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Editorial

The Ethics of War

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Introduction

War has been there since time immemorial. Ever since man has been there, war has been there. We have seen the ramification of the World Wars and the recent wars like the Gulf War and now the Russian-Ukraine conflict. This article tries to elucidate some issues from an ethical standpoint related to war. Philosophers and ethicists have for centuries been puzzled by war and one can understand why this has been the case. What could be more intuitive or ethical than the consideration that it is morally wrong to kill on a massive scale? The premise of ethics pertaining to warfare is that war is only waged as the last remaining alternative to an even worse atrocity. If the moral justification for going to war is to avoid an even greater atrocity or evil, then one can argue that you cannot inflict more harm than what you are trying to rectify or prevent. However, many also would argue that there are times when war is morally permissible and even obligatory.

Background

The discussion of the ethics of war goes back to the Greeks and Romans, although neither civilization behaved particularly well in war. In the Christian tradition war ethics were developed by St Augustine, and later by St Thomas Aquinas and others. Hugo Grotius (1583-1645), a Dutch philosopher and author of *De Jure Belli Ac Pacis* (The Rights of War and Peace), wrote down the conditions for a just war that are accepted today. The purpose of war ethics is to help decide what is right or wrong, both for individuals and countries, and to contribute to debates on public policy, and ultimately to government and individual action. War ethics also leads to the creation of formal codes of war (e.g. the Hague and Geneva conventions), the drafting and implementation of rules of engagement for soldiers, and in the punishment of soldiers and others for war crimes.

The 'Just War Theory'

A well-accepted way of ethically assessing war is to use the 'Just War Theory'; Just War Theory provides a useful framework for individuals and political groups to use for their discussions of possible wars. The theory is not intended to justify wars but to prevent them, by showing that going to war except in certain limited circumstances is wrong and thus motivates states to find other ways of resolving conflicts. Just War theory considers the reasons for going to war (*Jus ad Bellum*) and the conduct of war (*Jus in Bello*). This distinction is important. A war might be ethical but the means unethical, for instance, using torture, chemicals and the current debate is concerned with drones. Once a war is completed, steps are necessary to transition from a state of war to a state of peace (*Jus post-Bello*), is a new area of just war theory aimed at identifying principles for this period.

Jus ad Bellum

When political leaders are trying to decide whether to go to war or not, just war theory requires them to test their decision by applying several principles:

Is it for a just cause: This requires war only be used in response to serious wrongs. The most common example of just cause is self defense, though coming to the defence of another innocent nation is also seen as a just cause by many (and perhaps the highest cause).

Is it with the right intention: This requires that war-time political leaders be solely motivated, at a personal level, by reasons that make a war just. For example, even if war is waged in defence of another innocent country, leaders cannot resort to war because it will assist their re-election campaign.

Is it from a legitimate authority: This demands war only be declared by leaders of a recognised political community and with the political requirements of that community.

Does it have due proportionality: This requires us to imagine what the world would look like if we either did or didn't go to war. For a war to be 'just' the quality of the peace resulting from war needs to be superior to what would have happened if no war had been fought. This also requires we have some probability of success in going to war – otherwise people will suffer and die needlessly.

Is it the last resort: This says we should explore all other reasonable options before going to war – negotiation, diplomacy, economic sanctions and so on. Even if the principles of *jus ad bellum* are met, there are still ways war can be unjust.

Jus in Bello

These are the ethical principles that govern the way combatants conduct themselves in the 'theatre of war'.

Discrimination requires combatants only to attack legitimate targets. Civilians, medics and aid workers, for example, cannot be the deliberate targets of military attack. However, according to the principle of double-effect, military attacks that kill some civilians as a side-effect may be permissible if they are both necessary and proportionate.

Proportionality applies to both *Jus ad Bellum* and *Jus in Bello*. *Jus in Bello* requires that in a particular operation, combatants do not use force or cause harm that exceeds strategic or ethical benefits. The general idea is that you should use the minimum amount of force necessary to achieve legitimate military aims and objectives.

Not intrinsically unethical means is a debated principle in just war theory. Some theorists believe there are actions that are always unjustified, whether or not they are used against enemy combatants or are proportionate to our goals. Torture, shooting to maim and biological weapons are commonly used examples.

'Following orders' is not a defence as the war crime tribunals after the Second World War clearly established. Military personnel may not be legally or ethically excused for following illegal or unethical orders. Every person bearing arms is responsible for their conduct – not just their commanders.

Jus post Bello

Once a war is completed, steps are necessary to transition from a state of war to a state of peace. *Jus post bello* is a new area of just war theory aimed at identifying principles for this period. Some of the principles that have been suggested (though there isn't much consensus yet) are:

Status quo ante bellum: a Latin term meaning 'the way things were before war' – basically rights, property and borders should be restored to how they were before war broke out. Some suggest this is a problem because those can be the exact conditions which led to war in the first place.

Punishment for war crimes: is a crucial step to re-installing a just system of governance. From political leaders down to combatants, any serious offences on either side of the conflict need to be brought to justice.

Compensation of victims: suggests that, as much as possible, the innocent victims of conflict be compensated for their losses (though some of the harms of war will be almost impossible to adequately compensate, such as the loss of family members).

Peace treaties need to be fair and just to all parties, including those who are guilty for the war occurring.

War Ethics

Just war theory provides the basis for exercising 'ethical restraint' in war. Without restraint, philosopher Michael Ignatieff, argues there is no way to tell the difference between a 'warrior' and a 'barbarian'.

A "just" war (if we assume, for the moment, that such a thing even exists) is generally thought to fulfil six criteria:

- A just cause.
- Right intentions.
- Reasonable chances to succeed.
- Benefits proportional to losses.
- War must be the last resort.
- War can only be declared by a legitimate authority

Legitimate authority

When attempting to apply and interpret these principles considerable disagreement arises. An example is evidenced by the – still ongoing – debate about the 2003 US-led invasion of Iraq. Just war principles are used to address the question of whether the war lacked legitimate authority without a UN Resolution. Legitimate authority is an issue in all conflicts, including those considered to be acts of terrorism or insurgency. Example uprisings such as 2011 loosely termed the Arab Spring, and the debate about whether to arm the 'rebels' in Syria. Are these legitimate authorities? Does legitimate authority make sense anymore?

Just cause

Establishing 'just cause' is difficult and equally problematic. An example, self-defence is widely recognised, and the UN Charter grants states a right to defend themselves. However, other 'just causes' are more difficult to defend. Particularly controversial is humanitarian intervention, even though it is sometimes seen as obligatory and indeed, the most ethical reason for war. An example was for humanitarian reasons that NATO intervened in Kosovo in 1999. But, then there are instances where humanitarian disasters have left - An example being controversially the failure to intervene in the Rwandan genocide in 1994.

From evidence all criteria are problematic and hard to justify. Think about the principle of right intention' with regard to the 2003 Iraq war and the study report with discussions about the 'real' motives of the great powers. When we consider the principle of proportionality, the contemporary debate is particularly fraught. Can it ever be proportional to use drones where there is no risk to life on one side and risk to many lives (including civilian lives) on the other? When battles are fought in villages and homes by those with no uniforms, how can the principle of discrimination be upheld or be respected – and indeed should it be respected?

Changes needed in ethics of war

- The character of war is changing fast.
- Ethics of war needs to keep pace with these changes.
- For the discussions these War Ethics principles might well need revision.
- Important to note the fundamental ethical issues have not changed.
- Hence It is still the case that in a sense war is inherently unethical.
- To be justified, significant ethical reasons are required and although we might consider Just theory imperfect it continues to be one way to seek ethical reasons.

Conclusions

There is a long-standing tradition in Western culture of differentiating between "just" and "unjust" wars. Although Just War theories were developed primarily by theologians and most explicit references to a Just War theory today tend to come from Western sources, implicit references to it

can be found widely because of the way in which it has become incorporated into Western political thought. Using this argument, I make the case that today, all wars are unethical.

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A 5 Step Empathetic Model (5-SEM) for Doctor Patient Communication

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ABSTRACT

Although empathy in the physician-patient relationship is often advocated, a theoretically based measurable practical model for doctors has been missing. This paper presents a Five Stage Model for Empathetic Communication (5-SEM) and a measurement scale. The suggested measurement's aim is to assist doctors to evaluate the effectiveness and contribution of the 5-SEM in terms of the levels of patient trust, a patient will for joint decision making, patient motivation to collaborate, and measurement of health outcomes. The 5-SEM is designed to become an integral part of natural communication. In this paper, the 5-SEM model is elaborated both technically and theoretically in order to demonstrate its rationale and its mechanisms in the production of empathetic communication.

Keywords: empathy, empathetic communication, doctor patient relationship, decision making.

Introduction

Communication is considered one of the most important facilitators of all social interactions and the main catalyst for interpersonal relationships. In the medical profession, the ability to establish good interpersonal relationships is of great value. Research shows a strong correlation between positive doctor-patient relationships and the extent to which patients are willing to exchange information and participate in decision-making [1-3]. Effective doctor-patient communication has a major influence on regulating patients' emotions, facilitating comprehension of medical information, and better-identifying patients' needs and perceptions. It can encourage patients to share information, follow advice, and follow prescribed treatment. In addition, patients' agreement with the doctor about the nature of the treatment and the need for follow-up is strongly associated with their recovery [4-11]. The question remains as to what constitutes positive and effective interpersonal communication. This paper will introduce empathy.

Empathy

Empathy is known to profoundly contribute to the construction of positive communication [12-13], yet it is commonly perceived as an obscure and impractical concept, more suited for therapists, educators, or parents. In the medical environment where time is short, patients are many and professional decisions are sometimes difficult to establish, often the formation of meaningful relationships with patients remains a privilege. This can contradict an awareness that some forms of communication such as empathy are correlated with positive health outcomes [14-15]. This paper suggests a 5-Step Empathetic Model (5-SEM) for empathetic communication that can support a doctor's communication requirements, that stem from a unique work environment. 5-SEM can make empathy an effortless and integral part of patient-doctor communication and beyond. This is a highly valuable skill that can become a natural part of

everyday communication, yet at the same time, is a powerful tool with which to construct and sustain any relationship through the establishment of trust, mutuality, and growth.

5-SEM will be discussed later in this paper; first, a few comments about the unique and positive effects of empathetic communication. Empathy is all about having a special moment with someone. A moment that can become a turning point in any form of relationship. Between couples, colleagues, doctors, patients, or professionals and their clients. This moment happens when you feel that another person simply gets you. Although it certainly can be, it does not have to be a very deep moment or some profound inner truth. It can be a word or phrase that describes someone else's subjective needs, feeling moods, or perspectives, whether they are positive or negative or neither.

That moment is constructive for any relationship because of three reasons:

1. It results in the perception of being understood, which is a rare and most desirable moment.
2. It can become a source of insight and growth for the recipient.
3. It is a catalyst for the formation of trust and mutuality, which are the building blocks for the construction of positive relationships.

Rarely do people truly feel that their subjective experience or opinion is understood by another. During an argument, consultation, conversation, or conflict, people make a concerted effort to be understood. Mostly, both participants make this effort simultaneously and often unsuccessfully. On rare occasions, one gives up on trying to be understood and instead tries to listen to understand the other. This act of looking outwards makes it possible to learn something about the subjective truth of another person, without judgment. This is a moment of transformation. In the event of a listener's success, a deep appreciation from the recipient will be the outcome, particularly if this understanding will be articulated for the recipient ("If I understand correctly, you think that...or, your experience is..."). This articulation can sometimes become an insight for the recipient because the articulation of one's subjective truth transforms it into something that can be observed and decided upon.

For instance, during a consultation, doctors often encounter perceptual differences, such as a patient's unique belief system about different types of medicine. A different belief system can become a barrier to patients' acceptance of treatment. Such was the case during the Covid-19 pandemic and the resistance to vaccination [16-18], which was very difficult to overcome. One of the characteristics of a belief is that it is not necessarily a part of a rational thought process but rather an integral part of an innate belief system. There are many barriers to mutual understanding, such as personal differences, gender, age, emotional state, or culture. Empathy (understanding another subjective truth) turns differences into opportunities for a positive and constructive dialogue.

All humans have the cognitive ability to easily learn empathetic communication. There is no age limit to acquiring this skill - on the contrary; exposure to empathy can sometimes be sufficient for learning. In that respect, it could be described as a 'contagious' mode of communication, since if one is exposed to empathy, he or she will probably and unnoticeably acquire it as a skill [19]. From an evolutionary perspective, empathy is a valuable social asset that helps achieve social acceptance and social favor and therefore, increases survival. Research demonstrates that people have an inherent cognitive ability to learn how to be empathetic [20]. This type of learning can be materialized from a very early age. Nevertheless, infants and children who are not exposed to empathy often lack this skill. Children who were understood by their primary caregivers can more easily understand others as well as themselves and therefore be more socially and psychologically content. One of the manifestations of this is having emotional stability and a strong capability to overcome hardship [21-22].

The five step model (5-SEM)

Empathy is an act that manifests the intention to be attentive to another. Hence, the first step in taking interest in another person's moment of distress (or any other experience) must depend on the recipient's permission to do so.

1. The first step is 'Recognition' (R) – hence, finding out if a person is interested in empathy. Forcing empathy is simply not empathetic since it does not manifest the recipient's desire but rather the giver's interest or curiosity. If a person is seeking empathy, they will make gestures to show it. For instance, seeking attention or making a subtle sign such as looking at you and waiting for you to notice. In the case of doctor-patient dialogue, empathy is quite inherent to the nature of the situation, since the roles of the interaction are predefined, thus, the patient seeks help while the doctor tries to diagnose.
2. The second step is 'Active Listening' (AL). AL consists of six different acts:
 - a) Listen attentively to the story while making your availability apparent. During active listening, one should give full attention to the speaker, make eye contact, and sit or stand opposite the speaker.
 - b) The aim is to try to understand what is the underlying experience that the person's story (description) represents. This has to be done (as much as possible) without judgment (for instance, the experience of getting lost, being impatient, feeling alone, etc.). To be able to do this, you need to find within yourself a similar personal experience that resembles that underlying emotional experience. It could be that your story is completely different but the emotion was similar. For instance, if you have never been in a car accident, you might be able to remember experiencing an accident in a different context. Different life experience often evokes similar emotions. In that case, it may be the experience of 'losing control'.
 - c) Try to find a word or a short sentence that represents the emotional experience of that person (for example: maybe you feel that you've lost control) but do not say anything at this stage.
 - d) Wait and listen until that person pauses.
 - e) Offer the word or sentence with reservation (for instance - "You may feel as if you have no control."). Reservation is a crucial component since it allows that person to own it or rather reject it. The basic assumption is that you do not know the inner truth of another but you try to understand it and verbalize it.
3. The third step 'Empathetic Evaluation' (EE): look for the person's reaction to the first attempt at empathetic articulation. If you succeed, the recipient will react enthusiastically (Yeah!!! that's exactly what I feel!), followed by sharing more information.
4. The fourth step is repeating AL.
5. The fifth step is the 'Final Empathetic Evaluation' (FEE) offering a second EE that can be either similar or more accurate. At times, the first empathetic phrase might be enough. This whole process should take 2-4 minutes; nevertheless, in order to master it and make it a natural part of communication one should practice it (This module is inspired by a personal conversation with Prof. Yuval Wolf).



Measurement and evaluation

There are four parameters to evaluate successful empathetic communication:

1. After the EE stage, the person will express an agreement with the empathetic comment.
2. The recipient will add more information
3. The recipient will start contemplating what he or she is going to do to advance themselves (this can take place after EE or FEE). This is because being understood help's the person understand him or herself and can take it further into action.
4. This is because being understood help's the person understand him- or herself and can take it further into action.

Conclusions

In conclusion, empathy is a deliberate act, whose purpose is to make another person feel understood from his or her subjective and personal point of view. Whether that person's experience is reasonable or appears as not reasonable it is nevertheless her or his innate reality. This experienced reality is all that matters at that moment when effective and productive communication is needed. Empathy creates a bridge that reduces the need to resist, be guarded, feel frustrated, or be suspicious. Those feelings are replaced with trust, appreciation, closeness, and security. That is the best possible condition to strengthen relationships and create mutual responsibility. This is why this act of empathy is so beneficial in any relationship and with no doubt in a doctor-patient relationship, where time is scarce and trust is vital. this act creates a win-win situation for the doctor-patient relationship. The patient feels understood and the doctor can gain trust and have more insight into the patient's emotional and physical features. Hence 5-SEM can be an effective contribution to doctors and to the health system for the following reasons: 1. It can reduce the time necessary to create trust and corporation with the patient. 2. It can become effective in contributing to the correct and effective use of medicine by the patient. 3. It can contribute to successful treatment and therefore an effective use of public funds.

Nevertheless, 5-SEM has to be practiced, simply because empathy is often not an automatic response in spontaneous dialogue. The most effective practice is within a study group, where each participant can bring an example of an empathetic intervention to be explored and learned from. Using the proposed constructed 5-SEM makes the group discussion very fruitful; first since it becomes a common point of reference. Second, this model's success can be easily evaluated. The evaluation can be made in two ways: the patient response as was described earlier, the patient levels of corporation and trust, and a short scale that can be used as a measurement tool at the end of every meeting. It is possible to have a clear indication of the success of an attempt to act empathetically. If you can measure success, you can create a process of learning, which is the purpose of this model, to make empathetic communication a natural part of communication – a second nature.

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Ethical Issues in the use of Exergames in the Elderly

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ABSTRACT

There has been a lot of recent literature in the use of exergames in the elderly. Exergames have been used in the management of various disorders in the elderly like gait and movement disorders, motility in general and in dementia and depression. There have been various controlled trials of these exergames in the elderly. While exergames is a digital interface intervention, there are various ethical issues that may arise in the use of exergames in the elderly. The current paper is attempting to elucidate the various ethical issues concerned with the study, use and introduction of exergames in the elderly.

Keywords: elderly, ethical, exergames, dementia, gait, movement.

Introduction

It is no secret that India's population is aging, in fact, India's geriatric population is predicted to increase by 41% by 2031 [1]. This means that there will be a shift toward elder care in the coming years to allow aging with dignity. Exergaming is a promising arena for research because it promotes healthy aging by positively impacting self-imaging and self-efficacy, improving physical skills and wellness, and encouraging social engagement [2]. However, a shift towards new health-related practices comes hand in hand with research and by extension the ethics involved in such research. The current paper looks at the various ethical issues that arise with the use of exergames in the elderly.

Informed Consent in the elderly

Informed consent is the backbone of all research; the ethics behind obtaining informed consent from the elderly is particularly nuanced because of the presence of several factors that impairs their ability to make informed decisions. For consent to be truly informed, the researchers should ensure that participants have received details about the research they are participating in its entirety and understood all the information being given to them [3]. However, greater age and lower levels of education are associated with a poorer understanding of informed consent [4]. In addition, visual and auditory decline associated with increasing age also adds to the difficulty in understanding [3]. In a country as vast and varied as India, language and cultural barriers can also lead to more issues and pose difficulties in truly grasping exactly what one is consenting to, this can be even more challenging when technical terms related to exergames and their mechanisms need to be communicated in regional languages.

The American Psychological Association (APA) advocates respect for people's rights and dignity and mentions that specific accommodations should be made for people whose vulnerabilities

impair autonomous decision-making [5]. This is of particular importance while working with cognitive impairment. Cognitive impairment can occur due to a variety of factors but among them, dementia is of particular importance because it is one of the most prevalent causes of disability in the geriatric population in India [6], a person dealing with declining cognitive abilities might not have the ability to understand and recall enough information about an unfamiliar topic to make an informed choice. Techniques for supporting and enhancing decision-making in the elderly about participation in exergames should be routinely used. Sometimes, an elderly individual might sign up for exergame-based research without fully comprehending what it entails, consent obtained after a try out or 'experienced consent' can be useful in these situations [7] since many geriatric individuals are not familiar with the technology used in exergames. Obtaining consent should be a process and not a singular event especially when the participant in question experiences fluctuations in their level of mental competence and awareness. The lack of standardization of such process can result in complications. In addition, elderly people living in institutions might agree to consent to exergame studies to get attention or approval from their caretakers. They might also agree because they are afraid they'll end up getting neglected or face hostility if they refuse [8].

Proxy consent provided by caregivers is often viewed as a viable alternative when the participant is unable to consent. However, factors such as caregiver distress, depression, and the nature of the relationship with the elderly participant can influence decision-making [9]. In environments where the participants are living with families and the primary responsibilities of the participants are dependent on a caregiver, consent should also be taken from them. The addition of an exergame into the daily life of the family means an additional source of responsibility for changing and maintaining the pieces of equipment as well as overseeing the participant while they are exercising to avoid any accidents from occurring. Therefore the family/caregiver should also be informed about the role changes and challenges they might face, there should also be a discussion about how to respond to and who to turn to, to take responsibility for the medical care or financial expenditure in case of the unlikely event of an injury sustained while engaging in exergaming and consent should be obtained from all the family members who will be affected by the usage of the exergaming technology [10].

Privacy and Cyber-security

Another arena of ethical concerns is that of privacy and cyber security. Privacy can be defined as the 'right of an individual to keep information about themselves from being disclosed to others' [11]. Exergames that make use of tracking devices and motion sensing devices to keep tabs on their elderly patients can seriously violate all the dimensions of privacy. Privacy violations can occur when one's information is either obtained without permission or against one's will [12]. The logistics behind the storage of the personal data obtained over the course of the study should be carefully considered. If all of the personal information collected about the participants over the course of the study is stored in the form of electronic medical records or saved in cloud storage then the data is vulnerable to cyber security threats, confidentiality breaches, and unauthorized access [13]. The maximum protection of the data should be guaranteed by all individuals involved including medical staff, researchers, maintenance, and installation technicians [14].

Lack of control over what kind of information and extent of information is shared can be particularly dubious, especially with the involvement of third-party actors such as service providers, maintenance personnel and relatives [15]. Even the sharing of private information between relatives has the potential of changing the care dynamics between the participant and their caregivers [16].

It is often assumed that the geriatric participants will prefer conducting their exercising regime from the safety and comfort of their home, but this might not be true especially since home based exergames can make people feel observed and conscious about being judged by unauthorized personnel or they may also fear a breach in confidentiality due to cyber security issues, burglary or sharing of sensitive information that can leave them vulnerable to home invasion or other security threats. This can create a sense of alienation and insecurity in an area that should be

considered a safe space [17]. Furthermore, unfamiliarity with and poor understanding of the equipment and technology means that the elderly participant may experience continued anxiety about the privacy and well-being of their family members even when the necessary precautions are taken.

Too much responsibility on the participant

The availability of advanced psychotherapy, physiotherapy, and intervention strategies provided by home-based exergames raises questions of competence and places too much responsibility on the participants and their caregivers resulting in the creation of unclear responsibilities, particularly for the caregivers [18]. Limiting visits to hospitals and other health-focused institutions can inadvertently increase machine dependence and hamper the timely and accurate diagnosis and rectification of emerging conditions or health developments that might have been noticed during a routine visit to a mental or physical health practitioner. Studies that introduce exergaming as means of replacing traditional physiotherapy and group exercising also run the risk of cutting their participants from human contact as it reduces instances where the participants have a chance to interact with other individuals in the form of group exercising or walking in community areas or even meeting their physiotherapist or trainer [19].

Issues related to the technology

The technology utilized in exergames is often highly complex and sensitive and requires maintenance and upkeep. The elderly participant might not have the ability to keep up with the demands of such technologically advanced devices, this poses further challenges because either the participant or their caregiver needs to understand and keep up to date with charging or any other updates. Some elderly participants might feel trepidation about using the technology especially when the study makes use of virtual reality experience-based games where they have to wear headsets, joysticks, or wands. They might fear getting tangled up in the wires, electrocuting themselves, or accidentally breaking delicate equipment. The highly specialized and technologically advanced gadgets that are used during these studies can be expensive and are typically not covered through financial aid or insurance. Therefore, the participants might have to rely on their saved finances or receive help from relatives to be able to afford them unless the devices are provided by the organization carrying out the research study [20]. The use of exergames on a daily basis can result in habituation, a study found that some older individuals believe that they spent too much time playing digital games, to the point they experience minor physical ailments such as a sore neck due to the long hours they spent playing [21]. Game addiction at an advanced age can cause even more social isolation, furthermore, the nostalgia-inducing qualities of certain games that replicate real-life activities like bowling, skiing, or gardening, can cause a sense of sadness and loss in the elderly individuals who find themselves homebound or sequestered in institutions.

The headsets used in virtual reality or augmented reality exergames can cause cybersickness which can include disorientation, nausea, headaches, put strain on the eyes, cause retina damage and dryness in the eyes [22], these can evolve into secondary conditions in a vulnerable population like that of the elderly [23]. Problems with controllers and finicky equipment can cause frustration in the elderly playing in the home setting and embarrassment in the group exergaming setting. Studies with virtual reality should be undertaken with extreme caution especially when the elderly participants in question suffer from co-morbid psychological conditions. A 2018 study found that a virtual reality-based game had a positive effect on people with dementia, however, it was also found that participants with dementia experienced more fear and anxiety than the normative group [24].

Aftermath of the study

Discussions about what happens once the study reaches its conclusion become important. Will the elderly participants be allowed access to the technology and devices after the study has run its course? In the case of home-based exergaming research, the fate of the equipment installed at homes is also a point of discussion. The devices may both be uninstalled and removed, or the

family may be allowed to retain them and continue with the exercise regimen the elderly participant has gotten used to, does this mean they will need to pay for the equipment and its upkeep? In case they are unable to will a physiotherapist and a psychotherapist be allocated to them to ensure that there is no loss in the physical and cognitive developments that occurred during the study? This also raises issues about just distribution of exergame technology, if only the people who can afford to eventually buy and maintain these devices are given access to them then it contributes to the digital divide and denies people from families with lower income access to technology, Socio-economic factors language and technological literacy of both the participants and their caregivers can also act as an important factor that can limit access to exergame technology that could have improved their quality of life and ultimately enhance other disparities [25].

The utilization of exergames with the elderly is a relatively recent domain of study, therefore it is absolutely imperative for the researchers to ensure that the study goes ahead only when the possible risks have been competently calculated and strategies to manage them have been proficiently implemented [26].

Digital Addiction in the Elderly

The use of exergames in the elderly may lead to some of them getting psychologically dependent on these games as a part of their daily routine and later withdrawing the same after a span of time may get difficult. There are enough studies to show that behavioral and digital addictions are common in the elderly. In India, many elders are lonely and do not have schedule for the day, so the exergames may be a source of entertainment and a means to eliminate loneliness and boredom. This is an important facet that must be kept in mind when introducing exergames to the elderly [27].

Conclusions and Future Implications

Thus, there are many complications of the use of exergames in the elderly and there may be many reasons why ethical factors must be kept in mind when introducing these games as a treatment modality and in controlled trials of the same in the elderly. There is a need for researchers, practitioners in gerontology, physiotherapy and geriatric mental health to be aware of the same and keep in mind various factors when using this treatment modality.

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The Challenges of Online Dating and Digital Relationships during COVID-19

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ABSTRACT

The COVID-19 pandemic has affected almost every aspect of human lives across the globe. Digital technology plays a critical role in our renewed essence to relationships - romantic and otherwise because of accessibility, anonymity and less emotional burden due to perceived control on relationships in the digital space. Online dating platforms have changed the way we build and sustain relationships. Online dating received an upsurge following the COVID-19 pandemic as people squared in quarantined spaces. While online dating can be one way to maintain social connection, finding potential partners, and / or romantic or sexual interaction to cope with the stress imposed by the pandemic, several consequences of online dating need to understand and promote sexual and mental health. This paper explores challenges and consequences of online dating and its public health significance. Online dating has evolved digital relationships as potential coping mechanisms to deal with a sense of insecurities and threat on safety and belongingness. It has changed the dynamics of relationship, emotional expression, trust and fidelity. It has created negative consequences

Keywords: online dating, digital relationships, challenges, COVID-19 pandemic, quarantine.

Introduction

The advent of digital technology, especially smart devices, has modified many aspects of our society, which also constitutes our interactions: how we meet people and establish relationships with them. This rapidly evolving technology plays a critical role in our renewed essence to relationships- romantic and otherwise. When sifted through, it becomes evident that certain interpersonal relationships have transformed during the last decade of the twentieth century with the advancing trends of cyber-relationships. Traditional face-to-face interactions have now come to be complemented by social technology that gives rise to a new genre of interpersonal relations [1]. Research literature has delineated for long upon the differences between online and offline communication along with having outlined the particular characteristic communication styles of online communication (that vividly differ from that of offline relationships) [2]. Online communication is not the best suitable for social relationships due to the fragility of online interpersonal ties that are easily formed as well as abandoned. However, the several advantages, such as, asynchronous communication and a lack of non-verbal cues allow better control of one's self-presentation- also make the online environment appealing [3]. As people are taking increasingly to social media platforms, we have seen the divide and distance among people and their face to face relationships grow. With an enthusiastically growing work culture, not many are left with time possibilities to grow their circle of interpersonal relationships. As life is getting busier and individuals are experiencing more stress, relationships are becoming more temporal. The internet then becomes a provider of opportunities to create and develop public relationships

through various dialogic components, including e-mail, Twitter, Facebook, among others [4]. Diane Wysocki stated two decades back that the introduction of the internet into modern society would have a more significant impact on social life than anyone could have foreseen.

With the limitless possibilities of what we can do with the help of the internet, it is no surprise to see the intrusion of science in the form of artificial intelligence into matters of love- whether it is the period of courtship, getting married or casual dating. Dating online is not role-playing and whether in a game, forum or other social network the interactions between these people are not fantasy; these are people who are developing real romantic relationships with real feelings. The presence of a screen and the 'freedom' of socializing, provided through the networks' various public and private channels of communication, allow relationships to foster in a distinct manner. Particularly, the pandemic and consequent lockdown have changed the way technology is playing a role in not just courtship, but also in facilitating marriage and divorces (that are being aided with internet based social media platforms). With only an internet connection and a compatible device, we can find prospective partners in today's time. One in three people now use online platforms as a medium for dating [5]. The usage of online dating platforms has risen during the pandemic as a result of quarantining and everyone following physical distancing norms. However, this does not necessarily imply socio-emotional distancing. People have found diverse platforms to connect with people in order to connect and make love. In coronavirus times, dinner dates have shifted to Zoom, watching movies together from their respective houses has become possible on Netflix Party and online wine is a part of the new dating norms.

Dating applications have made several changes in the way people can date online, ensuring they stay indoors during the pandemic [6]. The features of video calling / video chatting, passport to meet people overseas, adding the ideas of 'ideal virtual date' to user profiles as well as playing games online. Some unusual human trends that are aspects of online dating have also seen a surge, such as, "breadcrumbing," that refers to someone sending endless flirtatious messages without ever intending to meet up, and "obliga-swiping" which is when someone swipes to get matches on an app just for a buzz. Some anthropologists believe that the crisis of times could make people consider dating more seriously as a result of the fear of being alone [6].

Method of Conducting the Review

References for this review were identified through searches of PubMed and Google Scholar with the search terms "online dating," "romantic relationships during pandemic," "online dating during COVID," and "COVID-19". These keywords were combined with Boolean operators to narrow down the search results. Manual searches were executed to identify grey literature and additional articles based on the references mentioned in the articles selected for full-text review. Only records published in English those that were available as full texts were reviewed.

Increased use of online platforms during the pandemic

According to OpenVault's first quarterly report on Broadband Insights [7], the average broadband consumption has rocketed from 273.5GB to 402.5GB. One can infer from this that the overall internet surged in the first quarter of 2020, largely due to the COVID-19 pandemic. The COVID-19 pandemic, in a matter of weeks, reshaped and transformed intimate relationships in unprecedented ways, constraining some to either live closer together or further apart from each other. It has had a colossal impact on relationships and dating –

- Divorce rates are soaring.
- There is an increase in the rates of postponing weddings.
- Individuals have been forced to isolate themselves from their lovers.

And on the other hand [6],

- People have used Netflix 70% more
- The discussion around coronavirus jumped 800% after the lockdown
- 25% more users of dating applications wanted to video chat

With these profound changes in one's lifestyle consolidated with the Internet's advancement, online dating has attained tremendous popularity among aspiring lovers, irrespective of their age. Being a more efficient and prompt replacement to traditional modes of dating, people have begun using chat rooms and dating websites or applications to find partners at an increasing rate. Since going on dates in real-time now goes against the rules of social distancing set by numerous countries, people are noticing more innovative ways to communicate with their current and potential partners. From virtual dates on platforms like Skype or Zoom to watching movies together- in their own separate homes, the usage of activity on dating apps like Bumble and Tinder has seen a stark rise from the 8th of March, 2020. With about 43% of 25-34-year-olds using online dating services, the masses are embracing online dating as a medium to meet new and exciting people.

The changing face of online dating and casual relationships amidst the lockdown

The world has gone online with shopping, banking, reading, writing, playing and working, so why not dating online? It's no more a taboo to have met online or even dated online. With more than 1500 dating applications in existence [8], dating online is growing and being accepted as well. However, dating has taken a turn as a result of the COVID-19 induced lockdown on a global level. Earlier dating application use was more about texting and exchanging (photoshopped / filtered) photographs of another in order to maintain the steam of dating- which would not necessarily translate into a physical meeting (which is ideally the purpose of dating). Video calls before a physical meeting were not healthy but rather 'creepy'. With the physical distancing norms and millions of people self-quarantining for the safety of everyone, dating apps have pushed the video calling feature. This has brought about change in online dating which has allowed people to connect via video call, unveiling the filters and showing themselves as they are. This has allowed people to authentically express themselves. Along with dating, sex at distance is also growing, with people resorting to sex tech and novel sex gadgets like Zoom sex parties and virtual reality strip clubs [9]. The pandemic and quarantine have brought along a shift in the dating culture, making it virtual and in a way bringing comfort at distance too. What is challenging to ponder is how will this shift concretize with the prolonged duration of the pandemic and the consequent quarantining period.

Online dating as a coping mechanism: A new norm

The pandemic has given rise to a digital infodemic where the news of updates on coronavirus spreads faster than the virus itself. The lockdown has kept people at home, pushing them to increase digital screen times on laptops, televisions, tablets and smartphones. Many people have switched to working online which inevitably keeps them glued to the screens (for longer time with workload and work timings increased for many). This has left many individuals overwhelmed and emotionally exhausted. Several individuals opted to get off social media platforms to take a break from the continuous news updates and information blast. On the other hand, dating applications saw a rise in sign-ups from anywhere between 20%-30% on various platforms [10]. Virtual dating has become the new buzz with video chatting features more convenient and comforting. Where on one hand users have the concern of security for themselves on online dating apps, almost 57% people are found to lie on online dating platforms [5], the coronavirus pandemic has left little option but to trust people online. Another worry with online dating is also to reveal the 'status' of a relationship where sharing too much may wean away intimacy and sharing too little may seem the person is unsure or not comfortable revealing about the partner / relationship for others to (digitally) know. With romantic relationships going digital, people are pushing the small talk out and taking it slow, focusing on what is real and really important to them- as they are realizing that physical distancing is here to stay for a while.

Changing dynamics of the Relational Dialectics Theory (RDT)

Relational Dialectics Theory or RDT is a theory of the meaning-making between relationship parties that emerges from the interplay of competing discourses. The RDT states that romantic partners have to try to balance the effects of forces trying to bring them together and pull them

apart simultaneously [11]. It also helps to understand why do people commit to relationships, what is the reason behind, how do they see the relationship, what they want to commit for one another and several other dynamics of the relationship between the two people. The discourse is what people saw, how they say about relationships and in relationships. It is an interesting dynamic to consider as we see the discourses transforming to digital discourses. The integration-separation in the relationship is challenged with online dating as people find a balance between 'we' and 'I' especially in the face of casual and multiple dating. The extent of change in the relationship can sometimes create uncertainty. When both partners are not in agreement with the balance of stability and change in the relationship then it may cause uncertainty in the relationship [12].

Privacy and trust in online relationships: an ethical concern

When one thinks about dating online, looking at a virtual biodata of a person, pictures along with likes, interests and basic demographic information are inevitable. However, this is not the case when it comes to dating someone face to face or even when one is looking for a potential life partner. The question regarding genuineness of the profile, privacy and trust maintained often surface in the era of digital times. The phenomenon of faking good or appearing socially desirable is a debatable aspect about people's profiles that questions the genuineness of the profile and eventually the nature of virtual relationships [13]. The nature of the platform is such that everyone would like to appear desirable and likable given that there is competition too. Self-disclosure can facilitate the development and maintenance of online relationships with many experiencing intimacy online. However, diffused intimacy is quick to enter while one maintains distinct socially driven internet profiles (on various social media platforms as well as multiple dating forums). The challenges that online relationships bring are that of the inability of the predictability of such relationships, trusting the person without any ad hoc communication / background knowledge as well as the integral aspect of risk and uncertainties that come along in virtual relationships [14]. These pose to have been an added challenge amidst the pandemic where people have been searching for intimacy in the phase of prolonged physical distancing. The Kaspersky Report (2020) reveals that 57% of users lie about themselves on online dating apps. Interesting to note is the different kinds of dating purposes that have arisen amidst the pandemic.

Online fidelity or infidelity?

Technology seems to be outlining the idea that secrecy is good. Infidelity is violation of the marital agreement, a betrayal of one's trust, and a threat to the marital bond- which could be sexual infidelity or emotional infidelity. With the advent of technology, we have online relationships and thus, online fidelity looks like a romantic and/or sexual relationship with someone other than the spouse, which begins with an online contact and is maintained mainly through electronic conversations that occur through e-mail and chat rooms [16]. Most people date for fun and one in ten are looking for sexual relationships however there has also been a rise in variety of daters, such as –

1. The ones who are on a break from their relationship.
2. The ones who just are around for some time and then ghost on the person.
3. The ones who are willing to find a serious relationship.
4. The ones who are casual and reckless

Maintaining online fidelity can be challenging given the virtual nature of dating that allows people to have multiple dates at the same time. The infidelity as a series of random erotic chat room encounters with multiple online users is oft-debated but to also keep in mind is that a cyber affair can be a continuous one with a specific online user- this quizzes the core integrity of the virtual relationship. On the contrary, there are forums like Fidelity Dating which is a dating site aimed specifically at those who have been cheated on or betrayed in the past and are nervous about dating again. The users must first sign a contract in which they promise that they are single, and pledge to be faithful and honest with other members [16].

Online infidelity is as painful as infidelity in offline, face-to-face relationships. There is no clear guarantee of infidelity to be absent in face-to-face relationships however detecting it online becomes far more challenging. The rates of infidelity among couples are likely to increase as a result of the fact that they are living with one another more than ever (which has led to more arguments, confrontations and emotional exhaustion between the married couple). With no conclusive assurance about the fidelity in relationships online, it is understood as a path that many tread, with some amount of risk, chance and caution.

Psychologists from the University of Tennessee Knoxville claim that the stress of coronavirus has driven people to cheat. Married people are contacting ex-lovers and using dating websites to have virtual affairs during the pandemic according to Gordon and Mitchell. They also said that couples are likely to experience disruptions and delays to the affair recovery process during the pandemic, which can negatively impact their ability to heal [17].

Online identities and the risk of virtual intimacy and fraudulent profiles

With love coming on digital platforms, everything is changing- from how we talk about love to how we express our love this means that we are consciously changing our language and vocabulary to communicate about the same. Text communication has not only replaced our personal dialogues but the nature of the text communication itself is transforming with a greater demand for clear communication, subtle nuance of tone and turn of phrase have been replaced by emoticons, brackets and asterisks. Along with clarity, emotionality is also something that is expected to reflect in online communication while online dating requires technological as well social literacy [18].

Kathleen Bogle, an associate professor of sociology and criminal justice at La Salle University, [19] said that current dating behaviors remind her of how people had to navigate decision-making. She also said that if one has to quarantine separately there are virtual ways to stay connected by using platforms like Facetime and Zoom. She also said that it becomes easier when we know that there is an end to this situation and one has a possible date of meeting in person. Online dating in the new normal with this unprecedented time of the Covid-19 pandemic has created a divide in many individuals. Some are completely comfortable with sharing a lot about themselves with another person on the pretext of knowing them better, but there are also many who feel sharing information online can be misused in multiple ways. Many individuals who have taken up online dating as a result of feeling overwhelmed due to break ups and / or frustration with their partners, have landed up in blurry intimate encounters online. A study by Prelorentzos, Heckel and Ring (2020) showed that social anxiety among online daters was predicted by negative world appraisals, low self-efficacy and high recognition concerns [20]. Being virtually intimate with another person without having met them personally, can be scary, creates anxiety as well as doubt. Though most dating platforms are sensitive to take care of most parameters such as age, gender, education, work, relationship status, political views, any particular habits (smoking, drinking, drugs) and so on, the confidence about its validity remains shaky. How much can you trust a person on an online platform to share parts of your life with? When a person shares their innermost feelings, likes, dislikes, fears, expectations, dreams they expect the opposite person to do the same but how does one assure this to those dating for genuine causes? Likewise, the online dating platform raises several questions that don't necessarily have conclusive answers.

Expectations from a virtual versus offline relationship: what is better?

The oft quoted fact that virtual relationships are not a replacement for the face-to-face ones is truly acceptable. The face-to-face relationships, though that come with their set of challenges, are more effective, healthier and conducive to the happiness of partners for it maintains humanness. However, in the times of the pandemic, virtual relationships via online dating apps and forums have been the sole savior. Though cheating, fake profiles, non-genuineness and non-emotive relationships are not appealing, they are the ones that have managed to survive in the growing culture of casual dating. Surprisingly, with online dating becoming the only medium for people to express their love, the dynamics are changing and people are choosing to share their real self

on the virtual dating platforms as well as trying to take things slowly and build real connections as well. While online dating comes with its own set of risks, challenges and experiences, it also offers a number of ways to get to know a potential date before meeting in person. Such computer-mediated communication allows for safe and convenient interaction, without much risk or time commitment. Many dating sites offer various types of personality testing and have set algorithms to help find a potential match. They also offer more matches than a person can maybe find at a cafe/bar. Online dating also benefits people who have social anxiety or are shy in nature as they can connect with their dates on an emotional level first which will help build their confidence too. Couples can set their own pace and not feel awkward about making sure the date continues, as the platform offers a variety of ways one can do virtual dates with time limits. Dating apps also provide one with ways to start a conversation in case someone feels lost or confused about it. Lastly, it can be said that people still ultimately want to find love and romance and are willing to take risks to do so. And liars and scammers, aided by new software and other multiple options available on the internet, will continue to prey upon those vulnerabilities.

Conclusion

The face-to-face relationships, though that come with their set of challenges, are more effective, healthier and conducive to the happiness of partners for it maintains humanness. While online dating comes with its own set of risks, challenges and experiences, it also offers a number of ways to get to know a potential date before meeting in person; some of them being: convenient interaction; lesser risk or time commitment, many dating sites offer various types of personality testing and have set algorithms to find a potential match; benefits people who have social anxiety or are shy; couples can set their own pace; less awkwardness to ensure that the date continues among several others. People ultimately want to find love and romance, and are willing to take risks to do so. Online dating is here to stay and grow, eventually. Thus, regulation of risks on the online dating platforms is key to optimally utilize them for cultivating healthy relationships.

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Ethical Issues in Animal Assisted Therapy

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ABSTRACT

The influential outcomes of Animal-Assisted Therapy (AAT) have been greatly acknowledged worldwide. AAT is found to have a broad scope in diverse fields of practice. The complex human-animal relationship which is central to the practice of AAT, however, can throw multiple challenges in the implementation of AAT. Ethics in any therapeutic setting is crucial as it is a way of protecting both the client and the therapist. In AAT, it is more complex since it is not just about the client and the therapist but also about the co-therapist animal. Considering this intricate relationship in AAT, this paper discusses the various ethical issues relevant to the practice of AAT. This knowledge will be important for both health care providers and AAT practitioners for further developing the field in a decent way by offering quality intervention services and valued outcomes.

Keywords: animal-assisted therapy; animal-assisted interventions; human-animal interactions; ethics; animal welfare.

Animal-assisted therapy (AAT) is a structured intervention directed at meeting the clients' therapeutic needs by incorporating trained therapy animals. AAT has been practiced for years and gaining popularity as an alternative treatment approach. However, most often, owing to the lack of awareness surrounding the practice of AAT many ethical concerns have been raised. The intricate relationship of the triad "client-therapist-animal" also poses several challenges while implementing the therapy. Apart from the process of AAT that affects the clients, ethics that help conduct the moral practice of therapy are also crucial. Therefore, such ethical issues relevant to the AAT are essential to discuss for encouraging the ethical application of animal-assisted therapy worldwide.

The first concern about practicing animal-assisted therapy is the use of the right terminology. Various expressions that are been utilized for working with therapy animals are pet therapy, animal-assisted interventions, animal-assisted activities, animal-assisted education, canine-assisted therapy, and so on. If the practitioner is not aware of the basic difference in these terminologies, then it's quite possible to use the language "AAT" for something which in reality might not reflect the therapy [1]. Appropriate use of the terms is the first prerequisite of this field. Questions are being raised about the credentials of the professionals practicing AAT today. Several times, it has been observed that animals are being incorporated by the practitioners in therapy without adequate training and certification. Even though the practitioner has a degree in healthcare, he/she needs to have at least basic knowledge about human-animal interactions and theories for proceeding with practicing AAT [2]. Training in handling animals is also a

requirement that cannot be overlooked even if the practitioner of AAT himself/herself is not the handler.

Since it is the therapy animal that is the medium for therapeutic change in AAT, selection of the animal is another important prerequisite. Behavioral evaluation as well as physical evaluation by a licensed veterinarian is a must step before considering the animal as a suitable candidate for being a therapy animal [3]. Training is mandatory and crucial for the therapy animal. Paying attention to the training methods is important because any harm done to the animal while training them is unethical as well as detrimental to the therapeutic process. Positive training methods are usually utilized nowadays to protect the well-being of the animal [4]. Socialization and habituation to human interactions are essential aspects of the training for effective communication in therapy [5].

Another significant ethical concern is related to the safety of the clients in AAT. It is a must that informed consent is being taken before the therapy begins. The clients should be well aware of the potential benefits and harms of availing the therapy for their therapeutic needs. Screening for potential fears or phobias of animals, allergies, any traumatic experiences is also essential because these are factors that are important to take an informed decision about whether or not the client is suitable for AAT [6]. Religious and cultural concerns must also be taken into account.

Once the therapy begins, one of the crucial elements is to teach the client the appropriate ways of approaching the animals. This includes how to touch the animal, where not to touch, pet the animal, observe for signs of distress that the animal shows, and so on. This is significant for the protection of both the animal and the client. Many times, it becomes difficult for the client to end the therapy session owing to the attachment one develops with the therapy animal. Providing enough time to process the absence or termination should be considered for the easy transition of the clients [7].

In a therapy session, it might be natural for the therapist to center attention on the client more than on the animal. It is the duty of the therapist to split the attention equally so that well-being and safety are ensured equally for the client and the therapy animal. The instrumentalization of the therapy animal is another aspect that needs serious thought [8]. Looking at the animal like a tool for the therapy session will affect the natural human-animal interactions as well as the safety of the animal will be compromised in the therapeutic environment.

Animal wellbeing is very important for an effective therapy session affecting the therapeutic outcomes [9]. Hence it is imperative to continuously look for symptoms of distress, fatigue, or burnout in the animal before, during, and after the session [10]. Consistent breaks should be provided to reduce stress and fatigue. Availability of water, enough space to rest, access to toileting facilities are the things to be taken care of during therapeutic sessions [2]. Grooming is also an essential component to safeguard the safety of the client and the animal. The “Five Freedoms” of the animal - freedom from hunger and thirst; freedom from discomfort; freedom from pain; freedom from fear; and freedom to express natural behaviour has to be protected throughout [11].

There will still be more ethical concerns to discuss but these are the basics that practitioners should be aware of. Adherence to the moral conduct of the AAT will not only enhance the therapeutic outcomes but will also prove beneficial for the animal's wellbeing. Recent research also suggests that human contact positively affect animal by improving their endocrine functions [12]. An ideal and ethical animal-assisted therapy environment would be the one where not only the client benefits the most but even the co-therapist is at the peace. The authors urge the practitioners to adhere to the ethics for the sound conduct of AAT which will promote the field at a faster pace.

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Bio-Medical Issues that concern the Pandemic

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Introduction

The COVID-19 pandemic, first identified in 2019 in China, has spread around the world within just few weeks. While the virus blindly strokes entire populations, it fell more aggressively on the most vulnerable, such as the elderly and patients with severe chronic conditions. COVID-19 is an infectious disease pandemic that is spreading more rapidly than our healthcare resources can handle. The ethical issues of the pandemic, therefore, represent an intersection of the ethical problems of a contagious and highly morbid disease with the ethical concepts widely used in directing allocation of scarce resources.

The devastating pandemic that has stricken the worldwide population induced an unprecedented influx of patients in ICUs, raising ethical concerns surrounding triage, withdrawal of life support decisions, family visits and quality of end-of-life support. Whatever the angle of approach, imbalance between utilitarian and individual ethics leads to unsolvable discomforts that caregivers will need to overcome.

The following paper discusses various issues that have come to light in lieu of the pandemic; issues with regard to handling the pandemic and otherwise. An effort has been made to highlight some of the major transgressions and suggest viable alternative measures that can be tried, to reduce the conundrum of risk versus benefit.

Issues Requiring Modification of Admission Strategies

The massive influx of patients raised questions on the eventual modification of admission criteria to the detriment of the most vulnerable populations. The number of requests for admission made at a time of extreme scarcity of ICU beds dramatically increased. It has been shown that in case of shortage of ICU beds, the criteria for patient selection are modified, patients being more frequently considered as necessitating mainly palliative comfort care versus the increased risk of mortality for patients who cannot be admitted to ICU due to lack of beds. Utilitarian ethics would take precedence over individual ethics and employ the means least restrictive to individual liberty in view of accomplishing the public health goal. Utilitarian theories of emergency ICU bed allocation have been criticized in the theoretical literature, especially on the ground of inequity in application of criteria that may disadvantage existing vulnerable populations. In addition to the elements linked to the lack of available beds, several factors in the decision-making process were sources of concern: reduction of the minimum time necessary to make such occasionally “life-or-death” decisions, decrease due to containment measures in the essential time to be spent with relatives and pressure from the continuous flow of arriving ICU patients.

Separating the caregivers in charge of the patient and the triage team

It has been proposed to relieve the ICU teams in charge of patient care of the responsibility of admission or non-admission decisions and to entrust this work to a dedicated triage team headed by a triage officer. The advantage of this approach is that it relieves the healthcare team of the emotional impact of a potentially painful ethical dilemma

Impact of remote/virtual working

Health services needed to adapt quickly to working differently during this pandemic. Much routine clinical work including consultations needed to be done virtually requiring changing a number of areas of practice, including, for instance, assessing and managing risk on the basis of remote consultations, whilst remaining aware of the usual rules of confidentiality and record-keeping.

Ethical values to justify priorities for critically ill patients supported

- Prioritize those most likely to survive the current illness
- Prioritize those most likely to live the longest after recovery (considering comorbid conditions)
- Prioritize those who have lived fewer life stages
- Prioritize those who have a particular narrow social utility to others in a pandemic
- Prioritize the worst off (sickest or youngest)
- First come, first served
- Lottery

Adapted prioritization strategies for triage

In parallel with war medicine or disaster situations, prioritization strategies have been proposed. Among the ethical principles, prediction of number of years to live is posited as the priority selection criterion, which means that the youngest individuals should receive priority, thereby applying the life-cycle principle in allocation decisions.

Issues Related to Access to Treatment / Allocation of Resources

Access to critical care

Two vital threats of a different and competing type; thus, cancer management in times of pandemic emphasizes a more general problem: the conflict between the outbreak of an acute and often lethal pathology, and the presence of a chronic disease, which requires the maintenance of an appropriate offer of care but which, in itself, exposes the patient to a vital risk. How can we approach the ridged narrow path between two threats of a different type and temporality, whose combination requires the weight of two ‘competing’ pathologies, both at the individual and collective levels?

Reconciling two requirements: prioritizing the individualization of decisions by resisting utilitarian choices is a constant tension and a luxury

The COVID-19 pandemic turned the tables: the issue of equity in access to care came suddenly to the forefront.

Secondly how do we allocate scarce resources such as ICU beds, ventilators, and certain medication? How do you ration these resources fairly?

With treatment—we are talking about ICUs, ventilators, and the staff—the purpose is you are trying to save only the severely sick. Managing critical care resources is screening out patients who are unlikely to need critical care and urging them to self-quarantine at home.

We must ensure equity of access for all individuals making “reasonable adjustments” to ensure equity of access – this is the driver for all people.

First, we recommend that treatment decisions for COVID-19 and non-COVID-19 patients be evaluated first on medical merit before considering matters of resource allocation.

Second, we recommend that the adopted protocol for allocating nonfinite scarce resources should be followed systematically, with full transparency and with creative efforts to mitigate the loss experienced by patients to whom limited resources are not directed.

Third, we recommend that protocols be regularly reviewed in order to accommodate the needed changes in response to our growing knowledge of COVID-19.

The way you do that ethically is you screen patients based on medical utility, based on scientific assessments; you basically look at the cases and try to evaluate as quickly and efficiently as possible the likelihood that you can improve a patient's condition quickly. Eg. you remove

people from ventilators when your evaluation of the medical situation suggests that patients are not improving. If a patient is not improving, and it doesn't look like using this scarce resource is a wise investment, then you try it out on another patient who might have better luck.

Creation of “Neo-ICUs”: ICU outside the walls

One solution to overcome the shortage of ICU beds during a pandemic is to quickly set up new ICUs. However, this option has been associated with a significant risk of reduced quality of care for several reasons associated with the difficulties in meeting nationwide standards for critical care facilities in this type of emergency context.

- not adequately designed for the all the equipment and organization required in critical care.
- insufficient training of these HCWs increases the burden of work
- ventilators, are frequently lacking

This type of organization may imply distributive inequality, with access to ICU facilities of heterogeneous efficiency and with a selection criterion that would be close to first come—first served, which could become first come—best served.

Transfers of ICU patients towards distant ICUs with beds available

Patient transfers from regions with dramatic shortages of ICU beds to areas less affected by the outbreak and with a large amount of available ICU beds along with including optimal material and ICU staff, have been implemented. These transfers require aircrafts, helicopters or trains that have been sophisticatedly adapted to the care of critically ill patients. It is associated with increased costs that should not be charged to the patient or his or her relatives. The first ethical issue surrounding such transfers is related to the benefit/risk balance, risk of clinical worsening during transfer, close attention should be paid to severity status, not too severe (transfer would be too risky), and not too well (to avoid unnecessary transfer) along with psychological trauma for the relatives.

Issues regarding Healthcare Workers

In the current pandemic, sources of psychological disorders for HCWs are multiple. They are affected by distress similar to than the general population regarding the effects of lockdown and containment, the risk of personal or families' and friends' illnesses, the uncertainty about pandemic duration and, the lack of effective specific treatment. Fear was more frequent than anxiety and depression with incidences varying from 71, 25, 12% to 73, 44, 50%, respectively. Assessments by other scales confirmed two-thirds of mental health disorders, especially in young women. Sleep disorders were also reported. In some countries, e.g., in Italy or in France, healthcare workers are applauded by the population each evening at 8 pm. Societal reward and “glorification” of the caring function appears to be a protective factor in the short term and in his first address to the nation, the President of France, Emmanuel Macron, called healthcare workers “the heroes with a white coat”.

What are the professional responsibilities of healthcare workers in treating patients with this virus, given the demonstrated high risk of being infected as they care for them? Do providers have the right to refuse to treat a COVID-19 positive patient, or do they have a professional duty to treat the patient, no matter how high the personal risk? There is some degree of inherent risk when providing care to any patient.

Professional obligations

Whilst it is the case that all health professionals are at increased risk by virtue of their work, we must remember that doctors have a duty in such circumstances to consider all requests for redeployment to areas of greater need, and must also ensure that we have a suitable degree of competence in any duties undertaken. Doctors must be aware that crises such as global pandemics will cause such complex ethical dilemmas as to cause moral conflict for individuals, especially when there appear to be differing directives.

On the one hand, they have a set of obligations that inclines them to go to work when they get the call. On the other hand, healthcare workers have their own interests—they don't want to get sick, which can incline them not to work. The punchline is there is an ethical consensus that healthcare workers have a *prima facie* duty to work because of everything that has been invested in them, because of their unique position where not just anybody can replace them, because society looks to them to serve this function, and because they went into this profession and are expected to go into work.

Protecting healthcare workers

The social contract between doctors and society is bidirectional – so whilst doctors must use their training and skills, their employers have an equal duty to ensure that minimum protection such as adequate PPE is available.

Principles to be borne in mind in resolving particular ethical dilemmas include fairness and distributive justice, equity, respect for autonomy, necessity, proportionality and reciprocity, and beneficence and non-maleficence, whilst continuing to promote empowerment, autonomy and recovery. All approaches need to remain consistent with human rights – the Universal Declaration of Human Rights and the Convention on Rights of Persons with Disabilities.

When appropriate protective gear is available, we consider it a professional clinician's ethical duty to provide care for COVID-19 positive patients.

However, the obligation of healthcare workers to show up for their jobs is not absolute. If hospitals don't have personal protective equipment, they are in no position to tell their staff to show up and work. If a hospital cannot provide even a basic level of safety for their employees to do their job, then they are turning their hospital not into a place to treat patients—they are turning it into a hub to exacerbate the problem.

Issues regarding Confidentiality

How is prioritizing patient confidentiality being challenged by the COVID-19 pandemic? How should we report positive cases to the public and to hospital staff members?

Maintaining the privacy of COVID-19 positive patients becomes an ethical dilemma when doing so causes harm to other members of society. The key difference between the current COVID-19 pandemic and the HIV/AIDS pandemic is that no prejudicial stigma is associated with a positive COVID-19 test and, therefore, breaking the seal of confidentiality is not as problematic as it was in the early days of HIV/AIDS.

Sharing of information

But it is important to ensure that patients and families have clear advice regarding what is done with information pertaining to CoViD in individual patients – there will be an obligation to report some data for pandemic management and future learning. However – as ever, the duty of confidentiality to individual patients remains.

We encourage hospitals to warn its providers of the COVID-19 positive status of patients in order to protect the already challenged staff. Furthermore, we recommend that COVID-19 positive patients who can disclose their condition to those contacts they may have put at risk should be given the opportunity to inform these contacts. Ultimately, given the high morbidity and mortality rates and the degree of contagiousness of COVID-19, confidentiality must be limited by public health interests. It is also crucial that physicians and hospital systems report positive cases to public agencies so that data can be accurately tabulated and analyzed in order to inform treatment decisions and resource allocation.

Issues regarding Testing

Which members of the population should be screened and tested for COVID-19 when available tests are limited?

Patients with symptoms should be tested because early diagnosis and supportive treatment are in their best interest and because most of the spread is thought to result from actively symptomatic patients. As more tests and tests with better detection rates become available, we also

recommend screening asymptomatic healthcare workers in order to avoid inadvertent infection of the already high-risk patients with whom they interact. Finally, as tests evolve and become widely available, we recommend universal screening to limit exposure by quarantining potentially infected individuals.

Rationing of COVID-19 testing

The primary purpose of the test is pure public health epidemiology. It's about keeping track of who has COVID-19 in service of trying to limit the spread of the disease to other people. When that is the purpose, the prioritization isn't so much about who is at greatest risk. It's about who is more likely to interact with lots of people, or who is more likely to have interacted with more people.

Issues related to End of Life

How should we address end-of-life issues, including do not resuscitate orders and goals of care discussions?

First, in line with standard of care, one must address the likely medical benefit of resuscitation to the patient and offer CPR only if the particular clinical scenario suggests a medically defined benefit.

Second, providers should be required to perform CPR only if adequate protective equipment is available to them; however, if protective gear is available, then the duty to perform CPR should strictly be dictated by its likely medical benefit.

Finally, the question of allocation of resources should be considered separately from the CPR question and should follow the algorithms outlined above for allocation of scarce nonfinite resources in general. When CPR is deemed to be medically nonbeneficial, this decision must be promptly communicated to the patient and the patient's family. Palliative measures should be offered without delay.

Modification in the decision-making process to withhold or withdraw life support treatments due to the epidemic context

It has been suggested that patient severity assessments be intensified during their progress in ICU stay, so that the withdrawal of one patient's mechanical ventilation can benefit another patient. The appreciable time taken to make these decisions is an element that risks being called into question during an epidemic emergency.

End of life (EOL)

In end-of-life (EOL) situations, the ICU team must avoid depriving family members of the opportunity to say goodbye to the patient. If visitation is usually forbidden in the ICU, it should be made possible in an EOL situation. If the family cannot or does not want to come to the ICU, letting him/her speak to the patient one last time over the phone is important. Family members need to prepare for bereavement, meaning they must understand what is happening: end-of-life family conferences should be organized, remotely if needed

Family visits and family-centered care

Visits were prohibited to ensure that relatives did not contaminate other family members, patients, or healthcare professionals. Family members could no longer be at the patient's bedside and the ICU team was unable to propose structured communication and support to family members. Involvement in decision-making was compromised, and it was felt that this situation was harmful both for patients and family members. After death in the ICU, bereaved family members are at high risk of presenting symptoms that negatively affect their quality of life, such as anxiety, depression, PTSD symptoms and complicated grief.

Issues Concerning the Vaccine

Now since a vaccine has become available, policymakers, public health officials, and healthcare providers face rationing decisions until there is sufficient supply to treat the entire populations. Since the vaccine is out, the first group one is going to want to prioritize are healthcare workers,

who are at risk of getting infected by doing their jobs and saving lives. You would also want to prioritize people who serve essential functions to keep society going—the people who keep the water running, the lights on, police, and firefighters. Then start looking at the high-risk groups.

Conclusions

The COVID-19 pandemic is filled with uncertainty and uncharted territory. Despite being in the early stages of the medical, societal, and legal challenges of this crisis, lessons from both the HIV/AIDS pandemic and the models for allocation of scarce resources practiced most widely in organ transplantation may inform our ethical approach to the most pressing challenges of our time. To overcome the Covid-19 pandemic, in many places throughout the world, new resources were developed in a short period of time, dramatically increasing the number of ICU beds allowing admission of a huge number of critically ill patients. The massive patient influx highlighted numerous ethical concerns that ICU caregivers are likely to face. Some models have proposed ethical justifications to difficult decision-making, usually based on deontological (or societal) rather than individual ethics. Lessons should be learnt from this experience and ethical reflections should be developed in order to anticipate a potential new pandemic in the close or more distant future.

This includes reflexive monitoring in respect of fundamental ethical principles, but also providing help to enlighten and resolve ethical dilemmas in clinical complex situations, support caregivers in their daily practice and sometimes listen to their own suffering and recall general democratic principles in health decisions. Ethical monitoring assists physicians in decision-making, promoting the supportive and palliative dimension of care in a holistic approach. Finally, the principles of deontological ethics, centered on the respect for dignity of each suffering person, including during the context of sanitary tension, may counterbalance, at least in part, the collective injunction of a strictly utilitarian approach.

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Knowing The Nano: A look at current international laws that provide guidance on assessing the toxicity of nanomaterials for Crispr-based delivery of Human Genome Editing

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Crispr, short for Clustered Regularly Interspaced Short Palindromic Repeats-associated protein 9, is a revolutionary gene editing technology that has proven to be the solution for eradicating fatal diseases by altering the human genome. As used in the genome of human, it is referred to as human genome editing, and involves alterations such as cutting out a defective gene mutation and replacing it with a corrected one, using Crispr. Although off targets, side effects and difficulties using a physical-viral based drug delivery method have been reported, there has also been a monumental development in terms of eradicating fatal diseases, using Crispr, such as Sickle Cell Disease [1], Leukemia [2] and HIV [3].

Human genome editing using Crispr has also faced many challenges such as off-targets (not reaching target genes or reaching targeted and untargeted genes), and mosaicism (the presence of more than one genotype caused by edits [4]).

Arguably, however, the most challenging issue for Crispr is in its physical-viral delivery method, i.e., how to safely and efficiently deliver the components that are needed to use Crispr, which consists of a DNA cutting enzyme called Cas/9, and a short RNA that guides the enzyme to a target gene for edits.

In Part 1 of this paper, an exploration of how researchers have turned to the use of non-viral delivery method using nanomaterials to combat this challenge will be explored.

In Part 2 of this paper, a look at international laws on nanotoxicity that regulate the use of nanomaterials for human use will be explored.

Part 1: Viral delivery challenges for Crispr in the treatment of cancer treatment

Crispr has two components, Cas/9, and the guiding RNA. To achieve safe, and efficient delivery of treatment of diseases such as cancer, these two components must reach the targeted genes by passing through different physical barriers using viruses. According to researchers, a viral- based delivery technique can have complications for the patients, such as patients developing antibodies to the viruses or having pre-existing antibodies to the viruses. Viral vectors can also prompt side effects, off-target responses, and be costly.

Physical delivery challenges

Physical delivery method used in Crispr include micro-injection, electroporation, and hydrodynamic delivery, all of which, while found to be highly efficient, are also found to be beneficial if used in-vitro but not in in-vivo, a shortfall that cannot be ignored, since current laws allow for gene editing in humans but not for germline editing in human embryos [5].

Faced with these challenges, researchers have turned to the use of non-viral delivery method using nanomaterials. Also called non-viral vectors, nanocarriers such as polymers, lipids, porous silicon, mesoporous silica nanoparticles, metal-organic frameworks have been used to achieve safe and efficient delivery method using Crispr. These nanomaterials are being used in Crispr due

to their unique properties. Nanomaterials have low immunogenicity, high biocompatibility, and because of their nano size, considered ideal for delivery of the Crispr components [6].

Nano-based, non-viral delivery technique of CRISPR may be more efficient

Nanotechnology, inner engineering at nanoscale

Simply put, Nanotechnology is engineering and fabrication of things at nanoscale. Nanoscience is the study of the phenomena of materials and their properties at nanometer scale. A nanometer is 10^{-9} or one-billionth of a meter. In layman terms, a nanoparticle is “up to one million times thinner than a [strand of] human hair: https://www.horiba.com/en_en/science-in-action/should-you-be-worried-about-nanotoxicity/

As such, Nanoscience is the study of materials at microscopic levels: <https://www.nano.gov/nanotech-101/what/definition>.

As distinguished from Nanoscience, Nanotechnology, also known as molecular manipulation, is the use of nanoscience in the design, characterization, production, and application of structures, devices, and systems at the nanoscale. Nanotechnology is about the control of matter at atomic level: <https://www.science.org.au/curious/nanoscience>.

Part 2: Nanotoxicity: In International Law

Newness

An essential legal question relating to guidance on how to assess the risks of nanomaterials involves whether assessment of chemicals at nanoscale should be considered new. Since many chemicals in their original form have been assessed and regulated, should they then be exempt if introduced at nanoscale and exposed to both the environment, and humans? Various schools of thought argue for and against the exemption of nanomaterials as new or not new. This paper argues that since the toxicity of materials at nanoscale can be “extremely toxic”, it is crucial that laws should be enacted to mandate individual assessment of nanomaterials before they are used in the treatment of diseases in humans using Crispr.

Genotoxicity

Since most nanomaterials work by direct interaction with biomolecules, this also means that if nanomaterials are not assessed properly for toxicity, they would be administered directly into biomolecules that are essential for normal gene function and cell division: <https://www.sciencedirect.com/science/article/abs/pii/S0169409X12002384?via%3Dihub>

Tracing

Some nanomaterials are not capable of being traced after administration which makes it ultra-dangerous for human use.

Precise Interactions

In addition, the precise interactions of these nanomaterials are simply unknown.

Intravenous clinical applications

Many scientific studies have proven the negative impact of intravenous administration of nanomaterials, which constitutes the accumulation of nanomaterials in the liver, and subsequent translocation to essential areas in the human body such as the central nervous, cardiovascular, and renal systems.

While the potential efficacy of nanomaterials as used in the treatment of diseases such as cancer in humans using Crispr should be welcomed, their potential toxicity to harm humans should not be ignored. Sadly, the complexity of assessing nanomaterials means that there is currently a lack of proper guidance in terms of regulations surrounding nanomaterials [7].

Despite this, there are number of international organizations that have put forth efforts to provide guidance in this area.

UNITED NATIONS

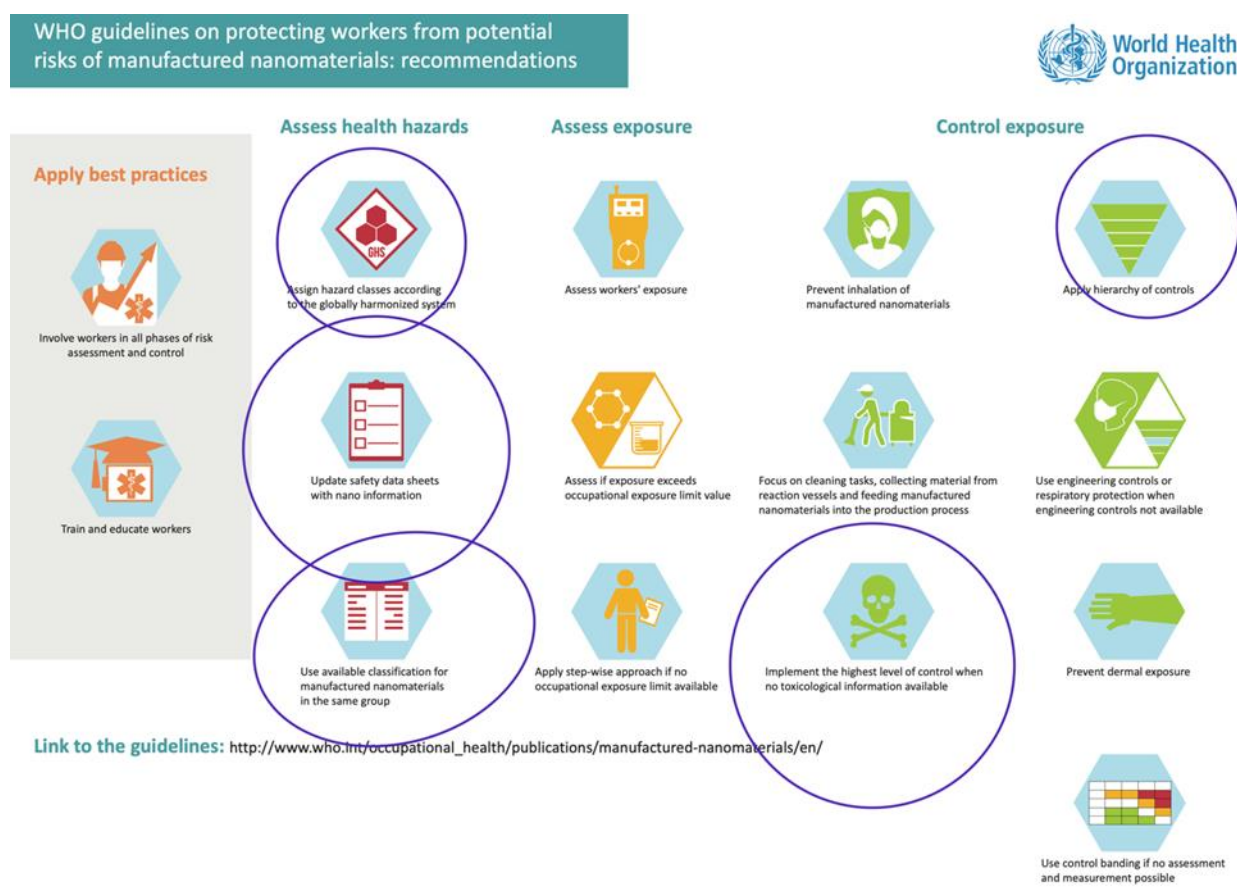
United Nations Institute for Training and Research (UNITAR)

UNITAR [8] has implemented international efforts to support developing countries in nano-safety. Since 2009, and principally funded by the government of Switzerland, UNITAR has been working with the Inter-Organization Program for the Sound Management of Chemicals (IOMC), the Strategic Approach to International Chemicals Management (SAICM), and the Organization for Economic Co-Operation and Development (OECD) to raise awareness of the risks involved with the use of nanomaterials in developing countries [9].

World Health Organization (WHO)

WHO has also implemented guidelines/recommendations to protect workers from potential risks of exposure to manufactured nanomaterials [10].

While this is not directly relevant for this paper as the discussion here is about the toxicity of nanomaterials (as opposed to Occupational Safety) as used in the safe and efficient treatment of diseases such as cancer in humans using Crispr, some of WHO's guidelines merit our attention.



The circled guidelines, such as “the highest level of control when no toxicological information is available” or “Update safety data sheets with nano information,” should be followed in assessing the risks of toxicity involved in using nanomaterials.

European Union Observatory for Nanomaterials (EUON) [11]

In Europe, EUON discussed the two European Union (EU) regulations that merit attention, namely, the Registration, Evaluation, Authorization and Restriction of Chemicals regulation (REACH No. 1907/2006), and the “Classification, Labelling, and Packaging” regulation (CLP No. 1272/2008) to assess the toxicity of nanomaterials: <https://euon.echa.europa.eu/regulation>

Under REACH, to be legally manufactured or imported in the EU, all hazardous nanomaterials must be registered. The registration must include information on the hazardous nanoforms, their impact on humans and the environment, and their exposure throughout the lifecycle.

Under CLP, the same hazardous nanoforms must not only be notified to The European Chemicals Agency (ECHA), but appropriately and clearly classified, labelled, and packaged to reflect the “possible hazards” of nanomaterials.

The rule of transparency in assessing the potential risk

In addition to the combined efforts of the organizations and the regulations, Europe also demands that companies that wish to use certain nanomaterials for commercial or scientific purposes should do the following:

- Clearly inform the above organizations on the safety of nanomaterials
- Measures needed to assess and control the potential risk
- Follow ECHA guidance on the identification and properties of nanomaterials

Knowing The Nano: A hope for more public debate in assessing nanotoxicity

In conclusion, while human Genome Editing, using Crispr has had a monumental impact on humanity, we cannot ignore the fact that just as with any new scientific innovations, Crispr as a human genome editing tool has met with challenges such as off-targets, side effects, and difficulties using a physical-viral based drug delivery technique.

While creating a safe and efficient delivery method using nanomaterials is currently being tested by Crispr researchers, they must not ignore the potential toxicity of nanomaterials as an ethical and legal challenge. In fact, creating a safe and efficient delivery method must mean that human lives must never ever be compromised in exchange for scientific innovations.

While there is currently a lack of proper uniform guidance in terms of ethics, and law surrounding nanomaterials, the four principles in bioethics, and the guidance from several international organizations should be utilized in furthering the public debate in this area.

Therefore, it is the hope of this paper that such public debates will shine light on the toxicity, as opposed to the efficacy of using nanomaterials, in the safe and efficient treatment of diseases such as cancer in humans using Crispr

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Introducing a Transformative Intervention for Trainers of Research Ethics Education in Medical and Health Related Field in Developing Regions: A viewpoint

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Research ethics as a part and parcel of Bioethics comprehends the guiding moral principles for autonomy, beneficence, nonmaleficence and justice, and norms and standards in conducting and reporting research. These are fundamental issues for understanding the current approach to ethical assessment in health care [1]. Those who undertake medical research should protect the life, health, dignity, integrity, right to self-determination, privacy, and confidentiality of personal information of research subjects [2]. Intensifying research ethics review procedures aims to promote and ensure quality, and integrity, to observe welfare and rights of participants and also to limit any allegation of misconduct by independent ethical oversight [3]. Cultural diversity and moral values are accountable in every dimension of research ethics and cannot be overlooked. An overarching research ethics principles are articulated in the International Ethical Guidelines for Health-related Research Involving Humans of the Council for International Organizations of Medical Sciences (CIOMS) (2016) and the Declaration of Helsinki of the World Medical Association (2013). In addition, the Universal Declaration on Bioethics and Human Rights (2005) navigates the linkage between dignity, respect, vulnerability, and human rights [4]. For ethical reporting of research results, International Committee of Medical Journal Editors (ICMJE) Guidelines are in the limelight. National regulatory bodies and national health research policies govern the ethical code of conduct and rules of play of Academic Institutions and Research Ethics Committees/Institutional Review Boards (RECs/IRBs) [5]. However, the evidence of research misconduct including retractions of published articles from scientific journals [6] accumulates in recent years that calls for continuing and sustained research ethics education and training in different modalities that include virtual, hybrid and in-person approaches.

Situation Analysis: Problem Identification, Determinants and Repercussions

The growing complexity and volume of research in poor and low-income countries is due to increased funding opportunities and advanced technical know how. Also, there is a lack of wide heterogeneity or flexibility of normative standards and regulations when compared to affluent countries. Developing regions demonstrate limited knowledge and understanding of research ethics in writing proposals as well as in REC/IRB review practices [7-8]. Notably, there are discrepancies between comprehensive understanding of international ethical guidelines and standards and compliance to the repertoire of research ethics principles such as vulnerability, risk benefit assessment and informed consent process, recruitment and fair selection among others [4]. Fragmentations/breaches happen as challenges in upholding the integrity throughout the research process. Underlying determinants include inadequate number of trained human

resources with good knowledge in research ethics, no specific plan for capacity strengthening of REC/IRB members, less rigid evaluation of several RECs/IRBs [9-12] the lack of/limited funding to conduct regular research ethics training courses, and the lack of national body and strong regulations to safeguard the allegations of research misconduct with zero tolerance. Besides, breaches of ethical guidelines in conducting research, sharing data and reporting are due to accelerating the recruitment process without the rigid consent procedures and aiming for personal prestige and to attain significant profits for researchers [13-14].

Justification and Feasible and Transformative Intervention Proposed

Changing health priorities in developing regions of Asia and the Pacific, Latin America and Africa, and daunting public health emergencies create further research needs alongside ethical challenges to address new preventive, non-therapeutic and therapeutic interventions in vulnerable populations [15-16]. It is critical to ascertain their safety, efficacy, cost-effectiveness, standards of care, post-trial access, fair compensation and feasibility to incorporate in clinical settings or public health programs for social value and benefit sharing in the society at large. Moreover, there is a pressing need to follow ethical principles in collecting, sharing and reporting data by innovative approaches inclusive of digital applications. Technically and ethically sound research proposals are mandatory to plan by researchers/faculty members who usually supervise students and to ensure thorough deliberations and critique by well-trained REC/IRB members. In order to fulfil the pressing needs and to rectify the current situation stated above, regular, short training courses for research ethics by competent trainers incorporating feasible and innovative pedagogical approaches to implement in resource-limited settings are desirable. To bring it into reality, the arrangements for north-south technical collaboration and sharing of human and material resources are critical. This transformative intervention proposal of good quality at low cost will serve as the template for developing regions with inherent research ethics problems. Besides, virtual research ethics training course for trainers at the regional level is not widely implemented. In so doing, improved awareness of ethical issues and better understanding of ethical standards and principles are expected among course attendees to prevent research misconduct and to protect the vulnerable research participants. Moreover, there will be a formation of the regional core group of research ethics trainers to reproduce further courses within their own countries.

Objectives of the proposed intervention

General learning objective:

- To inculcate the required knowledge, relevant skills and procedures in research ethics in all stages of research process and in support of research ethics review.
- To promote better understanding of moral attitudes towards the conduct and report of technically sound and ethically competent research among researchers/academia and REC/IRB members who will form the core group of trainers in the developing regions of Africa, Asia and the Pacific and Latin America.

Specific learning objectives: At the end of this short training course (10 days), participants will be able to:

- gain familiarity in historical background of research ethics problems and challenges and the evolution of international ethical guidelines;
- know the values, principles, norms and standards of research ethics in medical and health-related field;
- know the international research ethics guidelines and declarations;
- understand the responsibility in conduct of research and alleged practices;
- know the vulnerable populations including in research and specific protective measures as a safeguard to prevent exploitation and risk-benefit assessment;
- know informed consent procedures and practical challenges;
- know the requirements to attain approval by RECs/IRBs;

- know the principles of epidemic ethics in light of public health emergencies in developing regions;
- know the ethical principles in reporting research results
- ingrain with attitudes of tolerance, critical thinking, questioning, reasoning, dialogue and respect for diverse ideas.

Explicit Identification of Activities

We are planning to deliver the short training course in a virtual mode of 10 days (spread out in four weeks) to researchers/academia and REC/IRB members at the regional level that will cover three modules and three forums for deliberation, two group assignments with case scenarios provided and two plenary sessions. Before the initiation of the training course, it would be beneficial to carry out the scoping review of the existing literature over the past decade with emphasis on training of trainers in research ethics in the developing context. Human resources responsible for the activities will include the assigned Lecturers/Facilitators of the Academic Institutes and accredited REC/IRBs within the Region and the invited International Lecturers/Facilitators with expertise in bioethics. There will be an information technology group of webmasters, technical assistants to handle audio-visual (AV) aids, video clips and a secretariat to manage the required reading materials, teaching/learning facilities and to arrange the group work and plenary sessions. For each didactic lecture, there will be 45 minutes of presentation and 45 minutes of discussion. Each forum for deliberation will cover for three days. The duration of time given for each group work will be one hour and each plenary session will last for two hours. There will be one event every year and will be able to train 30 participants per training course. The faculty of the Academic Institute in developing regions which already has the capacity to host the training courses or the Academic Institute with affiliation to an accredited REC/IRB will act as the host for this training course.

WEEK 1: Module 1 – Theoretical Foundation: historical background, cultural and moral values, principles, norms and standards of research ethics, international research ethics guidelines and declarations, responsible conduct of research;

WEEKS 2 & 3: Module 2 – Research Ethics Principles and RECs/IRBs: Vulnerable populations, risk-benefit assessment, Informed consent procedures and practical challenges, REC/IRB approval process, Principles of Epidemic Ethics in public health emergencies;

WEEK 4: Module 3 – Research Ethics Principles and Publication: Reporting research results and publication ethics

Evaluation Plan for Course Attendees

For achievement of the participants to fulfil the learning objectives and the achievement of expected outcome of the course, following indicators are to be measured:

- Frequency of participation of each attendee in three fora for deliberations
- Attend at least one plenary session and fill up the self-evaluation form
- Improved awareness, knowledge and understanding towards ethical conduct of research to be measured by a semi-structured questionnaire (before and after the training course)
- Number of course attendees trained to form a regional core group of trainers in research ethics

Conclusion

To fulfil the research ethics training needs, the introduction of short virtual training course that covers three modules for 10 days, spread out in 4 weeks is critical. The major focus is to form the regional core group of trainers in research ethics and specific lecture for the epidemic ethics in response to regional priorities will be incorporated. Further policy and programmatic implications require attention.

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Publications beyond Research - Learning from Medical Students' Opinions and Viewpoints

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Students are important stakeholders in the medical community and hence, their feedbacks play an important role in improving medical education and furthering the profession at large. Inputs from the young, ignited minds can offer a different perspective and reveal new dimensions to the issues which plague the medical profession. Thus, it's imperative that the scientific community gives medical students an appropriate platform for the same. Medical journals of repute tend to have a low acceptance rate and students often feel discouraged by the critical remarks of the reviewers, which make them believe that their write-ups have no scope of getting published in quality journals while competing with articles of senior researchers. Sections which specifically solicit research submissions from medical students have given them some hope in this regard. All these submissions undergo a thorough peer review. If such manuscripts are accepted by other journals too, where the process is fine tuned according to the needs of undergraduate medical students, it would go a long way in helping them voice their opinions to other members of the medical fraternity. Quite a few medical journals also accept reviews of books, films and other media within the scope of the subject matter of the journal. Original poems and stories related to the medical experience, whether from the point of view of a health care worker or patients, or simply an observer, are also solicited by many medical journals. Following are few non-scientific avenues for medical students to commence their journey in the world of literature:

- **Students@NMJI** (National Medical Journal of India) [1]
Opinion articles, Experience as an undergraduate medical student, Interviews with eminent personalities, critical analyses of diseases in popular culture and letters to the editor. The manuscripts we received covered a wide array of topics, ranging from the importance of quizzes in improving medical education to substance use.
- **Student's Corner** (Journal of Postgraduate Medicine) [2]
Short narratives of real life experiences in the medical field during student life or residency with a clear informative, educative, or enlightening message.
- **Students' corner & Creative Space** (Indian Journal of Medical Ethics) [3]
Commentaries, discussions, reflections, short stories and poems by students of any discipline on topics on themes linked with the journal's core areas of interest - bioethics, healthcare ethics and humanities.
- **Experiences** (International Journal of Medical Students) [4]
Noteworthy experiences of Medical Students in the areas of academic, social outreach, student exchanges, research and others.

- **A Piece of My Mind** (Journal of American Medical Association) [5]
Personal vignettes (eg: exploring the dynamics of the patient-physician relationship) taken from wide-ranging experiences in medicine; occasional pieces express views and opinions on the myriad issues that affect the profession
- **Life** (British Medical Journal – BMJ Student) [6]
A feature that looks at a topical or controversial issue in studying or practising medicine from multiple angles and explains what students need to know, or explains how to make the most of a clinical placement or another part of medical school. Authors should interview and quote key people involved, such as first hand witnesses or experts from organisations linked to the topic. Life articles should have a practical takeaway where possible
- **Student's Corner** (Journal of Medical Internet Research – Medical Education) [7]
Short essays and viewpoints by students and trainees in the health professions on all aspects of medical education, but in particular suggestions on how to improve medical education, and suggestions for new technologies, applications and approaches.
- **Speaking for myself** (National Medical Journal of India) [1]
A personal viewpoint on any aspect of healthcare in India. This provides a forum for airing individual views on different facets of debatable and topical subjects in healthcare
- **Opinion** (British Medical Journal – BMJ Student) [6]
Articles focusing on a single strong, novel, and well argued point. They are often topical, insightful, and attention grabbing. Make sure that what you write is fair and based on verifiable facts.
- **Looking Back** (Journal of Postgraduate Medicine) [2]
Historical account of a stream of medicine or an institution or department that has made significant contribution to medicine, medical education, medical research or bio-ethics.
- **The Arts and Medicine** (Journal of American Medical Association) [5]
Essays that demonstrate the relevance of the arts to the science and practice of medicine.

Another quite popular option for students is to opt for Medical Student Journals or MSJs. They are entirely student-led periodicals that publish student-authored articles. MSJs have characteristically been known to employ a student-friendly and feeble peer review process [8] and they also have a quick response time which attracts many student authors to send their articles to these journals for publication. However, their opaque peer-review process, lack of MEDLINE® indexing, absence of official journal impact factor data and low article visibility and exposure to the scientific community [9] are other factors which must be considered by the students while publishing their work in student-run publications. Magazines such as *InnoHEALTH* [10] and *The Checkup* [11] also offer students a platform to express their views on a myriad of topics in a more informal way.

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Innovative Course on Moral Values, Bioethics, Professionalism and Personal Well Being in Undergraduate Medical Curriculum – A Futuristic Approach: Reflections of Undergraduate Medical Students

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Bioethics – The untold component of successful medical practice and research

Bioethics is the soul of virtuous clinical practice and research. As the healthcare field is evolving and advancing, it is essential to focus on fairness, equity and moral thinking across several medical fields. An ethical dilemma happens in a decision making circumstance where the medical practitioners face a situation to infringe their ethical merits. A profound understanding of the bioethical principles will aid in analyzing the consequences of every possible option leading to righteous decision making. Bioethics education and its application in clinical medicine is the dire need of the hour with the medical fraternity suffering the loss of patients trust and faith on them. Massive technological breakthroughs in the healthcare field together with strained doctor – patient relationship emphasizes the implementation of bioethics into the medical curriculum. Increasing cases of violence and brutality against medical professionals is a cause of concern across the globe but the root cause for this remains undiscovered. Lack of effective communication and unsatisfied patient's needs are the major ethical concerns. Also paucity of effective ethically governed grievance addressing system complicates the existing crisis. To overcome all these tribulations and to offer morally bound medical assistance in the forthcoming years upscaling the undergraduate bioethical knowledge becomes imperative.

The curricular innovation

A well conceptualized, meticulously planned and rigorously implemented curriculum is crucial to the success of any professional course. A modern unprecedented curriculum was designed by National Medical Commission of India which included bioethics as a component of the AETCOM (Attitude, ethics and communication) module [1]. This module aimed to offer a holistic view of the healthcare profession to the students. The curriculum was formulated with scrupulous attention, organizing them into competencies, verifying its incorporation and evaluating its outcomes via formative and summative assessments.

Panimalar Medical College Hospital & Research Institute has always been keen on providing exceptional standards of education to the students. In an attempt to implement the newly revised curriculum comprehensively and effectively, the Medical Education Unit & the Bioethics Unit of the Panimalar Medical College Hospital & Research Institute in association with the Department of Education, International Chair In Bioethics, conceptualised and launched the unique, first of its kind yearlong “Foundation course on moral values, bioethics, professionalism & personal well-being” as beyond the campus training initiative in year 1 as beyond the campus training initiative and continues across all the professional years until IIIrd Professional Part-2..

Fostering medical ethics beyond the borders

Ever since its establishment in the year 2001, the UNESCO chair in bioethics has been working towards building a robust international network of units in academic institutions for disseminating ethics education. Currently the chair consists of more than 218 units across 77 countries [2]. The chair is actively involved in a multitude of activities including organising international conferences, local, national and international seminars and courses, International teacher's forum, and formulating curriculum for bioethics. The Department of Education, International chair in bioethics intends to lay the foundation of ethical standards among medical students and strengthen medical ethics among various healthcare sectors.

Ethically competent healthcare professionals in making

Panimalar Medical College Hospital & Research Institute aims to deliver quality healthcare services with high ethical standards. They have always been pioneers in adopting curricular updates and innovations that benefit students to greatest possible extent. It has a well established bioethics unit in collaboration with Department of Education, International Chair in Bioethics. The bioethics unit is actively functioning, including weekly seminars for the undergraduate medical students and international conferences on account of International Bioethics day. The painstaking efforts of the bioethics unit led to the formulation of a methodical curriculum which ensured that bioethics education was imparted all through the four and half years of medical education course.

The undergraduate medical students were offered an year long "Foundation course on moral values, bioethics, professionalism & personal well-being". Distinguished speakers from across the globe present enriching sessions before the students and give deep insights about various concepts of bioethics and the forum opens up for in-depth discussions on ethical issues and dilemmas in the healthcare settings.

We discerned profound changes in our moral and ethical behaviour ensuing a year long international bioethics course. The eye opening sessions by expert faculties exposed us to all sorts of ethical conundrums that we could encounter in our clinical practice or in clinical postings during the undergraduate professional years and provided finest solutions for them. The sessions took a different path from conventional didactic teaching. We were never addressed as students but co – learners. The interactive lectures were never concluded without the question & answer segment. The speakers were exceedingly interested in hearing our comments, views and thoughts. This helped us appreciate the perspectives and viewpoints of our fellow colleagues and view a problem from different angles. After the successful completion of bioethics foundation course in the first professional year, our analytical and critical thinking skills have been revamped. It has encouraged us to be more of thinkers and a better listener which improves the doctor – patient communication and interaction with fellow colleagues more effective.

Ethics play a pronounced role in decision making during clinical practice. In the world of ever growing medical advancements and digitalisation nothing is more gratifying than caring for patients under stress by sharing optimistic interactions, making them comfortable and fearless. With this prior exposure to bioethics, we were able to critically appraise the ethical behaviour of clinicians. Knowledge of established guidelines and application of these ethical principles in research has paved way for a more appropriate and rectitude approach. Deep insights on concepts like autonomy, equality, justice, equitable sharing of resources, maximizing benefit, less harm, human dignity and human rights, ethical transgressions, individual responsibility, informed consent, privacy and confidentiality, solidarity, co-operation and social responsibility in context of healthcare and research, non-discrimination and non-stigmatisation, respect for human vulnerability and personal integrity, respect for cultural diversity and pluralism in healthcare delivery were provided.

Drafted in an attempt to produce ethically qualified healthcare professionals, this course has been a source of light illuminating the importance ethical conduct in medical field. This novel course has produced an ineffaceable impact on the progress of our career. It has made a deep rooted

impression in our mind that ethically sound behaviour is the crux of healthcare profession. We perceive a sense of empowerment to make headway in our professional journey.

Conclusion

Public concerns regarding moral behaviour of physicians have become universal extending from miscommunications, to breaching of ethical practices for personal benefits. Bioethics education should be reinforced and intensified into a vigorous bioethics training programme. Despite the assiduous efforts of Medical council in replacing the conventional classroom teaching with more vivid and crucial components like ethics many medical universities are yet to effectively introduce the same. An extensive implementation of these novel revisions in curriculum will enhance the ethical standards of healthcare services provided and pave the way for fruitful doctor – patient relationship in the years to come.

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Global Bioethics Enquiry is a journal of the UNESCO Chair in Bioethics and publishes reviews, original research papers, commentaries and case studies related to all issues in the field of Bioethics. Original viewpoints and narratives as well as poems in the field of bioethics are welcome. The journal also has a student section where articles in the field of bioethics written by undergraduate and post graduate students are considered.

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