



ISLĀMIC ETHICAL PRINCIPLES AND STEM  
CELL RESEARCH

BY

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## ABSTRACT

Stem cell is one of the most controversial issues in the world today. It is seen as one of the most significant discoveries of the century. Yet, its potentials are not even close to realization. Despite its potentials one wonders why it remains very controversial. The answer is not far-fetched. It is a technology that combines various issues concerning the physical foundation of human life and its development. It is being described as an implausible blend of topics such as abortion, fetal tissue, transplantation, animal rights, women in research, setting guidelines for the regulation of in vitro fertilization clinics, gene therapy, the risk of changing the human germ line, cloning, regenerative medical technology, sex and aging. Before it is used to its fullest potentials, many deeply embedded views of people would have to change. Although a lot of money has been invested in research, attitude of people is also very important and even though, some Western ethical values have been used to explain the benefits which can be derived from it, not many or enough people are convinced of its significance. This study aims at examining various means in which Islāmic ethical values can contribute to this discourse. The study began by giving a general introduction to the research. Then, what stem cell is all about is explained. It also examined the present position of stem cell research in some developed countries. Afterward, stem cell was examined from the bird's eye view of Islām. The finding of the study is that by using Islāmic ethical considerations, we can kill two birds with one stone. We would be able to avoid the pitfalls in stem cell research and at the same time promote and encourage scientific progress in the field.

## ملخص البحث

الخلايا الجذعية هي واحدة من القضايا المثيرة للجدل في عالم اليوم. وتعتبر واحدا من أهم اكتشافات القرن لا سيما و ان إمكاناتها الواسعة ليست حتى قريبة من التحقيق بعد. بالرغم من ذلك يتساءل المرء لماذا لا تزال مثيرة للجدل. الإجابة ليست بعيدة المنال، إذ هي التكنولوجيا التي تجمع بين مختلف المسائل المتعلقة بالأساس المادي للحياة البشرية وتطورها. وما يجري وصفه بأنه غير قابل للتصديق هو هذا المزيج من المواضيع مثل الإجهاض ، وأنسجة الاجنة ، زرع الاعضاء ، حقوق الحيوان ، والمرأة في تجارب البحوث ، ووضع مبادئ توجيهية لتنظيم عيادات الإخصاب في المختبرات ، والعلاج الجيني ، وخطر تغيير الخط الجرثومي في البشرية ، والاستنساخ البشري، والتكنولوجيا الطبية في التجدد، والجنس، والشيخوخة. لكن قبل أن يتم استخدام تلك الامكانيات الى أقصى حد ، فإن العديد من وجهات النظر المتأصلة عند الناس يجب ان تتغير. وعلى الرغم من استثمار كثير من المال في هذه البحوث ، الا ان موقف عامة الناس من هذه البحوث هو أيضا أمر مهم جدا في هذا المجال . بغض النظر عن ان بعض القيم الأخلاقية الغربية التي استخدمت في شرح الفوائد التي يمكن استخلاصها من تلك البحوث ، فليس هناك العديد من البشر او حتى ما يكفي منهم للدلالة على اقتناع الناس بأهميتها. تهدف هذه الدراسة إلى اختبار وسائل مختلفة من القيم الأخلاقية الإسلامية التي يمكن أن تسهم في هذا الخطاب. هذه الدراسة تبدأ من خلال منح مقدمة عامة للموضوع، ثم التعريف بالخلايا الجذعية في كل جوانب استخداماتها . كما تبين الوضع الراهن لأبحاث الخلايا الجذعية في بعض البلدان المتقدمة و بعد ذلك ، تم اعطاء وجهة نظر شموليه اسلامية عن موضوع استخدام الخلايا الجذعية. الاستنتاج الذي خرجت به هذه الدراسة هو أنه باستخدام الاعتبارات الأخلاقية الإسلامية ، يمكننا نحن المسلمين ان نصيب عصفورين بحجر واحد، إذ يمكننا ان نملك القدرة على تجنب المزالق الاخلاقيه في أبحاث الخلايا الجذعية، وفي الوقت نفسه نعزز ونشجع التقدم العلمي في هذا المجال.

## APPROVAL PAGE

I certify that I have supervised and read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Master of Arts in Islāmic Spiritual Culture and Contemporary Society.

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## DECLARATION

I hereby declare that this dissertation is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole or in part for any other degrees at IIUM or other institutions.

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Signature.....

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*To all who are ill (internally and externally)  
and wish to be healed.*

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***Then which of the favours of your Lord will you deny (Qur'ān 55:13)***

Indeed, all praise is due to Allah. I praise Him and seek His help and forgiveness. I seek refuge with Allah from the evils of my soul and the wrong of my acts. He whom Allah guides, no one can misguide; and he whom He misguides, no one can guide.

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# CHAPTER ONE

## INTRODUCTION

### 1.0 GENERAL INTRODUCTION TO THE STUDY

Ethics is considered a discipline concerned with what is right and how to maintain a good life. According to Pojman, “it (ethics) is the systematic endeavour to understand moral concepts and justify moral principles and theories. It undertakes to analyze such concepts as right, wrong, permissible, ought, good and evil in their moral contexts.”<sup>1</sup> Ethics is also sometimes used in reference to a set of rules, principles or ways of thinking that show, or claim authority to show, the action of a group of people; and in some instances stands for the systematic study of reasoning about how we ought to act.<sup>2</sup>

Islāmic ethics, which can be described as a section in religious ethics, does not exist as a separate and independent discipline in Islām. It draws most of its resources from revelation. The ethical teachings in Islam is closely linked to its theology and not separated as a moral philosophy as in Greek thought.<sup>3</sup> The sense of God’s presence or God’s guidance is seen as the guiding principle. Various teachings on ethics in Islām can be found in pages of *Tafsīr*, *Kalām*, *Fiqh*, and *Sufi* works. However, we can still maintain the fact that Islāmic ethics faces the same set of questions that philosophical ethics faces. For instance questions such as, what are values which should be pursued?

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<sup>1</sup> Louis P. Pojman (ed.), *Ethical theory: classic and contemporary readings*, (Canada: Wadsworth, 2002), 1.

<sup>2</sup> Peter Singer (ed.), *Ethics*, (Oxford: Oxford University Press, 1994), 4.

<sup>3</sup> See Ann K.S. Lambton, *State and government in medieval Islam: an introduction to the study of Islamic political theory: the jurists*, (Oxford: Oxford University Press, 1981).

What acts are right and what acts are wrong? How should society go about making ethical decisions posed by new challenges?<sup>4</sup>

Ethics as a discipline in Islām began to emerge as a result of the influence of Greek thought.<sup>5</sup> The classical scholars of Islām when referring to the moral philosophy in Islām often use *'ilm al-akhlāq, akhlāq or Khuluq*. For instance, Aḥmad ibn Muḥammad Miskawayh wrote a book titled *Tahdhīb al-Akhlāq*. Miskawayh in his famous work linked akhlāq to the soul. He believes that if humans understand what their soul is, what kind of beings they are, and for what purpose they have been brought forth, Man would be able to perform good actions easily and reach a high state of mind.<sup>6</sup> Al-Ghazālī in his *Iḥyā ulūm dīn* also linked *akhlāq* to the state of the soul. He noted that human nature is rooted in the soul and actions flow out of it.<sup>7</sup> He mentioned further that *akhlāq* is not the recommendable deeds or evil deeds, it is not the ability to do good or bad, it is not the difference between good or bad. It is the state that prepares the soul so that stems from it expansion and contraction of deeds. He added that *akhlāq* is a term for the state of the soul and its inner or spiritual structure.<sup>8</sup>

Islāmic ethics can therefore be described as what is morally correct in Islām or what is morally acceptable in Islām especially concerning human conduct. There are also some important words that we must be conscious of when we look at Islāmic

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<sup>4</sup> Attaullah Siddiqui, Ethics in Islam: key concepts and contemporary challenges, Journal of Moral Education (1997) Vol 26: No4, 423.

<sup>5</sup> See Muḥammad Umar al-Dīn, *The Ethical Philosophy of al-Ghazālī* (Lahore: SH. Muḥammad Ashraf, 1991), 53.

<sup>6</sup> Ahmad ibn-Muḥammad Miskawayh, *The Refinement of Character*, (Constantine K. Zuraykh, Trans.), (American University of Beirut: Beirut, 1968), 1.

<sup>7</sup> Al-Ghazālī, *Iḥyā ulūm dīn*, Fazlul Karim (Trans.), (New Delhi: Islamic Book Services, 1998), vol. 3, 54.

<sup>8</sup> See Zaki Mubarak in *Al-akhlāq inda al-Ghazālī (Ethics of al-Ghazālī)*, (Cairo: Dārul al-Kitab al-Arabi, 1924), 113-114.

ethics. They are: *Iman*, *Islām*, *Taqwa* and *Iḥsan*.<sup>9</sup> *Iman* means faith and it can further be divided into six parts. *Taqwa* means God consciousness, it is expected of every Muslim to know that Allah sees him or her wherever he or she might be. *Iḥsan* means good, Muslims are expected to do good always. It is in relation to the notions and values in these words that we would try to understand the Islamic position in relation to stem cell research.

Before we discuss stem cell therapy, let us define what stem cells are. Stem cells are known as nature's master cells, capable of generating every one of the many different cells that make-up the body. They have the ability of self-renewal, which means that they are theoretically immortal and can divide forever if provided with enough nutrients, and since they are so plastic, they hold enormous power as basis for new treatments and cures for various disorders ranging from Parkinson and heart diseases to Diabetes and spinal cord injuries.<sup>10</sup> They are obtained from embryos, umbilical cords, bone marrow and so on.<sup>11</sup> When we look at the history of stem cell research, we understand that it had a benign, embryonic beginning in the mid 1800's with the discovery that some cells could generate other cells. Now stem cell research is embroiled in a controversy over the use of human embryonic stem cell for research.

Despite all the contributions and research made on stem cell therapy, there seems to be little contributions coming from Muslims or Muslim scholars. Learned Muslims and their scholars are expected to give their contributions, especially when we bring to mind the fact that Islām is a religion that serves as guidance for mankind; the Qur'ān says: "This is a book; in it is sure guidance, without a doubt, to those who are God-fearing" (Suratul Baqarah: 2).

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<sup>9</sup> Attaullah Siddiqui, 424.

<sup>10</sup> Nancy Gibbs, Stem Cells: The Hope and The Hype, *Time Magazine*, United State, July 30, 2006

<sup>11</sup> There would be more explanations on this point in the next chapters.

The embryonic stem cell research is a very controversial issue because days-old embryos sometimes called blastocysts must be sacrificed to obtain the stem cells. It entails sacrificing a potential life. This has raised a lot of arguments from ethicists, legal practitioners, and sociologists and others. Those who value human life from the point of conception, oppose embryonic stem cell research. The issue is centered on whether human life in the form of an embryo less than two weeks after conception is also a human person. If it is, then extracting stem cells constitute first degree murder, if it is not, then removing stem cell is morally acceptable. Those who oppose this view are of the opinion that an embryo is not sentient; it has no brain, sensory organs, ability to think, memory, awareness of its surroundings, consciousness, internal organs, arms, legs, head and so on. The argument therefore concludes that since a blastocyst has no related features to human beings, ethical judgments pertaining to human beings cannot be applied in these circumstances.

Chapter two of this research will concentrate on what stem cell is, its scientific and ethical background. The various types of stem cells as well as its unique properties will be examined. Chapter three will present a cursory look at countries that are into stem cell research and therapy, how they found themselves in it and their present regulations on stem cell, and then attempts will be made to analyze reasons behind their regulations on stem cell. Chapter four will focus on Islāmic ethics, looking at what constitutes ethics in Islām; the various ways in which ethical values in Islām are derived, the purposes and aims behind such values and how they can be related to the controversial and ethical issues of stem cells. Chapter five will focus on the conclusion of the researcher and the recommendation and suggestions for further research in this area.

It is the view of the present researcher that Islām has a great role to play in this area of discourse, especially when we look at what really constitutes human life. When does human life really begin? When can we have the right to kill or experiment involving some form of ‘killing’ in order to cure a patient? By trying to find answers to these questions Islāmic ethics can make significant contributions on stem cell research.

### **1.1 PURPOSE**

- To examine if stem cell therapy have the potential to harm.
- To assist in looking at the benefits in stem cell therapy.
- To formulate Islāmic ethical guidelines that would better regulate stem cell therapy.
- To explore the risk involved in the process of using embryonic stem cell.
- To make a comparative study of works of Muslim and secular scholars on the concept of life.

### **1.2 PROBLEM STATEMENT**

Bioethicists in various countries have tried to resolve the various problems plaguing stem cell research. The reason why it is gathering a lot of attention is because it holds enormous power to cure many diseases. Stem cell researches, in the last few years, have created a huge impact on society. The unpremeditated use of it for cures of various diseases has raised a lot of ethical questions which can be regarded as a threat to the society. Research on stem cell has advanced tremendously so much so that scientists believe it is not a matter of if they will find a cure for diseases that have so



far been proven incurable. For instance, researchers have been injecting stem cells into paralyzed rats and watched their spinal cords mend.

Stem-cell research has joined global warming and evolution science as fields in which the very facts are put to a vote of whether to support or go against a scientific finding, a public spectacle in which data wrestle with dogma. Scientists who are having surprising success with adult stem cells find their progress being used by activists to argue that embryo research is not just immoral, but also unnecessary. However, to those in the field, the only answer is to press ahead with it on all fronts.<sup>12</sup>

Although adult stem cell research is considered morally fine, it is clinically limiting. Embryonic cells are the only cells that have the power to replicate indefinitely and grow into more than 200 types of tissues. Extracting knowledge from embryos that would otherwise be wasted is one thing, but scientists admit that moving forward would require a much larger supply of fresh, healthy embryos than fertility clinics could provide.<sup>13</sup>

It is very rare that fields of science should cause a lot of debates and challenges not only among scientists but also among ethicists, religious scholars, governments, and politicians. Among the politicians in the United States for instance, it is not surprising that support or lack of support for embryonic stem cell research is an issue during election period. Polls carried out consistently show the majority of Americans support embryonic stem cell research.

The ethicists, especially the bioethicists are urging regulators, governments and other institutions dealing with human stem cell research to take a cautious middle ground. Muslim scholars are also looking at the issue from the Islāmic perspective. Many among Muslim scholars support stem cell research to a large extent but there is

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<sup>12</sup> Ibid.

<sup>13</sup> Ibid.

also need for Muslims to be cautious of their support. It is becoming imperative for Muslims to contribute because Muslim physicians sometimes find themselves in a dilemma when it comes to biomedical issues. As science progresses there will always be a need to look at what has been approved in the light of the new developments in science.

Furthermore, governments of different countries are known to have been taking different sides concerning stem cell research. Some of them are fully ready to sponsor the research while others still want the different ethical issues to be resolved. One of the concerns of this study is to answer the question of: to what extent can Islāmic ethics help to resolve the various issues surrounding stem cell therapy? What are the Islāmic angles to the study of stem cell? What are the areas in which Islām supports this therapy as treatment on patients? With these questions in mind, the researcher will observe ways in which Islāmic ethics can facilitate the use of stem cell as a therapy.

### **1.3 SIGNIFICANCE OF THE STUDY**

This study is an attempt to examine the various impasses surrounding the stem cell issue from the Islāmic ethical perspective. It would help Muslim jurists to understand the issues and the various viewpoints in which the issues can be understood. The study would also help Muslim physicians to understand how biomedical issues should be understood in the light of Islām. Many Muslims would also understand where their stand should be concerning the issue of stem cell therapy.

Also, if the issue of stem cell therapy is well understood among Muslims and Muslim Jurists (*Fuqaha*), governments would be able to decide on the form in which the

policies on stem cell research should take and which areas they should be conscious of when making decisions.

#### **1.4 RESEARCH QUESTIONS**

The questions to be addressed in this study are as follows:

1. What are the attitudes of Muslims to stem cell research?
2. What are the attitudes of Muslim Jurists?
3. Is there any significant difference between what constitute a life among Western secular scholars and Muslim scholars?
4. What is the Islāmic understanding of an embryo?
5. Are Muslims against stem cell research or in support of it?

#### **1.5 METHODOLOGY OF THE STUDY**

The central question of this research is how can Islāmic ethics help to resolve various controversial ethical issues on stem cell therapy? The analysis on this question is divided into three major parts: first, what we know about stem cells, its various types and characteristics. Second, the present day regulations on stem cell and how they have been determined. Third, Islāmic ethics and various issues that make up Islāmic ethics and how these can be seen in the context of stem cell therapy.

Also in order to address the aims of this thesis, an analysis of the policies of developed countries policy on stem cell research was examined by reviewing various literatures on them. In addition, various books available at IIUM and ISTAC as well as the electronic database and the internet, were consulted.

## 1.6 SCOPE AND LIMITATION OF THE STUDY

This work is an attempt by one who is very interested in science, especially a science on the origin of human life and aims at reducing human suffering through diseases. However, since the researcher is not a scientist, there are certain limitations which could be expected. Also the work is intended not just for the scientifically inclined minds but also those who are not. This is why the research will steer away from the technical aspects of the research on stem cell except when unavoidable. This is also a work that aims at resolving the issues from an Islāmic perspective but at the same time take into consideration the advanced stages in which the research on stem cell have reached.

## 1.7 LITERATURE REVIEW

Muzaffar Iqbal in his article titled *Whose stem, whose cell? On the Islamic position on stem cell research*, observed how Muslims rush to get *fatwa* (juristic opinion) from Muftis on almost all scientific discoveries. He noted that this is a result of a deep-rooted ‘catching-up syndrome’ which has affected Muslim discourse on science. He further explained that what most people do not understand is that modern science:

is not a stand-alone piece of equipment that can be bought and placed in a home-grown laboratory; it is one of the most complex and largest components of a civilization that is now being driven by this self-created Frankenstein in a direction and at a speed over which no one has any control.<sup>14</sup>

Iqbal warned at conclusion of his article that: if close attention is not paid to the destruction being caused to Islamic civilization by the rapid advancement and change in lifestyles due to modern technology, “there will soon be nothing left of that

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<sup>14</sup> Muzaffar Iqbal, “Whose stem, whose cell? On the Islamic position on stem cell research,” *Journal of Islam and Science*, (Center for Islam and Science, Gale) vol. 6, no. 1, 2008. [www.questia.com](http://www.questia.com) (accessed on 11 February, 2011).

enchancing Islamic space where the ever-proliferating stem cells have never existed as isolated entities severed from their Creator.”<sup>15</sup> Although, did not give his verdict on stem cell research as the title suggested. He seems to be more concern about the problem of modern science in general rather than the problems stem cell research confronts us all with.

Mahmoud Sadeghi examined the issue of human cloning from Islamic perspectives in his article *Islamic perspectives on human cloning*. Sadeghi’s article is quite interesting because he studied the topic not only from the Sunni perspectives, but also the Shiite perspectives. He noted that Muslim scholars are divided on the issue of human cloning. Some scholars allowed it on the bases of its therapeutic significance while others reject everything connected to the science (human cloning). Those scholars that are against human cloning Sadeghi explained gave reasons such as “break-up in family system and emergence of confusion in kinship and genealogy of cloned persons, probable catastrophic illnesses of clones and dangers to egg donors and surrogate mothers”.<sup>16</sup> Sadeghi’s paper is quite related to our research because one of the ways in which stem cells are obtained for research is through cloning. This would be elaborated upon in the next chapter of this thesis. Sadeghi concluded in his paper that the “human cloning for biomedical research and therapeutic applications together with the exploitation of stem cells from cloned embryos is recommendable”<sup>17</sup> because of the invaluable scientific advances and the development which could be fruitful for the whole human society.

In the chapter titled “Defining the Pedagogical Parameters of Islamic Bioethics” in *Muslim medical ethics: from theory to practice*, Abdulaziz Sachedina

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<sup>15</sup> Ibid, Muzaffar Iqbal.

<sup>16</sup> Mahmoud Sadeghi, “Islamic perspectives on human cloning,” *Journal of Human Reproduction and Genetic Ethics*, vol. 13, no. 2, 2007, via <[www.questia.com](http://www.questia.com)> (accessed on 11 February, 2011).

<sup>17</sup> Ibid, Mahmoud Sadeghi.

examined what we need to know about Islamic bioethics. One of the interesting points he made is that Islamic medical bioethics can-not be laid solely on Islamic legal studies. The reason is that “The scope of Islamic legal studies includes medical jurisprudence (fiqh al-tabib), but it does not deal with biomedical ethics as the discipline is defined today”.<sup>18</sup> The moral emphasis of most religious duties in Islamic jurisprudence limited the scope of Islamic law. Sachedina advised that in teaching Islamic bioethics there is need to avoid reducing it to mere fatwa investigation.<sup>19</sup> This thesis will move away from giving just fatwas. We will be examining important Islamic ethical principle that we believe are related to stem cell research.

The following works are of significant contributions to this research:

1. Lars Ostnor, *Stem cells, human embryos and ethics: interdisciplinary perspectives*, (Norway: Springer, 2008). The work examined various opinions and positions on stem cells from human embryos. It critically evaluates the opinion strengths and weaknesses.
2. Dariusch Atighetchi, *Islamic bioethics: problems and perspectives*, (The Netherlands: Springer, 2007). The work is a critical analysis of issues related to biomedical technologies such as organ transplantation, genetics, IVF and so on. It also examined the Muslim laws of the past and the contemporary Muslim laws in Muslim countries.

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<sup>18</sup> Abdulaziz Sachedina, “Defining the Pedagogical Parameters of Islamic Bioethics” in *Muslim medical ethics: from theory to practice* edited by Jonathan E. Brockopp and Thomas Eich, (Columbia, U.S.A: University of South Carolina Press, 2008), 244.

<sup>19</sup> *Ibid.*

3. Hossam E. Fadel, "The Islamic viewpoint on new assisted reproductive technologies," *Fordham Urban Law Journal*, Vol. 30, no. 1, 2002. The article discusses the rise of modern reproductive technology and how it led to religious and ethical issues. It also gave a background description of Islamic law. The main idea in the article is Islamic views on topics such as artificial insemination, in vitro fertilization, donor eggs/sperms/embryos, surrogacy and cloning.

## CHAPTER TWO

### 2.0 INTRODUCTION

All parts of our body contain cells and each cell possesses a genetic code that makes us individual organisms. As we grow, the cells become specialised or differentiated. Cell differentiation take place when cells become matured and non-dividing with specialized expression of gene products that are needed to carry out specific tissue functions.<sup>20</sup> This simply means cells ‘forget’ how to become or function as some tissues and become capable of fulfilling only one function. For instance, cells that make up the brain will function only as the brain cells even though they contain the DNA for every other tissue in the organism. What we however have, before any differentiated cell, are referred to as “Stem cells” or Human stem cells. Stem cells are known to produce at least one type of specialized tissue and are self-renewing. They are the foundation of all living organisms and the root of all individual human organisms.

Stem cell study is one of the most interesting and highly funded emerging areas of research. It is considered to be very important to those in the medical field because of the following reasons: 1) it has the potential to supply tissues that would be used for patients as replacements for diseased organs. 2) it has also been discovered to be “plastic” enough to become all kinds of cells, tissues and organs that make up a body, and 3) because of its plasticity scientist have discovered ways to interfere in the cell’s differentiation process.

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<sup>20</sup> Ann A. Kiessling and Scott Anderson, Human embryonic stem cells: an introduction to the science and therapeutic, (Missisauga ,Canada : Jones and Barlett, 2003), 6.