
Human subjects	45.47	3.07	142
Total research ethics	146.83	5.39	142

Considering normal data distribution to examine research questions statistical parametric tests were used. As it is observable in table 2, 3 and 4 results of one sample t test indicated that adherence rate of higher education students of physical education in Islamic Azad University branches in component of researcher ethics was equal to ( $t=80.19$ ,  $p=.001$ ) and in component of human subjects this value was equal to ( $t=48.40$ ,  $p=.001$ ) and also total score of research ethics was equal to ( $t=92.39$ ,  $p=.001$ ) which is

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significantly higher than mean of society, therefore it is clear that adherence rate of students to these principles are high.

**Table 2: Results of one-sample t-test in researcher ethics component**

t	Freedom degree	Mean of differences	Significance level
80.19	141	29.36	0.001

**Table 3: Results of one-sample t-test in human subject component**

t	Freedom degree	Mean of differences	Significance level
48.40	141	12.47	0.001

**Table 4: Results of one-sample t-test in research ethics**

t	Freedom degree	Mean of differences	Significance level
48.40	141	12.47	0.001

Also results of independent t test indicated that there is no significant difference between men and women adherence rate in researcher ethics component ( $t=1.67$ ,  $p=.096$ ) and humans subjects ( $t=.905$ ,  $p=.367$ ) and total score of research ethics ( $t=1.91$ ,  $p=.058$ ) and both groups are committed to ethical principles these results are presented in table 5, 6 and 7.

**Table 5: Results of independent t test in comparison of scores of researcher ethics component separated based on gender**

Levin test F	Significance level	t	Degree of freedom	Significance level
0.45	0.504	-1.675	140	0.096

**Table 6: Results of independent t test in comparison of scores of human subjects component separated based on gender**

Levin test F	Significance level	t	Degree of freedom	Significance level
2.26	0.135	-0.905	140	0.367

**Table 7: Results of independent t test in comparison of total scores of research ethics component separated based on gender**

Levin test F	Significance level	t	Degree of freedom	Significance level
0.03	0.863	-1.912	140	0.058

A similar result obtained from comparison of people in different fields of physical education and results of ANOVA indicated that there is no significant difference among scores of researcher ethics ( $F=1.71$ ,  $p=0.184$ ), human subjects ( $F=0.104$ ,  $p=0.901$ ) and total score of research ethics ( $F=1.22$ ,  $p=0.298$ ) in people of different majors including motor behavior, sport physiology and sports management and adherence rate of all groups to these principles are high. Results of ANOVA are presented in tables 8, 9 and 10 respectively.

**Table 8: Results of ANOVA in comparison of scores of researcher ethics component**

Total squares	Mean of squares	Degree of freedom	F	Significance level
64.674	32.337	2	1.715	0.184

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**Table 9: Results of ANOVA in comparison of scores of human subjects component**

Total squares	Mean of squares	Degree of freedom	F	Significance level
1.995	0.997	2	0.104	0.901

**Table 10: Results of ANOVA in comparison of total scores of research ethics**

Total squares	Mean of squares	Degree of freedom	F	Significance level
70.835	35.418	2	1.221	0.298

Totally, results indicated that higher education students of physical education in Islamic Azad University branches of Isfahan including men and women in all fields are committed to ethical principles in their researches and conduct their research by observing these principles.

### Discussion and Conclusion

It is clear that researchers must adhere to ethical principles research process and do not violate these moral values. In fact research ethics is said to all ethical principles morality that researchers are required to adhere to them in the framework of a research project. These ethical principles have been developed to support human subjects in research as well as to the necessity of integrity in publishing results of conducted research. Almost in all areas discussion about ethics and respect to ethical principles and behavior of incumbents is observed. In scientific and academic community attention to ethics and observing ethical principles is concerned. This sensitivity to ethics in scientific community particularly in research activities of is considered. Observance of a series of ethical principles in the process of research, including purpose of study, method and research results is called research ethics (Singh, 2013). In fact, there is a legal, rational relationship that in line with it, authors and researchers are required to observe rights of owners and authors. Physical education is followed based on academic and practical training in training centers of the world and the need for studies and scientific research in this field is clear for all people more than before. Along with the development of areas of research and scientific studies in this area, the issue of research ethics is discussed as one of the main principles of research. Therefore it is clear that researchers who work in this physical education and sport sciences must observe these ethical principles in their researches, so in this study we tried to examine observance of ethical principles among physical education students in order to know that to what extent these people were committed to these principles. Results of the present study showed that adherence rate of higher education students of physical education in Islamic Azad University branches of Isfahan in components of researcher ethics, human subjects and total score of research ethics are significantly higher than mean of society and adherence rate of these students to ethical principles is evaluated high. This indicates that students follow these principles in their researches and are committed to these principles. Results also indicate that there is no significant difference between adherence rate of men and women and both groups are committed to these principles. A similar result obtained from comparison of people in different majors of physical education which showed that there is no significant difference between adherence of people to these principles in different majors and all people observe these ethical principles very much. Totally results indicate observance of ethical principles in research in physical education researches. From among conducted researches on research ethics in Iran results of study conducted by Nakhae *et al.*, (2010) are in contrast with results of the present research. Nakhae *et al.*, (2010) propose a disciplinary regulation of research misconduct. They believe that along with the growth of science in Iran, two major problems are in the face of this growth. First are sanctions and restrictions applied by Western countries and can slow the growth of science and production of articles. Second is growth of research misconduct that can lead to stigma of country and Iranian researchers in the international community. Although scientific fraud and copying in the field of science is not just in Iran but considering evidences because of stress of job promotion, insistence and obligation of responsible on publishing article as one indicator of performance evaluation of faculty members immoral behaviors are more common among researchers. In fact Nakhae



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*et al.*, (2010) believed that researches in Iran are not based on observance of ethical principles while results of the present study showed a different result. Probably inconsistency in the results of this study and the research conducted by Nakhaei (2010) is due to shift in process of conducting research in universities because more monitoring by supervisors and departments in universities has caused higher education students to conduct their researches more accurately and less violate ethical principles. What is the main concern that encouraged the researcher to do this research is this thought that most of higher education students of physical education have turned to immoral ways to publish an article and practically ignored value of research activity. Students' extreme efforts to strengthen their scientific and research resume as an important part of reaching higher levels has caused that ethical issues in research are ignored for the sake of their personal development and improvement of their academic qualifications. But it become clear that higher education students of physical education in different fields are familiar with research ethical principles and adhere to these principles in their researches.

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