# PROFESSIONAL ETHICS IN CLINICAL RESEARCH

#### **Abstract**

Randomised controlled trials (RCTs) have replaced clinical judgement, case reports, and observational research as the most reliable sources of medical data over past few decades. Additionally, throughout this time, RCTs developed into a crucial part of the regulatory process by which a novel medicine could get access to the pharmaceutical market. As research issues get more complex, clinical trials have grown to be huge, tightly controlled operations that must balance adhering to ethical guidelines with upholding high epistemic standards. With a focus on current discussions and the context of oncological research in particular, the author of this paper will examine some of the most relevant ethical problems connected to RCTs.

**Keywords:** Ethics; Trials; dilemmas; RCT; Legal; Tele Pharmacy; Consent and confidentiality.

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## I. INTRODUCTION

When there are disagreements over moral conduct or the application of moral principles, ethical quandaries arise. There may be ethical conflicts between a pharmacist and a patient, a pharmacist and a doctor, or between pharmacists since each party's values, sense of justice, and fairness may vary. Each party may advocate a different principle, such as utilitarianism vs respect for the person Physicians are often the ones who face ethical dilemmas in the healthcare industry, but a rising cascade of ethical dilemmas are also plaguing other healthcare professionals, such as pharmacists. Our healthcare system has gone from being extremely basic to extremely complicated in only a generation. The issue of legal culpability, both actual and imagined, influences the conduct of doctors and pharmacists as they try to practise [1].

Recognizing the growing role conflict, particularly in the community pharmacy environment, has encouraged pharmacists to reconsider their position in healthcare during the previous few decades. In 1986, pharmacy was defined as a "profession in transition," with considerable changes occurring in reaction to pharmacists' perceived loss of function, social influence, and prestige, resulting in a shift toward a patient-centred position. One significant manifestation of this transition is the review of codes of professional ethics; in certain countries, such as the United Kingdom and the United States, there has been an ongoing debate over the review of codes of ethics throughout the latter two decades of the twentieth century [1].

According to contemporary pharmacy ethics rules, patients' dignity and welfare must always come first. However, it has also been recognised that this dedication to patients' welfare can be jeopardised when pharmacists allow corporate aims to govern and dominate their behaviour [1].

Three important writings written in the wake of the research misconduct events previously recounted had an impact on how we currently perceive research involving human subjects. Many consider the Nuremberg Guideline, which US judges established at the Nuremberg Trials after World War II, to be the most reliable legal source on human experimentation. It establishes the essential notion that participation in research requires the subject's free and informed consent and is based on universal principles of natural law and human rights. The most well-known and significant international standard for medical research is the Helsinki Declaration. [1][2].

It is a declaration of the official position of the World Medical Association (WMA), which was initially released in 1964 and has subsequently undergone a number of changes. The Declaration can be interpreted as a result of the WMA's efforts to find a middle ground between the demands of producing high-quality medical information and preserving the welfare of research subjects. Last but not least, in reaction to crises involving research misbehaviour in the 1970s, the National Commission for the Protection of Human Subjects of Biomedical and Behavioural Research produced the Belmont Report in 1978 as a condensed declaration of moral principles. The directives of the Council of Europe and the European Commissions, in addition to the National Bioethics Commissions of each member state, provide additional guidance at the European level. The Belmont report is particularly well known for outlining a framework of fundamental moral precepts, including justice,

beneficence, and respect for people. The research of human subjects is a subgroup that is the focus of this review. Medical experiment: the stage of clinical research where a novel therapy or therapeutic method is tested on living individuals. t [2].

Professional codes of morals have served as publicly acknowledged norms for professional conduct that go above and beyond the bare minimums required by law and society over the years. These codes have also helped to impose a constructive, cohesive effect on individual members of a profession, and as products of professional associations, they represent the consensus of a wide variety of practitioners' viewpoints on current, real or potential, difficulties in practise.

These four main principles are

- 1. Respect for individuality (including the right to informed consent, privacy, refusal of treatment, veracity)
- 2. Beneficence (the moral obligation to benefit others)
- 3. Non-maleficence (to do no harm)

The justice (fair, equitable and appropriate treatment in light of what is due or owed). Although beneficence and non-maleficence were two of these concepts that were frequently emphasised in earlier generations of pharmacy codes of ethics, they have gained importance as a result of the growth of bioethics and the rise in public expectations [3].

# II. THE RANDOMISED CONTROLLED TRIAL

In its simplest form, a randomised controlled trial (RCT) compares the effects of an experimental treatment to the course of the disease that is the subject of the investigation without treatment. The evaluation is done under extremely controlled circumstances so that a generalizable conclusion from the study can be made. [4]

The goal of several components of scientific trial design is to minimise this kind of interference with the results. The most infamous of these features is random subject assignment, which is frequently connected with blinding participants and, in some cases, investigators. Patients recruited in a trial are randomly assigned to either the experimental group or the control group; neither they, the investigators, nor the participating physicians are aware of which arm they have been assigned to. This is done in a random, chance-based manner. The main goal of this technique is to eliminate subjective interferences, such as the potential for healthier patients to initially be assigned to one arm of the trial by the researchers. Similar to this, even though there is considerable methodological debate over the suitability of the significance test for this task, its approach is employed as an objective technique to identify real variations in treatment effectiveness from sporadic changes in patients' reaction to therapy. Due to its scientific status, the RCT approach is currently considered as the gold standard in the rapeutic evaluation. Over the past few decades, RCTs have virtually taken the role of clinical judgement, case reports, and observational studies as the de facto standards for medical evidence, in large part due to the efforts of the movement for evidence-based medicine. During this period, RCTs also became an essential part of the regulatory process, which is necessary for a new medicine to reach the pharmaceutical market. Clinical trials nowadays are huge, highly regulated businesses that must balance adhering to ethical standards with upholding high epistemological standards, a balance that gets harder as the research issues get more complex. [4].

## III. THE MAIN ETHICAL ISSUES SURROUNDING RCTS

Clinical trials have a core ethical issue since, frequently, individuals who stand to benefit from the research's findings are not those who take on the risk and responsibility of participating in the trials Because the main objective of a clinical trial is to produce generalizable medical knowledge rather than to treat trial participants, these risks aren't truly offset by a prospective clinical benefit. Participating in a clinical trial involves a higher level of risk than receiving conventional medical care. As we will see in the sections that follow, this ethical conundrum can take many different forms depending on which RCT component is emphasised. Informed permission, the use of placebos, randomization, and participant protection will all be briefly discussed before the author presents the pertinent ethical concepts and principles and discusses the most pressing concerns that are still up for debate. [5].

- 1. Participation and informed consent: Medical research has a long history of unfairly burdening trial participants, whether by deceiving them into believing they would receive a therapy or by purposely concealing their involvement in research. This is no longer acceptable in our contemporary ethical perspective, and every study involving human beings must be pre-emptively approved by the subject(s) through the process known as informed consent. Informed consent, one of the key concepts in contemporary biomedical ethics, is now a need for both treatment and research. Even in the early days of medical testing, individuals were occasionally given written consent papers. However, rather than being an indication of concern for their welfare, this was typically a tactic used to ensure the subject's cooperation. Modern informed consent differs greatly from these early examples in that it is based on the Nuremberg Code's fundamental premise of the respect for individuals and the importance of their autonomy [6].
- 2. Use of placebo and deception: Under the majority of ethical guidelines and study recommendations, the use of placebo controls is subject to a complex trade-off between the rigour of the scientific basis for using it and the possibility of harm to participating patients. According to the most recent revision of the Declaration of Helsinki, for instance, the use of placebo is acceptable when there is no effective treatment available as well as "where it is necessary to assess the effectiveness or safety of an intervention for compelling and scientifically sound methodological reasons," so long as "the patients receiving placebo or no treatment will not be exposed to any risk of serious or irreversible harm [7].
- 3. Randomisation and blinding, and equipoise: By definition, RCs involve randomization and, in certain circumstances, participant blinding. To rule out the most blatant alterations to the trial results brought on by investigator or patient influence, these two epistemic tools are necessary. Blinding and randomization, however, might be in conflict with participants' own preferences. The primary reason for this contradiction is that when randomization and blinding are used, patients cannot receive tailored treatment recommendations based on their condition. Patients, on the other hand, explicitly consent to this when they sign up for trial participation. However, randomization between the two

arms of the trial raises another ethical question that is not readily disregarded. Participating patients in an active-controlled RCT have a possibility of obtaining a therapy that turns out to be inferior. This is especially troublesome if the experimental treatment turns out to be worse than the standard of care accessible outside of the study, because it is a widely accepted ethical precept that patients should be given the best confirmed standard of care wherever possible. Apparently, randomization damages trial participants since they may be denied the greatest level of treatment available by enrolling in the study Equipoise, which refers to an epistemic condition of indifference between two treatments, is currently regarded as having the potential to ease this ethical dilemma, according to the ethical literature. If the medical profession is stated to be in equipoise, then there is a scenario of "honest professional discussion" regarding the best course of therapy. [8].

# IV.NAVIGATING BETWEEN EXPLOITATION AND OVERPROTECTION OF PATIENTS

In clinical research, there is a distinction between trial participants—who are exposed to the risks of a medical intervention—and intended beneficiaries—future patients and society at large. This gap was mentioned in the section's introduction. This gap motivated the bulk of ethical rules currently in use, which were developed with a focus on safeguarding participants from the dangers and costs of study. The Helsinki Declaration, for instance, states that "the wellbeing of the individual study subject must take precedence above all other interests," yet due to the new emphasis on participant protection, there has been a rise in criticism of this paradigm. Two things generally work against it. Among results with the same beginning value [9].

# V. AN OUTLOOK ON ONCOLOGICAL RESEARCH

The subjects of the study are determined by characteristics of clinical research and the RCT methodology, such as the requirement for participant blinding, the randomization of treatment groups, or the idea that clinical practise and research must adhere to separate ethical standards. To wrap up this review, the author will specifically examine the setting of oncological research. Cancer is a condition that can be fatal and manifest itself in a variety of ways. As a result, the majority of the moral problems we examined in this chapter, such whether or not employing placebos is acceptable or the possibility of therapeutic misunderstanding, occur when anticancer medications are being tested. Despite being the first line of defence against a variety of tumours, surgery will not be included in the discussion that follows because RCTs are rarely used to evaluate it. [10].

1. Testing targeted agents: some ethical considerations: Conflicting evidence standards appear to be the root cause of the ethical problems just discussed in connection to the testing of targeted medicines. The question of whether and how the evidence required demonstrating the effectiveness of a personalised therapy differs from that required to evaluate standard medications must be answered. The above-mentioned ethical problems can only be qualified and maybe resolved if this epistemic point is clarified. No informed opinion of the ethical concerns, according to medical philosopher John Worrall, "may be accepted without first taking an informed view of the evidential-epistemological ones," and this perspective appears to apply particularly well to the situation in question It

would appear that unless the evidentiary peculiarities of personalised medicines establish a stable position in the evidential paradigm of medicine, the ethics of focused trials cannot be effectively decided. However, that is a completely separate and unanswered matter from whether this only needs a minor change or whether a paradigm shift is necessary.

2. Ethical dilemmas in pharmacy: Conflicts over moral behaviour or the application of moral principles lead to ethical quandaries. Because each side may have different moral standards, there may be ethical conflicts between pharmacists and patients, between pharmacists and doctors, and even amongst pharmacists themselves. Each side may hold a different premise, such as the respect for the individual vs a utilitarian viewpoint. The majority of ethical difficulties in healthcare involve physicians, but a rising number of other healthcare professionals, including pharmacists, are running into ethically challenging circumstances in their daily work. Our healthcare systems have evolved from being relatively simple to becoming extremely complicated in just one generation. Both the actual and perceived issue of legal liability has an impact on the activities taken by doctors and pharmacists as they work to maximise patient care while minimising legal risk. Under certain conditions, relationships between colleagues deteriorate. Risk-taking has become even more dangerous as a result of the increase in insurance costs for everyone, including those doctors who pay stratospheric rates [12].

It has become difficult for doctors and pharmacists to work together as a result of the exponential growth in knowledge about diseases, their treatments, and technological technologies. Information transfer between professionals and between professionals and patients is a concern. How much information is shared, who shares what with whom, and by whom? It gets harder to answer when duty of disclosure, patient rights, confidentiality, and truthfulness are taken into account. Key phrases Pharmacy; level of ethical reasoning; ethical conundrums. In order to provide efficient and effective patient care, it is crucial for doctors and pharmacists to understand and complement one another given the increased interdependence between the two professions This essay aims to update ethical dilemmas that pharmacists confront and their solutions to some of them [12].

Respondents to a survey about ethical quandaries were pharmacy school students and pharmacists in the state of Virginia. Students in their first professional year, their third college year, and their fifth college year were questioned. A random sample of pharmacists was asked for responses through mail, and a low response rate of about 30% was received. As a result, additional surveys are preferred and the results should only be viewed as indicative rather than conclusive. The moral quandaries utilised in the survey were those reportedly faced by pharmacists in practise, those discussed in the literature, in a national meeting in the United States, or in various codes of ethics for pharmacy. The answers to the multiple-choice questions were analysed and grouped based on how similar the three groups' responses were. [13].

**3.** The scope of pharmacy ethics: Prior to 2002, pharmacist working in the industrialised world's health system had shifted their focus from a predominate focus on the supply of medications to one that was more and more clinical and advising. The process of moving away from the creation and distribution of drugs has been drawn out and is still far from complete. Policy guidelines define important responsibilities for

community pharmacists, including prescribing and providing prescribing recommendations, accepting accountability for therapeutic outcomes, and engaging in patient care decision-making within multidisciplinary health care teams. The NHS plan and Pharmacy in the Future are two examples of these jobs in England and Wales. Due to this shift in practise, pharmacists will not only have to deal with special ethical problems that are different from those that their clinical colleagues face, but they will also have to be aware of and react to common ethical problems. Community pharmacists additionally work in both the public and private sectors [14]. For instance, a pharmacist in the UK might work for a business that is contracted by the NHS to administer medicines, which is a public service. In addition, the pharmacist sells more pharmaceuticals and other products in the private sector, whether or not they are connected to health. Every day, patients who are treated by pharmacists in the community are both clients and beneficiaries of sophisticated and intricate treatment plans. Therefore, practising pharmacists need to be actively involved with and capable of handling ethical dilemmas resulting from the growing difficulties of "hi-tech" healthcare and its delivery in a corporate setting. The purpose of this examination of the literature is to determine the breadth and depth of the literature that documents such participation [14].

4. Ethical scope in pharmaceutical industry: The UK's core curriculum for medical ethics, which is supported by American-done original research and classic texts on healthcare ethics, is a good example of a healthcare ethics issue spectrum Medical practitioners' contacts with patients, families, and the general public can lead to a number of problems. Others are a result of problems balancing costs and demand, especially in state-funded healthcare systems, or the research and development process that underpins healthcare ethics has traditionally focused on patients within a healthcare system rather than circumstances where the "patient" is actually a fully autonomous consumer in the private sector, such as a customer choosing their own over-the-counter medications. Hospitals make up 17% of practise areas, followed by community (or retail) pharmacies (62%), general practitioners (perhaps 3%), and then other businesses. Although not always to the same degree or level as those that may be encountered by medical or nursing practitioners, pharmacy practise has the potential to raise ethical issues that span the entire healthcare ethics spectrum, such as when negotiating the termination of a pregnancy or the turning off of life support..[15]

Community pharmacists, on the other hand, must constantly balance their financial responsibility to make a living, nay, a profit as they operate in the private sector with their professional responsibilities as advisors and supporters to optimise the use of medications. In Britain, where national multiples run about 40% of community pharmacies, the organisational values and targets adopted by these businesses (and countless small local groups) to secure adequate profits for shareholders or owners may also have a significant impact on the capability of individual pharmacists to exercise independent professional judgement and morality. The two additional published collections that this assessment of the literature did not consider are not very relevant to the practise of pharmacy. These were primarily reports on projects related to teaching pharmaceutical ethics. Given that the majority of this data is intended to inform and improve future pharmacists' moral awareness and cognitive capacities, further analysis of it may be acceptable elsewhere. The ethical dilemmas that the pharmaceutical industry,

third-world poverty, and access to drugs present are covered in the second body of work. As a result, it was concluded that the present review did not apply to this. [15]

## VI. APPLICATION OF ETHICAL CONCEPTS TO PRACTICE

A preliminary form with eight scenarios was developed in the UK by Nathan and Grim Wade in 1993 "to assess your legal and ethics knowledge." But all but one of the situations highlighted legal rather than ethical concerns, and the only one that did was the eighth scenario, which dealt with the confidentiality of contraceptives. A preliminary form with eight scenarios was developed in the UK by Nathan and Grim Wade in 1993 "to assess your legal and ethics knowledge." But all but one of the situations highlighted legal rather than ethical concerns, and the only one that did was the eighth scenario, which dealt with the confidentiality of contraceptives. [16].

Wing field, Taylor, and Lee (1997) and Appelbe, Wing field, and Taylor (2002) promoted using a methodical "stepwise" approach to decision-making in circumstances where moral and legal criteria may conflict. This can be summed up as gathering information, recognising problems, determining priorities and interests, developing workable options, and selecting an option based on sound reasoning. In the American Journal of Hospital Pharmacy, two articles that at first glance appear to be scenario-based research alone actually include philosophical examination of the schools of thinking that inform the conflicting "solutions" put out by the two commentators.. [16].

Veatch (1990) provides deontological and utilitarian arguments in favour of the two choices when the pharmacist must inquire into the reasons behind a modification in a doctor's prescription before concluding that duties like the "ethics of respect" for the patient's rights should likely take precedence.

Veatch (1993) also compares earlier paternalistic concepts of secrecy with more contemporary ideas on respect for autonomy in reference to a patient who refuses to reveal significant symptoms to his doctor. The following sections serve as examples of how ethical ideas are applied to pharmacy practise, frequently in works that are not particularly intended to do so [16].

# VII. CONSENT AND CONFIDENTIALITY

Confidentiality and the related idea of consent to use and disclose patient information are regularly explored in the literature on pharmacy ethics. A French study looked into how 15 hospital pharmacists responded to scenarios that potentially jeopardise patient privacy. All of the study's pharmacist participants argued that they did not have any instruction in biomedical ethics throughout their bachelor years and did not have enough practise to feel comfortable handling these circumstances The primary remedy was considered to be turning to a manual of best practises.17] The same issues, as well as a solution, were raised in a later UK study on the challenges faced by pharmacists who provide medical information. These services were previously only available to other healthcare professionals, but the general public is now making use of them. The study identified conflicts between pharmacists who believe that since the majority of the requested information is in the public domain, it should be made available upon request and those who prefer to keep sensitive information on hand

Futuristic Trends in Pharmacy & Nursing
ISBN: 978-93-95632-82-9
IIP Proceedings, Volume 2, Book 24, Chapter 18
PROFESSIONAL ETHICS IN CLINICAL RESEARCH

for more suitable disclosure than by phone. Again, out of 151 centres for medicine information that provided feedback, more than half said that the pharmacists providing the service had not been trained in "ethical considerations" even though more than 70% of them had obtained postgraduate clinical degrees [17].

The "situation and potential solutions" method mentioned above is used in other published materials on consent and secrecy Haddad talked about a case in the US where a patient had given a strict order not to tell the patient's doctor about material that appeared to pose a major threat to his health. According to her, the obligation to maintain patient privacy is based on two core ethical principles: respect for the patient's right to autonomy in making medical decisions and faithfulness, which is implied in the pharmacist's tacit promise to remain silent if the patient so chooses in this scenario, it is believed that expressed wish to be the deciding factor. Disclosure might have been a different course of action if the patient had remained silent. Other instances of sensitive information provided by the patient to the pharmacist were included in a series of scenario conversations in the UK. Examples of this behaviour include will fully refusing to take prescribed medication or withholding information that would affect the medication's effectiveness. [17].

In a series of essays analysing the process of ethical decision-making, the current author included a confidentiality situation involving the release of patient information after death to show the generic nature of ethical obligations outside of statutory legislation. Other publications have taken a more descriptive tack, outlining the effects of practise alterations or revisions to the Code of Ethics on secrecy. Another study looks at how using a phone link and a buffer zone to keep waiting patients away from the patient consultation in process can actually provide both security and privacy. The majority of the literature on secrecy in pharmacy has been produced since the introduction of electronic communication. There has been a huge increase in statutory regulation on both sides of the Atlantic, and there has been a lot of discussion about how to deal with the potential and hazards that "tele pharmacy" presents [17].

Pharmaceutical corporations can use "data mining" to focus their drug marketing campaigns more profitably and efficiently by purchasing electronic patient medication information. The data processor was able to show that the patient's identity had been successfully erased, which was a major factor in the state's defeat. To protect physician confidentiality, the Medical Association of Canada urged for legislation in reaction to similar actions taken by the same data processor. This report makes mention of British Columbia's unilateral decision to forbid pharmacies from contributing to the collecting of this data and replace it with a province-wide, online pharmacy organisation. Incongruously, while such information is currently available to the NHS in the UK through its state reimbursement systems, it has not yet chosen to use it in this manner In the UK, the ability to write and send electronic prescriptions is still in its infancy, but preliminary research indicates that consent and confidentiality will be problematic issues. The ability of governmental systems to manage personal health information, such as the NHS in the UK or employment-linked PBOs in the US, presents actual and potential opportunities to reduce prescription costs or improve patient health outcomes. Additionally, these possibilities raise questions about how to balance patient autonomy and organisational effectiveness. The right to correct information is arguably more important to these rights than the ability to opt-out. [18].

The media discovered a US operation that used prescription data to sell a new medicine to patients without their consent in 1998. An editorial analysing this development emphasises earlier recognition that pharmacy providers' interests, such as those of business owners or Pharmacy Benefit Managers (PBMs), may differ from pharmacy practitioners'. The privacy danger posed by the widespread employee access to specific data sets in PBMs for behavioural (mental) health. The number of online pharmacies is increasing everywhere. The majority of discussion centres on the financial ramifications for more established "brick and mortar" pharmacies, however Landis (1999) and Spooner (1999) explain the privacy and confidentiality ramifications of email exchanges in a US news article (1999). The privacy risk brought on by huge numbers of employees having access to certain data sets in behavioural (mental) health PBMs. The number of online pharmacies is increasing everywhere. However, Landis (1999) and Spooner (1999) highlight the privacy and confidentiality concerns of email exchanges in a US news piece (1999). The majority of discussion focuses on the financial implications for more established "brick and store" pharmacies. [18].

# VIII.LEGAL AND ETHICAL ISSUES REGARDING SOCIAL MEDIA AND PHARMACY EDUCATION

In recent years, the popularity of new social media sites like YouTube, Facebook, Twitter, and Blogger has skyrocketed. However, younger generations were primarily the early adopters of this technology. Older generations are quickly entering the ranks of social media users. Facebook alone has 400 million users, with those 35 and older growing at the fastest rate. Due in part to the success of these programmes, the paradigm of social communication is changing from the traditional face-to-face or telephone model to one that makes use of a variety of Web-based social media tools. Technology is now so prevalent that it is beginning to disrupt several aspects of our social structure. [19].

Duncan stated in 2008 that the preceding two decades in particular have been marked by exponential advances in technology, especially by widespread access to ever-sophisticated electronic devices for communication and information retrieval. The intergenerational divide has expanded as a result of concurrent changes in societal mores about the usage of such devices, which affect all institutions, including law and education. Despite the fact that these disruptions have affected the entire society, there are several challenges that are particularly pertinent to professional education. [19].

Discussions in academic journals and at professional conferences have also helped with many of the vague worries. Because this field of research is still fairly young, many students, faculty members, and administrators are not yet fully aware of the complexity placed upon schools as a result of the aforementioned paradigm shift The authors of this essay review and explain the legal and ethical considerations related to social media use in order to aid pharmacy faculty members and administrators in understanding this growing area of concern and avoiding potential legal entanglements. They then make suggestions for pharmacy department heads and the entire faculty [19].

# IX.LEGAL ISSUES

In instances involving the use of social media, a variety of essential rights guaranteed by the US Constitution may be in peril, including freedom of speech, concerns about search and seizure, the right to privacy, and the denial of due process. A discussion of the problems with social media could start with an outline of these topics. [20].

Freedom of speech is one of the six rights granted to citizens by the First Amendment of the US Constitution, which also states that Congress cannot pass legislation restricting the free exercise of one's religion, banning its practise, restricting one's right to free speech or the press, or restricting the right of the people to peacefully assemble and petition the government for redress of grievances. Issues with free speech only arise when the government is engaged. The standard was established that student speech may only be restricted when it materially disrupts or substantially interferes with a school's activities in one of the key US Supreme Court cases in this area [20].

The Supreme Court's decision in the Tinker case states that "Of course, the constitutional guarantee of freedom of speech does not exempt student behaviour, whether it occurs in or outside of class. This holds true regardless of the occasion, location, or behaviour that seriously disturbs the peace, infringes on the rights of others, or seriously interferes with academic performance." When a school claims that a student has made disrupting speech that the school would like to stop, this criteria should. [20].

"It does not follow that the same latitude must be extended to children in a public school simply because the use of an unfavourable means of communication may not be restricted to adults communicating what the speaker views to be a political argument," the Supreme Court ruled. The school board mandates that language used in teaching and school assemblies be appropriate. In cases involving the use of social media, Fourth Amendment issues with search and seizure occur. Without probable cause, an oath or affirmation, and a detailed description of the area to be searched and the people or items to be seized, no warrants may be issued It is against the law to violate a person's freedom from being subjected to arbitrary searches and seizures of their person, property, or effects. If university officials attempt to view a student's social media discussions or the programmes they employ, such issues may occur. The Fifth Modification might be violated if institution superintendents ask about a student's social media conversations. [21].

This amendment also establishes rights to due process. No person shall be subject to having his or her life or limb endangered twice for the same offence; no person shall be required to testify against him or her in any criminal case; and no person shall be subject to having his or her property taken by force, except in cases arising in the land or naval forces, or in the militia, when in actual service in time of War or public. The threat that a state government or an entity that is a part of it, such as a public university, may take action is expressed in the Amendment, which enhances the scope of constitutional due process rights by extending them to non-citizens: All persons who were born or naturalised in the United States and come under its jurisdiction are citizens of both the United States and the State in which they currently reside. No State shall enact or carry out any legislation that restricts the rights or privileges of US citizens, no State shall violate the life, liberty, or property of

anyone under its control, and no State shall deprive any individual under its control of the law of equal protection. [21].

#### REFERENCE

- [1] Jones, D. S., Grady, C., & Lederer, S. E. (2019). Ethics and clinical research. *The Social Medicine Reader, Volume I: Ethics and Cultures of Biomedicine*.
- [2] Nardini, C. (2014). The ethics of clinical trials. *Ecancermedical science*, 8.
- [3] Gillon, R. (1994). Medical ethics: four principles plus attention to scope. Bmj, 309(6948), 184
- [4] Barbara, G., Cremon, C., Annese, V., Basilisco, G., Bazzoli, F., Bellini, M., ... & Stanghellini, V. (2016). Randomised controlled trial of mesalazine in IBS. *Gut*, 65(1), 82-90.
- [5] Halpern, S. D., Doyle, R., & Kawut, S. M. (2008). The ethics of randomized clinical trials in pulmonary arterial hypertension. *Proceedings of the American Thoracic Society*, 5(5), 631-635.
- [6] Nijhawan, L. P., Janodia, M. D., Muddukrishna, B. S., Bhat, K. M., Bairy, K. L., Udupa, N., & Musmade, P. B. (2013). Informed consent: Issues and challenges. *Journal of advanced pharmaceutical technology & research*, 4(3), 134.
- [7] Miller, F. G., Wendler, D., & Swartzman, L. C. (2005). Deception in research on the placebo effect. *PLoS medicine*, 2(9), e262.
- [8] Joffe, S., & Truog, R. (2008). Equipoise and randomization. *The Oxford textbook of clinical research ethics*, 245-260.
- [9] Nardini, C. (2014). The ethics of clinical trials. *Ecancermedical science*, 8.
- [10] Putora, P. M., Baudis, M., Beadle, B. M., El Naqa, I., Giordano, F. A., & Nicolay, N. H. (2020). Oncology informatics: status quo and outlook. *Oncology*, *98*(6), 329-331.
- [11] Enoch, M. A., Johnson, K., George, D. T., Schumann, G., Moss, H. B., Kranzler, H. R., & Goldman, D. (2009). Ethical considerations for administering alcohol or alcohol cues to treatment-seeking alcoholics in a research setting: can the benefits to society outweigh the risks to the individual? A commentary in the context of the National Advisory Council on Alcohol Abuse and Alcoholism—recommended council guidelines on ethyl alcohol administration in human experimentation (2005). *Alcoholism: Clinical and Experimental Research*, 33(9), 1508-1512
- [12] Lowenthal, W. (1988). Ethical dilemmas in pharmacy. Journal of medical ethics, 14(1), 31-34.
- [13] Latif, D. A. (2001). The relationship between ethical reasoning and the perception of difficulty with ethical dilemmas in pharmacy students: implications for teaching professional ethics. *Teaching Business Ethics*, 5(1), 107-117.
- [14] Wingfield, J., Bissell, P., & Anderson, C. (2004). The scope of pharmacy ethics—an evaluation of the international research literature, 1990–2002. *Social science & medicine*, 58(12), 2383-2396.
- [15] Deans, Z. (2010). Ethics in pharmacy practice. London: Pharmacy Practice Research Trust.
- [16] Shaffer, H. J., Ladouceur, R., Blaszczynski, A., & Whyte, K. (2016). Extending the RENO model: Clinical and ethical applications. *American Journal of Orthopsychiatry*, 86(3), 297.
- [17] Larcher, V. (2005). Consent, competence, and confidentiality. *Bmj*, 330(7487), 353-356.
- [18] Berlan, E. D., & Bravender, T. (2009). Confidentiality, consent, and caring for the adolescent patient. *Current opinion in pediatrics*, 21(4), 450-456.
- [19] Cain, J., & Cain, J. L. (2010). Legal and ethical issues regarding social media and pharmacy education. *American journal of pharmaceutical education*, 74(10).
- [20] Yip, C., Han, N. L. R., & Sng, B. L. (2016). Legal and ethical issues in research. *Indian journal of anaesthesia*, 60(9), 684.
- [21] Manhal-Baugus, M. (2001). E-therapy: Practical, ethical, and legal issues. *CyberPsychology & Behavior*, 4(5), 551-563.