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Editorial

Integrating Artificial Intelligence into Ethics Education: Opening a New Chapter

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Ethical education holds a paramount significance in shaping the character and conduct of healthcare professionals, laying the groundwork for humanistic, empathetic and compassionate healthcare practices [1]. The contemporary landscape of medical education is undergoing a transformative shift with the introduction of Artificial Intelligence (AI), presenting both challenges and opportunities [2]. As we delve into the current state of medical education, it is imperative to explore the benefits of AI, understand how it is being seamlessly integrated into teaching methodologies, particularly in the realm of ethics, and examine the multifaceted roles of educators and students. Furthermore, the discourse must encompass the ethical issues that emerge with this integration, and the far-reaching implications on the future of medical practice.

In the dynamic field of medical education, the importance of ethical training cannot be overstated. The medical profession is inherently bound by a commitment to uphold ethical standards and moral values. Thus, embedding ethical education into the curriculum becomes an essential component of nurturing healthcare professionals with a robust ethical foundation [3]. Medical educators, being the torchbearers of knowledge and values, play a pivotal role in imparting ethical principles to the next generation of healthcare practitioners. Their responsibility extends beyond the transfer of clinical knowledge to instilling a deep sense of moral responsibility and ethical integrity [4].

As we navigate the current challenges in medical education, the integration of AI stands out as a transformative force. AI brings great possibilities for improving the learning experience and refining teaching methodologies [5]. The benefits of AI in education are multifaceted, ranging from personalized learning paths for students to the development of sophisticated simulations that replicate real-world scenarios [6]. These advancements have the potential to enhance not only the technical proficiency of medical professionals but also their ethical reasoning and decision-making skills [7].

When considering the incorporation of AI into ethics education, a nuanced approach is imperative. The interactive and dynamic nature of AI can revolutionize how ethical scenarios are presented and explored. AI-driven simulations can simulate complex ethical dilemmas, allowing students to engage in critical thinking and decision-making in a controlled environment. Immediate feedback from AI tools can further enrich the learning process, providing insights into the ethical dimensions of various medical scenarios.

The role of medical educators becomes crucial in navigating these challenges and leveraging the benefits of AI in ethics education. Educators must be adept at integrating AI tools into the curriculum while preserving the core values of ethical reasoning [8]. This involves not only selecting and implementing appropriate AI technologies but also continuously reassessing their impact on the learning outcomes. Ethical considerations should be at the forefront of these decisions, with educators serving as advocates for the responsible use of AI in medical education. Moreover, educators must facilitate a collaborative and inclusive learning environment that encourages active student engagement with AI tools. Students, as the end users of these technological advancements, have a pivotal role in shaping the future of medical practice. Their involvement goes beyond passive acceptance of AI-generated content; they must actively question and critically evaluate the ethical dimensions of the scenarios presented by AI. This active engagement fosters a sense of responsibility and ethical mindfulness, ensuring that the integration of AI aligns with the broader goals of medical education.

The responsibilities of medical students in this transformative landscape extend beyond critical engagement with AI tools. They must actively participate in shaping the ethical discourse surrounding AI in healthcare. This involves advocating for transparency in AI algorithms, demanding accountability for algorithmic decision-making, and actively contributing to the ongoing ethical dialogue in the medical community. By taking an active role in the ethical considerations of AI, students contribute to the development of a healthcare system that prioritizes both technological advancements and ethical integrity.

However, the introduction of AI into ethics education is not without its challenges. Ethical considerations extend beyond the content being taught to encompass the very design and application of AI tools [9-10]. One prominent challenge is the potential biases ingrained in AI algorithms. If not addressed diligently, these biases can perpetuate existing disparities and discrimination, particularly in the context of healthcare [11]. Educators must be vigilant in ensuring that AI tools used in ethics education are ethically designed, free from biases, and capable of fostering a comprehensive understanding of diverse ethical perspectives [12].

Another ethical consideration is the preservation of patient confidentiality in the era of AI. As AI tools rely on vast amounts of data for training and decision-making, ensuring the security and privacy of patient information becomes paramount [13-14]. Educators must emphasize the importance of ethical data practices, educating students on the ethical dimensions of data collection, storage, and utilization in the context of privacy-preserving AI applications in healthcare.

Furthermore, the risk of dehumanization in medical practice due to overreliance on AI should not be underestimated. The empathetic and compassionate aspects of patient care may be compromised if AI becomes the predominant factor in decision-making [15]. Students must be educated on the ethical balance between technological efficiency and human touch in healthcare. This involves cultivating a sense of empathy and understanding that transcends the capabilities of AI, reinforcing the humanistic aspects of medical practice.

The implications of neglecting these ethical dimensions in the integration of AI into medical education are profound. A generation of healthcare professionals may emerge with technical skills but lacking in the ethical sensitivity required for navigating the complexities of patient care [16]. The erosion of ethical values in healthcare can lead to a loss of trust between healthcare providers and patients, jeopardizing the very foundation of the doctor-patient relationship [17-18].

In conclusion, the integration of AI into medical ethics education is a double-edged sword, offering immense opportunities while posing significant challenges. The transformative potential of AI in enhancing the learning experience and refining ethical reasoning cannot be ignored. However, a cautious and ethical approach is crucial to ensure that the benefits of AI align with the fundamental

principles of medical ethics. Educators and students must collaborate in navigating these challenges, addressing ethical considerations, and advocating for responsible AI use in medical education. By doing so, the integration of AI into medical ethics education can contribute to the development of healthcare professionals who are not only technically proficient but also ethically adept in providing compassionate and patient-centered care.

REFERENCES

1. Gillon R. Medical ethics: four principles plus attention to scope. BMJ (Clinical research) 1994;309(6948):184–8.
2. Masters K. Artificial intelligence in medical education. Med Teacher 2001;41(9):976–80.
3. Hafferty FW, Franks R. The hidden curriculum, ethics teaching, and the structure of medical education. Academic Med 1994;69(11):861–71.
4. Shamim MS, Baig L, Zubairi N, Torda A. Review of ethics teaching in undergraduate medical education. J Pak Med Assoc 2020;70(6):1056–62.
5. Nagi F, Salih R, Alzubaidi M, Shah H, Alam T, Shah Z, Househ M. Applications of Artificial Intelligence (AI) in Medical Education: A Scoping Review. Stud Health Technol Inform 2023;305:648–51.
6. Tolsgaard MG, Pusic MV, Sebok-Syer SS, Gin B, Svendsen MB, Syer MD, Brydges R, Cuddy MM, Boscardin CK. The fundamentals of Artificial Intelligence in medical education research: AMEE Guide No. 156. Med Teacher 2023;45(6):565–73.
7. Han ER, Yeo S, Kim MJ, Lee YH, Park KH, Roh H. Medical education trends for future physicians in the era of advanced technology and artificial intelligence: an integrative review. BMC Med Educ 2019;9(1):460.
8. Zawacki-Richter O, Marín VI, Bond M, Gouverneur F. Systematic review of research on artificial intelligence applications in higher education–where are the educators ?. Int J Educ Technol Higher Educ 2019;16(1):1-27.
9. Akgun S, Greenhow C. Artificial intelligence in education: Addressing ethical challenges in K-12 settings. AI and Ethics 2022;2(3):431–40.
10. Safdar NM, Banja JD, Meltzer CC. Ethical considerations in artificial intelligence. Eur J radiology 2020;122:108768.
11. Gurupur V, Wan TTH. Inherent Bias in Artificial Intelligence-Based Decision Support Systems for Healthcare. Medicina 2020;56(3):141.
12. Panch T, Mattie H, Atun R. Artificial intelligence and algorithmic bias: implications for health systems. J Glob Health 2019;9(2):010318.
13. Alonso A, Siracuse JJ. Protecting patient safety and privacy in the era of artificial intelligence. Sem Vascular Surg 2023;36(3):426–9.
14. Khalid N, Qayyum A, Bilal M, Al-Fuqaha A, Qadir J. Privacy-preserving artificial intelligence in healthcare: Techniques and applications. Comput Biol Med 2022;158:106848.
15. Jiang F, Jiang Y, Zhi H, Dong Y, Li H, Ma S, Wang Y, Dong Q, Shen H, Wang Y. Artificial intelligence in healthcare: past, present and future. Stroke Vasc Neurol 2023;2(4)230-43.
16. Chomutare T, Tejedor M, Svenning TO, Marco-Ruiz L, Tayefi M, Lind K, Godtliebsen F, Moen A, Ismail L, Makhlysheva A, Ngo PD. Artificial Intelligence Implementation in Healthcare: A Theory-Based Scoping Review of Barriers and Facilitators. Int J Environ Res Pub Health 2023;19(23):6359
17. Chambers DW. Unethical behaviour is not a dilemma. Commun Dentistry Oral Epidemiol 1996; 49(2):209–10.
18. Shanahan T, Cunningham J. Keys to Trust-Building with Patients. J Christian Nurs 2021;38(2):E11–4.

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Review Paper

The Development of Bioethics: Historical Facets Vital in the Foundation and Development of Healthcare Bioethics

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ABSTRACT

In 1927, Fritz Jahr used Bio-Ethik in his Publication entitled Bioethics: A Review of the Ethical Relationships of Humans to Animals and Plants. About four decades the use of bioethics remained unpopular. In early 1970s, Van Rensselar Potter reinitiated the use of bioethics in his paper entitled Bioethics: The science of survival and in his book entitled Bioethics: Bridge to the Future. Without considerations for when and who firstly coined the term bioethics, it appears that, bioethics has remained significant from its time of inception to its current status as global multi-interdisciplinary and applied field of ethics that integrates all foundations of life related scientific activities. Healthcare Bioethics should be regarded as a branch of bioethics that focuses on the application of ethical principles as mechanism of wisdom enhancement in regard to dialogues and decision making related to certain healthcare events and situations. Such dialogues should encompass scrutiny not only facts and statuses adjoining each event, but also standards which prime all healthcare related clients, healthcare teams and institutions deciding to recommend, accept or refuse certain demeanor. Understanding historical perspectives of healthcare bioethics is crucial. However, there is insufficient compiled literature unfolding precisely history of healthcare bioethics. The goal of this article is to describe historical facets vital in the foundation and development of healthcare bioethics with reference to four eras namely: (1) Pre-Conceptional Era of Healthcare Bioethics, (2) Gestational Era of Healthcare Bioethics, (3) Birth, Growth and Developmental Era of Healthcare Bioethics and (4) Maturity Era of Healthcare Bioethics.

Keywords: Ethics, Bioethics, Healthcare Bioethics, Historical facets of Healthcare Bioethics, Foundation of Healthcare Bioethics, Development of Healthcare Bioethics

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Introduction

In 1905 George Santayana narrated that "those who-cannot remember the past are condemned to repeat it" (https://en.wikiquote.org/wiki/George_Santayana). Bioethics is relatively considered as a new discipline that emerged as results of: 1) scientific activities related to life, 2) advance of technology, 3) religions and 4) unfavourable decisions of some people towards other forms of life including life of their fellow human beings (for instance: use of human subjects in experimental studies without their voluntary informed consents, wars, unfair distribution of scarce health related resources, destruction of ecosystem etc.) [1-3]. In case acts of forgiveness are not applied, anyone who could attempt to repeat some of the wrong actions that led to existence of bioethics would be condemned at all! Although bioethics is relatively considered as a new discipline, some of its

branches should not be considered to be new. For instance, with thorough analysis, it is clear that healthcare bioethics existed prior to ushering the movement of bioethics as new discipline. Events that led to the existence of healthcare bioethics are complex. In fact, some of those events started long ago in Paleolithic time. For illustration, about 3 to 2 million years ago, a reduction of rainfall caused the shortage of food (especially fruits). And prolonged draughts inspired early ancient hominins to increase hunting activities, and they started eating tubers and roots in order to obtain adequate energy and other nutrients. For survival and protection purposes those early ancient hominins adopted the principles of solidarity [4] which is similar to the partnerships established by most of the modern world people while trying to mitigate certain threats that could hinder the progression of life or health on the earth.

Several scholars and experts have repeatedly asserted that, bioethics as new discipline started in about 1960s-1970s [5-7]; thus, anticipated period for the start of healthcare bioethics as one of its branches [8]. However, that is only true in terms of reviving and giving a name but wrong in terms of time and how bioethics (or particularly healthcare bioethics) started. In fact, the first use of the term bioethics (Bio-Ethik) in literature stems back in 1926-1927, when Fritz Jahr used it in his paper entitled "Bio-Ethics: A Review of the Ethical Relationships of Humans to Animals and Plants" [9]. Moreover, he stressed bioethical imperative regarding the use of animals and plants in scientific research [2,7,10-11]. About four decades the usage of the term bioethics remained unpopular. In 1970 and 1971, a North American Oncologist Van Rensselar Potter reintroduced the usage of bioethics as he used it in his paper entitled "Bioethics: The science of survival" and in his book entitled "Bioethics: Bridge to the Future" respectively [5-6]. With no respects to when and who firstly coined the term bioethics, it appears that, bioethics has remained vital from its time of inauguration to its current status as global multi-interdisciplinary and applied field of ethics that integrates all foundations of life and health related scientific activities.

In 1998 Darryl Macer clearly asserted that bioethics is love of life [2]. In reality love of life started long ago not just in 1970s. Despite the fact that, some people have disrespected life and dignity of their fellow human beings. There is critical evidence that numerous heroic actions and commitments of many people who loved life have been visible since antiquity until present time. As evidence indicates, since antiquity, human beings have invented unstoppably in order to discover skills, knowledge and practices that could lead to the attainment of optimum health status and ensure the progression of life on the earth. For many centuries such knowledge has been exponentially increasing, but regrettably starved of exponential advance of wisdom. Yet, wisdom is recognized as "the knowledge of how to use knowledge for human survival and to improvement in the quality of life" [5, 12-13]. Thanks to Potter for instituting bioethics as a new discipline that aim to raise wisdom for human survival and to upgrading the quality of life. However, if bioethics is love of life, considering 1960s-1970s as starting reference point for its history is an incomplete history. The coherence and harmony of understanding the historical standpoints of how ethics has been applied in healthcare settings as means of raising wisdom with anticipated results of improving health status of world's population is very crucial. Nevertheless, there are insufficient compiled literatures unfolding precisely the history of healthcare bioethics.

Each decade, each century, each field, each country, each region, each continent has its own great people and each of us has his/her own heroes. And in point each of these has a good and bad past event to remember. Averring, the history of healthcare bioethics without considering the contributions of great famous people such as Hippocrates, Aristotle, Alexander the great, Galen, Ambrose Pare, Andreas Vesalius, John Hunter, Edward Anthony Jenner, Joseph Lister, Louis Pasteur, John Snow, Fritz Jahr, Alexander Fleming, Van Rensselar Potter, Ken Newell, Halfdan T. Mahler, Mr. James P. Grant, and plus more others would be an alien history. The scope of this paper is not about describing detailed contributions of these famous people, but Table 1 highlights some of their achievements in terms of promoting human dignity, health related science, advancement of healthcare and development of healthcare bioethics practices. It is also crucial to consider the influence of religions, political, philosophical, industrial revolution, different

epidemics/pandemics, wars, slavery trade, colonization and different scandals that disrespected the dignity of human beings in terms of advancing healthcare bioethics. In order to incorporate all these together, this article describes historical facets vital in the foundation and development of healthcare bioethics with reference to four eras namely: 1) Pre-Conceptional Era of Healthcare Bioethics (B.C., A.D. to 1749s), 2) Gestational Era of Healthcare Bioethics (1750s to 1947s), 3) Birth, Growth and Development Era of Healthcare Bioethics (1948s to 1990s, and 3) Maturity (but not elderly) era of Healthcare Bioethics (1991 to present). The rational for this classification is contingent with certain remarkable right and wrong actions/events which attempted to: respect or disrespect the dignity (health) of human beings. Correlating those events with current practices and further elaboration for this classification will be explained in subsequent sections of this paper

Table 1: Some remarkable contributions to the advancement of healthcare and healthcare bioethics by some famous Scientists /Philosophers/Physicians

Name and time lived	Key Remarkable contributions and comments
Hippocrates (450-380 B.C)	• A Greek philosopher and physician • A father of modern medicine • The first person to affirm that diseases are not caused by superstition. • His works is found in Hippocratic corpus. • Hippocratic oath remains relevant in modern medical fields
Aristotle (384-322 BC)	• A Greek philosopher and physician • He is considered as gold father of evidence-based medicine. • Aristotelian principle common sense and logic is still relevant today
Alexander the great	• A founder of School of Alexandria in 3 Century BC • The school of Alexandria became a center of ancient scientific knowledge. • Historical Famous Physicians such as Herophilus, Erasistratus and Galen, were trained from the Alexandria school of medicine
Ambrose Pare (1509-1590)	• A French Berber Surgeon • Invented various surgical innovations such as wound management, hemorrhage prevention via arterial ligation during limb amputations, treatment of war-related head and spine injuries. • He emphasized gently procedural strategies in order to reduce pain and improve outcome for all of his clients, thus compassionate and empathic principles • Credited as a father of modern surgery
Girolamo Fracastoro (1478–1553)	• An Italian doctor • The first person to suggest that pathogens from outside the body may be responsible for the occurrence of certain epidemics. • He proved human to human infections transmission mechanism
Andreas Vesalius (514-1564)	• A father of human anatomy(14) • He published a famous anatomy book entitled "De Humani Corporis Fabrica" that has become the foundation for modern human anatomy(15)
John Hunter (1728-1793)	• A father of scientific surgery • He was a teacher and collaborator of Edward Anthony Jenner
Edward Anthony Jenner (1749–1823)	• An English Physician and scientist • The originator of the concept of vaccine • He invented the vaccine against smallpox. • He is credited as father of immunology. • Ethically, by 1958 WHO opted to use the vaccine he discovered and in 1980 smallpox was eradicated Worldwide [16-17].

	• Thus, he is ethically and acceptably considered as man who saved many lives than any other person on this world
John Snow (1813–1858)	• A father of modern epidemiology • His discoveries supported to control numerous epidemics including Cholera
Louis Pasteur (1822-1895)	• An originator of germ theory • This theory supported to disapprove long held theory (miasma, bad air) as cause for infectious diseases. • Germ theory allowed to save many lives
Joseph Lister (1827 – 1912)	• An originator of antiseptic • His antiseptic practices saved many lives
Alexander Fleming (1881-1955)	• An originator of antibiotic (Penicillin) in 1928 • A receiver of the Nobel Prize in Physiology or Medicine 1945 • Antibiotic have saved many lives
Fritz Jahr (1895-1953)	• He was a German protestant theologian. • A first person who used bioethics in literature (1927) in paper "Bio-Ethics: A Review of the Ethical Relationships of Humans to Animals and Plants" • Some Scholars consider him as an originator of European bioethics
Van Rensselar Potter (1911-2001)	• A North American Oncologist • Remarkable influencer for the foundation of bioethics as a discipline • Considered by some scholars as an originator of American bioethics. • His major publications with respect to bioethics include: *1)* Bioethics: The science of survival an article published in 1970 *2)* Bioethics: Bridge to the Future (A book published in 1971) *3)* Global Bioethics: Building on the Leopold Legacy (a book published in 1988*)*
Ken Newell	• An influencer for the existence of health for all ambition by 2000 • An influencer for the existence of Primary Health Care (PHC) • Goals of Bioethics, PHC and health for all positively correlate • Adoption of core bioethical principles in all sectors could support to achieve health for all
Halfdan T. Mahler (1923-2016)	• A Danish who specialized in tuberculosis • A third Director-General of World Health Organization from 1973 to 1988 • He vastly influenced the existence of PHC and health for all ambition by 2000. • Goals of Bioethics, PHC and health for all positively correlate
Mr. James P. Grant (1922-1995)	• Ethically, he saved lives of many children via endorsing UNICEF Declaration of *Children's Revolution in* 1982 • Such revolution contained: 1) Growth Monitoring, 2) Oral Rehydration, 3) Breastfeeding, 4) Immunization, 5) Food supplementation, 6) Female literacy and 7) Family planning (GOBI…FFF) • In 1987, He launched Bamako initiative that saved lives of many children of developing countries (Especially Sub-Saharan Africa) • Adoption of core bioethical principles in all sectors could support to achieve health for all

Preconceptional Era of Healthcare Bioethics (B.C., A.D. to 1749s)

'Those who don't know where they are coming from cannot know where they are going' [18]. Planning to ensure the proper progress of life of all living things including life of human beings

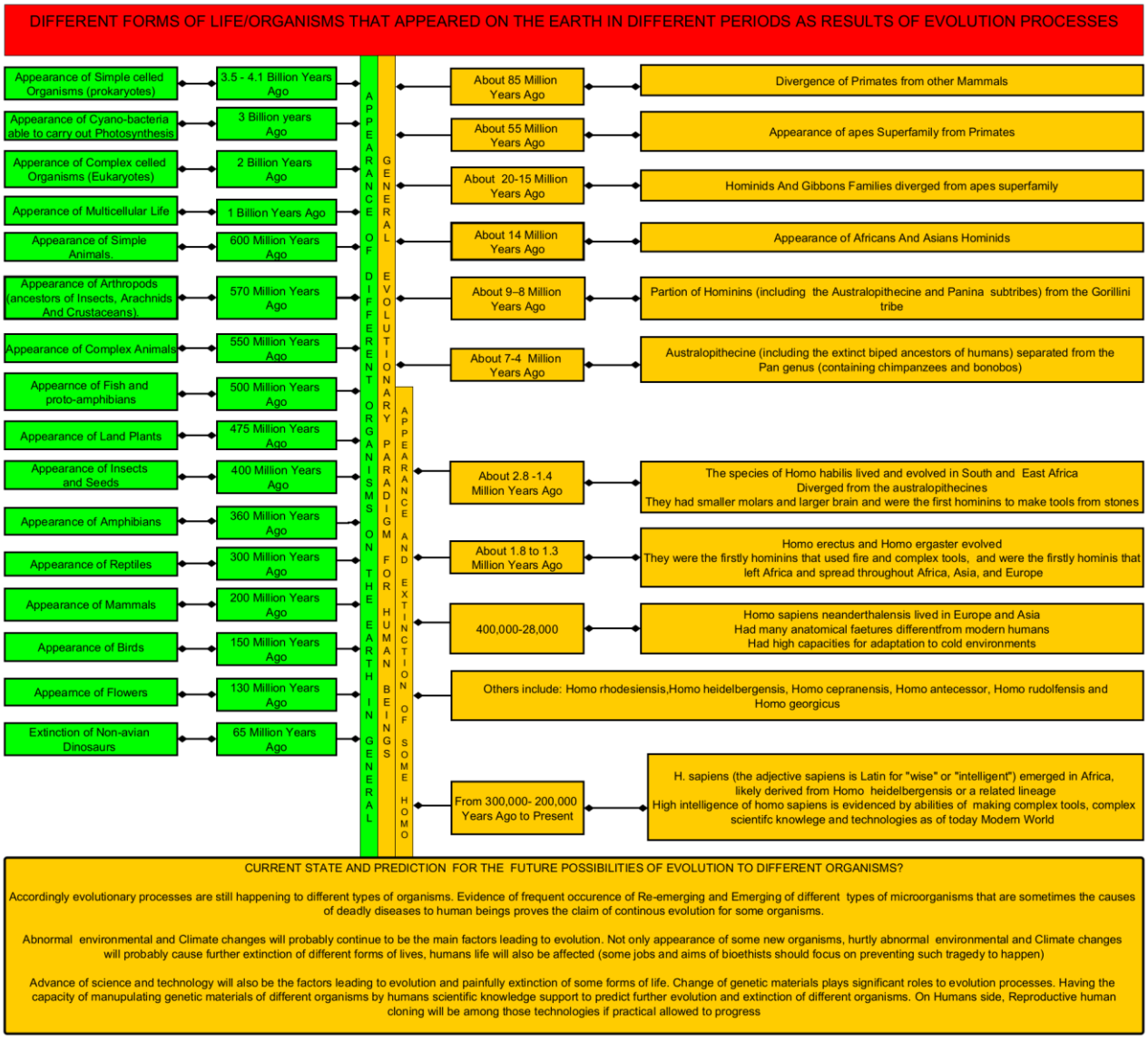
without the knowledge of how life started and progressed and what attempted to hinder such progress is blamably plan for the future that would just fail without reaching on third counts. According to scientific evidence, the earth is about 4.5 billion years old. About 3.5-4.1 billion years ago, life on the earth became possible firstly with appearance of simple celled organisms (prokaryotes) [19]. Through complex evolutional processes with support of molecular [20] and environmental changes other organisms evolved. Figure 1 shows a timeline of different organisms that appeared on the earth in different periods. Evidence indicates extinction of numerous types of organisms. However, reasons that led to such extinction are not clear. Did such extinction happen spontaneously? Did it happen due to humans' activities? Could such extinction be linked to genetic diseases? Could such extinction be linked to the failure by extinct human species to adapt to the abnormal changing environment and climate as per Darwinian adaptation mechanism? Could we allot higher likelihood to abnormal environment and climate change to have been the cause for such extinction as we currently see how dangerous abnormal environment and climate change is to the health of human beings and life of other living things? With this, in our minds, can we predict further extinction of current species of human beings in future centuries? It is a duty of bioethicists and other people "to safeguard and promotes the interests of the present and future generations" [21]. What are the views of bioethicists in regard to extinction of some living things? Guided by the 'importance of biodiversity and its conservation as a common concern of humankind' [21] as it is proclaimed in the Universal Declaration on Bioethics and Human Rights, building the bridge to the future in terms of reversing history is possible in case we promote one health and love of life which is equal to Bioethics. Removing all possible factors (e.g. abnormal climate change) that are likely to cause extinction and compromises to the future human generations would be mark as great achievement with respect to such duty.

Possession of systematizing mechanism (special circuits in the human brain that allows looking for different patterns around the World in order to invent something new) indicates higher intelligence of human beings than other living organisms. Bipedalism, encephalization, tools making marks such intelligence [22]. Homo habilis that evolved around 2.8 million years ago was the earliest human species to use stone tools. Homo erectus which lived between 1.8 million years ago to 70,000 years ago was the first human species to invent fire. The modern species of human beings Homo sapiens (Latin: "wise man") originated in Africa in about 300,000 years ago [4,23] and spread Worldwide. Homo sapiens have invented complex tools and technologies. Progressively, discovery of fire supported homo to eat cooked foods. Consuming cooked foods supported homo for ease digestion and other physiological processes including encephalization. Bipedalism was adopted for protection purposes. As erect position would easily support Homo erectus to recognize and localize voices of predators. Additional erect position would support Homo erectus to carry different items and physiologically, it would support them for body thermal regulation. With support of diets the nervous system of ancient human beings were enhanced. Encephalization elevated as there is notable evidence that neocortex extended to 76% likened to the average 16% in other animals [4].

Diets contributed to encephalization and in turn to improved cognitive functions for the brain of ancient human beings. Even in modern world, diets play significant roles in the development of human body tissues. Particularly the brain of human beings needs much of the quality diets during rapid growth and developmental periods. This has been a known fact for many centuries. It is firmly unethical that still in the present modern world many people including pregnant women and children do not receive adequate food and nutrition. Adequate food and nutrition can support in terms of attaining of maximal intelligence which is the most needed trait of which most of the world's people wish to possess. Contrarily, undernutrition could hinder numerous people in terms of gaining such intelligence. Over the centuries, undernutrition has been more prevalent at unacceptable level in many parts of the world. This is a hurting fact because, though some of our ancestors lacked adequate nutrition; undernutrition is not a heritage from our ancestors. Despite such hurting fact, another painful fact is that numerous people have been overburdened with different diseases linked to over nutrition. With support of bioethical principles and theories of

ethics, how can the world's communities including bioethicists be involved to address the burden associated with malnutrition? In his chapter, 'Bioethics: a bridge to the future? Published in a book entitled Global Bioethics: What for? 20th anniversary of UNESCO's Bioethics Programme Mary C. Rawlinson asserted that bioethics needs to make food central to its thinking' [24]. No doubt if such thinking is accomplished malnutrition (both under and over nutrition) would be eradicated globally.

Figure 1: A timeline showing different forms of life/organisms that appeared on the earth in different periods as results of evolution processes.



Human beings of palaeolithic time lived in caves and somehow in non-contaminated environments because they were absolute hunter gatherers leading to minimal burden of infectious diseases. However, their life expectancy was as low as only 35 years; due to inadequate food and nutrition, lack of shelters, injuries and disabilities sustained while hunting wild animals, etc. Relevant transitional event in the history of human beings stems back about 12, 000 years ago when humans shifted from absolute hunter gatherers to agrarians. With such shift humans established permanent settlements, communities and began to rear various domestic animals. All these improved their quality of life. However, extra tragedies of infectious diseases began to affect humans unacceptably. Due to lack of medical knowledge and technology, the causes for most

diseases were attributed to superstition forces and to the punishments of God (gods) as of people's sins. There was no healthcare facilities; no sufficient trained health workers. Only Religions played roles for supporting sick people using spiritual and magical techniques. For instance, Imhotep (2650-2600 BC) was an Egyptian, clever physician who treated many patients and due to that, Egyptians considered him as their god of medicine.

The history of diseases and need for optimum health status are almost as old as the history of human beings because human beings have been affected by diseases since ancient time. Cancers, genetic diseases, infectious diseases, neurological diseases and injuries are examples of diseases that have been affecting humans since ancient time. A recent review by Potgieter and colleagues indicates that malignant neoplastic lesion have affected human beings nearly since 2 million years ago [25]. They also report other multicellular organisms being affected by cancers about 1 billion years ago. Possibly, mutation that happened spontaneously during evolutionary mechanism led to some of those cancers. Moreover, in such review authors report both intrinsic (inheritable genetic) and extrinsic (environmental) factors to play a role in the induction of cancers. Typically, intrinsic factors are reported to associate with cancers development less than 10-30%, whereas extrinsic factors contribute about 70-90%. Numerous pathogens and chemicals are implicated as environmental factors leading to cancers. Firmly, environmental factors can be preventable with guide of bioethical principles. Thus, all these should ring a bell in ears of both clinical bioethicists and other health related stakeholders because for many centuries cancers have been horrific conditions to the health of several human beings.

Some genetic diseases would have occurred due to errors in heritability and in nucleic acids transcription and translation. And possibly due to the fact that, prior to the discovery of the field of genetic, people lacked knowledge that, mating of closer human couples leads to consanguinity. Though in the modern world, closer mating of human couples still exists in some cultures [26]. Probably, ignorance is one of the factors leading to such practices. But it is unethical, because most of the consanguineous off-springs are unhealthy. Some people with consanguineous traits live in compromised health status and in fact, some do not live long. Article 16 of Universal Declaration of humans Rights gives three points that seem not to prohibit any types of marriage [27]. However, it is unethical and dangerous to favour marriage for closer relatives. In fact, both agreed and forced kind of such marriage still occurs in different societies. Some lucky offspring survive and innocently bear negative health problems linked to such marriage. The contents of this article 16 must be revised, redefined and updated. Bioethicists, Geneticists, Paediatricians, and others must involve in the revision of this article. Ethically such may support to reduce consanguinity and its burden.

Classically since long ago, numerous people did various heroic actions in order to ensure optimal attainment of humans' health status. Hippocrates is credited as the father of modern medicine. He ushered the movement of logical and real scientific thinking about the cause of diseases rather attributing them to superstition forces [28-29]. He asserted that imbalance of four humors (blood, yellow bile, black bile, and phlegm) could be responsible for human diseases. He also developed medical ethics. His legacy (Hippocratic Oath) for respecting human dignity has been critical since ancient time till present modern world [30]. Aristotle ushered the movement of evidence-based medicine. In 343 BC Aristotle was appointed by King Philip II to be a teacher of his son, Alexander the Great and his colleagues including Ptolemy I sorter. Alexander and Ptolemy I influenced advancement of knowledge via establishment of and developing the school of Alexandria (Alexander was a founder, while Ptolemy I established a famous library of Alexandria and a museum). The students of Alexandria adopted common sense and logic (Aristotelian principle) rather than superstition.

Fathers and inventors of some present scientific fields and practices were trained from the school of Alexandria. Among those include: 1) Euclid (a father of geometry), 2) Heron (the first inventor of steam engine), 3) Archimedes (a famous mathematician of antiquity), 4) Eratosthenes (an

astronomer who firstly calculated the perimeter of the earth to the nearest 100 kilometres), 5) Ptolemy (a father of geography who is credited to draw the first map of the world), 6) Herophilus (a famous ancient anatomist and surgeon who firstly and systematically dissected human body, thus, a father of anatomy, a father of cardiology and discovered in other medical fields such as neurology, ophthalmology et), 7) Soranus (ancient physician who influenced advancement of gynaecology) and 8) Galen (great historical physician whose works were the most influential in medical teaching after the fall of Alexandria school of medicine till renaissance era).

In third century, AD, the spread of Christianity led to the fall of the school of Alexandria, and such became an obstacle to advancement of medicine, other scientific knowledge, technology, and wisdom. The school of Alexandria was active till 3rd Century AD. In 3rd Century AD city of Alexandria became a site of many revolts that were fighting against Roman pagan Rulers and other people. In 389 AD Theophilus Patriarch of Alexandria decreed and received an edict of destroying all pagan related symbols from Emperor Flavius Theodosius. In 391 AD all pagan's related symbols were burnt. Serapeum and second library of Alexandria that located underneath it and numerous books that were kept there were also burnt. That led to the loss of most of discovered knowledge. Unethically, some scientists and philosophers were also innocently killed. Hypatia was female (to inspire many current females not to fear any things including science). She is regarded as last famous philosopher and great mathematician of school of Alexandria. In 415 AD she was innocently killed because of encouraging logical thinking and promoting Mathematics. Range of period between her tragic death and beginnings of renaissance Era has been regarded as Dark ages for advancement of scientific knowledge.

The 14th, 15th, and 16th centuries mark the renaissance Era and such Era mark further progression of scientific fields including medical science because scientists managed to overcome the resistance of churches that had been an obstacle for science since the fall of the school of Alexandria and death of Hypatia. Painfully, lives of many innocent scientists ended with execution. Galileo Galilei (1564–1642) is an example of famous scientist who was executed by church because of his scientific thinking. Accordingly, scientific activities of many scientists were not about to dishonour God. For instance, Isaac Newton (1642–1727) repetitively asserted that his motivation for scientific research was the wish to probe the ways God had constructed the world and thus learn more of God's will. Regrettably, few scientists of present days are compelled by this motivation. The enthusiasm of many scientists of renaissance Era was to understand natural phenomena using experiments and observation as the basis for theoretical thought and mathematical arguments. Science and technology reciprocally began to advance. Discoveries of renaissance scientists paved many new ways for the survival of future human generations. For instance, Antonie van Leeuwenhoek (1632–1723) built a microscope and used it to identify bacteria. Though, he did not describe bacteria as cause of some diseases to humans, for all following years microscope became a powerful means of studying various diseases. Health science (Medicine) is an ever-changing science. However, during Dark Ages periods this fact was not realized. Mainly Galen's works such as anatomy remained the only accepted source of medical knowledge. Renaissance Era inspired numerous prominent physicians and scientists to discover more knowledge with an attempt of advancing the field of medicine and in turn the health of human beings. Among those include William Harvey (1578–1657), Andreas Vesalius (1514–1564) Ambrose Pare (1509-1590), Girolamo Fracastoro (1478–1553, Paracelsus (1493–1541), Leonardo Da Vinci (1452–1519) [31-32].

Despite efforts of such heroic people in terms of advancing health of human beings, uncountable horrific events that disrupted the dignity and health of some human beings happened or started before 1700s. Slavery trade is among those horrific events. It mainly targeted and negatively affected many people from different regions of Africa. Four big slavery trades affected the continent of Africa. The first three and oldest one started at least prior to 800 AD. These are: 1) Trans-Saharan, 2) Red Sea, and 3) Indian Ocean slave trades. The fourth and the biggest is trans-Atlantic slave trade which occurred between fifteenth and nineteenth century. It is estimated that

during trans- Atlantic slave trade between 12 -18 million Africans were forcefully taken away from Africa and four million died along the way. The slave's trades were unhealthy and unethical because it induced wars and conflicts between different territories while trying to capture people for trade.

Gestational Era of Healthcare Bioethics (1750 to 1947)

Between 1750s -1760s industrial revolution (IR) began in England and later it spread to other parts of the world and since then its effects have had huge influences on the health of global population. Development has been a major determinant for health since IR. Remarkably IR brought numerous positive impacts to the health of human beings. For instance, in England, social wellbeing, infrastructure and economy increased. Infant and children mortality reduced. Fertility rate increased, and thus population expanded. Cities and towns grew larger. People migrated from rural to urban areas to look for jobs [33]. However, unethically during early IR Era England systems did not promote strategies that would lead to health for all (both internally and externally). Internally, waste management was poor, overcrowding was a serious problem, and working conditions were poor, Human rights were in violation etc. Externally, England used to get raw materials for its industries from its colonies, however it did not support those colonies to develop (poverty and poor health status remained high in most of its colonies due to lack of fair sharing of benefits of resources they provided). Agonizingly, during Early IR Era, England did not allow the spread of technology and knowledge that could enhance the quality of life in other countries. Discovery of new knowledge, technology and various innovative practices influenced the possibilities of IR. IR have had huge both positive and negative impacts in all sectors.

IR did not solve most of the health-related problems rather it brought new ways for tackling them, in fact some positive and negative health problems have been linked to the impacts of IR. IR enhanced technology and in turn use of such technology in scientific health related research improved humans' survival. John Hunter, John Snow, Edward Jenner, Louis Pasteur and Joseph Lister are examples of enthusiastic investigators who used technology that resulted from IR and the findings of their discoveries have saved many lives. Few negative health problems linked to IR from the thousands include: 1) frequent occurrence of pandemic and epidemic linked to globalization, 2) sedentary lifestyle leading to non-communicable diseases, 3) promotion of unhealthy behaviours such as smoking (as tobacco industries increased), overconsumption of alcohol (a serious toxin to the brain tissues) etc. Unethically, early healthcare system did not warn people about those negative health impacts linked to IR. At least the current system has tried to warn people about those impacts, but some unhealthy behaviours have become legacy to the present people. For instance, some people (both female and male, youth, and adults, educated and non-educated, poor and rich, those from developed and developing countries) still smoke despite evidence that tobacco is very dangerous to their health. Ethical principle such as non-maleficence (do not harm) and beneficence need to be broadened in both preventive and health promotive strategies. Dangerously industrial revolution came as destroyer to the atmosphere due to release of greenhouse gases into atmosphere. Greenhouse gases refer to a set of gases in the Earth's atmosphere with features of absorbing infrared radiations and cause retention of heat inside the atmosphere. Most things have beginnings and ends. Such end might be permanent. The ends of the release of those gases into the atmosphere have become permanent abnormal climate change. The ends of abnormal climate changes have become compromised humans' health and other World's forms of life. All these create ethical dilemmas about how to blame.

Most of the horrifying events (linked to industrial revolution) in the history of human beings are World War I and II [34]. When World War I hit the world from 28 July 1914 to 11 July 1918, it took the lives of 9 million soldiers, 23 million wounded, 5 million civilians died, and more million died due to genocide. Hunger and diseases were more prevalent. From 1918 to 1920 Spanish flu pandemic took the lives of about 17-100 million people globally. World War I increased the movements of people, and such movements increased the burden of Spanish flu. World War II occurred from 1939 to 1945. It approximately took the lives of 70 -85 million people, soldiers and

mostly civilians, young and old, city dwellers and those from countryside. Moreover, lives of tens of millions were lost due to genocide, massacres, hunger, diseases. In 1945, Atomic Bomb made at Manhattan Project by various Scientists led by Robert Oppenheimer (1904-1967) under the influence of United State of America (USA) was detonated in Nagasaki and Hiroshima (Japan) [35-37]. Thousands and thousands of people perished due to such atomic bomb; but also, led to uncountable morbidity including genetic diseases for the future generations. Detonating atomic bomb in Nagasaki and Hiroshima provoked the end of World War II. Erroneously we could say that such saved many lives in case we follow consequentialism. Scientists who manufactured atomic bomb clearly knew its horrifying impacts, as Oppenheimer narrated "We waited until the blast had passed, walked out of the shelter and then it was entirely solemn. We knew the world would not be the same. A few people laughed; a few people cried. most people were silent" [37]. This shows that it was unethical to detonate atomic Bomb in Nagasaki and Hiroshima. In fact, civilians were the mostly affected group.

During World War II some Nazi doctors adopted principles of dangerous knowledge instead of useful knowledge via performing unethical experiments on human subjects [38-39]. They mainly targeted vulnerable groups such as prisoners. Examples of unethical experiments done on humans by Nazi Doctors during World War II are provided in Table 2. Not only Nazi doctors, other tragically experiments that disrespected the dignity of human beings; in fact, dishonoured healthcare and research fields are known. One example of those is Tuskegee Syphilis Study (1932-1972). Accordingly, by 1945 the whole World and dignity of its population were seriously unstable. Thus, there was a need for forming a unified organization that could reverse the history; mainly focusing on safeguarding the dignity and ensuring the attainment of optimum health status for all people globally. United Nations (UN) formed on the 24th of October 1945 became such organization. Since 1945, safeguarding human dignity in any circumstances in all sectors became a critical point. In 1947 Nuremberg trial became a pivotal point that stressed the need for respecting the dignity of all participants who involve in clinical research. Formation of UN in 14945 and 1947 Nuremberg trial mark gestational term period for healthcare bioethics.

Table 2: Examples of unethical experiments done on humans by Nazi Doctors during World War II

Experiment	Targeted Subjects	Procedure of experiment	Tragic outcomes for the subjects/comments
Low pressure Experiment	Prisoners	• Forcefully prisoners were put into low pressure tank [40] • The aim was to determine how long they could survive with insufficient oxygen	• Most died
High altitude Experiment	Prisoners	• Forcefully prisoners were hanged at higher altitude [40] • The aim was to determine how long live in high altitude	• Most died and later autopsied. • Survival was put underwater till they die and autopsy proceeded
Cold Experiments	Prisoners	• During winter (temperature -20^{oc}) naked prisoners were forcefully kept outside 9 to 14 hours(40). • Some were forcefully kept in a bath of freezing water till death • Aim was to determine how long a man can bear cold and consequences of cold until death	• Most died

Malaria Experiment	Prisoners	• At Dachau more than 1000 prisoners were forcefully infected with Malaria parasites. • Some were infected directly by mosquitoes, others injected with malaria parasite from the glands of mosquitoes [40]. • Treatment with experimental anti-malarial drugs followed. • Dr. Klaus Karl Schilling, an eminent malaria expert involved in such unethical practice	• Thirty forced participants died from malaria. • More than 400 died due to complications and overdose of experimental anti-malaria drugs given to them [40].
Twins experiment	Twins' babies	• These were comparative studies with two groups. • Twin baby in experimental could be exposed to a pathogen and killed and then autopsied in order to determine natural progression of disease. • The other control twin was then sacrificed to see what the differences were	• Babies in experimental group died of unreasonable reasons. • Babies are innocent; they could not know the benefit of any experiments. • Involving them in any study requires higher ethical standards
Epidemic Jaundice Experiments	Eight Jews of Polish resistance	• This study took place at Sachsen Hauser and Natzweiler camps. • Experiment began in an effort to determine an inoculation against epidemic jaundice	• Torture • Deaths of participants
Incendiary Bomb Experiments	Five inmates	• These experiments took place in Buchenwald in 1943. • Intentionally and forcefully participants were burned with phosphorous material taken from an English bomb.	• Participants were severely injured

Birth, Growth and Developmental Era of Healthcare Bioethics (1948s to 1990s)

The 1948 was a critical transitional year in regard to respecting the health and dignity of human beings because of United Nations' (UN) ambitions of optimizing the health and dignity of all people Worldwide. In 1948, World Health Organization (WHO) was established. In the same year UN issued 30 Fundamental Universal Declaration of Human Rights [27]. Moreover, in September 1948 in Geneva/Switzerland World Medical Association (WMA) released the Declaration which aimed to inspire all physicians to follow ethical standard while managing all clients. One of the excerpts from Geneva declaration reminds Doctors (health workers) to respect dignity of humans all the time, as it states all doctors must 'MAINTAIN the utmost respect for human life from the time of conception even under threat, must not use their knowledge contrary to the laws of humanity' [41]. The fact that, all these happened in same year and facts of being still active today with aim of maximizing health and dignity of human beings globally, marks 1948 as birth year of healthcare bioethics. The growth of healthcare bioethics progressed as evidenced by existence of other declarations and commitments that aimed to respect the dignity of human beings. Helsinki declaration issued by WMA in 1964 and it focuses on ethical principles regarding human experimentation and Belmont reports [42] are few examples from thousands.

Firmly, after World War II, advance of medical science and technologies together with respecting ethical standards in healthcare sectors have allowed numerous practices and programs that aim to optimize health and dignity of human beings to be possible. For instance, for many centuries, smallpox had been a deadly disease that caused different pandemics with higher morbidity and mortality in different parts of the world. Eduard Jenner was a scientist who lived from 1749 to 1823, at his time smallpox killed about 10% of global population; men and women, young and old, city dwellers and those from countryside, of which the number was as high as 20% in cities and towns due to higher infections spread. In 1796 Jenner discovered smallpox Vaccine; however, due to lack of justice, the application of such Vaccine remained in confined areas. Yet smallpox was a global issue and still in 1950s many people especially those from Africa, Asia and South America continued to perish as consequences of it [16]. In 1958, WHO began programs for eradicating smallpox using smallpox Vaccine discovered by Jenner. Due to application of justice and equitable distribution of smallpox vaccine, such program culminated into successful eradication of smallpox in 1980 [16-17].
Moreover, in mid 1950s, World Health Organization began malaria eradication program. Approach for such program was absolutely vertical via DDT insecticide distribution campaigns that took place in different parts of the world. In 1960s, evidence showed failure of such program due to its absolute vertical nature. Though, such failure stimulated various global health actors to think about the comprehensive approaches that could favour all people from the globe to enjoy the benefits of science and technologies. The cardinal actors from hundreds of actors include Dr. Ken Newell, Dr. Halfdan T. Mahler, and various doctors from Christian Medical Commission [43]. In 1970s, such approaches came to be setting of the ambitions for health for all by 2000, and establishment of primary healthcare (PHC) in 1978. Lack of enough resources, start of global HIV/AIDs pandemic in 1980s and somehow lack of maximal adoption of healthcare bioethical principles led to some feebleness in terms of implementing goals of comprehensive PHC. After launching of PHC, health related problems remained high in developing countries. Vulnerable groups including children continued to suffer. That led to the adoption of selective PHC by some actors in 1979. Mr. James P. Grant is a typical actor who adopted selective PHC in order to ethically save lives of many children who were dying in developing countries. His commitments towards respecting humans' dignity led to existence of UNICEF Declaration of Children's Revolution in 1982. Such revolution contained: 1) Growth Monitoring, 2) Oral Rehydration, 3) Breastfeeding, 4) Immunization, 5) Food supplementation, 6) Female literacy and 7) Family planning (GOBI…FFF). He later influenced existence of Bamako initiative [44] that seemed purely and comprehensively to respect healthcare bioethical principles. Unethically some public health experts opposed this initiative [44]. Today, it is known that Bamako initiative saved many children, yet its legacy has not been recognized by many.

In line with reasons for establishing PHC and health for all, it is clear that by 1970s people from all parts of the world were still unacceptably struggling with health-related problems. Technology and knowledge for tackling some of those problems were availability. Probably, among other observers, Potter observed 1) inappropriate usage of scientific knowledge and technology with respects to supporting the societies, 2) continuous sufferings of people, 3) continuous destruction of ecosystem etc. In early 1970s Potter published his paper entitled Bioethics: The science of survival and his book entitled Bioethics: Bridge to the Future. Prior to Potter's publications, different organizations such as WHO, WMA etc. had started to endorse the use of scientific facts in order to optimize humans' health and their dignity. However, there was not clearly named and defined discipline that could support people to integrate scientific facts with moral principles. Such lack inspired Potter to stress the need for a new discipline that could favour people to obtain wisdom of how to use knowledge for human survival and to improvement in the quality of life. He named such discipline Bioethics. Later the growth and development of bioethics dramatically increased as evidenced by the fact that different reputable organizations honoured and accepted bioethics as new discipline. Among the organizations that endorsed the concepts of bioethics in 1970s include: Kennedy Institute of Ethics at Georgetown University, 2) Hastings Centre, 3) UNESCO and plus others. With respect to bioethics the primary meeting of UNESCO occurred

in 1975, in Varna/Bulgaria, and its main theme was to reflect on the relation between ethics and (molecular) biology [24]. For the proceeding years UNESCO continued to honor the discipline of bioethics. Its activities, scientific conferences and symposium have influenced the growth and development of bioethics until today.

Maturity (But Not Elderly) Era of Healthcare Bioethics (1991 to Present)

By 1991, the discipline of bioethics was well known, its main goal of respecting all forms of life on the earth remained critical. In 1991s the world was nearly entering into new millennium. By 2000 the world entered into new millennium with unfinished businesses. Among others, attaining health for all was still an issue. Millennium development goals ambitions to be achieved by 2015 were proclaimed [45-46]; but this was erroneous description in terms of timing because the millennium that started in 2001 will end by 3000. By 2015 the world still had unfinished businesses [47]. Poverty, hunger, no health for all, no education for all, inadequate gender equality, abnormal climate change etc. were still in existence. All these provoked extensions of 8 millennium development Goals to 17 Sustainable development Goals with 169 targets. Evidence indicate that since 2015 many nations have been making progress in terms of achieving SDGs. However, Covid19 pandemic and other constraints including Russia–Ukraine conflicts and war interrupted all processes designed to support people to gain optimal health status and prosperous lives. Momentously, over the years science and technology continued to advance. Reciprocally, all these brought various ethical dilemmas. Bioethics has remained as a core discipline that would help to tackle all those ethical dilemmas. Millennium Development Goals will remain critical till 3000. The first 15 years (2000-2015) and other 15 years of SDGs (2015-2030) should be regarded as pilot years of probing strategies that will support to implement millennium development goals. What does this fact tell bioethicists and other various stakeholders? The answer is found in one the aims of article 2 of the Universal Declaration on Bioethics and Human Rights as it proclaims we must 'safeguard and promote the interests of the present and future generations' [48-49] all the time, in all means and in all actions.

To ensure highest level of human rights, dignity and health status have been critical targets for many nations and international organizations. UNESCO has put bioethics on its heart as means of ensuring respects to human rights and dignity. Its interests in bioethics started in 1970s [24,29]. In 1990s UNESCO expanded its scopes via becoming a core UN organization in Bioethics and Ethics of Science and Technology [50]. In 1991 "UNESCO's Division of Human Rights and Peace, together with the USSR Academy of Science and the USSR Academy of Medicine, held an international bioethics conference in Moscow May 13-15, 1991. Twenty participants from the United States, Europe, Asia, and South America participated". Since then, UNESCO continued to expand its scopes with respect to bioethics and it has issued various reports and declarations shown in Figure 2 that demonstrate its interests in the discipline of Bioethics. Three global declarations namely: 1) the Universal Declaration on the Human Genome and Human Rights (1997), 2) the International Declaration on Human Genetic Data (2003) and 3) the Universal Declaration on Bioethics and Human Rights (2005) are the cardinally remark of its interests in Bioethics. Not surprisingly WHO also has put Bioethics on its heart as evidenced by existence of Global Network of WHO Collaborating Centres for Bioethics. Considerably, all these have brought recognition of the discipline of Bioethics universally. Thus, maturity Era of healthcare bioethics (Bioethics) because of such worldwide recognition, but not elderly Era because despite being recognized worldwide some of its principles are still in early implementation stages and the fact many countries do not have institutes responsible for teaching and overseeing activities of bioethics.

Painfully, until now, no realization has been made by global communities that bioethics is life for all. Life for all cannot be possible if there is no proper ecosystem and suitable climate. Over the years various eminent actors of the World have wished the attainment of health for all. Truly, Health for all cannot be possible if there is no life for all. In point health for all should be regarded as subset of life for all (Bioethics). The main goal of health for all was to support all people globally

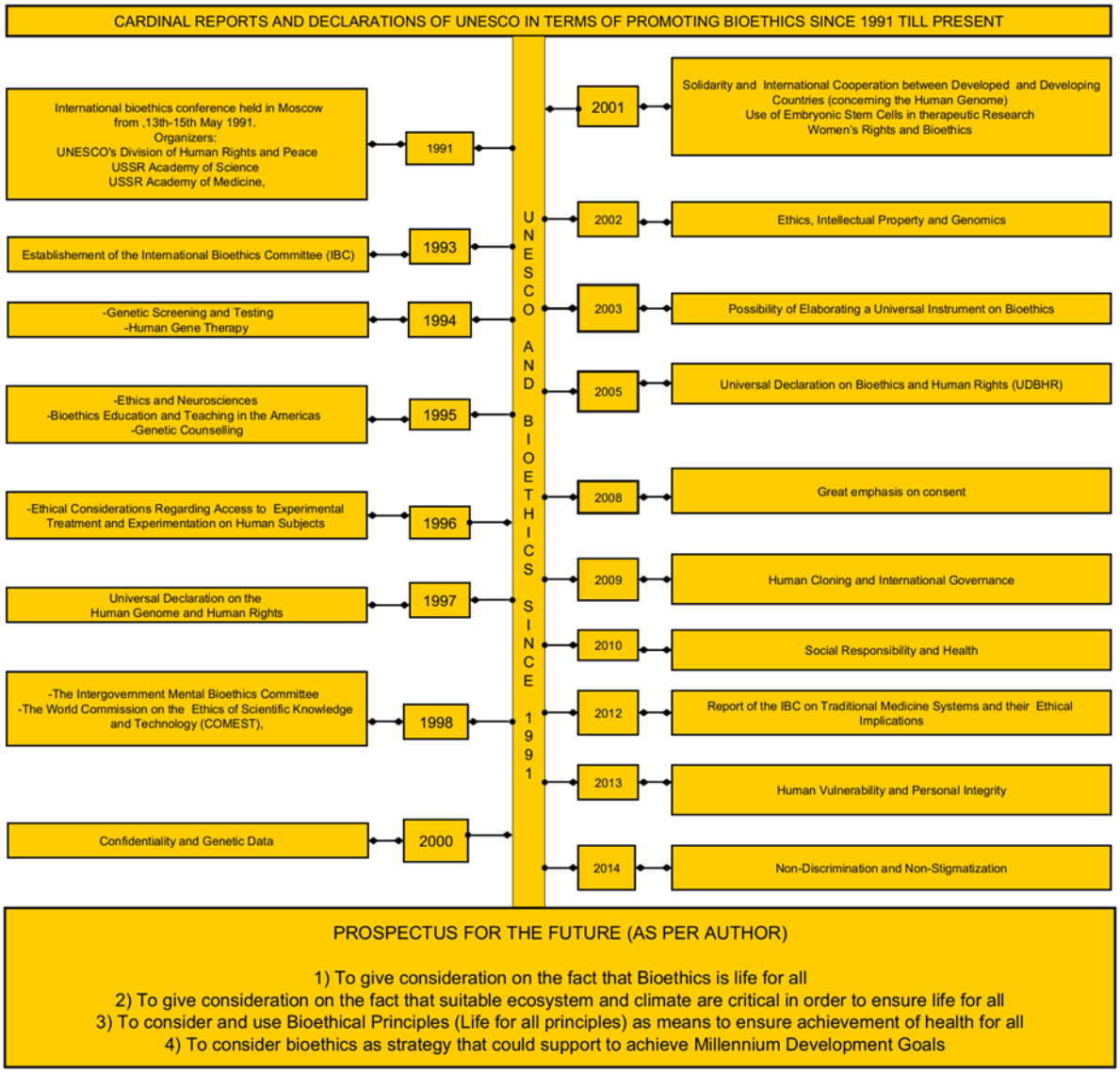
to gain highest level of dignity and health status. To achieve health for all is still relevant agenda for the present days as recognized by WHO, in fact, the main theme of recent 76 WHO General Assembly (21st May to 30th May 2023) included the word health for all. If one thinks properly, one of the applications of the principles of bioethics must be to support the implementation of all goals and principles set in health for all ambitions and other ambitions. Ethical principles namely non-maleficence (do not harm), beneficence, autonomy, and justice must broaden and utilized in all sectors. Ethically, all worlds' people should not adopt anything or behaviours that are likely to harm their health rather they must promote those one that are likely to promote their health (beneficence). Do not harm principle should be used to promote peace comprehensively worldwide. Do not harm is critical principle to use for avoiding conflicts between individuals, conflicts and wars between groups, communities and countries. Do not harm principle should be used to empower people to stop doing activities that destroy ecosystem and those that lead to abnormal climate change. Beneficence must be used in terms empowering people to maximally use timely climate adaptation strategies. The end of all scientific activities and technologies must be to support the progression of life for all living things in shared appreciation of one living things to another. Scientific knowledge and technology should not be used with purposes of harming humans' health and destroy ecosystem. Following these ethical standards will support to implement health for all agenda and other ambitions including Sustainable development goals.

Conclusion

After comprehensive review and synthesis of the literature presented in this paper my conclusions are as follows:

1. With regard to the history of Healthcare Bioethics all periods (B.C., A.D. to 1749s) prior to beginnings of industrial revolution, should be termed as Preconceptional Era of Healthcare Bioethics because the usage of ethics in health care existed however, there were minimal utilization of scientific knowledge and technologies in healthcare sectors.
2. With respect to the history of healthcare bioethics, the period between the beginnings of industrial revolution (1750s-1760) till 1947s should be labelled as gestational era of healthcare bioethics. Because, despite enhanced invention of scientific of knowledge and use scientific knowledge and technologies in healthcare sectors, several scandals, wars, conflicts and scientific activities that disrespected the dignity and health of human beings and some destroyed bionetworks of which life would be maintained were more apparent. They were done intentionally by various people including health related scientists. Those people were the promoters of dangerous knowledge as they adopted unethical practices. Firmly, what happened during this era became the motives for the establishment of the discipline of bioethics. Thus, in turn healthcare bioethics.
3. Regarding the history of healthcare bioethics, the period between 1948s to 1990s should be recognized as birth, growth and developmental era of healthcare bioethics because since 1948 various commitments that aimed to respect the dignity and health of human beings have been taken, Science and use of technologies in health care setting have dramatically increased and bioethics as new discipline with several institutes related to it were established. But during this era, no global declaration linked bioethics in terms of respecting the dignity and health of human beings had been taken.
4. The period from 1991 to present should be acknowledged as maturity (but not elderly) Era of healthcare bioethics. Maturity due to UNESCO adoption of three global declarations linked to Bioethics. Respecting human rights, dignity and health of all humans are critical concepts in those declarations. Not, at elderly level due to the fact that, all world's countries have not adopted all principles asserted in those declarations. Yet ethical dilemmas related to health are ever increasing worldwide. Most countries do not have institutes related to bioethics. As such teaching of bioethics is still suboptimal globally. Promoting the usage of ethical principles in healthcare sectors is very critical. There is a need for recognizing bioethics as life for all. Such recognition will support in terms of attainment of health for all and protection of ecosystem.

Figure 2: Showing reports and declarations related bioethics issued by UNESCO demonstrating its cardinally interests in discipline of bioethics



5. Finally, Healthcare Bioethics is very important and has long history. It should be listed among the recognized branches of bioethics. However, after numerous searches on various internet sources, it was found that no published literature thoroughly describing Healthcare Bioethics, what is available is just a mention of healthcare bioethical principles. It was also recognized that some authors misuse terms such as clinical bioethics, medical ethics, and biomedical ethics etc. as if they are equal to healthcare bioethics. UNESCO and other health related organizations such as WHO should recognize Healthcare Bioethics as a branch of bioethics. Principles of bioethics must be integrated in all healthcare sectors. Thus, forming healthcare bioethics. Accomplishing that would support to eradicate or minimize several of the ephemeral and heuristic approaches which are still hindering the attainment of optimum health status for the global population. Author is currently working on the paper entitled HEALTHCARE BIOETHICS: Its Description, Its Branches, Its Core Principles, Its Functions, Pre-Standard and Standard Practices in Healthcare Bioethics, with a hope that, it will serve as roadmap for establishing and recognizing healthcare bioethics as branch of bioethics.

REFERENCES

1. Cascais AF. Bioethics: History, Scope, Object. Glob Bioeth 1997;10(1–4):9–24.
2. Martins PN. A Concise Study on the History of Bioethics: Some Reflections. Middle East J Bus 2018;13(1):35–7.
3. Stevens MLT. The History of Bioethics [Internet]. Third Edit. Reference Module in Biomedical Sciences. Elsevier; 2014. 1–9 p.
4. Restani P, Colombo F, Biella S, Bani C, Mercogliano F, Lorenzo C Di. applied sciences Diet , Polyphenols, and Human Evolution. MDPI [Internet]. 2022;1–15.
5. Potter VR. Bioethics The Science of Survival. Carl PS. editor. Englewood cliffs, New Jersey: Prentic Hall International; 1971.
6. Muzur A, Rinčić I, Fritz J. The Father of European Bioethics. Synth Philos 2011;51(1):133–9.
7. Muzur A. Europäische bioethik: Neue geschichte für neue zukunft. Soc Ekol 2017;26(1–2):61–70.
8. Goldimi JR, Raymundo MM, Fernandes MS, Helena M, Lopes I, Kippers DJ, et al. Clinical Bioethics Committees: The Brazilian Experience. J Int BioEthique 2008;19.
9. Henk M, Patrão Neves M. Bioethics, Global. Dictionary of Global Bioethics; 2021. 175–176 p.
10. Steger F. Fritz Jahr's (1895-1953) European concept of bioethics and its application potential. JAHR 2015;6(12):29–33.
11. Sass HM. Fritz Jahr's 1927 concept of bioethics. Kennedy Inst Ethics J. 2007;17(4):279–95.
12. Zanella DC. Is the Brazilian Made Bioethics Social ?. Eur J Bioethics 2021;12(1):87-105.
13. Furnari G, Furnari MG. The Scientist Demanding Wisdom: The "Bridge to the Future" by Van Rensselaer Potter. Johns Hopkins University Press 2002.
14. Moscovici M, Engelhardt E. Andreas Vesalius as a renaissance innovative neuroanatomist: his 5TH centenary of birth. 2015;(September 2014):155–8.
15. Sellmeyer E. "I shall not keep in my bedroom several weeks bodies taken from graves …" 1: Andreas Vesalius and the Impact of De Humani Corporis Fabrica on Anatomical Exploration.
16. World Health Organization. Report F, Commission G, Eradication S. THE GLOBAL ERADICATION Final Report of the Global Commission for. WHO. 1980.
17. Senger DJ. Smallpox Eradication. CDC Museum Public Health Acad 1980;1–9.
18. Janvier N. African Countries being categorized as developing countries should not be an excuse for having a Weak / Poor Health System. Glob Sci Journals 2022;10(5):2119–24.
19. Bell EA, Boehnke P, Harrison TM, Mao WL. Potentially biogenic carbon preserved in a 4.1 billion-year-old zircon. Proc Natl Acad Sci USA 2015;112(47):14518–21.
20. Duve C De. The Beginnings of Life on Earth. 1995;83(5):428–37.
21. UNESCO. Universal Declaration on Bioethics and Human Rights. Law Hum genome Rev = Rev derecho y genoma Hum / Chair Law Hum Genome, BBV Found Gov Biscay, Univ Deusto. 2005;(23):227–37.
22. Ko KH. Origins of human intelligence: The chain of tool making and brain evolution. Anthropol Notebooks 22(1):5–22.
23. Chaabani H. Recent out of Yemen : new version of the theory of unique and recent origin of modern man. Int J Modern Anthropol 2014;13–42.
24. Callahan D, Lamm E. Global Bioethics: What for? 20th anniversary of UNESCO's Bioethics Programme. UNESCO; 2015.
25. Rifkin RF, Potgieter M, Ramond JB, Cowan DA. Ancient oncogenesis, infection and human evolution. Evolutionary Applicat 2017 Dec;10(10):949-64.
26. Bittles AH. A community genetics perspective on consanguineous marriage. Public Health Genomics. 2008 Aug 5;11(6):324-30.
27. Yacine Ait Kaci. Universal Declaration of Human Rights (UDHR) is published by the United Nations in. © 2015 United Nation. 2015;4.
28. Qidwai W. The hippocratic oath: has it ceased to be relevant?. Journal of Pakistan Medical Association 2004;54(4):229-33.
29. Grammaticos PC, Diamantis A. Useful known and unknown views of the father of modern medicine, Hippocrates and his teacher Democritus. Hell J Nucl Med. 2008 Jan 1;11(1):2-4.
30. Clark SA. The impact of the Hippocratic Oath in 2018: The conflict of the ideal of the physician, the knowledgeable humanitarian, versus the corporate medical allegiance to financial models contributes to burnout. Cureus. 2018 Jul 30;10(7).
31. Toledo-Pereyra LH. Medical renaissance. Journal of Investigative Surgery. 2015 May 4;28(3):127-30.
32. Siraisi NG. Medieval and early Renaissance medicine: an introduction to knowledge and practice. University of Chicago Press; 2009 May 15.

33. Mohajan H. The first industrial revolution: Creation of a new global human era.
34. Wilhelm, I.I., Wilhelm II, German Emperor-History of World War I-WW1-The Great War.
35. Rogers JD. Implementation of a national information infrastructure: Science and the building of society. Virginia Polytechnic Institute and State University; 1996.
36. Hevly BW, Findlay JM, editors. The atomic west. University of Washington Press; 2011 Dec 1.
37. Cuhra M. The scientist: creator and destroyer—"Scientists' warning to humanity" is a wake-up call for researchers. Challenges. 2019 Jul 31;10(2):33.
38. Marks AR. Doctors from hell: the horrific account of Nazi experiments on humans. The Journal of Clinical Investigation. 2006 Jan 4;116(1):2.
39. Loewenau A, Weindling PJ. Nazi medical research in neuroscience: medical procedures, victims, and perpetrators. Canadian Bulletin of Medical History. 2016;33(2):418-46.
40. Novak D. Is the use of data from Nazi medical experiments justifiable or not?. Ethics, Medicine and Public Health 2020;12:100431.
41. World Medical Association. Code of Ethics. 1994.
42. Donald T. Campbell and, Cecil JS. Appendix Volume II, The Belmont Report Ethical Principles and Guidelines for the Protection of Human Subjects of Research. DHEW Publ.
43. Walley J, Lawn JE, Tinker A, De Francisco A, Chopra M, Rudan I, Bhutta ZA, Black RE. Primary health care: making Alma-Ata a reality. The Lancet. 2008 Sep 13;372(9642):1001-7.
44. World Health Organization. Global Network of WHO Collaborating Centres for Bioethics: progress report 2017-2018. WHO: Geneva; 2018;
45. United Nation Organization. The Millennium Development Goals. UN; 2015.
46. Satterthwaite D, editor. Millennium Development Goals and Local Processes: Hitting the Target Or Missing the Point?. IIed; 2003.
47. Ki-Moon B. The millennium development goals report 2013. United Nations Pubns. 2013;365-6.
48. Kirby M. Human rights and bioethics: The universal declaration of human rights and UNESCO universal declaration of bioethics and human rights. J. Contemp Health Law Policy 2008;25:309.
49. Ten Have H, Jean M, editors. The UNESCO universal declaration on bioethics and human rights: Background, principles, and application. Unesco; 2009.
50. Martínez-Frías J, Hochberg D. Classifying science and technology: two problems with the UNESCO system. Interdisciplinary Science Reviews 2007;32(4):315-9.

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Review Paper

Legal and Ethical Aspects of Cloning and De-Extinction – A Short Review

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ABSTRACT

The discovery and deciphering of the human and animal genomes opened completely new fields in the domain of science. Opportunities for advancement in all fields have become almost limitless. In the last 50 years, science has progressed more and better than in the last millennium. This progress has led us to a number of questions of primary moral and then legal character. Should we slow down or limit progress? Have we crossed the lines we shouldn't have crossed? Should we completely free science from all moral and legal rules and stick to the principle of laissez faire, that is, let everything take its course? One of the most controversial issues that has arisen in recent decades is the question of the ethics of cloning, i.e. the artificial reproduction of living organisms – humans and animals. Almost all relevant factors tried to answer this question. Thus, some believe that cloning should be used both for therapeutic and reproductive purposes, while others go a step further and mention the economic exploitation of clonal organisms. Others believe that we have opened Pandora's box and that we are playing God, and are strongly opposed to cloning as a procedure, regardless of the goal and purpose. The main goal of the text before you is the author's attempt to make his modest contribution to this discussion.

Keywords: cloning, de-extinction, ethics, law, genetic engineering, morality, respect for life
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"Life will always find a way."

Jeff Goldblum in 'Jurassic Park' (1993)

Introduction

The possibility of artificial multiplication of living organisms was the subject of speculation and the subject of many discussions during the 20th century. But the history of cloning goes back much longer. It is believed that the first gene manipulations were carried out by humans more than 2000 years ago (using methods such as grafting or stem cutting, but here we must wonder if people were then aware of the manipulation of nature they were doing). The modern era of cloning begins in 1958 with the first artificial multiplication of carrots. Namely, that year F. C. Steward cloned carrot plants from mature single cells placed in nutrient culture containing hormones. A few years later, the first animal was cloned – a frog (xenpus). The scientists did this by taking the nuclei of intestinal cells and injecting them into unfertilized eggs whose nuclei of the original parents had been destroyed using UV light. About 20 years later (in 1983), J. McGrath and D. Solter successfully cloned the first mammal – a mouse, by introducing the pronucleus of one zygote into another enucleated zygote (admittedly, the first failed attempt to clone mammals was performed by D. Bromhall in 1975 by transplanting the nucleus into a guinea pig oocyte). Soon after, progress in

biotechnology erupted, which led to the successful cloning of the famous Dolly the Sheep in 1996 (by the technique of somatic cell nuclear transplantation) [1]. Since then, many different types of life have been successfully cloned – cows, dogs, coyotes, wolves, cats, camels, rats... All this tells what the possibilities of science are and what is its beauty. However, certain authors believe that this is precisely the dark side of science and that this is a path that we do not know where it will lead us. Will it be self-destruction or something else? Did science do the right thing when it entered the field of bioengineering? Is what is being done ethical? The author hopes to find answers to these and many other questions in the following lines.

Cloning – A Step Forward in Science or Two Steps Back In Morality?

Cloning a human (or human being) is a process in which the entire DNA of one human is introduced into an egg cell to obtain an embryo with an identical DNA code. The resulting embryo is almost the same as any other. The only difference between an embryo created in this way and an embryo created through natural reproduction is that it contains the DNA of only one person, not two. Today, he distinguishes between two basic types of cloning: (i) reproductive cloning and (ii) therapeutic cloning. In the first case, cloning serves as a substitute for the natural reproductive process. The resulting child has only one parent with whom it shares DNA and/or a surrogate mother (depending on whether the DNA donor also carries an embryo). The purpose of reproductive cloning is to create a new individual, in this case a new human. In therapeutic cloning, the situation is much different. A new human being is not developed from the resulting embryo, but its stem cells are extracted and used to treat the DNA donor [2]. Proponents of reproductive cloning argue that it must be allowed as part of the procreative rights of couples who cannot otherwise have children or people with hereditary diseases for whom sexual reproduction poses a risk. According to this understanding, reproductive rights include the right to procreation through cloning when this is the only possibility of obtaining offspring. If the state wants to limit that right, then it must state the reasons for such a decision. In addition, proponents of reproductive cloning maintain that its ban violates the right to scientific research, which is guaranteed in the constitutional provisions of most states. However, even this right is not unlimited [1, 3]. Opponents of reproductive cloning most often cite as their argument the violation of the principle of equality of human beings. Namely, this argument expresses the fear that clones will be treated as „assets “, and that they will thus become second-class beings. In principle, it is a moral and political question: Should clones be given the status of a natural born human with all the associated packages of rights and treated equally or treated as an industrial product? A further argument against reproductive cloning is the claim that cloning destroys a person's personal identity. This argument is based on the claim that every individual has the right to their genetic identity, and cloning violates that right because a clone is a copy of the person who donated the nucleus [1, 4-5]. Here then we must ask ourselves, from the point of view of the DNA donor: Is the clone me or is it just like me? Is it the original or is it a copy of the original? If it is an original, then it must mean that it also has the characteristics of the original: habits, emotions, memories, values, beliefs… It would be real so that the consciousness of the original is cloned along with the body. So, it is still a copy of the original that presents itself as an individual and independent organism with its own consciousness and its own thinking. That copy can start to develop in a completely different direction and take on characteristics opposite to those of the original. In short, the DNA donor (the original) is only one, and each clone created from his DNA is his independent copy. In principle, there is an original, but there is also a clone. The clone was created from the original, because if it wasn't for him (the original) there wouldn't be a clone either (the theory of originality or genuine theory). After this discussion, if we return to the posed dilemma, we can conclude that this can violate the personal identity of the DNA donor, but only if it is a completely identical clone, i.e., a clone that, in addition to the body, shares the consciousness with the original. Furthermore, the argument that reproductive cloning violates human dignity is closely related to the idea of human instrumentalization. This argument is acceptable, but only in cases where we would use the clones as assets, for example as a reservoir of spare parts for ourselves [2, 6-7]. This question of ours leads to another type of cloning, which is cloning for therapeutic purposes. The main argument pro therapeutic cloning is that it can result in the elimination of many diseases and the solution of many other health problems. Namely, since there are organs in the human body that cannot be

regenerated at all (or regeneration requires a long period of time), it is considered justified to use stem cells created by cloning. These are, in principle, undifferentiated cells that can differentiate to become, for example, nerve cells [8]. Thus, therapeutic cloning could lead to the creation of a completely new industry – the industry of human tissues and organs. However, then certain moral dilemmas arise.

In bioethics, cloning ethics considers many ethical positions regarding the practice and possibilities of cloning, especially human cloning. Although most of these attitudes are of religious origin, the authors also deal with questions from a secular perspective. Human therapeutic and reproductive cloning is not used commercially (at least not yet). However, there are proponents who support the development of therapeutic cloning to create whole tissues and organs to treat patients who cannot receive tissue or organs from a living donor or to avoid immunosuppressive therapy. Some are concerned about the possibility of using therapeutic cloning to prevent the effects of aging (for cosmetic purposes).

Considering the chronic shortage of organs for transplantation all over the world and the appearance of criminal acts that are the result of the high demand for organs, the possibility of cloning, for example kidneys or liver, gives great hope to those waiting for their turn for transplantation. In addition, the application of the therapeutic cloning technique would largely solve the problem of organ rejection during transplantation. It is clear from all the above that the technique of therapeutic cloning represents a potentially very effective tool in improving medicine [1]. So, if we look at a simple economic calculation – the criminal market of human and human organ trafficking would be reduced and those whose lives depend on organ or tissue transplantation would be saved (the possibility of rejection of the organ would be very small, if the organ or tissue is cloned, because it is the same DNA). Doesn't that look like a win-win situation? Maybe not after all. In order to get the tissues or organs needed by the patient, we have to clone the whole human being, keep him in a vegetative state and harvest tissues or organs as needed. This most controversial issue in the bioethics of cloning would not be a problem if it were possible to artificially create a tissue or organ on an artificial basis, rather than the whole body.

A new question arises here: Do clones have rights? In response to that question, we must consider the question: What exactly is a clone? Is he a human being? Or is he the thing? To obtain a clone at all, it is necessary to apply one of the cloning methods: SCNT (somatic cell nuclear transplantation) or iPSCs (induced pluripotent stem cells). Whatever we apply, we will get an embryo that later develops into an organism [9]. So, it is unquestionable that we need to grow the whole body to get functional organs. If it is an independent individual organism, we must ask ourselves if it is moral to treat another being in such a way that we use his body for harvesting as needed. But what is that being? There are many different understandings of the concept and content of this term, but in principle by being we mean a complete (healthy or with defects) organism that has virtues and defects (sociological-cultural point of view) or a God-realized (spiritualized) organism (philosophical point of view). If it is a subject that develops from an embryo into a fully functional organism (but which does not have two, but carries one genetic material), then it is logical to conclude that it is a living being that will probably (and certainly if it is a human clone) to have awareness and know how to express oneself in some way. This leads to the conclusion that the clone is a being, only its origin is a little,, different. Furthermore, we arrive at the fact that a clone as a self-aware being with the ability to express its peculiarities is not a thing. However, maybe we still want to adhere to the legal maxim that, although clones are not things - but the same applies to them as to things? Then it is an industrial material that has only one purpose - to be liquidated to exploit its organs or tissues. What then is the meaning of creating that life? Is it just playing the gods? Perhaps this moral dilemma should be resolved in such a way as to make it immediately clear to the creep that he serves a purpose – to be sacrificed for the salvation of another human being. In this sense, it is a universal ethical principle – self-sacrifice for another. But what if the clone refuses?

The fact is that cloning causes many moral as well as legal dilemmas (which we will see later). Every time we try to find an answer to one question, another arises. Thus, this discussion falls into

a kind of vicious circle. However, work on cloning techniques has advanced our basic understanding in humans. Observing human pluripotent stem cells grown in culture provides great insight into the development of the human embryo, which cannot otherwise be seen. Scientists can now better define the steps of early human development. Studying signal transduction together with genetic manipulation within the early human embryo has the potential to provide answers to many developmental diseases and defects. Many human-specific signalling pathways have been discovered by studying human embryonic stem cells. The study of developmental pathways in humans has given developmental biologists more evidence for the hypothesis that developmental pathways are conserved across species. Cloning gives us answers to new questions and with the help of biomedicine we question the world around us. This tells us that nothing is absolute. Maybe the purpose of cloning is exactly that - to enable us to find an answer to the meaning of life? And what is life anyway?

De-Extinction – One Question More?

The procedure and the issue arising from cloning is the issue of de-extinction, that is, resurrective biology. Namely, it is a process of recreation of extinct organisms (plants or animals). The most suitable method for performing this procedure is, in addition to backward selection, certainly cloning [10-11]. Although it has many advantages, resurrective biology entails many technological and ethical issues.

The de-extinction procedure is, in our humble opinion, a procedure of great importance for bio-conservation. With it, we can save tens of thousands of animal species that die out every day, and even bring back long-lost species (like the mammoth or the sabre-toothed tiger). The technology that would allow us to do this is under development and we believe that within a few years the process of completely returning extinct species to life will become our reality. Let's consider how important it would be for our understanding of life on earth in general. Let's imagine ourselves in a situation where we can observe a giant sloth in its natural environment or once again admire the not-so-long-lost dodo bird. However, what are the moral complications that can arise? Is resurrection biology ethical? In short, the answer to this question can be viewed from the aspect of the goals and purposes of this procedure. For example, the dodo bird was killed en masse for its delicious meat, and the reason for the extinction of this species is precisely man. So, what would be the goal and purpose of returning the dodo bird to life? If it is for study and observation in the natural habitat – then it could be moral and even the right thing to do. However, if dodo birds were to be brought back to life through resurgent biology only to economically exploit them for their tasty meat – then the technology that would be used for this purpose should be at least limited or even completely prohibited. So, if we bring a particular animal species back (e.g. the Tasmanian tiger or the aurochs or the dodo bird) and put it in the same position it was in at the time of extinction – then naturalist scientists are no better than the people who caused those species to disappear.

In addition, there are many other ethical dilemmas to which we still do not have an answer - should the extinctions have happened or are we allowed to play with nature in such a way? Many authors believe that human intervention in certain natural processes, such as extinction, can entail serious consequences. In addition, the fresh de-extinct animal would be a purely human creation and would be the result of purely human interference. Of course, there are pros and cons to everything in science. Thus, the advantages of resurgent biology are stated: (i) recreational value (this is often considered a central motivation for de-extinction), (ii) advancement of scientific knowledge (de-extinction could offer unique opportunities for studying the life history and biology of ancient revived species), (iii) technological advancement (advances in genetic engineering), (iv) environmental benefits (the massive loss of species causes the destruction of the natural systems that purify the world's air and water and any contribution of de-extinction to such processes could theoretically have very high-dollar value, such contribution would also happen indirectly, through usage of de-extinction methods in bio-conservation) and (v) educational and cultural values (the environmental education associated with de-extinction could boost the other utilities, notably, environmental protection and funding for environmental causes). As arguments against this procedure, the authors point out: (i) unwise expenditure (de-extinction may prove a bad

investment, as the chances that resurrected species will not last are realistic), (ii) health concerns (newly de-extinct creatures might prove excellent vectors for pathogens, an extinct animal's genome could also conceivably harbour unrecognized, harmful endogenous retroviruses), (iii) environmental hazard (if the ecosystem that formed the habitat of the extinct species has changed significantly, the reintroduced species may prove to have become a pest) and (iv) harm to animals (utilitarianism that views all sentient beings as moral patients, must calculate animal suffering) [12-21].

It is our humble opinion that we still need to continue working on the development of the technology necessary for the resurrective biology procedure. Also, we believe that bringing extinct species back to life under strictly controlled conditions and in a strictly controlled and limited area would not entail serious consequences - either ethical, practical or environmental (or at least it shouldn't), and yet would have great significance for the development of science and our understanding of the world around us.

Legal Regulation and Problems

The international community - aware of the fact that science has entered legally unregulated spheres, has started preparing and adopting international legal frameworks. The first international instrument that regulates the issue of (reproductive) cloning and explicitly prohibits it is the Declaration on the Human Genome and Human Rights adopted in 1997 within the framework of UNESCO. In the declaration, reproductive cloning is condemned as a practice against human dignity [1]. However, since the declaration is not a legally binding document, at the initiative of some countries, the UN General Assembly formed an ad hoc committee a few years later (2004) whose task is to prepare a document that will be binding for all member states of this universal international organization. But, as is often the case, the states did not manage to reach a consensus on all issues. Namely, agreement was reached on the complete prohibition of reproductive cloning, but therapeutic cloning remained an open question. Some countries believed that all forms of human cloning should be banned (some proposals, e.g., Costa Rica, went so far as to make cloning a criminal offense), while others emphasized the potential advantages of therapeutic cloning. Thus, for example, Spain proposed to ban both types of cloning because, according to their delegation, they are inextricably linked. On the other hand, one of the alternative proposals was to include in the final document a ban on therapeutic cloning for a period of five years from the adoption of the convention and to give the states the possibility of placing reservations on these provisions. Despite the efforts and negotiations that lasted four years with interruptions and even though all countries agreed on the prohibition of reproductive cloning, the convention was not adopted. Disagreements and disagreements regarding the legal regulation of therapeutic cloning were too great and eventually prevented the adoption of a convention. Finally, in 2004, a Working Group was established with the task of drafting a declaration on cloning, and in March 2005, the Declaration on Human Cloning was adopted, which calls for the prohibition of all forms of human cloning insofar as it is incompatible with human dignity and the protection of human life. Adoption of this Declaration does not represent a significant step in terms of legal regulation of cloning. As previously stated, the declaration by its legal nature does not necessarily represent a legal document, so this declaration has only symbolic significance [1].

What did not succeed at the international universal level succeeded at the regional, or rather – European level. One of the most important intergovernmental organizations - the Council of Europe - adopted two important documents: (i) the Convention on the Protection of Human Rights and the Dignity of the Human Being in the Application of Biology and Medicine: Convention on Human Rights and Biomedicine and (ii) the Additional Protocol on the Prohibition of Human Cloning beings. Legal theory was divided over whether the Convention itself really prohibits human cloning. Namely, in Article 1 of the Convention, the contracting states undertake to protect the dignity and identity of all human beings, which leaves room for numerous machinations. Therefore, it was necessary to adopt the Additional Protocol, which explicitly prohibits the cloning of human beings (the provisions of Article 1 of the Additional Protocol prohibit any procedure intended to create a human being genetically identical to another human being, whether living or dead).

Regarding the cloning of human beings, the state's policy varies, but all the positions expressed so far advocate the prohibition of (reproductive) cloning, while there are serious doubts about therapeutic cloning. Today, there is not a single country that has legalized reproductive cloning, and an increasing number are passing laws prohibiting the creation of identical human beings using the cloning technique (some states have even criminalized the cloning of human beings with serious criminal sanctions). So, for example, if you clone a human being in Germany, you can face a fine or a prison sentence of up to five years, while if you do the same in Italy, you will face a prison sentence between 10 and 20 years and a fine between 600,000 and 1,000,000 euros. Only a few countries have enacted legislation regulating therapeutic cloning, either explicitly prohibiting it (e.g. Germany, France) or allowing it (e.g. Japan, Belgium, Sweden, the United Kingdom, Israel and others). On the other hand, a large number of countries have not legally regulated this issue [1].

The legal issue continues with the disappearance procedure. The first question that arises is: Will the revival species be, legally speaking, an „endangered species"? The answer to this question is unclear. Legal regulations regarding the requirements that a species must „fulfill" in order to be endangered are different, but, in principle, the following criteria are valued: (i) has a large percentage of the species' vital habitat been degraded or destroyed, (ii) has the species been over-consumed by commercial, recreational, scientific or educational uses, (iii), is the species threatened by disease or predation, (iv) do current regulations or legislation inadequately protect the species and (v) are there other people -made factors threatening the long-term survival of the species. According to Sherkow and Grelly all considerations that would seem to apply to a newly revived species and, ironically, international organizations typically tie endangered status to whether species' population has declined – the opposite of the concern about newly revived species. Uncertainty about the status of de-extinct species will affect numerous civil, criminal, and international laws [14]. Another question that arises is: Is it possible to patent revived species? At this moment the answer is - no (?). patenting of new animal breeds, as well as essentially biological procedures for obtaining new animal breeds, are exempt from patent protection. However, this all refers to „new" species, and strictly speaking the Tasmanian tiger or the woolly mammoth are not exactly „new" animal species. This brings us to the third question: Will this area be legally regulated and, if so, how? Again, the answer here is quite unclear. As it is a not very insignificant sphere of life, leaving it legally unregulated would be disastrous. The ways and mechanisms by which this can be done are different: adoption of international conventions (universal or regional), adoption of regulations at the national level with coordination and consultation with the scientific community, adoption of inter-university or inter-scientific (non-binding) declarations or guidelines in the form of opinions of the experts... So, the mechanisms are different, but since this is not a discussion whose goal is to find a de lege ferenda solution, we will stop here.

Conclusions

There are certainly legal and ethical reasons against cloning, and we cannot say that they are not well-founded. The consequences of cloning can be disastrous from a moral point of view. Is it really our intention to put human clones in the position of prisoners in Nazi concentration camps or bring extinct animals back to life just to exploit them economically? If so, then I have to give up on further research and direct those resources to something much more humane. But if that is not our intention – we need to roll up our sleeves and fill the boilers of progress with the highest quality coal and boldly move into the future. The need for medical progress is slowly overriding moral and ethical principles, so society and law are adapting to it. It is our opinion that one should not hold back in the pursuit of constant progress. This is precisely why science is so wonderful. She tells us that nothing is absolute and that we should constantly question the world around us. After all, it's in our human nature. Also, we believe that we should tread with caution on certain paths of science. This is the only way we can avoid certain negative consequences that may occur. Whenever possible, it is necessary to avoid causing excessive suffering to all living beings, but we should not adhere to this at all costs. Cloning and de-extinction should definitely be subject to appropriate legal regulations and these two processes should be kept under constant supervision.

But these restrictions must not be greater than necessary. They should be such as to avoid negative consequences, but not such measures as to hinder any kind of progress in science.

REFERENCES

1. Škorić M. Pravna regulacija reproduktivnog i terapeutskog kloniranjana međunarodnoj i nacionalnoj razini. Zb. Prav. fak. Sveuč. Rij 2007;28(2):1239-67.
2. Polšek D. Sloboda kloniranja. Filozofska istraživanja 2004;93(2):609-20.
3. Macintosh, K. L. Illegal Beings, Human Clones and the Law. Cambridge University Press; 2005.
4. Navratiyl Z. Legal and Ethical Aspects of Human Reproductive Cloning. Acta Juridica Hungarica 2013;54(1):106-17.
5. Raz Dž. Etika u javnom domenu. CID; 2005.
6. Mujović H. Perspektive pravnih i bioetičkih razmatranja sa stajališta medicinskog prava. Filozofska istraživanja 2022;165(1):53-61.
7. Birnbacher D. Human Cloning and Human Dignity. Reproduct Biomed Online 2005;10:50-5.
8. Pavelić K. Potencijalna važnost postupka prijenosa jezgara u kliničkoj medicini, Argument za kloniranje stanica ljudi. Društveni značaj genske tehnologije, Polšek D. & Pavelić K. (eds.). Institut društvenih znanosti „Ivo Pilar", Zagreb; 1999:85-91.
9. Nikolić I., Rančić G., Radenković G., Lačković V., Todorović V. & Mitić D. Embriologija čoveka. Medicinski fakultet Univerziteta u Nišu; 2004.
10. Richmond DJ, Sinding MHS, Gimbert MTP. The Potential and Pitfalls of De-Extinction. Zool Scr 2016;45:22-36.
11. Donlan J. De-Extinction in a Crisis Discipline. Front Biogeography 2014;6(1):25-8.
12. Cohen S. The Ethics of De-Extinction. Nanoethics 2014;8:165-78.
13. Taubenberger JK, Baltimore D, Doherty PT, Markel H, Morens MD, Webster RG, Wilson IA. Reconstruction of the 1918 Influenza Virus: Unexpected Rewards from the Past. MBio 2012;3(5):201-12.
14. Sherkow J, Greely H. What if extinction is not forever? Science 2013;340:32-3.
15. Randall A. What mainstream economists have to say about the value of biodiversity. In: Wilson Eo (ed) Biodiversity. National Academy Press; 1988.
16. Ehrenfeld D. Transgenics and vertebrate cloning as tools for species conservation. Conserv Biol 2006;20:723-32.
17. Sandler R. The ethics of reviving long-extinct species. Conserv Biol 2013;28(2):354-60.
18. Cottrell S, Jensen JL, Peck SL. Resuscitation and resurrection: the ethics of cloning cheetahs, mammoths, and neanderthals. Life Sci Soc Policy 2014;10(3)
19. Robert A, Thevenin C, Prince K, Sarazzin F, Clavel J. De-Extinction and Evolution. Funct Ecol 2017;31:1021-31.
20. Novak BJ. De-Extinction. Genes 2018;9(11):548.
21. Browning H. Won't Somebody Please Think of the Mammoths? De-extinction and Animal Welfare. J Agricult Environ Ethics 2018;31:785-803.

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Review Paper

Dynamic Shift of Transgenders - A Journey from Social Exclusion to Inclusion. Recognition of Transgender Community Through Corporate Social Responsibility

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ABSTRACT

The concept of gender is not just restricted to males and women. It is a spectrum, a much broader concept. Transgender people must be included when discussing gender. Realizing that members of the transgender community are also humans has become a serious concern for the world. The transgender community plays a significant role in Indian society. Even the law cannot dispute their reality. To clear up any misunderstandings, the paper begins with an introduction in which it defines the term "transgender" in its terminological sense. It then discusses the challenges, risks, and issues that transgender people in a developing nation like India confront. The article also discusses how transgender people are excluded from society and what law enforcement agencies and CSR businesses are trying to change that social exclusion into social inclusion. The importance of CSR has led to many businesses updating their core principles to include social responsibility. The underlying tenet of CSR is that business should engage with society. Environmental concerns, poverty eradication, labour practises, environmental protection, education, and human development are all significantly impacted.

Keywords - Corporate social responsibility, transgender community, LGBTQ, CSR, Social Inclusion.

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Introduction

Transparency has become more and more in demand in the business world over the past few decades. Corporate social responsibility (CSR) reports are created by businesses utilising guidelines like the Global Reporting Initiative standard. Lesbian, gay, bisexual, and transgender (LGBT) people experience prejudice in both their personal and professional life. Recently, CSR companies are coming up with plans to include the socially excluded Transgender population as well as the LGBTQ society.

Corporate Social Responsibility

Corporate social responsibility (CSR), often known as "corporate engagement with society," is a word used to describe one way in modern society that a company expresses and grows its "corporate culture" and social consciousness [1]. Corporate social responsibility is a gesture that demonstrates a company's accountability, care, and dedication to the long-term well-being of society. Carroll (1979) defined CSR as: "The social responsibility of business encompasses the economic, legal, ethical, and discretionary expectations that society has of organizations at a given point in time". Carroll's four-structured definition of CSR includes the operation of a business in a way that is economically successful, legal, ethical, and supportive to society. The discretionary

component includes generosity and/or volunteering. It was suggested in 1991 that CSR be divided into four levels: economic, legal, ethical, and philanthropic [1]. CSR is covered in Section 135 of the 2013 Companies Act, defining that "Every company having net worth of rupees five hundred crore or more, or turnover of rupees one thousand crore or more or a net profit of rupees five crore or more during immediately preceding financial year shall constitute a CSR committee" [2]. Businesses now have a larger social role that includes acting ethically toward stakeholders in addition to generating profit. The first nation to impose a legal requirement on corporate social responsibility is India.

Transgender Community

The World Health Organization uses the word "transgender" to refer to people whose gender identity differs from the gender assigned to them at birth [3]. Since the beginning of history, transgender persons have existed in every society, ethnic group, and cultural tradition. In its broadest definition, the term "transgender" refers to someone whose identity or behaviour deviates from conventional gender roles. It is a general word for anyone whose gender expression, identity, or conduct deviates from the norms expected of their biological sex. As a result, transgender persons are anyone, regardless of age or sex, whose physical characteristics, character traits, or behaviours differ from what men and women "should" look like and act like. This encompasses, among others, male to female (MTF), female to male (FTM), transgender male, and transgender female identities. Other persons who fall under this category are transsexuals, gender queer people, and crossdressers (those who dress in attire from the opposite gender). The transgender community is one of the stigmatised and discriminated groups in the world, and because of their gender identification and lack of support, they frequently have psychiatric issues [4]. While lesbian, gay, bisexual people have rights and are recognised in many communities around the world, the transgender community does not [5].

In India, there are several different kinds of transgender groups. The most well-known of these groups include the Kothi, who identify as men, the Hijras, who are biological men but reject masculinity, the Aravanis, who identify as women in male bodies, the Jogappa, who serve the goddess Renukha Devi, and the Shiv-Shaktis (Males but have feminine gender expressions) [6].

While gathering census data for years, the Indian census has never acknowledged the third gender, i.e., transgender. However, for the first time ever, the Census of 2011 included information on transgender people under the gender category of "Others" along with information on their occupation, level of literacy, and caste. According to the census, there are 4.88 lakh transgender people in India [5]. The Rights of Transgender Bill, 2014, which was amended in 2015, was approved by the Rajya Sabha, by getting rid of the clauses referring to the National and State Commissions as well as the Transgender Rights Court. The 2015 Measure underwent additional revisions, and a new bill — the Transgender Individuals bill — was filed in the Lok Sabha in 2016. (Protection of Rights Bill).

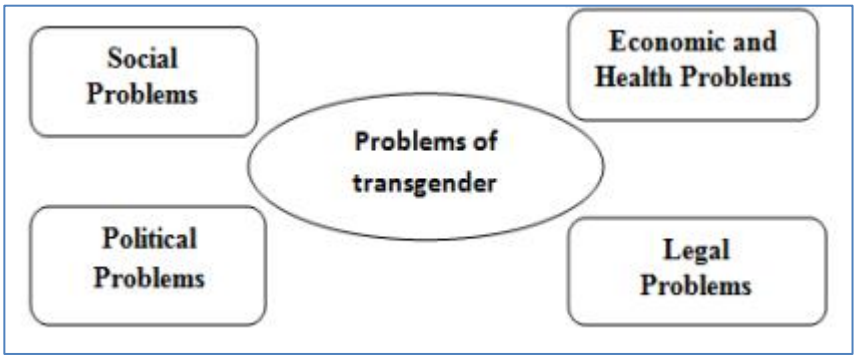
Laws Passed for The Transgender Community

The Lok Sabha first heard the bill in August of this year. The definition of a transgender person is defined in the law. Its concept of transgender people uses phrases like "trans-men," "trans-women," "persons with intersex variants," and "gender queers." There are rules that prohibit discrimination against transgender people in industries including healthcare, employment, and education, and they also order state and federal governments to implement social programmes in these fields. Offenses like making a transgender person beg, denying them entrance to a public location, abusing them physically or sexually, etc. would result in two years in prison and a fine. A person who is recognised as "transgender" would have the right to "self-perceived" gender identity, according to the proposed legislation. A National Committee for Transgender community will be established under the bill to advise governments on transgender-related laws and policies. The bill also permits the issuance of an identification certification for transgender people [7].

Problems Faced by Transgender Community

Social exclusion as a theoretical framework can be used to explain transgender people's problems.

1. **Social Problems:** Family members frequently oppose transsexual people. Transgender people in families deal with a wide range of issues, such as verbal and physical abuse, exclusion and rejection, and denial of family property. Transgender people frequently experience rejection and discrimination due to their sexual orientation or gender identity. Social stigma includes being despised, labelled, and having a generalised negative opinion of things like sex workers or sex marketers. Inheritance of property and adoption of children are two other areas where this community feels oppressed. They are frequently pushed aside as social outcasts, and many end up dancing and begging. Without a doubt, this is human trafficking. To survive, many even works as sex workers. Social acceptance of the transgender community is necessary. For example, there isn't room for them in hospital wards. Because they pose a threat to women's safety and freedom and expose them



to sexual assault in the men's ward, the authorities refuse to admit them to the women's ward. Additionally, there are no transgender-specific restrooms.

2. **Economic and Health problems:** Most of the transsexual community lack a high school diploma. Similar prejudice and stigma are experienced by gays and bisexuals in schools, particularly after voluntarily or involuntarily disclosing their sexual orientation. Lack of adequate education and lack of employment opportunities, they are forced into sex work and begging. While some transgender individuals can keep their careers despite stigma and prejudice at work, most of them quit their positions rather than put up with it. A variety of multiple-level factors such as lack of adequate education, lack of employment opportunities, and lack of familial support put the male-born sexual minorities at risk of contracting HIV. Similarly, needs related to sexual and reproductive health are frequently not sufficiently met. Most transgender person does not get adequate state's support (except Tamil Nadu) for sex transition surgeries such as hormone administration, emasculation, and breast augmentation surgery.
3. **Political Problems:** Even though there are several sexual protectors with sufficient knowledge of and interest in politics and governance, sexual minority do not have prominent positions in any state's positions or political parties. Although transgender contested local body election with social responsibility, they were not adequately recognized by public. A transgender person is emerging as successful individuals despite prejudice and marginalisation, demonstrating their potential. There are instances of transgender persons occupying positions of political power. For example – Shapnam Mousi became Member of Parliament from Sahogpur in Madhya Pradesh in 2000; KamlaJaan was elected as Mayor of Ketni in the same year. In 1994 transgender persons got the voting right, but the task of issuing them Voter Identity The male or female question drew the cards' attention. Several of them were refused cards in the preferred sexual group.
4. **Legal Problems:** Sec. 377, which makes private adult homosexual relationships unlawful, violation of civil and human rights (especially for transgender), lack of acknowledgement of marriage. Their enrolment in schools was impossible because of their conflicted gender

identities. They are ineffective in terms of political representation and voting rights. Jobs are advertised with prerequisites for a male or female applicant, and transgender people are not offered the opportunity to work for businesses [8]. This section has now been decriminalised.

Problems Faced by Transgenders at the Workplace

- Physical, sexual, and psychological abuse
- A lack of knowledge about sexual minorities
- Restrictions on free speech
- Ignoring the opinions, knowledge, and abilities of sexual minorities
- A lack of significant community interaction
- Issues with stress, anxiety, and other psychological wellbeing

How CSR Companies Help Transgender Community

- Mahindra Logistics introduced their first employment and retention policy for LGBTQ individuals in June 2020. The launch coincided with Pride Month, a period when the LGBTQ population around the world celebrates pride. The Mahindra Group has also established a range of diversity objectives, which played a significant role in the development of its new LGBTQ policy. The current sexual harassment prevention policy at Mahindra Logistics has been expanded to cover any sexual harassment that an LGBTQ employee reports.
- Events on LGBTQ themes are held at the experimental Godrej India Culture Lab in Mumbai. One of the first businesses in India to actively promote greater inclusivity, Godrej has stepped up its efforts in recent years. In addition, it developed Project Rainbow, a specialised hiring platform for LGBTQ individuals who wish to apply for internships or full-time employment roles at the firm, and it took part in two job fairs last year that geared specifically to the LGBTQ community. These job fairs were the first of their kind in India. Additionally, Godrej launched a gender affirming policy in 2018, offering to pay for transgender employees' hormone replacement therapy or surgery.
- Companies like Godrej and Mahindra Logistics now offer medical insurance coverage for the employee's extended family, including same-sex partners. The firms' counselling services, compassionate or bereavement leave for their same-sex spouse, and adoption leave are also available to LGBTQ employees.
- In India, Publicis Sapient, a corporation that specialises in digital transformation, offers coverage for gender reassignment surgery under its health insurance programme. Publicis Sapient is the sponsor of the LGBTQ community's leadership training programme, Leading with Pride. Participants in the programme are not Publicis Sapient employees, but they are partnered with mentors who are.
- Kaustubh Sonalkar has been preparing Essar Group and wants to join a business with activities in construction and energy that has been waiting more than a year to hire its first transgender staff members.

Conclusions

The goal of the entire article is to improve the lives of the transgender people and grant them legal status in the nation. This group is frequently mocked, subjected to prejudice, and shunned by society. They are denied medical treatment, jobs, and other basic necessities. It is a mandate for companies to spend 2% of their profits towards the society according to section 135 of Companies Act, 2013. Companies in the textile and health industries can work together on skill-based training programmes and health awareness camps to give back to the community and influence social change. Everyone has the right to the protections offered by international human rights law, including the rights to life, security of person, and privacy, freedom from torture, arbitrary detention, and discrimination, as well as the freedoms of expression, association, and peaceful assembly, regardless of sex, sexual orientation, or gender identity [9]. Governments can make laws that safeguard employees from discrimination and wrongful termination, but since they do not

constantly check up on employers, businesses should try to be proactive in putting direct voice mechanisms for transgender employees into place [10].

Recommendations

1. All people should have access to the right to open bank accounts, use debit and credit cards, create wills, and inherit property, regardless of changes in gender or sexual orientation.
2. Legal entitlement to travel in women's exclusive sections of trains.
3. 3. Right to marry anybody, regardless of sexual orientation, and to obtain adoption (even as a single parent), donation, conception, or surrogacy through official reproductive technology websites as a "couple."
4. Right to alimony and divorce in instances of violence, abuse, and fraud, etc.
5. Man, Woman, and Transgender should be the three options for gender on all official and unofficial application forms for all reasons.
6. The population of Hijra and its demographic parameters should be covered by the census.
7. Identity cards should be issued to distinguish genuine hijras from fake hijras.
8. Establishing a sufficient pension sum for hijras over 60.9. Right to Housing
9. Initiating to cover hijras from lower socioeconomic status under minimum wage laws and employment guarantee programmes.
10. Making interest-free loans available to hijras with business entrepreneurship skills with little to no formalities.
11. Educational institutions must recognise students who identify as hijra or transgender, provide an accepting environment, and oppose all forms of mistreatment.
12. Provision of free legal aid.
13. It is necessary for the Indian Medical Council (IMC) and Indian Council for Medical Research (ICMR) to address the transgender and transsexual issues. The essential rules and criteria should apply to Sex Re-assignment Surgery (SRS) and other operations that hijras frequently seek.
14. To guarantee that discrimination in medical care of hijras, such as refusing to treat a person based on their gender identification, is punished as professional misconduct, the IMC also must draft rules [11].

REFERENCES

1. Khan MT, Khan NA, Ahmed S, Ali M. Corporate Social Responsibility (CSR) – Definition, Concepts and Scope: a review. Universal Journal of Management and Social Sciences 2012;2(7).
2. Mehta A. Transgender Rights and Corporate Social Responsibility. Legal Desire: Int J Law Vol. 8.
3. Mahalakshmi K, Umadevi R, Anandhaeashwar VM. A Study on Depression among Transgender Residing In Chennai District, Tamil Nadu. Natl J Commun Med 2022;13(02):96-9.
4. Sawant NS. Transgender: status in India. Annals of Indian Psychiatry. 2017 Jul 1;1(2):59-61.
5. Hotchandani KR. Problems of transgender in India: A study from social exclusion to social inclusion. International research journal of Human resources and social sciences. 2017 Apr;4(4):73-9.
6. Raj A. The quest to recognise the historical and legal prevalence of the transgender in India. Int J Soc Sci Econ Res 2020;5(6):1425-34.
7. Khan AA. Obstacles and Challenges in Transgender Employment. Asia Pacific J Emerg Markets 2017;1(2).
8. Chaterjee S. Problems Faced by Transgender Community in India: Some Recommendations. Int J Creative Res Thoughts 2018;6(1).
9. Alexandra Beauregard T, Arevshatian L, Booth JE, Whittle S. Listen carefully: transgender voices in the workplace. Int J Hum Resource Management 2018;29(5):857-84.
10. Kumaradhas JP, Muthukumar PK. The problems faced by transgender. Int J Res Analy Rev 2019;6(1).

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Original Research Paper

Design and Development of SCRIBE (Systematic Collection of Reflections and Individual experiences in Bioethics Education): A Novel ePortfolio for Bioethics Education

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ABSTRACT

The escalating complexity of ethical dilemmas in healthcare underscores the critical need for innovative educational tools that transcend traditional didactic approaches. SCRIBE (Systematic Collection of Reflections and Individual experiences in Bioethics Education) emerges as a pivotal solution, addressing this gap by facilitating an ePortfolio-based formative assessment approach. This platform is designed to enrich bioethics education by enabling students who are enrolled in The International Graduate Course on Humanistic and Socialistic Medicine for Healthcare Providers by UNESCO chair in Bioethics to document, reflect upon, and evaluate their learning experiences and ethical reasoning in real time. The need for such a tool is driven by the growing recognition that understanding and navigating bioethical issues require more than theoretical knowledge; it demands continuous reflection, practical application, and adaptive learning. SCRIBE's development reflects a strategic response to this educational imperative, promising to enhance students' engagement, critical thinking, and ethical decision-making skills in bioethics.

Keywords: Bioethics, ePortfolio Development, SCRIBE, Formative Assessment, Reflective Learning, Ethical Competence, Personalized Learning Paths, Professional Growth

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Introduction

Bioethics education is integral to preparing healthcare professionals capable of navigating the complex ethical landscapes they will encounter in practice [1]. It blends ethical theories with practical applications, aiming to equip students with the skills needed for ethical decision-making

in healthcare [2-3]. The primary challenge lies in the limitation of conventional assessments, such as exams and essays, to fully capture the depth of students' understanding and their ability to engage in ethical reasoning and decision-making [4-5]. There's a growing recognition of the need for innovative assessment strategies that can more accurately reflect students' competencies in bioethics, focusing on application, critical thinking, and reflective practice [6].

ePortfolios are used to support personalized learning paths, encourage reflective practice, and facilitate continuous feedback from educators, enhancing the learning process in bioethics education [7]. By allowing students to create a comprehensive record of their learning journey, ePortfolios can enhance self-awareness, ethical sensitivity, and professional development, preparing them for the ethical challenges in healthcare [8-9]. Specifically designed for medical, nursing and other health professions' students enrolled in the International Graduate Course on Humanistic and Socialistic Medicine for Healthcare Providers by the UNESCO chair in Bioethics, SCRIBE (Systematic Collection of Reflections and Individual experiences in Bioethics Education) serves as a pivotal tool. It enables students to document, reflect upon, and evaluate their learning experiences and ethical reasoning in real-time, facilitating a deeper engagement with the course's humanistic and socialistic principles.

Need for ePortfolio in Bioethics Education

The incorporation of ePortfolios in bioethics education responds to the evolving landscape of healthcare and education, where traditional assessment methods fall short of capturing the depth and breadth of students' learning and ethical reasoning. ePortfolios offer a dynamic platform for students to document, reflect upon, and showcase their learning journey, facilitating a deeper engagement with bioethical concepts. This approach aligns with the pedagogical shift towards competency-based education, emphasizing critical thinking, ethical reflection, and lifelong learning. By enabling personalized learning paths, ePortfolios cater to the diverse needs and interests of students, fostering a more inclusive and adaptable educational environment. The need for ePortfolios in bioethics education is driven by the recognition that ethical competence is not just about knowledge acquisition but also about the ability to navigate complex moral landscapes, make informed decisions, and engage in continuous professional and personal development.

Methods

1.1. **Design and Development of SCRIBE (Systematic Collection of Reflections and Individual experiences in Bioethics Education)** – A novel ePortfolio for Bioethics Education: The SCRIBE ePortfolio is a cutting-edge platform designed to revolutionize bioethics education by emphasizing reflective learning, personal and professional development, and continuous assessment [10]. At the core of SCRIBE's methodology is its robust architecture that supports a wide array of features tailored to meet the unique needs of bioethics education.

1.2. **Reflective Journals:** SCRIBE encourages students to engage in reflective practice by maintaining journals where they can articulate their thoughts, experiences, and learning in relation to bioethical principles and dilemmas. This feature fosters a habit of critical thinking and ethical reasoning, enabling students to make connections between theoretical knowledge and practical experiences.

1.3. **Academic and Clinical Tracking:** The platform facilitates comprehensive tracking of students' academic coursework and clinical experiences, including internships and fieldwork related to bioethics. This feature ensures that students can document and reflect upon their encounters with ethical issues in real-world healthcare settings, enhancing their ability to apply bioethical frameworks in practice.

1.4. **Research Portfolio:** SCRIBE serves as a repository for students to showcase their bioethics research projects, publications, and presentations. This feature not only highlights students' contributions to the field but also encourages a culture of scholarship and inquiry, essential components of bioethics education.

1.5. **Professional Development Log:** Recognizing the importance of lifelong learning, SCRIBE includes a log for conferences, workshops, and seminars attended by students. This aspect of the ePortfolio underscores the value of continuous professional development and the expansion of knowledge through engagement with the broader bioethics community.

1.6. **Interactive Feedback:** A distinctive feature of SCRIBE is its interactive feedback mechanism, which allows educators to provide timely, constructive feedback on students' reflections, research, and clinical experiences. This two-way communication channel supports personalized learning and mentorship, crucial for student growth and development in bioethics.

1.7. **Customization and Privacy:** Understanding the personal nature of reflective learning, SCRIBE offers high levels of customization and robust privacy settings. Students can tailor their ePortfolio appearance and control who has access to their work, ensuring a secure and personalized learning environment.

A summary of features included in the SCRIBE ePortfolio is represented in Table 1

Table 1: Features of SCRIBE (Systematic Collection of Reflections and Individual experiences in Bioethics Education): A novel ePortfolio for Bioethics Education

Feature	Details Included	What Will It Assess
About Me	Personal information, brief bio, vision, and goals	Personal development and background
Academics	Courses enrolled, certificates, mode of study	Academic achievements and learning progress
Personal Reflection	Reflections on courses, "Be the Change" impact reflections	Self-reflection, learning outcomes
Projects	Research, publications, interdisciplinary collaboration details	Research skills, teamwork, and collaboration
Activity	Conference participation, competitions and awards, workshops and training details	Professional development and engagement
Clinical Experiences	Ethical dilemmas encountered, applied bioethics principles	Practical ethical reasoning and decision-making
Voluntary Participation	Organization involvement, role, learning outcomes	Community engagement and personal growth
Ethics Through Art	Artistic expression of bioethics topics	Creative expression and ethical understanding

Analytics	Visual representation of activity frequency	Engagement and activity overview
Feedback	Discussion forums, comments	Community interaction and feedback

Validation of the SCRIBE ePortfolio

The validation and pilot testing phase for the ePortfolio system will be meticulously conducted with medical and nursing students from year 1 to year 4, who have completed The International Graduate Course on Humanistic and Socialistic Medicine for Healthcare Providers. This diverse cohort will provide rich, multidimensional feedback, reflecting a broad spectrum of user experiences and needs across different stages of medical and nursing education. In the validation of the SCRIBE ePortfolio, a case-control study approach will be adopted, focusing on comparing students who have used the ePortfolio with those who have not, within the context of The International Graduate Course on Humanistic and Socialistic Medicine for Healthcare Providers. This design will facilitate a clear understanding of the ePortfolio's impact on learning outcomes, reflective practices, and professional development. Additionally, a mixed methods approach will be used to evaluate the ePortfolio, combining quantitative data (such as usage statistics and completion rates) with qualitative feedback (including student reflections and faculty assessments) to provide a comprehensive view of its effectiveness and areas for improvement. This strategy ensures a robust evaluation framework that addresses both the functional and experiential aspects of the ePortfolio system.

Anticipated Outcomes

The anticipated outcome of implementing and validating the SCRIBE ePortfolio system in bioethics education, especially among medical and nursing students from year 1 to year 4, is multifaceted. Firstly, it aims to significantly enhance students' reflective practices, allowing them to critically evaluate their learning experiences, ethical dilemmas, and professional development activities. This reflective capacity is expected to deepen their understanding of bioethical principles and how these principles apply in real-world healthcare settings. Secondly, the system is designed to promote a culture of continuous learning and professional growth, encouraging students to engage with the broader bioethics community through conferences, workshops, and research activities. By facilitating a personalized learning environment with robust feedback mechanisms, SCRIBE will enable educators to tailor their teaching and assessment strategies more effectively to meet individual students' needs. Furthermore, the ePortfolio's emphasis on privacy and customization ensures that students can safely and confidently document their educational journey. Ultimately, SCRIBE is expected to produce healthcare professionals who are not only academically proficient but also ethically conscious, socially responsible, and equipped with the critical thinking skills necessary to navigate the complex moral landscapes of modern healthcare. This approach aligns closely with the objectives of humanistic and socialistic medicine, promising to cultivate a new generation of caregivers who are deeply committed to the ethical dimensions of patient care and healthcare delivery.

Conclusions

SCRIBE (Systematic Collection of Reflections and Individual experiences in Bioethics Education): A novel ePortfolio for Bioethics Education represents a transformative approach to bioethics education, addressing the critical need for innovative assessment methods that support reflective

learning and professional growth. Its comprehensive features offer a holistic platform for students to document their educational journey, engage in critical reflection, and showcase their achievements. Anticipated outcomes suggest that SCRIBE will not only enhance students' understanding and application of bioethical principles but also foster a culture of continuous learning and professional development. As bioethics continues to play a crucial role in healthcare and research, SCRIBE stands as a testament to the importance of equipping future professionals with the tools necessary for ethical decision-making and leadership. In conclusion, SCRIBE's implementation is poised to set a new standard for bioethics education, paving the way for a more reflective, engaged, and ethically competent generation of healthcare professionals.

REFERENCES

1. Ghias K, Ali SK, Khan KS, Khan R, Khan MM, Farooqui A, Nayani P. How we developed a bioethics theme in an undergraduate medical curriculum. Medical Teacher 2011;33(12):974-7.
2. Martins V, Santos C, Duarte I. Bioethics education and the development of nursing students' moral competence. Nurs Educ Today 2020;95:104601.
3. Sim JH, Ngan OMY, Ng HK. Bioethics education in the medical Programme among Malaysian medical schools: where are we now?. J Med Educ Curricular Dev 2019;6;2382120519883887.
4. Green RM. Method in bioethics: A troubled assessment. J Med Philos 1990;15(2):179-97.
5. Balamurali ST, Subhashini S, Prabakaran J, Thirunavukkarasu N. Assessment of knowledge and practice of bioethical principles in a healthcare setting. Natl J Res Commun Med 2020;9(4):145-51.
6. Michaud PA. Assessing adolescent capacity for decision making in clinical care: the practical application of bioethics and human rights principles. International Handbook on Adolescent Health and Development: The Public Health Response, 359-372.
7. Bleasel J, Burgess A, Weeks R, Haq I. Feedback using an ePortfolio for medicine long cases: quality not quantity. BMC Med Educ 2016;16:1-11.
8. Tailor A, Dubrey S, Das S. Opinions of the ePortfolio and workplace-based assessments: a survey of core medical trainees and their supervisors. Clin Med 2014;14(5):510.
9. Hall P, Byszewski A, Sutherland S, Stodel EJ. Developing a sustainable electronic portfolio (ePortfolio) program that fosters reflective practice and incorporates CanMEDS competencies into the undergraduate medical curriculum. Acad Med 2012;87(6):744-51.
10. SCRIBE – (Systematic Collection of Reflections and Individual experiences in Bioethics Education). Available from: https://bioethicseportfolio.com [Last accessed 15 Feb 2024]

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Original Research Paper

Attitude and Practice of Women toward Unplanned Pregnancies and factors affecting their Decision-Making Process

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ABSTRACT

Background: Globally, half of unplanned pregnancies end in abortion. Abortion is considered one of the most controversial, poorly understood, and socially unaccepted aspect of family planning. In Iraq, abortion remains illegal unless the mother's life is in danger or there is a possibility of fetal impairment. Despite that, over 10% of married woman induce abortion to control births. These points prompted us to conduct research on the attitude and practice of women towards unplanned pregnancies and factors that affect their decision making.
Methodology: A cross sectional study was conducted in three hospitals of Erbil city in Iraq from April 1, 2022, to September 1, 2022. A sample of 400 women with unplanned pregnancies attending the outpatient clinics of these hospitals were interviewed with pretested questionnaire. The data was analyzed using IBM SPSS.
Results: The prevalence of abortion among the studies sample was 8.3%. Majority of women believed that the final decision maker should be doctor while deciding for an induced abortion and that the laws should remain restricted. Several factors were found to be significantly associated with the decision to terminate unplanned pregnancy among women. These include having a high school education, feeling unhappy about the pregnancy, contemplating abortion, having a history of abortion, supporting the pregnant woman's right to make the final decision, and believing that abortion should be legal.
Conclusions: We recommend providing psychological support for women who are experiencing an unplanned pregnancy to help them with their confidentiality and educate them about the physical and psychological risks of unsafe abortion.

Keywords: Pregnancy, Planned, Unplanned, Decision-making, women.
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Introduction

Pregnancy is considered an extremely stressful time for women and their families. However, an unplanned pregnancy may catch the mother even more off guard and result in unpleasant consequences. A planned pregnancy is when getting pregnant is an objective, contraception is stopped, both partners agree to the pregnancy, and the timing is appropriate in the stages of both parents' lives [1]. An unplanned pregnancy, however, is a pregnancy that is not desired or the timing is not proper for one or both parents [2].

Globally, 40% of pregnancies are unplanned, 50% of which end in abortion-the termination of a pregnancy before viability of foetus [3-4]. Abortion is considered one of the most controversial, poorly understood, and socially unaccepted aspect of family planning [5]. Aside from its physical risks[6], divergent theological views on induced abortion, as well as those held by secular humanists, liberals, and feminists, have led to disagreements that have ultimately resulted in violent acts and loss of lives affecting numerous fundamental human rights and ethical values [5,7].

Majority of countries have legal restrictions regarding abortion. By the 20th century, the equal rights and opinions of women had to be regarded by nations to consider their decisions seriously [8]. Nevertheless, in Iraq, abortion remains illegal unless the mother's life is in danger or there is a possibility of foetal impairment [9]. Despite that, over 10% of married woman induce abortion to control births; this prevalence in Erbil city has increased to nearly 27.7% [5,7].

All the points mentioned have limited the number of studies on the subject and the ethical aspects of it, specifically in Erbil, prompted us to conduct research on the attitude and practice of women towards unplanned pregnancies and the factors that affect their decision-making.

The objectives of the study was at detecting the attitudes, intentions, and behaviours regarding unplanned pregnancies. Finding out the prevalence of unplanned pregnancies that end up with abortion. Identifying the factors that affect the women's decision-making process for ladies during unplanned pregnancies.

Methodology

A cross sectional study was conducted in Erbil (Maternity teaching hospital, Rizgary teaching hospital, and Al-Maseef hospital) from Jan 2nd 2023 to May 31st 2023. The study included 400 women who had experienced at least one unplanned pregnancy, selected by a convenience sample of outpatients attending the mentioned hospitals, as well as inpatients of the maternity teaching hospital. Those women were interviewed by the researchers using a questionnaire designed by the research team. The questionnaire consisted of three parts: *the sociodemographic characteristics of the woman and her husband* (age, ethnicity, religion, place of residency. etc.), *history of previous pregnancies (planned and unplanned) or abortions*, the woman's knowledge regarding family planning, questions regarding behaviour towards unplanned pregnancy, and *women's perspective regarding unplanned pregnancy*. For those who have had more than one unplanned pregnancy, questions were directed towards last unplanned pregnancy. A pilot study was conducted on a sample of 20 women to assess the adequacy of the questionnaire. The questionnaire was modified accordingly based on the feedback received from these 20 women and they were excluded from the study.

Ethical approval was taken from the research ethics committee of the college of medicine, of the Hawler medical University. Verbal consent was obtained from all the patients who were interviewed, and their personal information was kept confidential.

Data Analysis

The data analysis was performed using statistical package for social sciences (IBM SPSS Software version 26). Microsoft Excel was used for making the graphs and summarizing the data. Chi square and Fishers exact test were used to test the significance of the associations between variables. A P value ≤ 0.05 was deemed statistically significant.

Results

Socio-demographic characteristics of respondent

A total of 400 women were involved in the study with a response rate of 100%. The mean age (SD) of the respondents was 36.9 (10.4) years. The majority (91.3%) of the participants were Kurdish, and (98.3%) were Muslim in religion. More than half (52.5%) of the women were living in the Urban areas. The majority (94.5%) were married, and more than two thirds of them (68.5%) were housewives and were dependent on their family for income (69.0%). More than half of the women (59.3%) had an income sufficient for their daily needs (Table 1).

Table 1: Socio-demographic Characteristics of the Women

Variables	No.	(%)
Age		
<30	97	(24.3)
30-39	153	(38.3)
40-49	99	(24.8)
≥50	51	(12.8)
Ethnicity		
Kurdish	365	(91.3)
Arabic	28	(7.0)
Turkman	6	(1.5)
Shabak	1	(0.3)
Religion		
Muslim	393	(98.3)
Non-Religious	7	(1.8)
Marital status		
Single	3	(0.8)
Married	378	(94.5)
Divorced	6	(1.5)
Widowed	13	(3.3)
Residency		
Urban	210	(52.5)
Suburban	182	(45.5)
Rural	8	(2.0)
Education		
Illiterate	80	(20.0)
Primary School	128	(32.0)
High School	65	(16.3)
College/Institute	106	(26.5)
Postgraduate	21	(5.3)
Occupation		
High Rank	76	(19.0)
Non-Manual Worker	23	(5.8)
Skilled Manual	11	(2.8)
Unskilled Manual	16	(4.0)
Housewife	274	(68.5)
Income		
Insufficient for daily needs	86	(21.5)
Sufficient for daily needs	237	(59.3)
Exceeds daily needs	77	(19.3)
Financial independency		
Yes	124	(31.0)
No	276	(69.0)
Total	400	(100.0)

Socio-demographic characteristics of husbands

Out of 400 participants, 377 had a current husband with mean age (SD) of the husbands being 40.89 (11.232) years. The majority (96.6%) were Muslims, 111 (29.4%) have finished primary school and 128 (34.0%) were skilled manual workers (Table 2).

Table 2: Husband's socio-demographic Characteristics

Variables	No.	(%)
Age		
<30	55	(14.6)
30-39	131	(34.7)
40-49	100	(26.5)
≥50	91	(24.1)
Religion		
Muslim	364	(96.6)
Non-Religious	13	(3.4)
Education		
Illiterate	36	(9.5)
Primary School	111	(29.4)
High School	98	(26.0)
College/Institute	103	(27.3)
Postgraduate	29	(7.7)
Occupation		
High Rank	78	(20.7)
Non Manual Worker	51	(13.5)
Skilled Manual	128	(34.0)
Unskilled Manual	99	(26.3)
Unemployed	21	(5.6)
Total	377	(100)

Decision toward unplanned pregnancy

Out of 400 women, 367 (91.7%) didn't terminate an unplanned pregnancy. Whereas 33 (8.3%) have terminated an unplanned pregnancy (Figure 1). Out of those 33, more than half (57.6%) was their own decision. 9 (27.3%) were financially not ready or their husbands had influence as the most common cause for termination, the least causative factors for termination were interference with education, undesired fetal sex and medical disease of the mother at (6.1%) individually. More than half (63.6%) of them were terminated at a nurse's house illegally. Majority (78.8%) hadn't had their baby's sex determined. Half of them (51.5%) were done at the gestational age of 5-8 weeks (Table 3).

Table 3: Pattern of terminated pregnancy

Variables	No.	(%)
Was it mother's own decision?		
Yes	19	(57.6)
No	14	(42.4)
Cause of termination		
Financially not ready	9	(27.3)
It was unplanned	5	(15.2)
Husband's Influence	9	(27.3)
Interference with vocational and educational plans	2	(6.1)
Undesired sex of baby	2	(6.1)
Congenital anomaly	4	(12.1)
Medical disease	2	(6.1)

Place of termination		
Hospital	12	(36.4)
Home	21	(63.6)
Gestational age at termination		
1-4	7	(21.2)
5-8	17	(51.5)
9-12	4	(12.1)
≥13	5	(15.2)
Sex of the baby		
Female	4	(12.1)
Male	3	(9.1)
Undetermined	26	(78.8)
Total	33	(100)

Attitude of women towards unplanned pregnancy

Out of 400 women with an unplanned pregnancy, 198 (49.5%) women and 248 (65.6%) husbands were happy about the unplanned pregnancy and accepted it. The majority (77.8%) didn't think about termination, despite it being unplanned. 321 (80.3%) of legitimate causes for ending a pregnancy were medical problems of mother, and 34 (8.5%) were against abortion regardless of the any reason. Majority (79.8%) were not with the legality of termination in Kurdistan. 159 (39.8%) answered 'doctors' to be the final decision makers for termination of pregnancy, and on the second place the mother by 143 (35.8%) (Table 4).

Table 4: Attitude of women towards unplanned pregnancy

Variables	No.	(%)
Feeling toward unplanned pregnancy		
Happy and accepted	198	(49.5)
Not happy but accepted	158	(39.5)
Not happy and didn't accept	44	(11.0)
Husband's feeling toward unplanned pregnancy		
Happy and accepted	248	(65.6)
Not happy but accepted	101	(26.7)
Not happy and didn't accept	28	(7.4)
Others	1	(0.3)
Thinking of ending unplanned pregnancy		
Yes	89	(22.3)
No	311	(77.8)
Legitimate causes for ending a pregnancy as perceived by women*		
Medical problem of mother	321	(80.3)
Financially not ready	56	(14.0)
Mother thinks she can't focus on the child	37	(9.3)
Husband is not supportive	75	(18.8)
Rape	68	(17.0)
Congenital anomalies	25	(6.3)
Never	34	(8.5)
Others	5	(1.3)
Should terminating pregnancy be legal in the region?		
Yes	81	(20.3)
No	319	(79.8)

Who should be final decision maker?		
Pregnant lady	143	(35.8)
Husband	38	(9.5)
Doctors	159	(39.8)
Clergy	56	(14.0)
Others	4	(1.0)
Total	400	(100.0)

*The total is more than 400, since participant could choose more than one option in this question.

Family planning practice and percentage of unplanned pregnancy to all pregnancies amongst the sample

Out of 400 women, only 81 (20.3%) of them had family planning program.

Association between termination of pregnancy and other variables

According to our results, the variables which were significantly associated with termination of an unplanned pregnancy were mothers with a high school education (n = 0.014), mother neither happy nor accepting of the pregnancy ($p < 0.001$), husband neither happy nor accepting of the pregnancy ($p < 0.001$), mothers thinking of termination ($p < 0.001$), and those with previous abortions ($p < 0.001$). The results show that the women who have terminated an unplanned pregnancy were predominantly of age group of 35-45 during the time of pregnancy (9.9%), from urban areas (10.5%), financially dependent (10.5%), have medium socioeconomic status (9.5%), sufficient income for daily needs (8.4%), gravidity of more than 9 (12.5%), and have family planning (11.1%). These variables were all insignificant. Most of the women who have had a termination have answered the mother to be the final decision maker in abortion of an unplanned pregnancy (14.0%), and 25.9% were with the legality of abortion in Kurdistan (Table 5).

Table 5: Association between decision towards termination of pregnancy and other variables.

Variables	**Termination**			**P value**
	Yes	**No**	**Total**	
	No. (%)	**No. (%)**	**No. (%)**	
Education (Mother)				
Illiterate	5 (6.3)	75 (93.8)	80 (100.0)	0.014
Primary School	7 (5.5)	121 (94.5)	128 (100.0)	
High School	12 (18.5)	53 (81.5)	65 (100.0)	
College/Institute	9 (8.5)	97 (91.5)	106 (100.0)	
Postgraduate	0 (0.0)	21 (100.0)	21 (100.0)	
Residency				
Urban	22 (10.5)	188 (89.5)	210 (100.0)	0.195
Suburb	11 (6.0)	171 (94.0)	182 (100.0)	
Rural	0 (0.0)	8 (100.0)	8 (100.0)	
Feeling towards unplanned pregnancy				
Happy and accepted	8 (4.0)	190 (96.0)	198 (100.0)	<0.001
Not happy but accepted	6 (3.8)	152 (96.2)	158 (100.0)	
Not happy and not accepted	19 (43.2)	25 (56.8)	44 (100.0)	
Husband's feeling towards unplanned pregnancy (n=377)				
Happy and accepted	6 (2.4)	242 (97.6)	248 (100.0)	<0.001
Not happy but accepted	6 (5.9)	95 (94.1)	101 (100.0)	
Not happy and not accepted	17 (60.7)	11 (39.3)	28 (100.0)	
Other				

Financial independency				
Yes	13 (10.5)	111 (89.5)	123 (100.0)	0.276
No	20 (7.2)	256 (92.8)	276 (100.0)	
Thinking of terminating				
Yes	28 (31.5)	61 (68.5)	89 (100)	<0.001
No	5 (1.6)	306 (98.4)	311 (100)	
Income				
Insufficient for daily needs	7 (8.1)	79 (91.9)	86 (100.0)	0.983
Sufficient for daily needs	20 (8.4)	217 (91.6)	237 (100.0)	
Exceeds daily needs	6 (7.8)	71 (92.2)	77 (100.0)	
Family Planning				
Yes	9 (11.1)	72 (88.9)	81 (100.0)	0.295
No	24 (7.5)	295 (92.5)	319 (100.0)	
Number of Unplanned pregnancies				
1-4	30 (8.2)	338 (91.8)	368 (100.0)	
5-8	2 (8.3)	22 (91.7)	24 (100.0)	0.721*
>9	1 (12.5)	7 (87.5)	8 (100.0)	
Ever done abortion				
Yes	29 (64.4)	16 (35.6)	45 (100.0)	<0.001
No	4 (1.1)	351 (98.9)	355 (100.0)	
Age at unplanned pregnancy				
15-24	9 (8.1)	102 (91.9)	111 (100.0)	0.855
25-34	15 (8.0)	173 (92)	188 (100.0)	
35-45	9 (9.9)	82 (90.1)	91 (100.0)	
Socio-economic Status (n=377)				
Low	11 (6.7)	154 (93.3)	165 (100.0)	0.685
Medium	10 (9.5)	95 (90.5)	105 (100.0)	
High	9 (8.4)	98 (91.6)	107 (100.0)	
Final decision maker				
Pregnant lady	20 (14.0)	123 (86.0)	143 (100.0)	0.009*
Husband	2 (5.3)	36 (94.7)	38 (100.0)	
Doctors	5 (3.1)	154 (96.9)	159 (100.0)	
Religious man	6 (10.7)	50 (89.3)	56 (100.0)	
Others	0 (0.0)	4 (100.0)	4 (100.0)	
Legal				
Yes	21 (25.9)	60 (74.1)	81 (100.0)	<0.001
No	12 (3.8)	307 (96.2)	319 (100.0)	
Total	33 (8.2)	367 (91.8)	400 (100.0)	

*Fisher exact test used for analysis.

Relationship between number of unplanned pregnancy and other variables

The results of this study showed that the variables which were significantly associated with increased number of unplanned pregnancies to 5-8 were mothers of age group of >50 at (15.7%), low socioeconomic status (9.7%), and those who have no family planning (7.5%). Those who were living in the Rural areas were more likely to have unplanned pregnancy of more than 5 at a percentage of (12.5%) in comparison to Urban or Suburban areas (Table 6).

Table 6: Association between number of unplanned pregnancy and other variables

Variables	Number of unplanned pregnancies				p value
	1-4	5-8	≥9	Total	
	No. (%)	No. (%)	No. (%)	No. (%)	
Age					
<30 years	97 (100)	0 (0)	0 (0)	97 (100.0)	<0.001
31-39 years	148 (96.7)	5 (3.3)	0 (0)	153 (100.0)	
40-49 years	85 (85.9)	11 (11.1)	3 (3)	99 (100.0)	
>50 years	38 (74.5)	8 (15.7)	5 (9.8)	51 (100.0)	
Residency					
Urban	192 (91.4)	16 (7.6)	2 (1.0)	210 (100.0)	0.138*
Suburb	169 (92.9)	7 (3.8)	6 (3.3)	182 (100.0)	
Rural	7 (87.5)	1 (12.5)	0 (0.0)	8 (100.0)	
Socio-economic					
Low	142 (86.1)	16 (9.7)	7 (4.2)	165 (100.0)	0.001*
Medium	100 (95.2)	4 (3.8)	1 (1.0)	105 (100.0)	
High	106 (99.1)	1 (0.9)	0 (0.0)	107 (100.0)	
Family planning					
Yes	81 (100.0)	0 (0.0)	0 (0.0)	81 (100.0)	0.005*
No	287 (90.0)	24 (7.5)	8 (2.5)	319 (100.0)	

*Fisher exact test used for analysis.

Discussion

The purpose of this study is to investigate the attitude and behaviour of women towards unplanned pregnancies that they had had. Even though all the women in this study having unplanned pregnancies, there were differences in context, circumstances and individual traits that affected how each woman viewed and cognitively evaluated the incident.

Our results showed that the rate of termination among women with unplanned pregnancy in Erbil was 8.3%. This percentage is much lower compared to surrounding countries like Turkey, where the rate of unplanned pregnancy is 46.2% and 30% of them end in abortion [10]; the rate rises even more in less restricted countries like Germany in which 43.0% of unplanned pregnancies are terminated [11]. We believe that these results are attributed to the laws regarding abortion being restricted which makes the procedure harder to be done compared to a country with less restricted laws. Moreover, 95% of the people in our society are Muslim [12]. Most of them reported that religious beliefs play a significant role in their decision towards accepting an unwanted pregnancy despite being unplanned. Cultural factors also play a role along with the desire for a big family and stigma regarding abortion.

More than half (57%) of the terminated pregnancies were the mother's own decision and 42% were not. Studies in other countries such as the USA show higher rates of confidentiality among women who had been seeking abortion, 87% of the women who sought abortions felt strong confidence in their choice [13]. We believe that our results are the consequence of the current situation of women in Kurdistan. Women in the Kurdish community continue to face obstacles, including dignity related topics, violence, and patriarchy toward their participation in social, political, and economic decisions which collectively affect them and decrease their confidence in decision-making. We can see that the number is still not as expected to be for the modern world, which is aiming for gender equality and decision-making by the woman herself [14-16].

According to our findings, education of the mother was significantly associated with her decision making. Women who have sufficient education (a high school degree) are more likely to have an abortion; illiterate women who might not have enough knowledge and confidence to find an effective and confidential place for abortion without help of others. While this rate declines in highly educated women who are more likely to have knowledge about pregnancy barriers, the risks

of abortion and have desire for a smaller family. In contrast to our finding, a study done in Finland showed that women with basic education had the highest abortion rate compared to higher educational level [17].

However, the women's decisions were not significant with their residency. Nevertheless, we could observe a consistent increase in the rate of abortion among women living in suburban and urban areas compared to those who live in rural areas. The women living in urban areas have more access to health care facilities for the termination of an unplanned pregnancy with more liberty compared to those living in rural areas, where stigma and culture play rule in accepting an unwanted pregnancy.

The feelings of the mother and father towards the unplanned pregnancy show the resultant actions in some of the participants, as those who felt bad and didn't accept the pregnancy were more likely to end it. Feeling negative towards the pregnancy makes decision of termination more likely for the parents, since it increases the perceived threats of the parents towards the pregnancy and the new child. This finding was concomitant with research done in the Sweden which showed that negative feelings were dominant amongst the group of the women who terminated the Unwanted pregnancy compared to the group who didn't terminate [18]. from the findings, we can observe that the effect of husband's feelings is more prominent compared to the mother. And this can support the idea that most of the women are under the effect of their husbands, and it's the husband who decides not the woman herself.

Financial independence and income are not significantly associated with the termination of an unplanned pregnancy for having liberty to spend their money as well as autonomy toward their action. As for high or low income, there appears to be very little effect on the termination of a pregnancy, which may indicate that income has no significant influence on someone's actions.

Amongst women with unplanned pregnancy, those with medium socioeconomic status are more likely to undergo termination by 9.5%, which is inconsistent with a study done in Calgary Canada where low socioeconomic status is more like to be associated with abortion. This may be since people with low socioeconomic status in Kurdistan have less access to contraceptive methods and can't afford to terminate a pregnancy, and those with high income have more access to effective barriers and reproductive healthcare centres [19].

Family planning, number of unplanned pregnancy and the woman's age at the time of pregnancy, were not significantly associated with the termination of an unplanned pregnancy. However, women who has family planning program were more likely to go through the abortion of an unplanned pregnancy which can be justified by their desire to keep the number of their children the number they have planned. Abortion has a higher rate among women between the age group of 35-45 by 9.9%, which contrasts a study done in Kinshasa showing that the rate of unplanned pregnancies which resulted in abortion is much higher among adolescents (age 15-24) by 18.8% in 2016; this may be due to various contraceptive behaviour [20].

Our results indicate that most women believed that the final decision maker for terminating a pregnancy should be a doctor which we attribute to the lack of confidence and knowledge regarding abortion and its risks among women in our community. However, most of the participants who terminated a pregnancy believe that the final decision maker should be the lady herself. Legality of abortion rated 25.9% among those who had terminated an unplanned pregnancy; however, 3.8% of them believed that legal restrictions that exist regarding abortion should remain.

Conclusion

The study revealed a complex interplay of variables influencing women's attitudes, intentions, and actions regarding unplanned pregnancies. While most women aligned their feelings with their decisions to accept or terminate the pregnancy, some experienced conflicts during the decision-making process. Women generally believed that doctors should have the final say in induced abortions, with restrictive laws in place. Significant factors influencing decision-making included education, parental influence, abortion legality, and previous abortion experiences. Despite legal, religious, and social barriers, the study found that 8.3% of unplanned pregnancies ended in abortion. To support women facing unplanned pregnancies, it is recommended to provide

psychological assistance, ensuring confidentiality, and raising awareness about the risks associated with unsafe abortion.

REFERENCES

1. Barret G, Wellings K. What is a 'planned' pregnancy? Empirical data from a British study. Soc Sci Med 2002;55(4): 545-57.
2. Ranatunga, IDJC, Jayaratne K. Proportion of unplanned pregnancies, their determinants and health outcomes of women delivering at a teaching hospital in Sri Lanka. BMC Pregn Childbirth 2020;20(1):667.
3. Abrams Z. The facts about abortion and mental health [Internet]. American Psychological Association. 2022. Available from: https://www.apa.org/monitor/2022/09/news-facts-abortion-mental-health.
4. Al-Ridhwany H, Aljawadi A, Abduljawad M. Use of induced abortion for birth control by mothers in Iraq. East Mediterr Health J 2018;24(7):644-52.
5. World Health Organization. Abortion [Internet]. www.who.int. World Health Organization; 2021. Available from: https://www.who.int/news-room/fact-sheets/detail/abortion.
6. Azo FM, AKBAY CA. Prevalence and risk factors of abortion among a sample of married women in Kurdistan Region of Iraq. Zanco J Med Sci 2016;20(3):1424-32.
7. Al-Bar MA, Chamsi-Pasha H. Contemporary Bioethics: Islamic Perspective [Internet]. Cham (CH): Springer; 2015. Chapter 10, Abortion. 2015 May 28.
8. Iraq [Internet]. GAPD - The Global Abortion Policies Database. Available from: https://abortion-policies.srhr.org/country/iraq/.
9. Nur N. Socioeconomic Disparities Among Ever-Married Turkish Women Who Had Unintended Pregnancies and Abortions in a Middle Anatolian City. Women Health 2012;52(7):716–29.
10. Prütz F, Hintzpeter B, Krause L. Abortions in Germany – Current data from the statistics on terminations of pregnancy. J Health Monitor 2022;7(2):39–47.
11. Religious Politics in Iraq [Internet]. United States Institute of Peace. Available from: https://www.usip.org/publications/2003/05/religious-politics-iraq
12. Attitudes and Decision Making Among Women Seeking Abortions at One U.S. Clinic [Internet]. Guttmacher Institute. 2012.
13. Power dynamics, gender relations and decision-making regarding induced abortion among university students in Nigeria - ProQuest [Internet]. www.proquest.com. [cited 2023 Mar 22]. Available from: https://www.proquest.com/openview/4ee6141a9b55b832dd1deaecf44e5ebf/1?pq-origsite=gscholar&cbl=2031869
14. Letamo G. The influence of gender role attitudes on risky sexual behaviour: evidence from the 2008 Botswana AIDS impact survey III. African Population Stud 2011;25(2).
15. Kaya ZN. Women in post-conflict Iraqi Kurdistan. Open Democracy [Internet]. 2016 Feb 26; Available from: https://eprints.whiterose.ac.uk/174194/
16. Väisänen H. The association between education and induced abortion for three cohorts of adults in Finland. Populat Stud 2015;69(3):373–88.
17. Törnbom M, Ingelhammar E, Lilja H, Svanberg B, Möller A. Decision-making about unwanted pregnancy. Acta Obstetr Gynecol Scand 1999;78(7):636–41.
18. Metcalfe A, Talavlikar R, du Prey B, Tough SC. Exploring the relationship between socioeconomic factors, method of contraception and unintended pregnancy. Reprod Health 2016;13(1).
19. Fatusi A, Riley T, Kayembe PK, Mabika C. Unintended pregnancy, induced abortion and abortion care-seeking experiences among adolescents in Kinshasa, Democratic Republic of Congo: a cross-sectional study. BMJ Open 2021;11(9):e044682.
20. CDC. Unintended Pregnancy [Internet]. Centres for Disease Control and Prevention. 2019. https://www.cdc.gov/reproductivehealth/contraception/unintendedpregnancy/index.htm

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Original Research Paper

Participatory Theatre as Teaching-Learning Methodology in Bioethics Education: A Pilot Study with Medical Undergraduates

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ABSTRACT

Background: In the recent past, emphasis has been on training the medical undergraduates at improving their moral judgment when faced with bioethical dilemmas in the ambits of patient care and professional dealing. From a medical educator's perspective, the widely followed lecture-based teachings are ineffective in inculcating moral ethics and teaching handling of bioethical dilemmas necessitating the need to adopt novel pedagogical teaching methods that are effective, time tested, educative and joyous to the participants. This study describes our experience with using street play in Bioethics education for medical undergraduate students.
Methods: The investigators adopted the time-tested street play educative modality used for public health education. The study involved two stages and included the design and performance of street play by the willing student volunteers under the mentoring of a faculty trained by the UNESCO Bioethics. The volunteer students were coached by the faculty and were given a week's time to write the script and dramatize the concept. The faculty in charge guided the concept development, script writing and dramatization in the subsequent supervised meetings. The mentors facilitated the theatrical performance on the topic and followed it with a group discussion among the students. The student's feedback on usefulness and effectiveness of street play in imparting bioethics education was ascertained through a structured questionnaire and from their opinion for open-ended questions.
Results: The results suggest that 96.15 % (150/156) of the responding students agreed that street play useful to teach bioethics. Also, the overall assessment on street play was useful to teach bioethics was observed to be Excellent/Very good by 78.22% of the students. The volunteers also expressed high approval for the question pertaining to the theatrical aspects like depiction, relevance, impact, sensitivity, group dynamics, synchronization, and clarity. The open-ended

questions showed that the learning experience was fun, good and useful by most students.
Conclusion: The results of this pilot study indicates that street play was effective in teaching Bioethics to medical undergraduates and that this may facilitate learning, increase empathy and teamwork communication skills. The other important aspect is that conduct of street play on relevant issues does not need elaborate material equipment's and can be done in realistic setting of classroom and could be a creative alternative for the traditional lecturing teaching techniques being followed. As far as the investigators are aware of this is the first study that attempted at understanding the usefulness of street play in teaching Bioethics to medical undergraduates. It is suggested that medical curriculum should incorporate theater arts to inculcate moral ethics and teaching handling of bioethical dilemmas to students.
Keywords: Street Play, Medical Ethics, Bioethics, Medical Undergraduate Students.
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Introduction

Since time immemorial medical profession has been considered a very noble profession and the physicians to be epitome of righteousness, empathy, ethical practice, and care [1,2]. However, in the recent past observations from the medical fraternity and information published in the social pages indicate that when compared to the bygone times there has been a decrease in the values and in the level of ethical practice in healthcare sector [1,2]. In lieu of these observations, to prepare better professionals, many professional organizations and universities have identified that medical ethics needs to be taught to healthcare students by integrating well-constructed courses into both pre-clinical and clinical courses [1,2]. However, on a practical note, unlike pedagogy of structured medical subjects, teaching of medical ethics has obstacles and there has never been a clarity on how to achieve the best results. Currently, in most of the schools and hospitals where emphasis on medical ethics is being placed and taught, the traditional didactic lectures are used [3]. Teaching medical ethics and to have it a lasting impact and an integral part of clinical practice throughout a doctor's career is a challenge and requires considerable innovativeness and enthusiasm. Under these considerations, doubts persist on what impact the traditional didactic method which is known to be not everlasting will have in teaching of medical ethics.

In the recent past the role of visual arts like subject based movies, dramatic plays, poetry, narrative essays, music, skit, mime, and street plays have been shown to have profound impact in teaching and education [4]. To substantiate these reports have also shown that, when compared to reading educational information from book emotional components are easily recollected when learnt through visual arts [5-6]. In guidelines published as "Road Map for Arts Education" after the World Conference on Arts Education, Lisbon, Portugal 2006, suggests exploring the role of Arts Education in meeting the need for creativity and cultural awareness in the 21st Century, and to place emphasis on the strategies required to introduce or promote Arts Education in the learning environment [7]. Additionally, scientific reports indicate that using visual arts in medical education [8-12] and improves observational and diagnostic skills [12-13]. The investigators observed that when compared to the students who underwent standard didactic training, the cohorts trained through visual arts were more likely to describe clinical photographs of patients accurately and fully with medical conditions, had better observational skills and awareness of emotion and empathy [12-13]. A well-planned visual art is effective in exposing the viewers to worlds outside their own experience, present influential facts, and engaging emotions in the viewers. A well scripted and acted play can also help the audience actualize other condition and assists in inculcation of compassion, understand paradoxical divergent views, and consider multiple points of view [14]. This is especially very useful in teaching of medical ethics where ethical dilemmas are galore and multiple (and at times divergent) viewpoints are to be understood, accepted, and appreciated. For the first time an attempt is made to understand the usefulness of street play in imparting medical education to the undergraduate students.

Methodology

This was a multicentre study and was conducted under the aegis of the UNESCO Bioethics, India unit after obtaining the permission from the Institutional Ethics Committees of the participating

units. The topic consisted topics on autonomy & consent, concept of vulnerability, dignity on disability, disability ethics, disability ethics & blindness, disability is only in attitude, discrimination, disabled population, disabled population vulnerability, disability - problem understanding & awareness, environmental ethics, equality, justice & equity, equal rights to disabled, female child, gender discrimination, gender disparity, human dignity & human rights, help under privileged, need for changing thought process, non-discrimination, non-stigmatization, organ donation, privacy & confidentiality, protect girl child, respecting disability, respect for differently abled (disability), respect the people, respecting the specially abled, stop discrimination against under-privileged, stop discrimination of disadvantaged, vulnerable population-gender disparity & protection and use of ethics in helping disabled.

The study population consisted of medical undergraduates who had registered for the Bioethics program. The investigators approached the participating medical graduates and briefed them about the purpose of the study. Written consent was obtained on a separate sheet from all the participants before the administration of the questionnaire. The study involved two stages and included: The design and performance of street play by the willing students. The street play topic and dramatization were guided by a faculty at each institute. Controversial and antisocial aspects were avoided and only those topics of relevance to the medical curriculum and ethics were chosen. The detail methodology is enlisted in Table 1.

The appraisal of effectiveness of the performed street plays were done by student's naïve to the concepts and principles in Bioethics. The study questionnaire was designed by the investigators and was developed by a panel of experts in bioethics, medical education, and researcher. Special attention was given for clarity and the questions were open ended. Emphasis was placed on the opinion for the comprehension and understanding of the meaning of each question. The final instrument underwent only minor grammatical changes. The student's opinion was assessed by quantitative and qualitative methods. In the quantitative methodology by using a 1-5 Likert scale questionnaire with, 1 = not useful; 2 = could be better; 3 = good; 4 = very good and 5 = excellent, while the ascertain opinion (qualitative) and semi-structured open-ended questions were distributed to the students in the audience (the audience students) and the performing students separately.

Statistical analysis

The quantitative data was entered in Microsoft excel and answers on the questions were subjected to analysis using frequency and percentage using the SPSS software program version 22 from IBM. The effectiveness of the lesson was assessed by comparing rates of answers to multiple-choice questions in the final exam following the course

Results

The results of the study are enlisted in Table 1 to 2. As observed in the study, the students expressed their high appreciation to the overall assessment (Table 1; Figure 1). With respect to the sub sections of depiction, relevance, impact, sensitivity, group dynamics, synchronization, and clarity, the resulted indicated that majority of the students (> 85%) expressed their opinion as excellent or very good (Table 2).

Discussion

The results of the study indicate that the street play evolution has transformed the participants and substantiates the germ idea for evolving this as a teaching learning methodology. The most important observation is that this methodology virtually brings a metamorphosis peremptorily and without scaring the mind or the accepted beliefs. Here with a small group of students 10 to 12 underwent a mini kaleidoscope of experiences, which is natural and brought out a lasting change as expected outcome when this learning methodology was planned. In lieu of the observations accrued from this pilot study we recommend that small group learning with 10 to 12 students for a large class will bring about an effective learning of the ethical issues. This we feel will be very important as studies and our own observations have shown not to happen in the conventional teacher lecture pedagogy. Also, this method of purposive experiential learning will be readily

acceptable and have a long-lasting impact on the individual than hours of teaching or preaching. Therefore, this novel method of teaching would be the answer to teaching domain in the affective areas like professionalism, ethics and worth adopting by the fraternity.

Recent reports are suggestive to the fact that street plays are having a profound influence in delivering message to the public on complex issues and in conveying socially relevant messages in public health [15-17]. As a matter of fact, visual arts, and theatre (including drama, skits) are known to have an important role in inculcating knowledge and awareness on various controversial and lesser-known medical subjects [15]. In fact, a meta-analysis of various studies in the use of theatre in medical education by Lake and coworkers [16] have substantiated the fact that "arts can provide medical educators with a penetrating and dynamic set of tools for rethinking medical education and medical practice". They have also suggested that "arts must be permitted to take their legitimate place in medical education and to have their effectiveness judged by appropriate criteria and methods" [16].

In the current study for the first time an attempt is made at studying the effectiveness of street play in the teaching of bioethics to the medical undergraduates. The students selected for the study were the ones who did not have any exposure to the teaching of bioethics and medical ethics. The results of the study indicated that majority of the students (> 85%) expressed their opinion as excellent or very good (Table 1).

As observed in the study, the students who were audience to the street play on aspects addressing various bioethical issues expressed their high appreciation to the overall assessment (Table 1; Figure 1). With respect to the sub sections of depiction, relevance, impact, sensitivity, group dynamics, synchronization, and clarity, the resulted indicated that majority of the students (> 85%) expressed their opinion as excellent or very good (Table 1). In addition to this the sub analysis into the various facets of the street play like depiction, relevance, impact, sensitivity, group dynamics, synchronization and clarity also indicated high appreciation from the students (Table 2). When considered in total the observations from both quantitative and qualitative observations substantiate the fact that street play is indeed an effective modality in inculcating principles of bioethics in the undergraduate students.

From the perspective of medical education, unlike with the teaching of core subject related topics, inculcating/teaching ethical values is ideally not a classical class-based mentor-student teaching. For teaching of bioethics to be effective, an attitudinal change and inculcation of righteousness needs to be insidiously done through constant prodding via information and reinforcement by case scenarios analysis. In this regard the street play is important because it has an impact on the viewers and helps ingrain various sensitive issues in their minds. The other advantage of street play is that it encourages people to empathize themselves with an enacted character and this feature is of immense educational value [15, 17].

From a student development perspective such exercises are very beneficial and aid the all-round ability. In the study heterogeneous students varying from culture language, customs, traditions, personal experience religion, family outlook local societal propriety causes a group of students to be different as to cause learning. The study indicated that when students interact to implement the task of performing a street play, they must first contend with their beliefs and come to a socially acceptable consensus after process of debate, friction of values that transforms the student's perspective and in a short time learns attitude behaviours that would never otherwise be learnt.

In the study various topics on ethics like on autonomy and consent, concept of vulnerability, dignity on disability, disability ethics, disability ethics and blindness, disability is only in attitude, discrimination, disabled population, disabled population vulnerability, disability - problem understanding and awareness, environmental ethics, equality, justice & equity, equal rights to disabled, female child, gender discrimination, gender disparity, human dignity and human rights, help under privileged, need for changing thought process, non-discrimination, non-stigmatization, organ donation, privacy and confidentiality, protect girl child, respecting disability, respect for differently abled (disability), respect the people, respecting specially abled, stop discrimination against under-privileged, stop discrimination of disadvantaged, vulnerable population-gender disparity and protection and use of ethics in helping disabled were addressed and the opinion of the students on the effectiveness of street play as a medium of teaching was collected. A literature

study indicated there are no studies conducted on this aspect and that this is possibly the first in the fraternity.

The most interesting aspect about this methodology of teaching is that it thrusts the students into a vortex of conflicting ideologies, which culminates in triggering/learning of moral sensitivity, receptivity, courage, and critical thinking. The other best aspect of such exercise is that the student comes out unscathed from vitriolic discussions, learns to compromise unconsciously and achieve the necessary common aim. Together all these aspects will help in their personal growth and inculcate the right methods of speaking/negotiating, the necessary soft skills, accept others' views and cultures, to empathize with the afflicted and understand the situation. All these aspects are very important and help take forth the all-round development of the students and in accordance to the tenets of medical ethics, education and service

Conclusions

Participatory theatre involves all those actors to formulate and derive, an acceptable concern of the dialogue and direction of storyline. This requires each of the actors to come out of their comfort zones and take us stance that brings them to debate and advocate their opinions, which have been formed, over the years, by their experiences, indoctrination, and religious and traditional culture. The confluence of opposing believes gets a thrashing by reasoning and practicality. Varied behaviours and thought process often take a U- turn. This itself is a process of exposure, renationalization, relativism, and prioritization. The unexpected situation that the volunteering individual took up brought him to an experience of discriminatory situation which he would have been exposed only in a rare event.

When the volunteers agreed to participate in this programme, little did they know, that they would be having are visitation of they are beliefs. Two or three such teaching modules would allow for the sensitization of individuals in a phased and appropriate manner. The actors experience vastly different emotions than the observers in this situation. This allows the medical teacher to enhance the learning and tackle oft seen ethical dilemmas leading to empowerment of the students to handle such real time situation in an ethical manner. The actors have had the best experience and their opinions are now, rational. The actors who gave completed the qualitative survey form is, as easily, sucked into the vortex of cauldron of ethical issue in India. While the observer group were complacent and just took the essentials from the message of the street play, there was no lasting attitudinal change in them (as they have not' lived' this experience). The most forthcoming opinions and experience was from the actors having the focal group discussion. It was only the astute few actors who penned down their feeling in the reflective writing. The observers only took on the most superficial message that was evident in the play, by comparison. This methodology of teaching bioethics would truly influence the students in getting a better perspective of the learning objective. Five to ten, such learning objective (article 11, non-discrimination and non-stigmatization); could fast forward the students in to understanding the sensitivity and impact of various crux problem.

Table 1: Opinion expressed by the students on the overall assessment and on street play as a useful modality to teach bioethics

	Choice	Frequency	%
Overall assessment on street play useful to teach bioethics	Excellent	61	39.11
	Very good	61	39.11
	Good	26	16.67
	Could be better	3	1.92
	No answer	2	1.28
Is street play useful to teach bioethics	Yes	150	96.15
	Perhaps	1	0.64
	No answer	5	3.21

Table 2: Opinion expressed by the students on the various domains pertinent to the street play on aspects in Bioethics:

The domains on the street play	Opinion of the participants regarding various aspects pertaining to street play				
	No answer N (%)	Could be better N (%)	Good N (%)	Very good N (%)	Excellent N (%)
Depiction	0(0)	3(1.92)	16(10.26)	65(41.67)	72(46.15)
Relevance	0(0)	1(0.64)	17(10.9)	52(33.33)	84(53.85)
Impact	1(0.64)	1(0.64)	21(13.46)	57(36.54)	74(47.44)
Sensitivity	1(0.64)	3(1.92)	27(17.31)	45(28.85)	77(49.36)
Group dynamics	0(0)	2(1.28)	22(14.1)	61(39.1)	70(44.87)
Synchronization	0(0)	2(1.28)	16(10.26)	74(47.44)	64(41.03)
Clarity	0(0)	3(1.92)	19(12.18)	49(31.41)	84(53.85)

Open end Question	Expressed Answers
What is your opinion on the topic?	This is essential to promote equality. Every person should have equal rights Rights should be given to disabled It is very important ant topic four our society to discuss and accept the people. I agree with the topic as this topic needs awareness. It's a very touching and a social topic Topic chosen is an overlooked topic most of the time. We came to know about the actual problems faced by disables. It is pathetic that such people are ignored in society which should stop.
Do you like to be with your group in this?	It will be very creative and wonderful experience. Promotes socialism and various interactive ideas It was an awesome experience as working with my group I learnt new things. People were funny enthusiastic creative and innovative. I really like to be in the group because it helps to take part in a noble deed and moreover it helps to spread awareness among common people.
Do you think this is worthwhile?	Very educational This topic is of major concern and will hold strength to be discussed openly This topic is of major concern Yes, doing something for a noble cause is worthwhile. It will not only spread awareness among the people also help participants learn more things. It gives us an opportunity to bring such topics to everyone in an interesting way and we were also able to shed light on some problems people face.
Do you think it is better to include the people from same class (socioeconomic status/ same religion/ same caste/same scholastic caliber/ same age) why?	Discrimination should not be there. It should be a heterogeneous mixture of all people. Different people bring in a variety of ideas which help us to expand our knowledge further. I think having diversity in a group helps in better interaction and also helps in bringing out a really good message for the audience.

Do you think that all being from the same culture is better?	Everyone should be included I think people from different cultures should be included so that we can have diversity in ideas. Different cultures present different viewpoints. Also, one learns to convey to different cultures. By different cultural background we get to know each other and to learn from each other. Different people from different cultures bring different experiences and ideas.

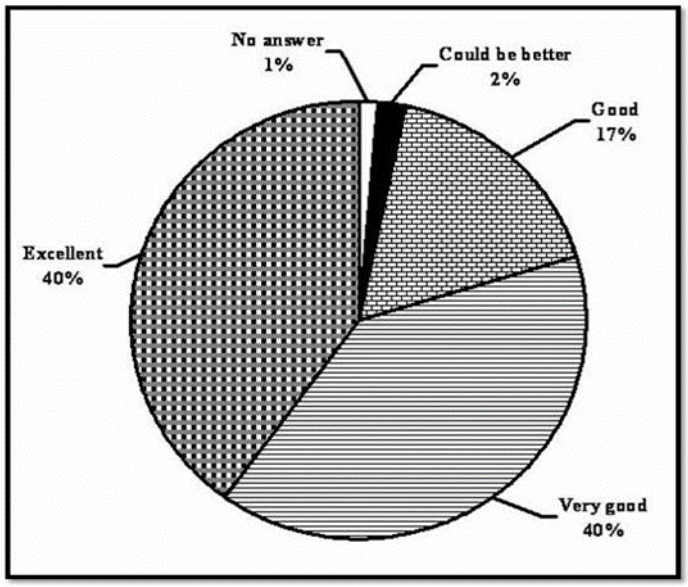

Fig 1: Opinion of the student audience on the overall assessment of street play as an effective medium in teaching of bioethics

REFERENCES

1. Manson H. The Need for Medical Ethics Education in Family Medicine Training. Med Ethics 2008;40(9):658-64.
2. Murrell VS. The failure of medical education to develop moral reasoning in medical students. Int J Med Educ 2014;5:219-25.
3. Edmiston B. Drama as Ethical Education. Research in Drama Education,2000;5:63-84.
4. Alberts R. Discovering Science Through Art-Based Activities. Learning Disabilities2010;16(2):79-80.
5. Davidson PSR, McFarland CP, Glisky EL. Effects of emotion on item and source memory in young and older adults. Cogn Affect Behav Neurosci 2006;6(4):306-22.
6. Chaturvedi J, Parameshwaran D, Vaz S, Parameshwaran S. Students' Perceptions of The Use Of Dramatics In Medical Education: Early Explorations. Internet J Med Educ 2012;2(2):1-6.
7. Anonymous (2006). Road Map for Arts Education. The World Conference on Arts Education: Building Creative Capacities for the 21st Century Lisbon, 6-9 March 2006. Published by United Nations Educational, Scientific and Cultural Organization, Paris, France. www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/.../Arts_Edu_RoadMap_en.pdf (Refered 20th August 2018)
8. Dolev JC, Friedlander LK, Braverman I: Use of fine art to enhance visual diagnostic skills. JAMA 2001, 286:1020–1021.
9. Kiessling C, Müller T, Becker-Witt C, Begenau J, Prinz V, Schleiermacher S: A medical humanities special study module on principles of medical theory and practice at the Charite, Humboldt University, Berlin, Germany. Acad Med 2003;78:1031–5.
10. Perry M, Maffulli N, Willson S, Morrissey D: The effectiveness of arts-based interventions in

medical education: a literature review. Med Educ 2011;45:141–8.
11. Reilly JM, Ring J, Duke L: Visual thinking strategies: a new role for art in medical education. Fam Med 2005;37(4):250–2.
12. Shapiro J, Rucker L, Beck J: Training the clinical eye and mind: using the arts to develop medical students' observational and pattern recognition skills. Med Educ 2006;40:263–8.
13. Edmonds K, Hammond MF. How can visual arts help doctors develop medical insight. Int J Art Design Education 2012;31(1):78-89.
14. Aull F. What "The Literature, Arts, and Medicine Database" Is and How to Use It. Resource for a New Paradigm in Training Doctors. https://med.nyu.edu/medicine/medhumanities/about-the-literature-arts-and-medicine-database (Refered August 20, 2018).
15. Üstündağ T. The advantages of using drama as a method of education in elementary schools. Hacettepe Üniversitesi Eğitim Fakültesi Dergisi 1997;13:89-94.
16. Glik DC, Nowak G, Valente TN, Sapsis K, Martin C. Youth performing arts entertainment – education for HIV/AIDS prevention and health promotion. J Health Commun 2002;7:39-57.
17. Loganathan S, Varghese M. Play it street smart: A street play on creating awareness about mental illness. World Cult Psychiatry Res Rev 2015;1:189-200.
18. Lake J, Jackson L, Hardman C. A fresh perspective on medical education: the lens of the arts. Med Educ 2015;49(8):759-72.
19. Shapiro J, Cho B. Medical Readers' Theatre: Relevance to Geriatrics Medical Education. Gerontol Geriatr Educ 2011;32(4):350-63.

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Ethical Viewpoint Paper

Should Healthcare Providers in Intensive Care Medicine be governed by the Principle of Beneficence and Non Maleficence more than Autonomy for a Terminally Ill Case, or Should They allow the Caregivers and Patient to take the call ?

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Introduction
Ethics is an integral part of clinical medicine with the physician having an obligation towards the patient to ensure benefit, avoid or reduce harm, and respect the patient's preferences. The principles of beneficence and non-maleficence can be traced back to the 4th and 5th century BC to the time of Hippocrates which led to the Latin dictum "primum non nocere". Autonomy and justice subsequently gained importance as biomedical ethical principles. Beauchamp and Childress, in their book Principles of Biomedical Ethics, outlines four pillars of biomedical ethics, that till today form the basis for taking ethical decisions in the hospital [1]. However, these principles can tend to be conflicting with each other in certain circumstances.

Autonomy
The principle of autonomy states that all individuals have the right to make their own rational and moral choices. In medical practice, it is described as the right of competent adults to make informed decisions about their own medical care. Autonomy forms the basis of "informed consent", a necessity before any procedure or intervention, except in life-saving emergencies. The significance of this principle is seen in the landmark case of Mary E. Schloendorff in 1914, who alleged that the surgery done on her to remove a tumour was performed without her knowledge, leading to the incrimination of the Society of the New York Hospital [2].

Informed Consent
Obtaining an informed consent from patients or relatives is a routine practice in the hospital and requires three fundamental criteria to be fulfilled - the patient must be in full mental capacity, receive a full detailed disclosure which he/she clearly understands, and the freedom to take a decision without any external pressure or coercion.

1. Mental capacity to make important decisions, as in an intensive care setting, would be dependent on various factors such as age, medical disease, psychological stressors, and medication. Appelbaum, in his article on informed consent, describes the legally relevant criteria for decision-making capacity as the ability of the patient to understand the relevant information, appreciate the situation and its consequences, reason about treatment options, and communicate a choice which may be verbal or non-verbal [3]. In case of a patient who was previously autonomous but presently incompetent, his/her previously expressed preferences, if any, are to be respected. If there are no known directives, then a surrogate decision-maker would be needed. This may usually be a spouse, family member

or close relative depending on the family support and dynamics. In case of uncertainty in the decision-making process, the surrogate may either use a substituted judgment standard (what the patient would desire in this situation) or a best interests standard (what would be the most beneficial to the patient by weighing risks and benefits).

2. Full disclosure requires the treating physician to inform the patient about all details of his condition, treatment options with risks and benefits of each, and the prognosis, in a language well understood by the patient. This is aimed at enabling the patient to take a decision after receiving all the necessary information.
3. Freedom to take decision without external pressure: Various religious and social customs play a crucial role in the decision-making process. In our culture, senior family members, particularly in joint families, play an important role in the decision-making process. A study in 1990 by Deimling et al revealed that elders in the family (40%) and nuclear family members (53%) were the key decision-makers [4]. Religious beliefs of the patient also influence decisions taken in the hospital. Patients belonging to Jehovah Witness group refuse blood transfusion even in intensive care units.

An extreme form of patient autonomy is described as consumerism where the role of the physician is limited to sharing of information of the medical condition with details of the treatment options, leaving the fully informed patient to choose the treatment ahead. In this model however, the physician is unable to fully use his knowledge and skills to benefit his patient, a gross contradiction to the principle of beneficence.

Beneficence and Non-Maleficence

This principle of beneficence outlines the responsibility of the physician to act for the benefit of his patient, while non-maleficence ensures that the interventions by the physician do not cause the patient any further harm. The physician has a responsibility to advocate the most useful intervention that is available for the given patient.

The situation where beneficence takes preference over autonomy is described as paternalism, where the doctor is believed to know what is best for the patient. Joel Feinberg, a renowned philosopher, describes two types of paternalism in criminal law – soft and hard paternalism [5]. Applying this to a medical setting, in soft paternalism, the physician acts in circumstances where the patient is unable to make his/her own decisions. However, determining whether the patient is autonomous or not, particularly in an intensive care setting, requires a great deal of skill and experience. An extreme form of beneficence is hard paternalism, where the physician acts to benefit the patient, even though it is against the desire of a patient who is fully able to comprehend the situation and make his/her own decision.

Both, hard paternalism, and consumerism, though strongly supporting one extreme of a single principle, cannot be ethically justified. Faced with contrasting views of beneficence and autonomy, there is an urgent need to find a middle path between the two. At no point in the spectrum of ethical decision-making is the conflict as marked as when beneficence and autonomy collide. These controversial situations are most seen in the intensive care unit when dealing with a terminally ill patient, where difficult decisions need to be made with limited patient information, high uncertainty about prognosis, and extreme pressure to make these decisions in limited time.

Clinical Application

Common situations in the care of a terminally ill patient in which ethical conflicts between patient autonomy and beneficence appear are described below:

(a) Admission: Admission of a terminally ill patient to an intensive care unit is an extremely difficult and emotion-driven decision. This choice is usually urgent and required to be made in a stressful casualty ward. The information given by the treating physician is vital in making this decision and many patients choose to leave the decision to the discretion of the physician. While physicians aspire to make patient-centred decisions, they face multiple challenges such as being overworked, under-staffed, and limitations to resources and equipment at their disposal. Patients and their relatives, on the other hand, are stressed, unsure, inadequately informed and under duress to decide. Therefore, admission

to intensive care should be implemented after shared discussion with the physician, the patient, and the family. The same should also be done if non-implementation of these therapies is being considered. A qualitative study by van de Kluit done by open interviews of 21 older hospitalized patients revealed that for all the participants, the decision for admission was taken acutely, even if the problems evoking admission were not acute. Admission to hospital was usually associated with positive expectations of hospital care – therefore prognosis and outcome must be adequately explained at admission, especially in a terminally-ill patient. The study also identified that advance care planning and shared decision making were not commonly encountered in the interviews [6].

(b) Diagnosis Disclosure: Complete diagnosis disclosure involves complete unrestricted information of the patient's medical condition, treatment options and prognosis to be shared with the patient and/or family members. There are various socio-cultural factors that play an important role in determining the choices of both physicians and patients. A significant shift has been noted in the attitudes of physicians between 1961 and 1979, where 88% of the physicians preferred to avoid disclosing a diagnosis in the former, but subsequently 98% of physicians favoured it [7-8]. A survey of 250 cancer patients' caregivers revealed that caregivers felt that patients knowing a diagnosis and prognosis may negatively affect the future course of illness and cause stress, depression, and loss of hope and confidence in the patient [9]. These evolving trends could be due to a paradigm shift from the age-old combination of paternalistic physician and patriarchal extended family, to a society with a clearer emphasis, both legally and ethically, on the issue of patient autonomy and informed consent. A recent survey of 304 cancer patients and 277 family members on complete disclosure of diagnosis revealed that patients preferred complete disclosure of related information as against their families who were more inclined toward scarce disclosure. Family members appeared to experience fear as the predominant emotion, compared with acceptance being the predominant attitude anticipated by the patient group [10].

(c) Ventilation: At the grey zone between intensive care and palliative medicine, many patients develop respiratory failure. While modern mechanical ventilation may improve ventilation, they may interfere with the patient's right to a dignified death, particularly at the end of a long-lasting chronic illness. Withholding and withdrawing of life support are considered ethically equivalent. However, issues in this aspect continue to exist as there is inadequate legal backing for withdrawal of life support. Keeping the above in mind, terminally ill patients should be carefully screened to determine the beneficial role of ventilation against the ill-effects of prolonging of life and suffering. Counselling of the patient and relatives plays an important role in taking this vital decision. Patient autonomy should be considered superior in these decision-making processes and should ideally be made early, during advanced care planning (ACP).

(d) Artificial Nutrition and Hydration (ANH): ANH describes feeding of a patient in the form of enteral tube feeds or parenteral nutrition. While many medical groups consider nutrition and hydration to be part of basic human care, others consider them to be life-sustaining interventions. A landmark judgement in the case of Margaret Anne Bentley, an 82 year old lady with severe Alzheimer disease living in a long-term care facility in British Colombia, clearly stated that feeds and fluids were considered to be part of basic care, and withholding of the same amounts to neglect on the part of the caregiver [11]. While ANH may improve the quality of life and prevent discomfort from hunger and dehydration, it also poses the risk of diarrhoea, aspiration pneumonia, infection and gastrointestinal discomfort. A randomized trial by Bruera et al studied the effect of parenteral hydration on 129 cancer patients in hospice care and found no difference in symptoms, quality of life, or survival [12].

(e) Terminal Sedation: Terminal sedation refers to the use of sedative drugs in the end-of-life care to make the patient unconscious until death occurs from the underlying illness, primarily as a means to alleviate severe pain and suffering. While the aim is not to cause or hasten death, the same may be seen as a side effect of these drugs –doctrine of double

effect. Strict criteria must be enforced to ensure that terminal sedation is used in the best interests of the patient and not as an active intervention to end life.

(f) Resuscitation: Do not attempt resuscitation (DNAR), also known as Allow Natural Death (AND) is a directive to withhold futile cardiopulmonary resuscitation (CPR) in specific conditions where CPR does not change the outcome of the patient. The Indian Council of Medical Research recognizes DNAR as a valid medical directive in these conditions, as CPR would be nonbeneficial, inappropriate and only serves to prolong the suffering of the patient [13]. The guideline also describes an algorithm to facilitate the decision-making process and ensure the best interests of the patient. In cases of non-competence of the patient, the family and surrogate decision-makers would then need to be counselled to make the decision. A decision to give DNAR consent would depend on personal patient preferences, the estimated success of CPR, the risks involved, and the perceived benefit. Age of the patient was also found to be a major factor in deciding about resuscitation. A systematic review showed that DNAR orders were more common in older patients ≥75 years but was surprisingly independent of other contributing factors such as severity of illness and likely outcome [14].

(g) Palliative Care and Advanced Care Directives: A more acceptable alternative to hospitalization and intensive care of a terminally ill patients is palliative care at home or hospice. This option amalgamates quality of care with dignity of life to ensure that the patient shares their last few moments with their loved ones and enjoy a peaceful end. End-of-life care at home requires a medical support system to set up a home-based care and train the caregivers to provide the necessary care to the patient.

Advanced care directives (ACD) are oral or written instructions about medical care choices of a patient in case he/she becomes unable to communicate his/her preferences and loses his/her decision-making ability for any reason. ACDs include living wills, health-care proxies, and DNAR orders. However, despite the clear benefit of ACDs, a study showed that patients receiving home care have a lower rate of ACDs compared with long-term care users in nursing homes and hospice [15]. This increases the burden on the family members and other relatives to identify a care plan among themselves keeping the patient's best interests in mind. A study by Deterring et al on the impact of advanced care planning on end-of-life care in elderly patients demonstrated a significant benefit of ACDs by improving end-of-life care and patient and family satisfaction, and in reducing stress, anxiety, and depression in surviving relatives [16].

In conclusion, care of the terminally ill patient is filled with ethical dilemmas that leave the physicians and family members with very difficult decisions to be made. While the best interest of the patient is to be always kept in mind, aggressive management with interventions that prolong suffering must be avoided. While patient autonomy needs to be weighed against competing moral principles, autonomy usually overrules beneficence in most dilemmas provided the patients or decision-makers have been explained the risks and consequences of the decisions made. However, the role of the treating physician in guiding the patient and family in the decision-making process cannot be over-emphasized. Another important aspect that needs to be considered when making these decisions is quality of life. Treating physicians can best respect the patient's autonomy by allowing the patient and decision-makers to identify relevant health care preferences in advance, and by abiding by the choices that their patients have made. Incorporation of hospice and palliative care in the continuum of terminally ill patient care can improve the use of ACDs, assist in decision-making, enhance the end-of-life care, and support family members through the harrowing process of caring for their loved ones with a terminal illness.

REFERENCES

1. Beauchamp TL, Childress JF. Principles of Bioethics. 7th edition: Oxford University Press: London; 2013.

2. Cardozo B. Basic right to consent to medical care – Schlendorff vs the Society of the New York Hospital, (1914).
3. Appelbaum PS. Clinical practice. Assessment of patients' competence to consent to treatment. N Engl J Med 2007;357(18):1834-40.
4. Deimling GT, Smerglia VL, Barresi CM. Health care professionals and family involvement in care-related decisions concerning older patients. J Aging Health 1990;2(3):310-25.
5. Feinberg J. The Moral Limits of the Criminal Law Volume 3: Harm to Self. 1989.
6. Van Der Kluit MJ, Dijkstra GJ, De Rooij SE. The decision-making process for unplanned admission to hospital unveiled in hospitalised older adults: a qualitative study. BMC Geriatrics 2018;18(1).
7. Oken D. What to tell cancer patients. A study of medical attitudes. JAMA 1961;175:1120-8.
8. Novack DH, Plumer R, Smith RL, Ochitill H, Morrow GR, Bennett JM. Changes in physicians' attitudes toward telling the cancer patient. JAMA 1979;241(9):897-900.
9. Ghoshal A, Salins N, Damani A, Chowdhury J, Chitre A, Muckaden MA, et al. To Tell or Not to Tell: Exploring the Preferences and Attitudes of Patients and Family Caregivers on Disclosure of a Cancer-Related Diagnosis and Prognosis. J Glob Oncology 2019(5):1-12.
10. Alzahrani A, Alqahtani A, Alhazmi M, Gaafar R, Bajabir D, Alharbi I, et al. Attitudes of cancer patients and their families toward disclosure of cancer diagnosis in Saudi Arabia: a Middle Eastern population example. Patient Pref Adherence 2018;12:1659-66.
11. In the Supreme Court of British Columbia. Bentley v. Maplewood Seniors Care Society 2014 BCSC 165.
12. Bruera E, Hui D, Dalal S, Torres-Vigil I, Trumble J, Roosth J, et al. Parenteral hydration in patients with advanced cancer: a multicentre, double-blind, placebo-controlled randomized trial. J Clin Oncol 2013;31(1):111-8.
13. Mathur R. ICMR Consensus Guidelines on 'Do Not Attempt Resuscitation'. Indian J Med Res 2020;151(4):303-10.
14. Cook I, Kirkup AL, Langham LJ, Malik MA, Marlow G, Sammy I. End of Life Care and Do Not Resuscitate Orders: How Much Does Age Influence Decision Making? A Systematic Review and Meta-Analysis. Gerontol Geriatr Med 2017;3:2333721417713422.
15. Jones AL, Moss AJ, Harris-Kojetin LD. Use of advance directives in long-term care populations. NCHS Data Brief 2011:54:1-8.
16. Detering KM, Hancock AD, Reade MC, Silvester W. The impact of advance care planning on end-of-life care in elderly patients: randomised controlled trial. BMJ 2010;340:c1345.

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Ethical Viewpoint Paper

Health Care Rationing: An On-going Ethical Dilemma in India

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Introduction

Healthcare rationing for elderly is an unfinished agenda in bioethics. It has gained momentum in recent years especially in resource-strapped country. More than two decades ago, Callahan in his highly controversial book, Setting Limits: Medical Goals in an Ageing Society [1] argued that expensive medical aid needs to be prudently decided and rationed carefully for the elder members. Even earlier to this, Veatch [2] had made a strong opinion of favoring younger population over elderly group in resource allocation. With rise in average life expectancy, burden of chronic and intractable diseases too has increased. On the other hand, there is an ever increase in the healthcare resource cost, socio-economic rift between rich and poor and population growth. These factors make it formidable to discuss healthcare rationing.

Hospitals, across the world are already under pressure of huge patient influx, majority of whom are elderly, chronically ill and dying. The emergence of COVID-19 pandemic in December 2019 has crippled the healthcare system even more. In India, healthcare institutions are already facing challenges in balancing issues around ethics, economic efficiency, universal access, and delivering medical services. In the present context, where health indicators are poor, the issue of ethics becomes more complex and requires a nuanced understanding and appreciation of the social predicaments. At present inequality in access to healthcare, unequal distribution of healthcare facilities, privatization, and corporatization of healthcare, overpricing of medical interventions and unnecessary prescription of drugs and procedures to inflate the costs, by private hospitals and doctors, lack of quality healthcare professionals in rural and backward areas, issue of granting and extending patents; evergreening of patents, etc., issues related to disclosure of information to the patient and the caretakers, ethical issues like euthanasia; abortion, etc. are some of the burning issues. The present pandemic situation has foregrounded these issues that have plagued the healthcare infrastructure. A rarely discussed but old discussion came to the forefront of all medical discussion i.e., rationing in the provision of healthcare. A video titled: "Doctors Face an Impossible Choice When Rationing Care" published by Time discusses the same issue and asked an important quest why a woman suffering from cancer should be getting treatment when her before the covid situation is even worse than her post covid situation. Similarly, when COVID-19 death rates peaked in Italy in March, TV channels around the world flashed horrific images of desperate patients lined up in hospital corridors awaiting admission, patients laying outside the hospital buildings, overworked healthcare workers triaged the arriving rush. They had to extemporize on their feet, knowing fully well that some of those sent home would die but still they had to do it.

The COVID-19 in India picked up considerably late after May but sparked similar fears of a cataclysmic crisis owing to poor health infrastructure. The largely poor living conditions and the density of population were worrisome situations. In metro cities and a few states such as Delhi, Kerala, Maharashtra, Gujrat, West Bengal, Madhya Pradesh was some of the worst-hit parts of

the country, ventilators, ICU beds, nurses, doctors, and medicines were all in short supply at different points. Some patients died while shuttling from one hospital to another in search of a bed. Video and the news that aired during that time some of the fearful news of all times where patients were helpless, and no one is there to help them. But fortuitously, many of our worst fears have not come to pass – perhaps more due to timely reaction to the crisis, Demographic dividend, and one of the strictest lockdowns, since the fatality rate in India has been lower than expected. Considering the population of India which 1.3 billion where more than 70% of the population pay out of pocket for their healthcare expenses choose to go to private doctors rather than an underfunded and overcrowded health care infrastructure. Doctor: population ratio of 1 in 1000 is very uneven concentrated mainly in urban areas and the government spends only 1.5% of its GDP on healthcare. With ongoing debates happening everywhere India also imported these debates of Healthcare Rationing in India to and research [3] discusses the applicability and implementation of rationing in the Indian context. There are many facets to these discussions, and it has started long before COVID-19. Proponents of these, ethicist Daniel Callahan has argued that expensive medical care is parceled out carefully – essentially rationed – for elderly patients in his book, "Setting Limits — Medical Goals in an Aging Society." he made the case for limitations on care based on age.

Cohen [4] attempts classifying healthcare rationing into three overlapping themes, as found in academic discourses:

- Define rationing and resource allocation, with an emphasis to understand the methods for accomplishing them [5-9].
- Conceptualize rationing as a cost containment tool to stem rising health care costs [10-15] and
- Promote rationing as an ethical policy to assure equitable allocation of resources [16-18].

Justifying the Limits

Those, like Callahan, who supported his suggestions to rationing health care and medical resources based on age believe that such a system would bring about the greatest good for the greatest number of people. The health of the young can be ensured by relatively cheap preventive measures such as exercise programs and health education, but for the elderly medical condition are often complicated, requiring the use of expensive technologies and treatments and often, these treatments are ineffective in providing any tangible benefit for either patient or society. In a nutshell, the costs incurred to cure one elderly person might be more productively directed toward the treatment of a far greater number of younger persons whose health can be ensured by less costly measures. Moreover, the advocates of this system argue, society benefits from the intensification in economic activity that is directly proportionate when medical resources are diverted from an elderly, retired population to those younger productive members of society. Supporters of age-based rationing don't see unjust in withholding medical treatment from the elderly population.

Against Rationing

There is dissent in arguments offered by the advocates of health care rationing. The claim by advocates that rationing would bring balance and benefits for society is contested by those who argue that any rationing policy deprive the old age people of life-saving medical care would result in enormous costs and few benefits. For the young, such a policy would lead to sharp levels of apprehension and fear as they grow old, while the elderly, not wishing to die and feeling abandoned by society, would despair. Moreover, if monetary benefits were achieved by rationing care by age, there's no guarantee, given our present political system, that any savings on the old would be directed to the young. The actual benefits would depend on what kinds of resources were transferred to what sorts of treatments. The opposition of health care rationing by age argues that such a policy would violate our moral sense of respect for persons and respect the fundamental dignity of persons.

However, I feel it would be an interesting exercise to see if equitable rationing can be implemented. It is recommended allocation of limited resources be aimed at both saving the greatest number of lives and at maximizing improvements in the individuals' post-treatment length of life. But it would be a question for debate in a situation when two people of a family come, and one is the chief wage earner and another person is the son of that person in his 20s. It is a very difficult ethical choice to imposed rationing decisions, the overall health care infrastructure must be efficient and proactive, so that need for rationing can be minimized. By reducing medical waste, containing medical corruption, promoting best practices, and eliminating medical errors, we can reorient healthcare expenditure for betteruse. The healthcare resource is finite but the demand for costly new treatments is growing rapidly. We need to focus and optimize healthcare allocation. To minimize rationing and mitigate benefits to a possible extent.

Conclusion

Within this debate for and against healthcare rationing there is a room for human compassion. The article ends with two cases: one, an Italian priest, aged 72 years, contracted coronavirus on March 2020. However, he died after he gave up a ventilator so a younger patient survive. According to a healthcare worker, the priest was given a ventilator, but he refused it. According to Vatican News, greeted everyone with the phrase: "Pace e bene." Clara Poli, mayor of Fiorano said, "He was a priest who listened to everyone, he knew how to listen, whoever turned to him knew that he could count on his help,". In contrast to the first instance, the second one revels how WHO director-general appealed to richer and developed countries to postpone vaccination of their children and donate the jabs to poorer countries, who so far are deprived (Hindustan times, 2021).

REFERENCES

1. Callahan D. What kind of life?: the limits of medical progress. Georgetown University Press; 1995.
2. Veatch RM. Just social institutions and the right to health care. J Med Philos 1979;4(2):170-3.
3. Nundy S, Cooper LA, Mate KS. The quintuple aim for health care improvement: a new imperative to advance health equity. JAMA 2022;327(6):521-2.
4. Cohen S. Social relationships and health. Amer Psychol 2004;59(8):676.
5. Mariner WK. Rationing Health Care and the Need for Credible Scarcity: Why Americans Can't Say No. Am J Pub Health 1995;85(10):1439–45.
6. Mechanic D. Dilemmas in rationing health care services: the case for implicit rationing. BMJ 1995;310(6995):1655-9.
7. Aaron HJ. Health Care Rationing: What It Means. Washington, D.C.: Brookings Institution; 1995.
8. Reinhardt UE. Can efficiency in health care be left to the market?. J Health Politics Policy Law 2001;26(5):967-92.
9. Meltzer DO, Detsky AS. The real meaning of rationing. JAMA 2010;304(20):2292-3.
10. Schwartz WB, Mendelson DN. Why managed care cannot contain hospital costs—without rationing. Health Affairs 1992;11(2):100-7.
11. Aaron HJ, Schwartz WB. Can We Say No? The Challenge of Rationing Care.Washington, D.C.: The Brookings Institution; 1995.
12. Aaron HJ. Health care rationing: what it means. Washington, DC: Brookings Institution; 2005.
13. Callahan D. Cost Control—Time to Get Serious. New Engl J Med 2009;361(7):e10
14. Callahan D. Taming the Beloved Beast: How Medical Technology Costs Are Destroying Our Health Care System. Princeton, N.J.: Princeton University Press; 2009.
15. Brody H. From the Ethics of Rationing to an Ethics of Waste Avoidance. New Engl J Med 2012;366(21):1949–51.
16. Cohen AB. Perspectives on Health Reform and Its Implementation. Inquiry 2002;49:90-100.

17. Young EWD. Rationing—Missing Ingredient in Health Care Reform. West J Med 1997;161:74–7.
18. Singer P. Why We Must Ration Health Care. New York Times July 19; 2009.

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Case Report

Homeless Person with Mental Illness and COVID-19: a case report

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ABSTRACT

Homeless persons with mental illness (HPMI) present with unique challenges in medical, psychological, social, and familial domains. Handling such cases requires a holistic approach for a comprehensive solution to the patient and his/her caregivers. Here we present such a case which presented during the COVID-19 pandemic.

Keywords: HPMI, Pandemic, Mental illness, Health access, Schizophrenia.

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Introduction

The Universal Declaration of Human Rights (UDHR) defines homeless as those who do not live in a regular residence due to lack of adequate housing, safety, and availability [1]. A mental disorder is characterized by a clinically significant disturbance in an individual's cognition, emotional regulation, or behaviour.

According to 2011 Census 1.77 million people are found to be homeless in India and 1/5th of the homeless population has been diagnosed with mental disorder [2]. The major disorders are schizophrenia, severe and recurrent major depression, and bipolar disorders. Survey conducted by National Mental Health Survey (NMHS) estimated number of HPMI being nil to 1% in some states. NMHS estimates the number of HPMI to be as high as 15,000 in few states.

Lack of infrastructure, awareness and facilities lead to the variation as according to Mental Health Atlas of 2017 there were less than 2 mental health workers per 100,000 population in India. Multiple factors contribute to high vulnerability of HPMI in acquiring and spreading COVID-19 infection including poor self-care, inadequate sanitation, lack of nutrition, immunocompromised state, overcrowding and lack of awareness of COVID-19 [3].

Mental Health Care Act,2017(MHCA) has laid various measures for treatment of HPMI patients. Mental health professionals played a major role in counselling and psychosocial management to address the mental health issues of HPMI [4].

Case Report

A 45-year-old lady was brought to a tertiary care teaching hospital Psychiatry department in a dishevelled state. She was found wandering around on the streets with extremely poor personal hygiene and self-care. She was brought in as her behaviour was found to be unusual by passers-by who referred her to the NGO (Non-Governmental Organization). On examination, she was found to be malnourished, with poor hygiene and stability. Her vitals were stable with no focal

neurodeficit grossly apparent. On mental status examination, she was bewildered, with raised psychomotor activity, mannerisms, hallucinations, and impaired insight. She was admitted to the ward. Since consent from the patient could not be obtained, it was obtained from the organization which brought her in. She was investigated for basic hemogram and routine investigations, which was normal apart from mild anaemia. A medicolegal case was registered with the police, so her whereabouts could be traced. The treating team first took care of her hygiene, cleanliness, and nutrition. She was given round the clock fluids containing electrolytes such as ORS, and nutritious meals from the hospital canteen. She was examined by departments of general medicine, surgery and obstetrics for any comorbid illness that can complicate current psychiatric presentation. For her behavioural symptoms, she was treated with olanzapine 5 to 10 mg and a multivitamin tablet. This was specifically chosen as it would promote good sleep, and appetite. She was monitored round the clock for vital functions, cognition, affective response, and vegetative functions. Over next 28 days, she recovered well, and her hallucinations, mannerisms stopped completely. Meanwhile, the police had found her relatives based on a missing complaint filed by them. They were reunited with the patient in the ward during her treatment. Background history from relatives indicated that the patient had a history of schizophrenia and was on treatment for past 7-8 years. During COVID-19 pandemic, loss of income, and restrictions on free movement affected her access and ability to buy medicines, which lead to an acute exacerbation about 2 months before presentation due to which she absconded from her home.

The patient was discharged after 28 days inpatient stay in custody of her relatives. They were counselled about the need for continuous treatment with proper follow ups.

Discussion

The case highlights the importance of equity and justice. HPMI patients become more vulnerable to lack of health care access during socio-political instability, pandemics, crisis, war. Covid-19 pandemic was a major challenge worldwide and the vulnerable groups specially HPMI were majorly affected as they were unable to access the healthcare facilities which exacerbated their disease.

Lack of healthcare facilities is matched by a dearth of health care workers as well. According to WHO (World Health Organization) India has 0.3 psychiatrists ,0.12 nurses,0.07 psychologists, and 0.07 social workers per 100,000 population while the desirable number is anything above 3 psychiatrists per 100,000 population [5]. HPMI is an endpoint of lifetime of severe mental illness. Social isolation, stigma, and perceptions of being removed from the society makes such patients vulnerable and they become reluctant to seek help.

The marginalized homeless population and HPMI have not been given priority under the Indian Pandemic Act Of 1897. Policy, administrative measures, and implications must guarantee that the HPMI are restored with minimum of decency empowered and aided in preventing infections like others [6]. In May 2013, WHO updated a comprehensive Mental Health Action Plan 2013-2030 which includes indicator on preparedness for mental and psychosocial support in public health emergencies.

Conclusion

Severe psychiatric illnesses like schizophrenia can have significant impact on a person's quality of life if treatment is suddenly stopped and other stressors present concurrently. Basic rights such as access to healthcare therefore is vital in preventing such occurrences in the community.

REFERENCES

1. Lehman AF, Cordray DS: Prevalence of alcohol, drug, and mental disorders among the homeless: one more time. Contemporary Drug Problems 1994;20:355-83.
2. G Gururaj, M Varghese, V Benegal, GN Rao, K Pathak N…. Bengaluru, National Institute of Mental Health Science 2016 NMHS Collaborators Group. National Mental Health Survey of India, 2015–16: Prevalence, patterns and outcomes; 2016.
3. Housing and Land Rights Network (HLRN). Need for Special Measures to Check Spread of COVID-19 Among Homeless and Other inadequately-housed Persons, 2020. Available at

https://www.hlrn.org.in/documents/Press_Release_COVID19.pdf (Accessed 25 April 2022)
4. Banerjee D, Nair VS. Handling the COVID-19 pandemic: proposing a community-based toolkit for psycho-social management and preparedness. Asian J. Psychiatry 2020;51.
5. World Health Organization. Mental Health Atlas 2014. Geneva: WHO; 2015.
6. Ministry of Law and Justice. The Mental Healthcare Act, 2017.pdf (2017, accessed December 02, 2020).

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Letter to the Editor

Suicide attempt using zinc phosphide rodenticide: Ethical considerations for renal transplant programs

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Suicide has emerged as one of the leading causes of death worldwide [1]. According to the World Health Organization (WHO), the global annual mortality rate due to suicide was estimated to be 10.7 per 100,000 individuals [2]. The significant psychological impact of the disease process and haemodialysis on chronic kidney disease patients was already established by multiple studies in the past [3-4]. Moreover, CKD patients also experience significant issues in relationships, lifestyle, and employment, resulting in significant psychological distress [5]. Recent evidence also suggests that patients with CKD on haemodialysis had a statistically significant increased risk of suicide when compared to the general population, even after depressive disorders are controlled for [6]. Moreover, a high rate of co-morbid depression (20–25%) among patients with CKD on haemodialysis can also compound the risk of suicide significantly [7]. Old age, male gender, lower educational achievements, alcohol or other substance dependence, and recent history of psychiatric hospitalizations were shown to be independent predictors of suicide among patients with CKD on haemodialysis [6].

Although existing evidence suggests that many patients with CKD on haemodialysis may attempt suicide while waiting for renal transplantation, there is inadequate medical and psychiatric data to guide renal transplant (RT) programs in making decisions about transplantation for patients who survive serious suicidal attempts. Most of the RT programs include psychiatric consultation of potential renal transplant recipients to assess the patient's suitability for transplantation. Psychiatric assessment for suitability for transplantation will be influenced by various clinical and psychosocial factors, including the presence of psychiatric disorders, substance misuse, family support, and adherence to medications [8]. To the best of our knowledge, there is no specific ethical guideline to inform RT suitability among patients with a recent history of attempted suicide. There is a need for further clarity regarding the ethical principles that should govern transplant decisions among such patients. Here we discuss the ethical principles that RT programs should consider when making decisions about transplantation for patients with recent or multiple past histories of attempted suicide based on an actual case, we encountered in our RT program.

Case Report: A 39-year-old male with a known diagnosis of hypertension and CKD was evaluated at the nephrology department of our hospital for renal transplantation. He was undergoing haemodialysis at a local hospital near his home for the last year. His renal biopsy showed IgA nephropathy. After evaluation, he was listed as a potential candidate for living-related kidney donation as his sister was willing to be a kidney donor and investigations were supportive. However, two weeks before the date of transplant surgery, he was admitted to the nephrology department with an alleged intake of zinc phosphide rodenticide. A detailed psychiatric evaluation revealed that he had low mood, worries, reduced interest, and impaired biological function for over 2 weeks. Family conflicts with his sister precipitated the symptoms. To reduce the psychiatric symptoms, he resorted to alcohol, and a suicidal attempt was made when he was under the influence of alcohol. During this period, he also skipped medications and haemodialysis sessions.

His past psychiatric history also revealed history two suicidal attempts (intake of zinc phosphide and overdose of medications), and harmful use of alcohol and nicotine. The treating team also learned that the sister (donor) expressed some concerns and demanded more time to take the final decision regarding donating a kidney to him considering suicidal attempts. Considering the overall clinical picture the transplant team decided to defer RT based on the following issues.

1. He has a history of alcohol misuse in the past which he restarted recently
2. History of repeated suicidal attempts in the past and a recent suicidal attempt while waiting for RT
3. Recent onset of significant emotional symptoms requiring psychiatric assessment and management
4. Concerns of the donor in the context of suicidal attempt.

The psychiatric team diagnosed him with adjustment disorder and started him on oral sertraline 25 mg per day and oral melatonin 3 mg per day. It was decided to treat his psychiatric symptoms before listing again him for RT provided the donor is willing for surgery after explaining the potential poor prognosis following RT.

There are two major ethical problems in this case; Is it ethical to perform RT on a patient with a history of substance abuse and recurrent suicidal attempts? Is it ethical to take away a kidney from a healthy donor to perform RT on a patient with recurrent suicidal attempts?

Ethical decision-making of clinical issues is guided by careful analysis of the problem in the light of four ethical principles: beneficence, non-maleficence, justice, and autonomy [9]. However, in living-related kidney donation, one needs to consider the ethical problem from the perspective of the patient and the donor.

According to the principle of beneficence, physicians have a moral duty to act in the best interests of their patients. In the context of RT, physicians should actively promote RT in patients with CKD as transplantation can significantly improve patients' longevity and quality of life [10]. In this case, a duty of beneficence would compel the RT team to aggressively pursue RT for the patient irrespective of his history of substance misuse and suicide as it significantly improves the patient's life. However, physicians also have a duty of beneficence and non-maleficence towards the donor. Considering the patient's history of substance misuse, recurrent suicidal attempts, and emotional symptoms, the decision-making for RT, in this case, is not straightforward. Unlike other CKD patients, there may be higher risks of relapse of substance use leading to poor treatment adherence and treatment failures, and a potential risk of death by suicide, in this patient. The duty of beneficence and non-maleficence towards the donor demands the RT team to evaluate the prognosis with RT in this patient seriously. Previous studies have also shown that patients with co-morbid psychiatric illnesses may find regular follow-up difficult and may not be compliant with their post-transplant therapy [11]. Moreover, repeated suicidal attempts also indicate higher chances of suicidal attempts in the future as previous studies have shown that a previous episode of attempted suicide is the best and most important independent predictor of a future suicide attempt [12]. A recent study also showed an increased rate of death from suicide, but not non-fatal suicide attempts, among patients who received an organ transplant in the absence of past suicidal attempts, indicating high suicidal intent among persons who receive a transplant [13]. It is the moral duty of physicians to take a call regarding accepting an organ from a donor only after properly weighing the values and goals of the potential donor regarding organ transplantation [14]. If the clinical analysis shows that the chances of poor treatment adherence or suicidal attempts are high in the future, it may not be ethical to perform surgery on the donor as it violates the principles of beneficence and non-maleficence, especially when the potential outcome of the surgical process may not be in alignment with the goals of the donor.

Informed consent is an important ethical aspect of living related kidney donation. A properly performed informed consent incorporating information about potential risks and acknowledgment of uncertainty about outcomes when it exists is essential before RT [15]. However, in the context of living-related kidney donation where the recipient is very dear to the potential donor, the donors may base their decision primarily on care and concern rather than on a careful weighing of risks and benefits [16]. Physicians should be careful about this scenario and should inform in detail

about the proportionality of risks and benefits with donor surgery for the donor and the recipient. In this case, when informed about the potential poor outcome of RT due to poor drug adherence, psychiatric illness, or suicide, the donor demanded more time to take decisions for organ donation. The concept of autonomy is relevant in this case because without it living donation will not be ethically permissible [17].

Another important ethical aspect, in this case, is justice. Justice demands giving each person what is due and treating patients who have similar clinical scenarios in an equal fashion [10]. Our decision to defer RT in this patient cannot be considered as discriminatory as multiple factors indicated potential poor transplant outcome, such as substance misuse, poor adherence to treatment including haemodialysis, and multiple suicidal attempts. Any patient with similar clinical history who presents with a suicidal attempt will be treated similarly in our programs. However, the lack of long-term post-renal transplant prognostic data among patients with a history of suicidal attempts can be considered a limitation in our ethical analysis. If future studies suggest that the efficacy of providing RT to patients who have attempted suicide is like the efficacy of providing transplantation to other patients with chronic kidney disease, we may have to change our decision considering newer evidence.

In conclusion, the decision-making of the transplant team in consultation with the psychiatry department is ethical as it was taken after analysing clinical history, examination findings, and existing research evidence, and guided by ethical principles of beneficence, non-maleficence, autonomy, and justice.

REFERENCES

1. Serpico S, Parsikia A, Goodarzi A, Manikath James R, Koizumi N, Ortiz J. Suicide amongst transplant recipients: Trends and unique risk factors. Clin Transplant 2022;36(6):e14669.
2. Bachmann S. Epidemiology of Suicide and the Psychiatric Perspective. Int J Environ Res Public Health 2018;15(7):1425.
3. Kurella M , Kimmel PL , Young BS, Chretow MS. Suicide in the United States end-stage renal disease program. J Am Soc Nephrol 2005;16:774–81.
4. Pompili M , Venturini P , Montebovi F, Tatarelli R, Girardi P. Suicide risk in dialysis: review of current literature. Int J Psychiatry Med 2013;46:85–108.
5. Cogley C, Bramham J, Bramham K, Smith A, Holian J, O'Riordan A, Teh JW, Conlon P, Hale SM, D'Alton P. High rates of psychological distress, mental health diagnoses and suicide attempts in people with CKD in Ireland. Nephrol Dial Transplant 2023;38(10):2152-9.
6. Liu CH, Yeh MK, Weng SC, Bai MY, Chang JC. Suicide and chronic kidney disease: a case-control study. Nephrol Dial Transplant 2017;32(9):1524-9.
7. Chen CK , Tsai YC , Hsu HJ. Depression and suicide risk in hemodialysis patients with chronic renal failure. Psychosomatics 2010;51:528.e6.
8. Sarkar S, Grover S, Chadda RK. Psychiatric Assessment of Persons for Solid-Organ Transplant. Indian J Psychiatry. 2022;64(Suppl 2):S308-18.
9. Varkey B. Principles of Clinical Ethics and Their Application to Practice. Med Princ Pract 2021;30(1):17-28.
10. Rhodes R, Aggarwal S, Schiano TD. Overdose with suicidal intent: ethical considerations for liver transplant programs. Liver Transpl 2011;17(9):1111-6.
11. Rogal SS, Landsittel D, Surman O, Chung RT, Rutherford A. Pretransplant depression, antidepressant use, and outcomes of orthotopic liver transplantation. Liver Transpl 2011;17:251-260.
12. Shepherd D, Taylor S, Csako R, Liao AT, Duncan R. Predictors of Suicide Ideation and Attempt Planning in a Large Sample of New Zealand Help-Seekers. Front Psychiatry 2022;13:794775.
13. Gradus JL, Horváth-Puhó E, Jiang T, Rosellini AJ, Lash TL, Sørensen HT. Rates of Suicide And Non-Fatal Suicide Attempts Among Persons Undergoing Organ Transplantation In Denmark From 1995 Through 2015. Clin Epidemiol 2019;11:1011-13.
14. Dalal AR. Philosophy of organ donation: Review of ethical facets. World J Transplant 2015;5(2):44-51.
15. Reese PP, Boudville N, Garg AX. Living kidney donation: outcomes, ethics, and uncertainty. Lancet 2015;385(9981):2003-13.
16. Spital A. Ethical issues in living organ donation: donor autonomy and beyond. Am J Kidney Dis

2001;38(1):189-95.
17. Walton-Moss BJ, Taylor L, Nolan MT. Ethical analysis of living organ donation. Prog Transplant. 2005;15(3):303-9.

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