

*State University of Makassar*

**INTERNATIONAL CONFERENCE ON MATHEMATICS,  
SCIENCES, TECHNOLOGY, EDUCATION  
AND THEIR APPLICATIONS**

*"Recent Research and Issues in  
Mathematics, Sciences, Technology, Education  
and their Applications"*

**PROCEEDINGS  
ICMSTEA 2014**

**Makassar, August 20-21, 2014**

**ICMSTEA  
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# Conference Proceeding

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Makassar, 20<sup>th</sup> – 21<sup>st</sup> august 2013

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**Mathematics and Science Faculty  
Makassar State University**

ICMSTEA 2014 : RECENT RESEARCH AND ISSUES ON MATHEMATICS,  
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APPLICATIONS

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## WELCOME SPEECH

### Forewords from the Head of Committee

Assalamu'alaykum wa Rahmatullahi wa Barakatuh

First, I want to give our welcome to all the delegates, speakers, and participants coming today.

Welcome to State University of Makassar, UNM.

This conference titled International Conference on Recent Research and issues in Mathematics, Sciences, Technology, Education and Their Applications (ICMSTEA) 2014 is assigned to the 53rd Dies Natalies of UNM. It is primarily organized by Faculty of Mathematics and Natural Science in conjunction with several committee members from other faculties within State University of Makassar.

This conference is conducted in two days from 20th of August to 21st of August in Theater Room, Pinisi Building, State University of Makassar. It involves eleven keynote speakers, ten invited speakers, and approximately 150 parallel speakers.

Ladies and gentlemen, as I previously said, the conference proudly invites twelve keynote speakers coming from several countries. Therefore, on behalf of the committee members, I would like to express my sincere thanks to the keynote speakers, specifically:

1. Professor Max Warxhauwer (Texas State University, USA)
2. Professor Naoki Sato (Osaka Prefecture University, Japan)
3. Professor Peter Hubber (Deakin University, Australia)
4. Professor Susie Groves (Deakin University, Australia)
5. Dr. Frans Van Galen (Utrecht University, the Netherlands)
6. Assistant Professor Duangjai Nacapricha (Mahidol University, Thailand)
7. Dr. Siti Nuramaliati Prijono (the Indonesian Institute of Sciences)
8. Professor Baharuddin Aris (Universiti Teknologi Malaysia)
9. Professor Ismail bin Kailani (Universiti Teknologi Malaysia)
10. Professor Muhammad Arif Tiro (Iowa State University & State University of Makassar)
11. Professor Suratman Woro Suprodjo (Gadjah Mada University, Indonesia)

Next, it is my privilege to thank all organizing committee members who have been showing good work and determination for the accomplishment of this conference. All of them have been working since the beginning of the planning stage and they are still here today for all of us, even though they are very busy with their personal responsibilities.

On this occasion, I would like to apologize to all of you when there are some inconvenience things during the implementation of this conference since we, the organizing committee, as just human being.

Finally, I would like to thank to the speakers and the participants listed in this conference. May I wish you all two fruitful days of interesting and beneficial conference and also that you have a very pleasant stay in Makassar.

Thank you very much for all the attention.

Assalamu'alaykum wa Rahmatullahi wa Barakatuh.

Head of Committee,

Suwardi Annas, Ph.D.

**Forewords from the Dean of Mathematics and Natural Science Faculty,  
State University of Makassar**

Bismillahirrahmanirrahim  
Assalamu'alaykum Warahmatullah Wabarakatuh

First of all, let us praise to the Almighty, Allah SWT, because of his Blessings and Helps, we are able to gather here to attend International Conference on Recent Research and issues in Mathematics, Sciences, Technology, Education and Their Applications (ICMSTEA) 2014.

The development of education and technology in recent decades grows very rapidly. In addition, they have been specialized into many specific topics. Indeed, for researchers and lecturers, being qualified of a specific field as well as being aware of the contemporary development of other fields are two crucial things. One of the reasons why we undertake the conference is to fulfil those two things. By attending the conference, researchers and lecturers have a good opportunity to share their research findings and to obtain broader descriptions of the development of other general knowledge.

We convey our deep appreciation and gratitude to all of the committees that work from the beginning to support and organize the conference. We also strongly expect the participants of the conference to be continually productive, increase the capacity in conducting a research, and carry out both national and international scientific publications.

Finally, let me again recite thank you to the all participants of the conference who are receptive to spend their time to be present and entirely involved at this events. I wish the conference advantageous for all of us.

Billahi taufiq wal hidayah,

Wassalamu'alaykum Wr. Wb.

Dean of Faculty of Mathematics and Science  
State University of Makassar

Prof. Dr. H. Hamzah Upu, M.Ed.

## Forewords from Rector of UNM

Bismillahirrahmanirrahim  
Assalamu'alaykum Warahmatullah Wabarakatuh

Your respectable, the high officials of State University of Makassar, the committee , the speakers, and the partipants of conference.

It gives me great pleasure to extend to you all a very warm welcome, especially to our keynote speakers who have accepted our invitation to convene the conference.

It is an apportune time to convey to you that UNM is celebrating the 53rd Dies Natalis and it commends the faculty of Mathematics and Natural Science (FMIPA) to be in charge of all activity sequences in the Dies Natalis. However, the support of other faculties is also really influential and gives valuable contribution to the success of the event.

In that celebration, we undertake several agendas including educational and sport activities. The conference, ICMSTEA, is one of our educational activities that covers a wide range of very interesting items relating to mathematics, sciences, education, technology and their applications.

By taking participation of this seminar, it is highly expected to all of us to share our research findings to society and continuously develop new ideas and knowledge. Those things are two significant steps in improving the quality of nations around the world, increasing our familiarity to each other, and even avoiding underdevelopment.

On this good occation, let me quote what Obama said about the education related to this conference and I wish fruitful for all of us:

*Every single one of you has something you're good at. Every single one of you has something to offer. And you have a responsibility to yourself to discover what that is. That's the opportunity an education can provide.*

Therefore, through this conference, we are able to implement education.

Furthermore, I would like to take this opportunity to express my heartfelt gratitude to all organizing committee especially for Mathematics and Natural Science Faculty that primarily hosts this conference particularly and other Dies Natalis events generally.

Finally, this is a great time for me to declare the official opening of the International Conference on Recent Research and issues in Mathematics, Sciences, Technology, Education and Their Applications (ICMSTEA) 2014.

I wish you a very enjoyable stay in Makassar  
I warmly welcome you again, as in Makassar, we say "salamakki battu ri mangkasara"  
Assalamu'alaykum warahmatullah wabarakatuh.

Rector of State University of Makassar

Prof. Dr. H. Arismunandar, M.Pd.

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## RELATIONSHIP ANALYSIS OF SPORT IN CREATING FASTING WITH THE STUDENT HEALTH ASPECTS SCIENCE FOUNDATION ISLAMIC SCHOOL FOUNDATION SCIENCES OF THE QUR'AN AL-MUZAHWIRAH MAKASSAR

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### Abstract

This study aims to analyze the relationship between sport and associate fasting with the health aspects arising from both. This study is the training given to students of Islamic school Foundation Sciences of the Qur'an Al-Muzahwira Makassar and implemented occurred during school hours, with a sample of 30 students. Research on the relationship of fasting with the sport in order to find health effects arising from both the circuit. The results showed that the impact of fasting relationship with the sport can realize health. It can be seen from the fasting state, the human body destroying objects of food into the intestine. When the objects were gone, the proteins formed, began to spread throughout the body in different, being the first time is to the liver and muscles. Likewise with exercise can lose weight up to 5% if the exercise routine so that members positive impact on the growth of the body. This study used a descriptive method with qualitative approach to describe the purpose of systematically and analytically about the properties of an individual, symptoms, circumstances or among a specific group of symptoms and other symptoms in the community. Fasting Muslims who carried underlined by the Quran as aiming to gain piety. The goal is achieved by fasting live meaning itself. Understand and appreciate the meaning of fasting requires an understanding of the two main points concerning human nature and obligations on this earth. First, man was created by God from the land, then exhaled his spirit His creation, and given the potential to develop itself until it reaches a level that makes reasonable to be the caliph of God in the prosperity of this earth. Fasting is the trigger of life and human health in a comprehensive manner, such as eating, breathing, moving, and sleep. Fasting will serve as a renewal or movement of cells in the body, especially the glands which encourages the growth and movement that encourages activity and the digestion of Trustees.

**Key words:** Relationships, Fasting, With, Sports.

### 1. Introduction

Each study Islam both the center and in the regions is a major component that affects the performance of the operational task lighting Islam who later restructured into Islamic education and empowerment in the community mosque. In this regard, religious leaders as a strategic function, it has a responsibility towards bringing public proxies better life and prosperity, batiniyah and lahiriyyah, in accordance with the teachings of Islam. The task of the present students, dealing with conditions

rapidly changing society that lead to functional society, technological society, scientific community, and open society. Thus every religious counselor needs to continuously improve the knowledge, insight, and self-development, and also needs to be understood religion instructor vision" as well as the optimal mastery of the material itself or religious counseling delivery techniques. Every religious training in accomplishing the task, not only in their knowledge, but rather should be rich with knowledge and insight into social



counseling delivered to add value to society and perceived as a solution to the problems that gave their lives.

Fasting has long been recognized by humanity, but by no means obsolete or outdated. Since the generation of the twentieth century is still doing it with a variety of motifs and encouragement. Fasting in the sense of "control and restraint not to eat and drink within a certain time" performed among others with the aim of maintaining health or streamline body, or in the form of hunger strike as a sign of protest or treat the other party, or done as a sign of solidarity with the disaster that befell friends or relatives. Fasting with a variety of objectives and the shape of the collected by the essence of self-control. (Quraish Shihab, 199: 307).

Fasting Muslims who carried underlined by the Qur'an aims to acquire taqwa. The goal is achieved by living the meaning of fasting itself. Understand and appreciate the meaning of fasting requires an understanding of two issues concerning the nature of man and the obligations of the earth. First, human beings are created by God from the land of his creation then exhaled her spirit, and given the potential to develop itself until it reaches a level that makes it reasonable to be a caliph in the prosperity of the earth god. Second, the human journey toward Earth, Adam transit in heaven, so that the experience gained can be used as a stepping-stone to success main task on earth. The experience of others is between the situation in heaven itself. In sanan have available all kinds of human needs, among other food and clothing as well as physical and spiritual peace. (Quraish Shihab, 1999: 308).

In the fasting state, the human body destroying objects of food into the intestine. When the objects were gone, the proteins formed, began to spread throughout the body in different, being the

first time is to the liver and muscles. So fast in a certain time and do not exceed the proportion as is Ramadan fasting, proteins spread throughout the body will always be in brand new condition so that it will return the rejuvenation of life. (Ahmad Al-Fanjari Syauqi, 1999: 71).

Already a reasonableness that the fasting person experiences a change, the change in diet. Based on general observation, the average change involves a reduction in weight. Based on several studies on changes in body weight had decreased to about 5% or an increase of about 2-3%. It is very dependent on the balance of activities of daily living with the adequacy of energy needs through the food consumed. Therefore, the weight loss occurs more often in women as housewives heavier activity during fasting. Weight loss classified as normal and no compensation mechanism will also adjust. When not fasting, consumption of foods that provide energy for the body, then the body will wear fast when the energy reserves in the body. The energy reserves in the form of glycogen which of from food ingredients containing carbohydrates as first-line with other reserves of fat and protein. (wayan Susetya, 2008: 151).

Starting from the above mentioned explanation, then neces ary guidance and training in order to consolidate Islam faith and devotion to God Almighty for boarding school students Science Foundation Qur'an Al-Muzahwirah, in an effort to fulfill a concrete solution to achieve the objectives of religion and get closer Allah SWT. Islamic School of Quran Science Foundation Al-Muzahwirah is the object of study, because it is very representative with the title discussion. Islamic School of Quran Science Foundation is one of the boarding schools located in the city of Makassar, and his student very enthusiastic attend the



training. Islamic School of Quran Science Foundation which is Modern still teach the subject matter by the method of taking from standard books published by the National ministry of education and religious ministry.

## 2. Depenition of Fasting

Allah Islam gives guidance to human life that can be used as guidelines have skeletons that better known as pillars of Islam. as the words of the Prophet:

بني الإسلام على خمس شهادة ان لا اله الا الله وان محمدا رسول الله وإقام الصلاة وإيتاء الزكاة وإقام وحج البيت وصوم رمضان

Translate:

*Islam is founded on five cases: namely syhadat that there is no god but Allah and Muhammad is the messenger of Allah, establish the prayer, pay zakat, pilgrimage, and fasting the month of Ramadan.*

Hadith can be obtained lesson that one of the pillars of Islam is fasting in the month of Ramadan. The obligation of fasting is confirmed by Allah in the Qur'an Surah al-Baqarah verse 183:

يَا أَيُّهَا الَّذِينَ آمَنُوا كُتِبَ عَلَيْكُمُ الصِّيَامُ كَمَا كُتِبَ عَلَى الَّذِينَ مِن قَبْلِكُمْ لَعَلَّكُمْ تَتَّقُونَ.

Translate:

*O ye who believe, fasting is obligatory upon you as required above those before you, that you be cautious,*

The above verse confirms the necessity of fasting on every believer also an affirmation that these characteristics are pious always utilized to meet the obligations of Allah, although bear the risk and great sense of responsibility. (Ahmad Sunarto, 1988: 305) In a hadith, the Prophet said:

صُومُوا تَصِحُّوا (حديث)

Translate:

*Lest you become healthy fasted (hadith).*

Fasting Muslims who carried underlined by the Quran as "aiming to gain piety. Objective is achieved with a meaning of fasting itself. Understanding and clicking the biological meaning of fasting requires an understanding of the two main points concerning human nature and obligations on this earth . Firstly, human beings were created by God from the land, then exhaled her Spirit of His creation, and given the potential for himself bound to develop until it reaches a level that makes reasonable to be caliph (successor) of the Lord in the prosperity of this earth.

In the Old Testament, as well as in the books of Hadith, it was discovered that God created man in "the map", in the sense given the potential to have the attributes of God according to his ability as a creature. Second, the human journey towards the earth, he (Adam) pass ("ransit" in) heaven, so that the experience gained there can be a provision in the success of the main task on this earth. Such experiences include for be contact the circumstances in heaven itself. There has available all kinds of human needs, including food and clothing as well as physical and spiritual peace (see Surah 20: 118-119 and QS 56:25).

This led him to create the shadow of heaven on earth, as his experience with the devil encourage to be careful so as not to be deceived again so experienced the bitterness that is felt when expelled from heaven. In his life, humans have many needs in outline can be grouped in five basic needs, namely: (a) fa'ali needs (eating, drinking, and sexual intercourse); (b) the need for peace and security; (c) will needs attachment to the group; (d) the need for a sense of reverence; and (e) the need for the achievement of the ideals. The second requirement would not urged before the first requirement is met. In fact one can sacrifice the next requirement when



previously unmet needs. Conversely, someone who is able to control himself in need the first, will easily control her needs that are at the next position.

In fasting, from a legal perspective, a person is obligated to regard himself to be control needs such fa'ali within certain times. In fasting, he is also at the same time trying to develop their potential in order to manifest themselves in accordance with the "map" imitate God by God in His attributes. And because of that, the Messenger of Allah. said: "to be morals (nature) with you all the attributes of God." If term in terms of the law of fasting, the nature of God who sought to emulate by which fasting is: (1) that He (God) to feed and not (be) eating (Qur'an 6: 14); and (2) He (God) does not have other friends woman (wife) (Qur'an 6: 101). Both of these were selected to emulate because they are the most important needs of human fa'ali, and success in delivering control to succes. Controlling other needs. However, as explained by the Prophet., That hunger and thirst is not the purpose of fasting. "The many people who are fasting are no results from his fast except hunger and thirst," This is because he does not appreciate the true purpose of fasting, which is to imitate God in his nature, amounting to ninety-nine was, or what some scholars say 127.)

Nature "Oft-Forgiving" and "All-forgiving", for example, must be followed. This is precisely why the religious fasting we recommend that many mem-read prayers in a tiny said references to the nature of God, so that he was memorable in the hearts, so that we also give forgiveness to others. Thus, with the example of the attributes of God means to build and prosper this earth, so that at the end of this earth to be his "shadow" paradise filled with security and peace, and the fulfillment of all human needs, such as

clothing, food, and board. Someone is trying to emulate God in His attributes, described by Muslim philosophers Avicenna as follows: "A person who is free from the bonds of his body, in him there been something hidden, but from his looks something real. He will always be happy and many smile. Why not, because his heart was filled with joy since she knew him. everywhere he saw only one course: see the truth, see Yang Glory be it.

All considered together, as indeed are all the same: all of God's creatures get a reasonable grace, whether they are obedient and those who are wallowing in sin. He will not spying weakness people, nor look for mistakes. He will not be angry or offended even see the unjust though, because his soul is always filled, love mercy, and as he looked sirr Allah (God confidential) lie in his nature, "If he invites to the good, then he will bring with gentle, not by force, nor by criticism or criticism. He will always be generous. Imagine, while the object of his love is not all gone. pemaai He will always be. "Why not, because his chest so airy, so as to accommodate all those errors., who will not hold grudges. Could not, because the whole memory is only fixed on the One (Allah).

"Al-Hasan Al-Basri, as quoted in the Quraish Shihab to exemplary describe the state of God's people so as to achieve the level of actual piety with the phrase: "You will find that person: steadfast in faith, firm but prudent, diligent in their studies, the more modestly knowledgeable, the more powerful the more wise, looks dignity in public, obviously gratitude in times lucky, prominent qana'a (satisfaction) was in the distribution of sustenance, always decorated although poor, are always careful, though not lavishly rich, generous and cheap hand, no insult, no mocking, no clicking spend time



in the game, and not run to bring libel, disciplined in his duty, high dedication, and maintained its identity, does not demand that is not right and does not hold the rights of others. When reprimanded he was sorry, that he is guilty of forgiveness, when reviled he smiled and said: 'If you swear is true, then I beg may God forgive me. And if so you are wrong, then I beg may God forgive you'. "Messenger of Allah, in the name of God, illustrates that:" A servant will draw closer to Me (God), to I-loved men, and when I (God) love, becomes the listener's me he used to hear, my vision is used to look, my hand-he used to follow her, and my legs are used for walking." (Hadith Qudsi).

Servant described in the above hadith, gained it because he tried and succeeded to emulate God in nature dala. The main steps for it done with fasting, that drove him to piety, and which has a very broad characteristics: the same is the case with *Al-shirath Al-Mustaqim* (the straight path broadly), so that the breadth and straight because it can accommodate a lot of the me-different for the streets filled with peace. Allah said: Lord leads (with the Scripture of the Quran) those who follow His good pleasure towards peace streets, removing them from total darkness into bright light, dun (eventually) led them to a wider road straight (QS 6: 16). This means that the differences can always be disposed of by *Al-shirath Al-Mustaqim*, during these roads characterized by peace, security, and safety.

### 3. Relationship with Health Fasting.

Fasting is the trigger of life and human health in a comprehensive manner, such as eating, breathing, moving, and sleep. Creatures of any kind, if without sleep and without moving, her body will suffer from a certain type. likewise without fasting, the body will also attacked by various diseases both are biological needs for living things.

Fasting will serve as a renewal or movement of cells in the body, especially the glands which encourages the growth and movement that encourages digestion and coaching activities.

In the fasting state, the human body destroying objects of food into the intestine. When the objects were gone, the proteins formed, began to spread throughout the body in different, being the first time is to the liver and muscles. So fast in a certain time and do not exceed the proportion as Ramadan fasting, proteins spread throughout the body will always be in brand new condition so that it will return the rejuvenation of life. (Ahmad Al-Fanjari Syauiqi, 1999: 71).

Already a reasonableness that the fasting person experiences a change, the change in diet. Based on general observation, the average change involves a reduction in weight. Based on several studies on changes in body weight had decreased to about 5% or an increase of about 2-3%. It is very dependent on the balance of activities of daily living with the adequacy of energy needs through the food consumed. Therefore, the weight loss occurs more often in women as housewives heavier activity during fasting. Weight loss classified as normal and no compensation mechanism will also adjust. When not fasting, consumption of foods that provide energy for the body, then the body will wear fast when the energy reserves in the body. The energy reserves in the form of glycogen which berasal of food ingredients containing carbohydrates as first-line with other reserves of fat and protein. (wayan Susetya, 2008: 151).

### 4. Results Discussion

From the results of this study suggested that students perhataian basically the material is very high, especially fiqh fasting problems with the analysis of the material relationship with sport fasting. So



it can be said that the boarding school students Science Foundation Qur'an Al-Muzahwirah can understand analysis of fasting relationship with the sport and its impacts. From the results of this study suggested that fasting was an impact on the sport, it can be seen from the impact caused by the fasting itself.

In the physical effect of fasting are very high, so that the sports movement and spiritual cultivation that is medically proven to bring benefits to human health. Allah commanded all, certainly bring benefits to human beings, which can be revealed or not, which can be rationalized either human or not. This is due to the limitations of human reason and science. Included in this case are the benefits of fasting. Health benefits for people who fasted high very influence Fasting gives the impact is so great for the human body, especially when fasting is done in a few days, will have an impact again for the human body.

Prayers are performed five times a day impacts the health investment large enough to do it. Prayer movement, of god raising until greetings, have a tremendous effect, good for physical health, mental, emotional and even spiritual balance. Prayer is not only believed to be a major practice in the next, but the prayer movements proportional to the anatomy of the human body. even from a medical standpoint, prayer is a drug warehouse of various types of diseases.

### 5. Conclusions

Fasting is a formal ritual in Islam. he has rules, procedures exemplified by the Prophet. In the existing legal constraints, namely a mandatory requirement, lawful requirements, obligatory fasting or pillars, which could cancel it makruh. In addition, prayer is also having an impact on human health. Fasting in the sense of "control and restraint" not to eat and drink within a

"certain time" is done, among others, with the aim of maintaining health or streamline body, or in the form of hunger strike in protest at the treatment as other party, or done as a sign of solidarity with the catastrophe of his friends or relatives, such as contained in the temporary tribes in India and the other which is still valid. Fasting with a variety of goals and collected by the shape of the essence, namely "self-control". Fasting is the trigger of life and human health in a comprehensive manner, such as eating, breathing, moving, and leep. Creatures of any kind, if without sleep and without moving, her body will suffer from a certain type. Likewise without fasting, the body will also attacked by various diseases because both is a biolo ical necessity for living things. Fasting will serve as a renewal or movement of cells in the body, especially the glands which encourages the growth and movement that encourages digestion and coaching activities.

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