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Editorial Board

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Editorial

Misuse of today's wonder-drugs threaten our future

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To state the obvious, death is a universal experience, but is very different around the world. In affluent Western nations, with healthy life expectancy around 70 years of age, malignancy and chronic diseases associated with ageing have become leading causes of death, yet in other parts of the world death from infection, famine, and war predominate [1]. The availability of analgesics is a scandal in itself, with massive oversupply in North America, Australasia and Europe, leading to abuse, yet may parts of the world cannot access morphine for those in excruciating pain and women routinely die in childbirth. In Sierra Leone, recently devastated by Ebola, one in ten women don't survive pregnancy and childbirth [2].

Currently, 80% of the world's dying cannot access morphine; 6% of these are dying children [3]. We have to ask ourselves as doctors, can we continue to tolerate this? How do we overcome the bureaucratic and knowledge barriers to provide even basic pain relief to those in the severest pain imaginable can have the most basic of care ?

These stark inequities are seen over other resources too. In the early 20th century infection was the major cause of death across all age groups, across all nations. Penicillin, first produced at scale during World War II, revolutionized survival chances. Wartime posters announced that thanks to penicillin the wounded might come home – previously most died of their wounds within days. Following penicillin, a pipeline of antibiotics allowed populations to take them for granted. But now we see antibiotic resistance becoming a major threat to world health. Contrary to popular myth, it is the organism that develop resistance, not the individual.

Given that the average human is made up of 30 trillion human cells and hosts around an astonishing 39 trillion bacterial cells [4], it is hardly surprising that there could be up to a trillion different microbial species on earth. Of course, they don't all cause disease. The majority are commensals, living in harmony with the human host, or become opportunist microbes that only cause a problem when the host body changes due to decreased immune-competency or a wound for example. But then there are pathogen organisms – the killers of everyday life across the globe. When these organisms share antimicrobial genetic material through a naturally occurring 'mobile genetic elements' or through internal mutation in response to exposure to antimicrobial medication, then we are in trouble. The result is high death rates, high healthcare costs and limited treatment options.

Whenever a patient takes antibiotics, drug residues are excreted unchanged through wastewater into the environment, where they may persist and further invoke resistant strains in those microbes that encounter even tiny amounts. In the UK today over 15% of E Coli infections show antimicrobial resistance to fluoroquinolones; in India well over 75 % of isolates today show such resistance [5]. Why is this happening? Over-the-counter availability of antibiotics, widespread use of antibiotics for viral infections and general excessive use across health care, combined with a lack of awareness amongst many clinicians of the scale of the problem are undoubtedly contributing factors.

Use of veterinary antimicrobials as growth promoters has exacerbated the problem, but farming cannot be held solely to blame. It is human abuse of these valuable drugs that is rendering them potentially useless in the long term, when surgery, chemotherapy and other interventions may become too risky to undertake [6].

Global consumption of antibiotics has increased by nearly 40% between 2000 and 2010, increasing the rate at which resistance is developing [7]. The problem facing the world is

exacerbated by the lack of new antibiotics coming through the pipeline. And this combined with the rapid development of widening antibiotic resistance, we will inevitably see more and more deaths in otherwise fit young people – deaths that were previously avoidable. This makes antibiotic resistance one of the biggest threats to global health, food security and therefore to international security today [8].

Multi-drug resistant tuberculosis is now emerging as major threat from those parts of the world – India, the Asia Pacific Basin, China, Russia and across central Africa – where TB prevalence and hence mortality rates are high. In India almost 2 million new cases of TB were notified in 2017; there is a TB mortality rate over 30/100.000 population and 12% of relapse cases have drug-resistant TB [9].

For some diseases, vaccination has changed the picture worldwide; smallpox has been eradicated. But polio, measles, diphtheria and others are on the rise again, in part due to an increasing number of anti-vaccination fanatics who spread dangerous misinformation via the internet and social media groups. Populations need a 'herd immunity' of 95% to decrease the risk of epidemics of disease. Measles has increased 300% in the first quarter of this year compared with the same period last year, rapidly increasing in many countries because of failed vaccination programs. Diphtheria, which kills by suffocation and through toxin, has remerged globally through low vaccine coverage and waning adult immunity. Poliomyelitis is still seen in Nigeria, Afghanistan and particularly in Pakistan, where violent militant group still thwart WHO efforts at supplying vaccination to all children.

Disease control through vaccination can succeeded when governments work with WHO initiatives and, importantly, promote education of mothers about the need to protect their children.

The irony is that many governments around the globe have draconian controls over morphine, yet almost none over antimicrobial use. Our duty to our patients today must not ignore our duty to the patients of tomorrow. Nor must we be blinkered, ignoring the global consequences of all we do. Doctors need to engage in the political debate to inform politicians and their bureaucrats responsible for enacting rules legislation of the science behind responsible prescribing and the need to protect the wellbeing of future generations. Control of antibiotic prescribing is as urgent as the supply of basic analgesia. At the moment many legislations around the world have got the balance wrong.

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Review Paper

Medicolegal Issues Concerning Women in India

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ABSTRACT

With passage of time and change in culture, women have taken the centre stage by gradually moving into the workforce and getting career-oriented. However, mental, physical and sexual harassment, misogyny and gender inequality continue to be a way of life for most of them. It is in this context that her awareness of the legal rights, mandated by Indian law, gains significance. Most of us, including females are generally not aware of the provisions related to the improvement of their own position. Even if they know about some of the provisions related to their rights of succession, marriage, or family, they do not desire to invoke them.
Many of their rights are related to medical examination and treatment. Medicolegal is something that involves both medical and legal aspects. It can be a legal issue that requires medical expertise or a medical condition that requires legal discourse. The Constitution of India guarantees equality to all Indians. In addition, it allows special provisions to be made by the State in favour of women and children, renounces practice derogatory to the dignity of women, and also allows for provisions to be made by the State for securing just and humane conditions of work and for maternity relief also. The current paper highlights the existing provisions in law for women in India with regards to their rights in relation to medical services.

Keywords: Witness, consent, medical examination, fertility, abandonment, domestic violence.

INTRODUCTION

Medicolegal is something that involves both medical and legal aspects. It includes legal issues that require medical expertise or medical issues that need to be executed within existing laws. Females often encounter medial conditions that have legal ramifications too. Some of these include and are discussed in following text.

1. Medical examination and consent
2. Dowry death and its investigation
3. Postmortem examination
4. Notification of birth/ abandonment of child
5. Impotence/ Sterility/ Artificial insemination
6. Surrogacy/ Pregnancy/ Fetal Sex Selection
7. Medical termination of pregnancy
8. Alleged sexual assault

The practice over last two decades of author shows that women are hardly aware of their rights and only try to invoke them, when things go wrong. Detail provisions related to above issues form the text of the article.

MEDICOLEGAL ISSUES

There's an unwritten rule which says that whenever a female patient is examined by a male medical practitioner, it is preferable to have a female witness by side during medical examination. This is to safe guard from later litigations of alleged sexual harassment or assault by the examinee. Best is to keep a relative of the examinee otherwise hospital nurse or even a neutral witness would do. A precaution to be observed is that signature of the witness should always be taken on case papers and informed that her being witness doesn't mean that she shall be called up in a court of law to depose, as a routine. This would make more and more neutral witness to be available during such examinations.

With respect to examination by a medical practitioner, a general rule for consent in India, which is applicable to both genders is that consent of the examinee is sufficient is he/ she is above 12 years of age - for a procedure that is not a threat to life; this indirectly means 'medical examination' [Section 87, 88, 89, 90 Indian Penal Code (IPC)] [1]. Hence, any girl has a right to refuse or go ahead with any medical examination, if she is above 12 years of age; defying any pressure from peers or guardians. If he/ she is below 12 years of age or of suffering from mental illness [of any age] consent of parent/ guardian or next of kin is mandated [Section 90 IPC] [1]. In cases of sexual assault, wherein the victim is < 12 years and alleged perpetrator is nearest relative, consent is best taken from Magistrate or Juvenile Justice Boards [present in each district]. For procedures involving risk to life, age of consent of examinee is 18 years [Section 87 IPC] [1]. It may happen that parents of a child can themselves be below 18 years. There is no law guiding as to who shall give consent in case the child needs examination or a medical procedure. Ethically, in capacity of parents, they must be entitled to give consent for their child.

As per Indian Law, if any female, who is accused of a crime and needs a medical examination for the required case, she can be examined only by a female medical practitioner and reasonable force can be used for examination or for taking of requisite samples [Section 53 (2) Criminal Procedure Code (CrPC)] [2].

With respect to medicolegal postmortems, there are different rules governing different States in India. There is no general ban on conduct of medicolegal postmortem after sunset and before sunrise. Some States allow postmortem to be done 24 hours a day while some have come out with regulations, governing timing of postmortems. In Gujarat, in certain instances, postmortem is not allowed after sunset and before sunrise. Out of them, inclusions are - female between 20-35 years of age/ death of a female in house of in-laws/ any suspicious death of female; death from poisoning; suspected suicidal death; death following sexual assault or body in a state of decomposition. These rules need to be taken care as and when request for postmortem is received after sunset in State of Gujarat [3].

By law, no person can be touched [examined or treated] without his/ her explicit consent. Violations can be tried under Section 351 IPC and Section 350 IPC [1]. This rule would apply to National Programs too, wherein immunization programs are undertaken. If the recipient agrees to go ahead with the executed programs, consent is taken to be implied. At the same time, every person has a right to expressly deny too; which cannot be enforced by anyone. This doesn't hold good where State explicitly passes an order to do something, where consent of the person gets overridden.

Consent of both husband and wife is mandated in cases of sterilization and artificial insemination but not for medical termination of pregnancy [MTP]. For MTP, only consent of girl is needed, when done as per the provisions of Medical Termination of Pregnancy Act, 1971. Any person, boy/ girl, can refuse to undergo any examination or procedure, even though life-saving; being known as Informed Refusal.

As per Section 304 [B] IPC [1], where the death of the woman is caused by any burns or bodily injury or occurs otherwise than under normal circumstances within seven years of her marriage

and it is shown that before her death she was subjected to cruelty or harassment by her husband or any relative of her husband for, or in connection with any demand for dowry, such death shall be called 'dowry death' and such husband or relative shall be deemed to have caused her death. In all such cases, postmortem is mandatory to be done by a panel of medical practitioners.

As per Section 317 IPC [1], intentional abandonment of child below 12 years is punishable with imprisonment of either description upto 7 years and fine. Even concealment of birth by burying/ disposing dead body of a child [born alive or dead] is punishable with imprisonment upto 2 years and fine. Apart from the discovered child, alleged mother is also examined by a medical practitioner on request from an investigating officer.

A marriage can be made 'null and void' on grounds of impotence before the marriage. This doesn't hold good for sterility. Fecundacio ab extra is a condition wherein a female gets pregnant after deposition of semen around external genitals or upper thighs, without an actual act of sexual intercourse taking place. Here also, marriage can be 'null and void' on grounds of impotence of husband even though wife is pregnant with his own child.

Since a Supreme Court Judgement in September 2018, adultery is no longer an offence in India. Earlier, it was an offence where only male was held accountable with no punishment for the female in the act.

India is still awaiting a Central Law to regulate Artificial insemination and issues thereof. Delhi Artificial Insemination [Human] Act, 1995 exists which is only applicable to State of Delhi [4]. Some of its provisions include that a donor needs to be tested for HIV antibodies before accepting semen, semen to be preserved for at least 3 months before using it, written consent of recipient wife and husband needed, one cannot segregate XX or XY chromosomes for insemination, maintenance of secrecy of recipient and donor etc.

Artificial Reproductive Technology [ART] Guidelines have been laid down by ICMR [5] which do not mention any punishment for violations of the guidelines. In case of any contravention to the guidelines, only Medical Council of India or State Medical Council can take an action depending upon the complaint. All information is to be kept confidential. Artificial Insemination Donor [AID], without husband's consent can be ground for divorce and fertility from ART does not amount to consummation of marriage [making it still a ground for voidance of marriage]. It is the doctor's duty to check that donor and recipient are not related [to be safe, include an exclusionary clause] and child born is to be considered to be legitimate. Minimum age for ART [except for infertile husband/ woman medically unable to conceive] is 20 – 30 years of woman, with 2 years of cohabitation without use of contraceptive and if woman is > 30 years, 1 year of cohabitation without use of contraceptive. Child born out of AID to has no right to know the name of donor. In case of divorce during such pregnancy, usual laws apply; also there is yet no law that bars unmarried female to use ART to become mother.

Surrogacy has been allowed in India since 2002. Central Government was to bring a regulation since 2008 which has still not seen light of the day. Currently, The Surrogacy [Regulation] Bill 2018 [2016] [6] is held up in Parliament to be enacted into law. The proposed provision include that couple must be married for at least 5 years, either one of couple must have proven infertility, age of couple acceptable would be 23 – 50 for females and 26 – 55 for males, only Indian citizens to be offered surrogacy with exclusion of even Non Resident Indians [NRI], a woman can be surrogate only once and a married couple can only have one surrogate child, the couple should employ an "altruistic relative", i.e. the surrogate mother should be a relative who is sympathetic to the situation with ban on egg donation. Explicitly, surrogacy will not be allowed for homosexual couples, single parents, couples in live-in relationships, foreigners, couples with children and for commercial purposes.

If a female sentenced to death is found to be pregnant, High Court shall commute the sentence to imprisonment for life as per Section 416 Criminal Procedure Code [2].

There have been instances reported wherein a female comes to know of her pregnancy only at the time of delivery. It is a known medical entity. Usually, a single ovum gets released in the middle of a menstrual cycle, which gets fertilized by sperm from a recent act of sexual intercourse. But it is possible that instead of a single ovum, two ova get released during the same cycle and get fertilized from two different acts of coitus, within a short time frame. This condition is known as

superfecundation. Once pregnancy starts, ovum do not release in subsequent period. But it is possible that another ovum gets released following fertilization from earlier period and female gets pregnant on an already ongoing pregnancy. The babies delivered shall have different periods of gestation. This phenomenon is called as superfetation.

To prohibit sex selection of fetus, Pre-conception and Pre-natal diagnostic techniques Act is in force since 1994. It prohibits sex selection before conception as well as before delivery. If mother so desires, it is punishable with 3 year's imprisonment and Rs. 50,000/- fine on 1st instance while with 5 year's imprisonment and 1,00,000/- fine on 2nd instance. If any woman is compelled, the compelling person is thus punishable.

With regards to medical termination of pregnancy desired by any female, her valid age of consent is 18 years with no age proof needed. If she is below 18 years, consent of parents or guardian is needed. Termination is allowed if there is threat to health of mother, threat to health of to be borne baby, if pregnancy is due to failure of contraception or as a result of sexual assault. Mere statement of female is acceptable with regards to her age, failure of contraception and allegation of sexual assault. Any such termination is to be done at a registered medical facility and by a competent medical practitioner as per the MTP Act 1971. MTP is allowed upto 20 weeks of pregnancy but can be done even after the said period, if the life of mother is in danger due to continued pregnancy [6]. Any act done against the provisions of MTP Act 1971 can be punished as per Sections 312 – 316 of Indian Penal Code.

In cases of alleged sexual assault, revealing the identity of victim is punishable under Section 228 A, IPC [1]. The Central Government has issued guidelines making provision for first aid and treatment of victims of sexual assault free of cost to be provided by all hospitals and immediate information to police.

Protection of Children from Sexual Offences Act 2012 [POCSO 2012] [7] provides that all cases of sexual assault, on boy or a girl, need to be mandatorily informed to police by anyone who comes to have information regarding it [this includes medical practitioners too]. As per the act, all females under 18 years of age are to be examined by female medical practitioners only. In case a female witness is not available during examination of a female victim of sexual assault, it is the duty of hospital owner to provide for the same for safe and secure medical examination of such victim.

Ministry of Health and Family Welfare, Government of India has issued Guidelines, in 2014 [8], where in cases of medical examination of a victim of alleged sexual assault, a copy of the medical report should be given free to victim; if age proof is available medical practitioner need not proceed with age estimation of the victim and apart from medical examination with regards to alleged sexual assault, all required treatment [emergency contraceptive, antibiotics, psychological counselling, HIV prophylaxis etc.] should be given to the victim.

CONCLUSION

There are numerous instances where a female comes in contact with a medical practitioner for an issue that has legal ramifications. With numerous instances and even more legal provisions, it has been observed that even the medical practitioners are most of the time not aware of these provisions and may not act according to it. In such a scenario, it is impractical to expect all females to be aware of their rights and responsibilities with regards to medicolegal issues. Even though efforts are being made on part of medical practitioners to educated women on such issues, whenever confronted with, larger measures still are need of the hour for widespread education on these issues.

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Review Paper

Identifying Various Learning Styles Amongst Students

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ABSTRACT

As teachers we are always eager to use the best teaching methods to make our students learn more efficiently. Each teacher has his/her own specific teaching style, but at the same time each student also has his/her peculiar learning style. Teaching learning process is compromised when there is a mismatch between the two. Therefore, it is important for teachers to understand the various learning styles of students/ learners and adopt different strategies in their teaching to make teaching-learning process more effective.
Dr. Richard Bandler and Dr. John Grinder are credited with initial work on learning styles (LS), in their work on Neuro-Linguistic Programming during 1970's. They identified three basic learning styles; visual, auditory and kinaesthetic. Later additional learning styles were advocated and identified by many researchers. Currently, academicians accept four basic learning style preferences (LSPs) among students as suggested by Fleming and Mills.
Learners do not possess any one learning style exclusively. Although students have one or the other preferred learning style, they can adopt more than one learning styles as required by the situation. Studies have shown that most of the students are able to analyze their learning styles and that they are flexible about adopting different learning styles. Understanding these learning style differences enable teachers to help students to adopt appropriate learning strategies. The best learning style is not to depend upon any single LS. Teachers should adopt various teaching strategies to address the needs of students with different LSPs e.g. using gestures, pictures, discussions, stories etc.

Key Words: Learners, teachers, LSPs, learning style, learning preference.

INTRODUCTION

As teachers and trainers we always strive to use the best teaching methods to make our students learn better. Learners have their particular learning styles. Richard Bandler and John Grinder (1970s) identified 3 types of learners: a. Visual learners, b. Auditory learners, and c. Kinaesthetic learners [1]. Neuro-linguistic programming explains the links between individuals' internal or neural experiences, their language and the pattern of behaviour (programming). As such NLP offers understanding of individuals' subjective experiences. NLP holds promising potential in improving teaching-learning process, because the teacher-learner relationship is a dynamic

process, which is meaningful only through two way feedback and not merely the transmission of information from one end to other. Teaching, essentially is a process which, a) creates the conditions which are conducive to learning, b) facilitates the learners to explore and express their internal experiences, and c) leads them towards the desired goal of academic activity [2]. The various learning styles as identified by Bandler and Grinder are as follows:

Visual Learners
Students with visual learning style prefer depiction of information pictorially e.g. in maps, diagrams, charts, graphs, flow charts, symbolic arrows etc. They perform best if they are given the opportunities to express their knowledge and present it in picture format. Even when describing something such students make a mind-map to explain what they have learned in a topic [1]. They also prefer to draw diagrams, labelled pictures, flow charts, graphs and other such techniques which express what other people could have expressed in words. This method can also be called as Graphic. This method of expression does NOT include photographs or reality movies, videos or PowerPoint. They recall information by remembering how it was set out on a page [3].

Auditory Learners
Auditory learners are the students who learn best from verbal instructions, like dialogues, discussions, lectures, radio, speaking, talking to oneself. They are benefitted from engaging them in debates, small group discussions, seminars, symposia and other such techniques. Such learners may also prefer to record their lessons in audio or video format and listen it repeatedly. They also like to link their learning with various anecdotes [1]. Thus, they basically learn when the information is heard or spoken and prefer learning by lectures, radio, web-chats, speaking on phone or talking the things and other methods discussed earlier. Talking out loud and talking to oneself are also included in this type of learning. The complex situations are also sorted out by speaking them out, rather than solving them silently in mind first and then speaking [3]. They solve problems by talking about them and use rhythm and sound as memory aids.

Kinaesthetic Learners
These students learn best when they are involved or active in groups and with a range of hands on or practical activities e.g. role plays, skits, making out the models, crafts etc. They also learn better by using 2D or 3D models or objects. Such learners benefit from such educational activities which involve physical activity like educational games, interacting and examining the models or real patients [1]. As such the learning is through personal experience, practice or simulated teaching learning sessions e.g. demonstrations, hands-on exercises, videos and movies of real experiences, documentaries, case studies etc. The real or concrete nature of the example is important. Students with this type of preference learn from experience of doing something and their own experiences are important [3]. They thrive acting out a story or using models or objects to describe their ideas, movies or videos of real things, case studies.

Bernice McCarthy developed 4MAT system of learning in 1972 and described four major learning styles based on this system:

i) **Type One: Imaginative Learners:** She mentioned that such learners perceive the information concretely and reflect to process the same; as such they integrate the experience with themselves. They need to be personally involved in the act to learn social justice and values. They are interested in people and culture. They may have difficulty in making decisions, because they see all aspects of the problem.
ii) **Type Two: Analytical Learners:** This category of learner perceives information in abstract form and then processes it by reflection. They integrate their observations and devise their own theories. They think through the ideas and need to know the ideas of experts. They value sequential thinking. Such students like traditional classroom teaching. They are verbally highly skilled and avid readers.
iii) **Type Three: Common Sense Learners:** This type of learners perceives information abstractly and then actively processes it. They integrate theoretical concepts with

practical and learn by testing the theories by applying common sense. They are down-to-earth problem solvers. Usually they are skills-oriented individuals and like to experiment and like to work on real problems. They find the school frustrating.

iv) **Type Four: Dynamic Learners:** This category of students perceives information concretely and then processes it actively. They integrate their past experiences with application and learn by trial and error. They are enthusiastic about new things and adapt to people who relish change. They are flexible and reach accurate conclusions even in the absence of justification. They find school as tedious and overly sequential, as they seek their interests in diverse ways [4].

Many other tools have been developed to understand individual learning process e.g. a) Vermunt's inventory, b) Kolbe learning style indicator, c) Meyer Brigg indicator, d) Fleming and Mills VARK questionnaire. VARK is an acronym for visual, auditory, read/write and kinaesthetic [5]. Research has proved that different students have different learning style preferences [6-8]. Learning style preferences are significantly different in males and females [9]. Studies have been successful to show that the most effective learners adapt to the learning style which is required by a particular situation [10]. A teacher should help students to learn to adapt different learning strategies in different situations. Awareness among students of their own learning styles improves learning by enabling students to use appropriate strategies in different learning situations [11-12]. Dunn (1983) has shown that most of the children are capable of analysing the way they learn, although some cannot [13].

The VARK Modalities

The acronym VARK means Visual, Aural, Read/write and Kinaesthetic modalities used for learning. It was suggested by Fleming and Mills in 1992 and it reflects the experiences of the learners and trainers or teachers [3]. The Visual, Aural and Kinaesthetic modalities encompass the qualities as described by Bandler and Grinder. The Read/write modality of learning was identified by Fleming and Mills and is as follows:

Read/write Learners: Learners with read/write learning style have preference for information displayed as words. This modality is found widely among teachers and learners as it has strong preference of employers. It emphasized text-based input and output e.g. manuals, reports, essays, assignments etc. Learners with this preference like to work with PowerPoint, internet, diaries, lists, dictionaries, quotations, words etc.

Multimodality: Although a variety of learning styles are identified, no learner belongs strictly to any one of these categories. As life is multimodal so are the learners. Seldom has any learner used only one modality or can it be considered sufficient for learning. Therefore, every learner is considered to conform to VARK profile, although the preferred mode varies among different learners. Fleming and Mills have developed VARK questionnaire, which provides score for all four modalities and also helps to highlight the most preferred modality by a learner. This helps in identifying the learning style of the student, which further helps the student and teacher to plan teaching learning sessions accordingly. Those students who do not have one preferred mode over the others are called as multimodal.

Multimodal students are of two types:

a. **Type One (flexible):** Learners who are flexible with their preferred learning style depending on the work or condition they are involved in. Thus they are specific to the context rather than the learning modality and easily switch from one modality to other, are classified in this category. They are labelled as VARK Type One; whereas

b. **Type Two (put all preferred modes):** These learners prefer to get information or its expression in all of the preferred modes. They may take more time to gather the information as they try to get it in more than one mode. As a result, they usually have deeper understanding of the concepts. Although they may appear to be slow-deliverers, they simply need all the information before they act. Such learners are labelled as VARK Type Two [3].

Studies have proved that individualization of instructional method doesn't contribute significantly to learning outcomes. Bhagat and others studied the impact of motivation for incorporating multiple learning styles by 1st year MBBS students to enhance learning outcomes [5]. They found that to maximize learning one must use a mixed method approach. Awareness of their learning style preference among students and motivating them to adopt other LS increases the learning outcomes significantly. They concluded that awareness of individual learning style and use of externally regulated strategies for enhanced learning helped students to adopt other learning styles. This improved their learning practices and, thus, better learning outcomes. Therefore, the teachers should try to identify and make a conscious effort to let the students explore other learning styles. Various strategies, as described by Fleming and Mills, can be adopted to cater the needs of students with different LSPs.

Strategies for Learners with preferred learning modes:

Visual Strategies

- Lectures with gestures and picturesque language
- Flowcharts
- Underlining, highlighters, different colors
- Textbooks with diagrams and pictures
- Graphs, symbols

Aural Strategies

- Classes, discussions, tutorials
- Discuss topics with others and teachers
- Explaining to people
- Using tape recorder
- Describing pictures and other visuals to someone who was not there

Read and Write Strategies

- Lists, headings
- Dictionaries, glossaries
- Definitions, handouts
- Textbooks, library
- Notes, essays
- Manuals

Kinaesthetic Strategies

- Using all senses: sight, touch, taste, smell…
- Laboratories
- Field trips and field tours
- Giving real-life examples
- Hands on approaches

CONCLUSION

Teachers need to be aware of their preferred teaching style. They should also make conscious effort to understand the learning style of most of the students in the class. As a class has a mix of students with different preferred learning styles, teachers should try to adopt different teaching strategies to cater the needs of students with different LSPs. Teachers should also make conscious efforts to create awareness among students of their learning style preference and should motivate, guide and help them to adopt other learning strategies.

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Review Paper

To Withhold or Withdraw: that is the Question

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ABSTRACT

The role of palliative care is to achieve the best care for the patient at the end of life. This article looks at the best practice of palliative care and the various ethical dilemmas that may confront physicians and relatives when dealing with patients at the end of life. An ethical and legal framework for the same is postulated and presented

Key Words: ethics, legal, palliative, withdraw, withhold.

INTRODUCTION

The realm of palliative care is in achieving the best quality of life, at the end of life. The quality of life is a variegated propensity based on a multitude of factors. Every person's situation is unique. This is in relation to the medical context, the goal of care, the approach to the care and the experience of illness, along with Psycho-social and cultural web [1]. Making an end of life decision requires the juxtaposition of withholding the treatment and withdrawing the treatment. This is an oft repeated decision that is truly difficult to make. This review focuses on ethico- social and Legal aspects of this concepts [2].

DEFINING THE TERMS

It is true that the values inculcated in the Physician is pro-life and by default, medicine is focused on extending life. It is distressing to note that in the exclusive goal of prolonging life, the harm, discomfort and pain along with loss of dignity is more stressful to the patient [3]. The process of witholding and withdrawing life support is a process through which various medical interventions are either not given or removed from them; leaving the patient to the destiny of his underlying disease. Physicians and Health Care Professionals should be aware of the underlying principles to make appropriate end of life decision making. A number of treatments and interventions can artificially extend life, at end of life: certain medications, artificial nutrition, treatments such as dialysis, transfusions, radiation and ventilation for breathing [4-5]. It is important that patients and families understand the intent and possible risks or benefits, of the care they are receiving. People with advanced illness, or their substitute decision-makers, who are properly informed and able to

make health care decisions, can stop or decline treatment, even if that treatment might prolong life. While withholding treatment and withdrawing treatment, refer to actions taken by health care providers. The actual decision to decline or discontinue treatment, rests with the patient or the patient's family or substitute decision-maker [6]. Declining or discontinuing treatments that artificially extend life doesn't mean that symptom control such as pain management and emotional support are stopped. Care and treatment focused on maintaining comfort continues, allowing the person to die naturally from the disease.

WITHDRAWAL OF ARTIFICIAL NUTRITION AND HYDRATION

At the end of a progressive life limiting terminal illness, people reach a point where they can no longer eat food or drink and become too weak to swallow food and end up requiring feeding tubes [7]. In an advanced point of illness, organ systems are deteriorating and in such state of an illness, the illness determines the point where food can no longer be taken. Feeding with help of tubes in a terminally ill patient, can be withdrawn if the person or surrogate decision maker opts to decline the procedure [8]. Though it is a controversial and extremely emotional issue, nonetheless they have the right to decline the procedure.

FOREGOING LIFE SUSTAINING TREATMENT

One of the ethically taxing decisions for clinical care providers is to withdraw a life sustaining treatment. Many of the hallmark cases in American bioethics involves such decisions like refusing ventilatory support, refusing to continue with dialysis, refusing treatment of life-threatening burns, preference to stop artificial nutrition and hydration, etc. [9-10]. Most health care givers are aware of the impending harm that may arise when a few of the life sustaining treatments are attempted but still many prefer to provide these measures on the context that it is safe to rather provide life sustaining measures than to restrain. We can as well put forth that the afore mentioned practice isn't right always [11]. In most cases, the safer practice is to forego life-sustaining treatments, especially when the beneficial component is meagre compared to the likely harm done. From an ethical perspective, the thoughtful option is Do Not Treat.

LEGAL ASPECTS

The laws regarding end of life issues and euthanasia varies from country to country. At times liberality in advocating euthanasia comes from the equivalent dogma of dignity at death and pro death. The legal justification for withholding or withdrawal of life supporting systems is based on the principles of informed consent as well as informed refusal [12-14]. The consent by default has the principle to refuse as it is justified and present in the common law. The patient or the surrogate decision maker has a right to make a choice in these circumstances. Often healthcare professionals have to take these decisions. There are various court judgements and rulings on various end of life issues including withholding and withdrawing of life support. The court has even over ruled the parental request to have a feeding tube removed from their vegetative daughter. The court of law requires clear convincing evidence of patients wishes and thereby potentially limited the role of surrogates in making decisions. The protection of the liberty is fundamental to every country [15-16]. The concept of futility rears its ugly head in varied end of life issues. Futility is difficult to quantify, notwithstanding the varied impact upon Physicians and patients. This brings us to another juxta positioning of life-sustaining and life-prolonging issues. Most countries are in agreement with foregoing life sustaining measures. The judges across the globe are unwilling to cause the death of a patient by their rulings. Judges and juries are equally reluctant to punish Physicians who act carefully and within professional standards in refusing to provide inappropriate treatments. Few courts have imposed no liability to Hospital / Physician after having removed patient from ventilator over and above the decision of the kin. It is also an accepted fact that courts reject unilateral actions by Physicians. Although it may be ethically appropriate if they support professional integrity and the obligation of each physician to define the moral practice of medicine

[17]. Autonomy maintains the absolute choice in using or removing life-sustaining therapy. It is the patients' right to exercise their autonomy in this regard either directly or indirectly through surrogate decision makers. Here law and ethics mirror each other because of the autonomy clause for informed consent / refusal.

COMPLYING WITH LEGAL REQUIREMENTS

What options do Physicians and other practitioners have in dispensing the choice to withhold and withdraw life support and provide palliative care to such terminally ill patients? What actions by Physicians can materialize as an attempt to relieve suffering and not seem as a measure to hasten death?

Foregoing of life-prolonging therapy is legally justified only when the measure suggested or attempted, represents unwanted treatment. Such measures should be withheld or withdrawn only with the consent of patients or their surrogates. Insist on joint decision making between health professionals, patients and their surrogates [18]. Other practitioners should also be involved in the decision making. Palliative care is to provide considerate comfort to patient's distress. Palliative care doesn't mean hastening the time for death. The intention can be conveyed through words as well as actions. The goal of palliative care and the method of providing it should be documented. Palliative care is to be provided as per the patient's requirements and level o distress.

ETHICAL CONSIDERATIONS

Every health care professionals and patients need to make medical decisions. The choice is often focused and innocuous but at times can be a dilemma with irreversible consequences. An ethical distinction is drawn between acts and omissions [19]. Withdrawing treatment would be considered as having been given a chance inspite of the therapy the patient does not recover and hence life-sustaining therapy is terminated. Whereas withholding therapy would mean not having given the chance leading to an omission that seems to have a lackadaisical attitude that amounts to neglect although the consequence is the same. Withdrawing therapy would mean removing from ventilator or inotropes to be stopped or heavy sedation is commenced allowing for death to ensue [20-21]. In fact, there is no difference between withholding and withdrawal of therapy but rather they are equal legally and ethically. Such a decision that allows for the disease to progress on its natural course is not a decision that proposes to invite death or end life. This is contradictory to euthanasia that actively seeks to end the patient's life.

CONCLUSION

In case of a dying patient, we intent to keep the patient going and keep trying all available diagnostic tools, try delivering another medication, and all possible measures. Added to this is the age old belief that medicine can almost do wonders and physicians are next to God. It is this unflinching faith in medicine and medical professional that makes it all the more difficult for all involved to withhold a life-sustaining treatment or even more difficult to withdraw one that has already been initiated. It is the initiation or continuation of medical interventions that must be ethically justified and not the withholding of life sustaining measures. It is often taxing and agonizing to analyze which measure has been beneficial and which has turned futile in the process of continuing these life-sustaining measures. It varies from patients to patients. Any intervention that has turned futile rather beneficial can better be terminated. Patient's wellbeing is not a statistical concept and so care givers have to involve their patients in determining what treatment will benefit them. But the patient always gets the final say.

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Original Research Paper

Compassion Fatigue among Indian Physiotherapists: a descriptive cross sectional comparative study

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ABSTRACT

Background: Compassion has been variously defined as a feeling, attitude or trait arising in witnessing others distress and that motivates a subsequent desire to help. Compassion fatigue is used to describe potential emotional impact on professionals working in trauma care, rehabilitation of degenerative disease and end of life care diseases. The role of physiotherapists is very crucial as they rehabilitate irreversible conditions, manage maintenance phase in degenerative diseases and prevent progression of the disease. This study focuses on assessing compassion fatigue among Indian physiotherapists working in different setups.
Methods: A descriptive cross-sectional comparative survey was conducted among Indian physiotherapists working in ICU setup, rehabilitation setup and general OPD setup by purposive sampling. A total of 520 physiotherapists participated in the survey conducted using survey monkey. ProQOL-5 scale is used to measure the outcomes. The data was analyzed by SPSS software version 16.
Results: When compared with the work set up ,physiotherapists working in rehabilitation had more compassion fatigue ($p = 0.035$) than the ICU setup followed by OPD services, Male gender had more compassion fatigue ($p = 0.130$) and physiotherapists completed postgraduation along with special training had better compassion ($p = 0.023$) while physiotherapists clinical experience ranging from 0-10 years had more compassion fatigue ($p = 0.003$) compared with above 10 years experienced .
Conclusion: Compassion fatigue is an important construct that must be evaluated and incorporated in the training of physiotherapists.

Key words: Compassion Fatigue, Compassion satisfaction, Burn out, Indian physiotherapists, secondary traumatic stress.

INTRODUCTION

Physiotherapy care focuses primarily from ICU to tertiary care in rehabilitation both hospital and community based which proceeds months to years unruffled and requires kindness, compassion and competency. Physiotherapists remain perennial responders to the traumatized patients with high chance to internalize their stress and get pretentious by compassion fatigue [1]. Compassion fatigue express symptoms like hopelessness, lack of pleasure, anxiety, stress, sleeplessness and a

negative attitude towards life. This decreases self-efficacy and confidence leading to deterioration in performance and work output [2].

Multiple factors are involved in the pathophysiology of compassion fatigue. Personal factors are level of sympathy and compassion, age, gender, ideology and personality type. External or environmental factors are job related stress, support from society, family and friends, ethnicity and training. Having any one or both predisposes a high risk of developing compassion fatigue [3].

Compassion fatigue is comprised of two parts: burnout, characterized as "exhaustion, frustration, anger and depression" [4], and secondary traumatic stress, described as the negative consequences secondary to fear and work-related trauma. Compassion satisfaction is the positive feelings derived from helping others, whether it can be from direct contribution or for the betterment of society [5].

Although compassion fatigue is often used synonymously with burnout, the two concepts are derived from two separate failed survival strategies. Compassion fatigue arises from a rescue-caretaking response, and burnout arises from an assertiveness-goal achievement response [6]. Compassion fatigue occurs when the caretaker cannot shield or save the individual from harm and, therefore, results in feelings of guilt and distress, and burnout is when one cannot achieve an anticipated goal, resulting in frustration and perceived loss of control [7]. Compassion fatigue is caused by a natural and intrinsic response to alleviate pain and suffering. Burnout is environmentally driven (e.g., time and resource constraints, increased workload) [8] and the onset and resolution period between compassion fatigue and burnout are different. Compassion fatigue has an acute and insidious onset, resulting in long-term consequences that are not easily reversible. Conversely, burnout has a rapid onset and resolution, suggesting that removal of stressor source may be effective [9]. A study conducted in nurses showed that they felt as they have become pessimistic, anergic, and less sympathetic towards their patients and even realized as they were distancing from patients and even from their colleagues [10]. Many studies showed that specialty, duration spent with patients and treatment outcomes has a profound impact on developing compassion fatigue [11]. Till date research on compassion fatigue is not yet been conducted among Indian physiotherapists who are tortuous in treating long term conditions (stroke, spinal cord injuries, cerebral palsy), progressive conditions (COPD, cancer, heart failure) and degenerative conditions (muscular dystrophy, Parkinson's disease, arthritis) and remain associated with the patient for hours and also have an elusive bonding with patients.

To confront the problem of compassion fatigue, first it should be properly assessed based on their profession not in a wide view of health care profession, sound planning parameters need to be developed for which basic data from each own set up in needed, the current study is planned for to assess the compassion fatigue, among Indian physiotherapists working in different setups.

The aim of the current study was to assess compassion fatigue among Indian physiotherapists working in different setups, to determine compassion fatigue among Indian physiotherapists working in ICU setup,to determine compassion fatigue among Indian physiotherapists working in rehabilitation and OPD setup and to identify which demographic and work related variable contribute to the risk for compassion fatigue among Indian physiotherapists

METHODOLOGY

A survey conducted among Indian physiotherapists working in ICU, rehabilitation and general OPD setup. Duration of the study was six months. A total of 580 participants were selected in the study through non-probability purposive sampling. Finally 35 respondents could not complete the questionnaire leaving a sample size of 545. The participants included a) physiotherapists working in ICU, OPD and rehabilitation services, b) Both male and female physiotherapists c) physiotherapist holding minimum bachelor's degree. Physiotherapists, not directly related to patient care, were excluded from the study.

Procedure

After getting approval from institutional protocol and ethical committee the survey was sent to the selected physiotherapists covering most parts of India through mail. The survey monkey, a web-based survey tool for data collection, was used to conduct the survey. It is designed with inclusion

of demographic data and professional questions. Clicking the continue option from demographic data to the survey is taken as informed consent for the participants. Once the survey was forwarded after 2 weeks a remainder mail is sent and a subsequent remainder after one week is sent.

Data analysis

The collected data was compiled for analysis. The obtained sample was coded and analyzed in SPSS version 16.0. Descriptive statistics was used for calculating mean and standard deviation for continuous variables whereas frequency and percentage for categorical variables. Inferential statistics was used for association and comparison among different variables. Reliability of the test was assessed through internal consistency by applying Cronbach's alpha test. Item analysis was performed by mean ± standard deviation of each item along with reliability analysis. The α was set as less than 5 for significance at a confidential level of 98%

RESULTS

545 physiotherapists participated in the study at a response rate of about 93%. Reliability of the question was determined by Cronbach's alpha test which was calculated to be 0.81 showing higher reliability.

Table 1: Frequency, percentage and comparison of different levels of compassion fatigue in three different setups

Compassion fatigue level	Work setup (n = 545)			p value
	ICU (90)	Rehabilitation (190)	OPD (165)	
Low	30 (33.33%)	56 (29.47%)	71 (43.03%)	0.035*
Average	53 (58.8%)	120 (63.15%)	90 (54.54%)	
High	7 (7.77%)	14 (7.36%)	4 (2.42%)	

*significant (P < 0.05)

Compassion fatigue was compared between physiotherapists working in rehabilitation setup, ICU setup and general OPD setup. Chi square test showed significant difference in compassion fatigue among the three categories (p =0.035) with high compassion fatigue among the rehabilitation setup physiotherapists followed by ICU therapists.

Table 2: Frequency and percentage and comparison of different levels of compassion fatigue between males and females

Compassion fatigue level	Male (390)	Female (155)	p value
Low	160 (4%)	63 (40.64%)	0.130
Average	213 (46.15%)	82 (52.90%)	
High	17 (4.35%)	10 (6.45%)	

Compassion fatigue was compared between the two categories of gender, male and female. Chi square test showed difference in compassion fatigue between the two categories (p =0.130) but not statistically significant with high compassion fatigue among the males compared to females.

Table 3: Frequency and percentage and comparison of different levels of compassion fatigue based on experience

Compassion fatigue level	Experience (N = 545)				p value
	0-5 years (130)	5-10 years (255)	10-15 years (100)	15 years and above (60)	
Low	29 (22.3%)	55 (23.52%)	35 (35%)	30 (50%)	0.023*
Average	78 (60%)	154 (58.43%)	55 (55%)	22 (36.6%)	
High	23 (17.69%)	46 (18.03%)	10 (10%)	8 (13.33%)	

*significant ($p < 0.05$)

Compassion fatigue was compared between four categories of physiotherapists' experience i.e. from 0-5 years, 5-10 years, 10-15 years and 15 years and above. Chi square test showed significant difference in compassion fatigue among the four categories ($p < 0.023$) with high compassion fatigue among the 0-5 years experienced physiotherapists followed by 5-10 years physiotherapists.

Table 4: Frequency and percentage and comparison of different levels of compassion fatigue based on educational qualification

Compassion fatigue level	Educational Qualification				p value
	BPT (210)	MPT (255)	MPT with special training (72)	Ph D (8)	
Low	5 (2.38 %)	57 (22.35%)	41 (54.66%)	1 (12.5%)	0.033*
Average	85 (40.47%)	112 (43.92%)	12 (16.66%)	3 (37.5%)	
High	120 (57.14%)	86 (33.72%)	19 (26.38%)	4 (50%)	

*significant

Compassion fatigue was compared between four categories of physiotherapist qualification. Chi square test showed significant difference in compassion fatigue among the four categories ($p < 0.033$) with high compassion fatigue is among physiotherapists holding Bachelor's degree alone followed by PhD holders and Master's degree

DISCUSSION

Stamm's guidelines was used to calculate patients score and categorise into low, average and high levels of compassion fatigue. From the above results it is shown that compassion fatigue is more in physiotherapists working in rehabilitation setup .Patients in need of palliative care, rehabilitation after cardiac and pulmonary surgeries and heart failure patients need more thoughtfulness and deliberation as each of the patient is unique specifically related to suffering and each should be addressed in compassion that can offer substantial benefit for patients such as patient therapist relation patient satisfaction, improvement in symptoms and promote quality of life and aid recovery or else it will result in progressive deterioration of health .So the huge affliction burdens the physiotherapists and treating same kind of patients daily may also result in compassion fatigue

Researchers studied 681 health care professional providers and reported that high CF scores were associated with the nature of work place and the number of years worked as health care professional and concluded that the CF scores became worsened over time. The word 'satisfied'

from 'fatigued' participants were the ability to deal with high work load and having positive view about the team with which they worked. The above study results are in keeping with the results of the present study [13].

Compassion fatigue is more in males compared to in females despite the type of work set up because of cultural effect as they may not sensitively be involved with the patients and male population has experienced ten times more compassion fatigue than female population and practicing females were less compared to male in India but the results are reverse in western population [14].

Compassion fatigue is more common in less experienced therapists that is from 0-10 years as during the initial and developing years the therapists must be finding it difficult in managing time, more work burden, selection of better techniques and lack of practice also thrust them into compassion fatigue compared to senior physiotherapists as they might have mastered in coping the problems related to patients

Compassion fatigue is experienced more in undergraduate physiotherapists as they lack specialisation and special training. Physiotherapists with post-graduation and special training with experience showed a less compassion fatigue compared with post graduate only and doctorate physiotherapists.

Authors studied with 151 freshly passed out physiotherapists and the study exhibited high level of compassion satisfaction, by understanding the experience of physiotherapists, we can better anticipate the support needed for the newer graduates to overcome the struggle which results in compassion fatigue [15].

Limitations

- Only one outcome tool is used in the study
- Small sample size
- Cross sectional study
- Purposive sampling reduces generalizability

CONCLUSION

Compassion fatigue affects both physical and mental wellness and results in reduced quality work output. Physiotherapists in rehabilitation services and critical care should be deloaded at regular intervals and necessary training should be given to deliver the service to patient satisfaction.

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Original Research Paper

Impact of Bioethics Education on Attitude and Beliefs regarding Homosexuality: A Pilot Study with Medical Graduates

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ABSTRACT

In a traditional country like India, homosexuality is still a taboo in most societies. The homophobic attitude of medical professionals is known to affect the quality of care for homosexual patients. The present study was conducted to ascertain the opinion of medical graduates on various aspects of homosexuality. A conscious attempt was made to know the opinion of medical graduates who studied bioethics through a structured module with those who did not study. The results indicated that graduates who had studied bioethics had a better judicious decision than their counterparts who had not learnt ethics in their undergraduate curriculum. The results of this study support the belief that teaching bioethics through structured teaching modules in undergraduate curriculum has benefit in inculcating the desired values.

Key words: homosexuality, homophobia, structured teaching, attitude.

INTRODUCTION

The Universal Declaration of Human Rights has clearly specified that "every individual has the right to life, privacy, health and equality before the law, as well as the right to freedomof expression and freedom from discrimination and violence, including torture"[1-2]. Although most of the aspects are adhered to, reports suggest that when aspects pertain to sex and sexuality it is considered shameful and embarrassing [1-2]. From a terminological perspective, 'Sexuality' is termed as 'capacity for sexual feelings' in the Oxford Dictionary of English. However, the term does not stipulate that the sexual feelings are essentially between individuals of the opposite gender (heterosexuals) or that between the same genders (homosexuals) or both (bisexuals).

Innumerable reports documented from around the world have conclusively shown that when compared to the heterosexuals, the homosexuals (gay and lesbians) and bisexuals (GLB) have faced undue harassment and penalization as these sexual preferences are considered abnormal and worse as criminal in many countries and communities [1-2]. The GLBs are often subjected to various forms of stigma, discrimination, social and economic alienation, and worse may even be subjected to repeated verbal, emotional and physical and psychological abuse by the community and worse at times also by the family members [1-3].

Discrimination of GLB individuals is common even in healthcare practice and the social pages contain writ up on doctors prescribing anti-psychotics and electrical shock therapy [4]. Several studies have clearly shown that LGBT people are subjected to discrimination and stigmatization and that this also exists in healthcare practice in some population [3]. The situation is worse in some orthodox communities were reports suggest that GLB individuals have not been provided healthcare because of their identity and are stigmatized [4]. GLB individuals face health care discrimination and are turned away by hospitals, pharmacists, and doctors [4].

Mistreatment, harassment and humiliation by healthcare providers are potentially dangerous as GLB individuals feel uncomfortable to approach the health care system for their medical needs [4]. To aggravate maters, reports that a qualified healthcare practitioner was treating homosexuality as "genetic mental disorder" and used hormonal therapy and electric shock to cure the gay and lesbian individuals, has had the medical fraternity in the shock (Times of India). This is in spite of American Psychiatric Association (APA) and the World Health Organization having removed homosexuality from the list of disease from the International Classification of Diseases (ICD-10) in 1990 [5-7].

A universally accessible and accepting health care system is important for the well being of a populace. It is therefore important to educate the medical students and professionals who serve in the field about the nuanced issues in care of GLB individuals. The present study was conducted to ascertain the opinion on homosexuality and care of GLB individuals in healthcare individuals who have had completed their undergraduate curriculum and clinical internship, and are preparing for the post graduate entrance exams. Importance was also given to ascertain the difference in the opinion between students who were taught with peers who were not taught bioethics in their undergraduate curriculum.

METHODOLOGY

This study was conducted under the aegis of the national curriculum Bioethics, Indian program. The study was a part of a research proposal proposed for the Rajiv Gandhi University of Health Sciences and was carried out after obtaining the approval from the Institutional Ethics committee. The inclusion criteria included volunteers who have had completed their undergraduate medical curriculum in modern medicine, while the exclusion criteria included students of other branches of healthcare sciences (like nursing, physiotherapy). The questionnaire was designed by the investigators and was developed with the help of medical educationists, bioethicists and researchers. Emphasis was given for clarity and comprehension of the questions by the students. The questionnaire was pilot tested on 10 students. The respondents of the pilot cohort rated the initial questionnaire for clarity, degree of comprehension and content validity. Emphasis was also placed to have a small questionnaire to enhance maximal participation of the volunteers. The final questionnaire consisted of two sections, the demographic and subject specific questions and filling it took a maximum of 5 minutes.

The study was done in a private postgraduate entrance coaching centre in Mangalore in the month of April 2017 after obtaining the necessary permission from the centre in charge. One of the investigators explained to the student volunteers the objective of the study and that their participation was voluntary. They were also informed that they could abstain or withdraw anytime from the study. No prior information or announcements were done in order to minimize response bias. They were informed that their participation was completely voluntary and that they did not have to write their names or identification number on the main questionnaire. The filled questionnaires were requested to be deposit in a collection box. Written consent was obtained on separate sheet from all the willing participants before the administration of the questionnaire and their anonymity was maintained.

Statistical analysis

Data was entered in Microsoft excel. All quantitative variables were expressed as frequency and percentage. The data was analyzed stratifying the volunteers as those who studied bioethics verses the one who did not study. The data was analyzed using the X2 test with the help of Social Science

Statistical Program available online (https://www.socscistatistics.com/tests/). A p value of < 0.05 was considered significant.

RESULTS

The results of the study are represented in Table 1 and 2. The factor to be considered here with is that many students did not answer all the questions. The demographic details suggest that most of the volunteers were of 23 years of age, females and from city (Table 1). The subject specific results indicated that there was a significant difference in the opinion on homosexuality between the volunteers (Table 2). The results indicated that majority of the students who were taught bioethics disagreed with homosexuality being morally wrong [44.44%vs26.32%; P value 0.027] (Table 2). With regard to the question as to whether it is alright to reveal an individual's homo sexuality to their heterosexual spouse in the absence of a disease which could put the spouse at risk the majority of the students who had studied bioethics disagreed [46.91% vs 25% P value 0.008] (Table 2). However, there was no difference between the two student cohorts when the spouse's life was at risk (Table 2). For the question to whether it is acceptable for homosexuals to have romantic feelings for one another as long as they do not engage in physical intimacy, it was observed that 25.92% (21/80) of the students who had studied bioethics agreed as verses to 7.89% (6/76) of those who did not study bioethics (Table 2). However, both cohorts were almost similar in their answer to the question homosexuals should not be allowed to work with children (Table 2). With regard to the question homosexuals should not be allowed to practice medicine 28.95% of the students who were not taught bioethics agreed while in the cohort that were not taught only 4.94% consented and was statistically significant (0.0003). The most important observation of the study was that 51.32% of the students who were taught bioethics agreed that homosexuality issues should be included in medical education, while only 15.49% of the students who did not study bioethics consented (P = 0.0001).

Table 1 – Demographic data of the students

	Response Options	**Did not study Bioethics (76)**		**Studied Bioethics (85)**	
		Frequency	**Percentage**	**Frequency**	**Percentage**
Gender	Male	33	43.42	35	41.18
	Female	43	56.58	50	58.82
Age	23	47	61.84	49	57.65
	24	19	25	24	28.24
	25	7	9.21	7	8.24
	More than 25	3	3.95	5	5.88
Domicile	Rural	10	13.16	12	14.12
	Town	18	23.68	20	23.53
	City	48	63.16	53	62.35
Have you studied Bioethics during undergraduate course	Yes	0	0	85	100
	No	76	100	0	0

Table 2 – Attitudes of medical students towards homosexuality

	Did not study bioethics			**Studied bioethics**			Significance
	Agree	Unsure	Disagree	Agree	Unsure	Disagree	
Homosexuality is morally wrong.	34 (44.74)	22 (28.95)	20 (26.32)	22 (25.88)	27 (31.76)	36 (42.35)	0.027*
It is alright to reveal homosexuality of patient to their heterosexual spouse in the absence of a disease which could put the spouse at risk.	31 (40.79)	26 (34.21)	19 (25)	18 (22.22)	25 (30.86)	38 (46.91)	0.008*
It is alright to reveal homosexuality of patient to their heterosexual spouse in the presence of a disease which could put the spouse at risk.	40 (52.63)	25 (32.89)	11 (14.47)	52 (64.2)	22 (27.16)	7 (8.64)	0.28 NS
It is acceptable for homosexuals to have romantic feelings for one another as long as they do not engage in physical intimacy.	6 (7.89)	37 (48.68)	33 (43.42)	21 (26.25)	41 (51.25)	18 (22.5)	0.002*
Homosexuals should not be allowed to work with children.	37 (48.68)	28 (36.84)	11 (14.47)	34 (42.5)	26 (32.5)	20 (25)	0.26 NS
Homosexuals should not be allowed to practice medicine.	22 (28.95)	11 (14.47)	43 (56.58)	4 (4.94)	15 (18.52)	62 (76.54)	0.0003*
Homosexuality issues should be included in medical education.	11 (15.49)	29 (40.85)	31 (43.66)	39 (51.32)	25 (32.89)	12 (15.79)	0.0001*

*significant ($p < 0.05$)

DISCUSSION

At a global level the stigma of homosexuality is on a wane especially in the developed countries [8]. However, in many traditional and conservative countries homosexuality is unaccepted and individuals with such preferences are ill-treated [9-10]. Since time immemorial, the Indian society has considered sex as a highly intimate topic and it is forbidden to talk about it in public [5,11]. Sexuality in India is essentially heterosexual–a sexual relationship between people of the opposite gender, while that between the same gender is considered to be unnatural and morally wrong in almost all cultures and traditions [5]. What is worse is that due to their sexual orientation homosexuals are often victims of violence and abuse from both society [12-13]and family [14], and this affects their mental and general health [11]. Additionally, reports also suggest that GLB individuals are at a higher risk of developing mental disorders like depression, substance abuse and suicidal tendencies as well as somatic disorders like sexually transmitted diseases, cancer, type II diabetes and cardiovascular ailments [15].

Healthcare profession is a highly revered job and physicians invariably will have to interact and treat homosexuals during the course of their medical education and practice [15]. Unfortunately reports suggest that the students often do not receive comprehensive education on different sexual orientations and that this can have adverse effects on their attitude in care of the homosexuals as professionals and consultants on a later date [15]. In lieu of these observations, correcting the attitudes of healthcare students and professionals are vital as this has a direct effect on the physician-patient relationship and can consequentially influence the treatment and its outcome. Professionals having a homophobic attitude are less willing to help the gay and lesbian patients and that this barrier will consequentially affect the patient care as the lack of understanding on the unique health care needs of homosexual patients tends to be minimized or neglected [15-17].

From a teaching perspective, reports suggest that the current medical curriculum and the institutions are not attempting at understanding the unique needs and health risks of homosexuals

and that a concerted attempt is lacking in inculcating competency, understanding, awareness, moral values and empathy towards the LGBT communities [18-19]. Realizing this, some academic centers in the developed countries have made a concerted effort by promoting anti-stigma programs focused on non-homophobic attitudes towards patients and also on increasing awareness on how homophobic attitudes can cause negative social, ethical, and psychological consequences [15,17,19].

In this study, it was observed that when compared to students who were not taught bioethics, the students who had undergone a structured teaching program in bioethics had a more compliant opinion to homosexuality. The results of this study suggest that it is worth the effort to inculcate bioethics teaching as this brings out a change in the attitude and belief. As far as the authors are aware of there are no reports from India on this aspect. However recent reports have indicated that teaching program on LGBT health issues have been effective in significantly bringing about positive change in attitude, comfort level, and knowledge on LGBT health issues [20-22].

The most important observation of this pilot study was that the graduates who had studied bioethics had empathy clearly indicate the usefulness of teaching bioethics in the undergraduate curriculum and needs to be supported. The biggest drawback of this study was that this was done with a small sample of graduates and at a single centre. Multicentre studies are warranted to ascertain the usefulness of structured teaching on bioethics as this topic is of importance to both medical fraternity and general public.

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Original Research Paper

Introduction to medical ethics in 1st year MBBS teaching of Anatomy

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ABSTRACT

Violence against Indian doctors is a common phenomenon. Every day we hear news that doctors are beaten up by the attendants of patients. In most of these cases the doctor is usually involved at junior level (Medical students, Interns, Resident and Senior Resident). One of the reasons for this maltreatment could be ignorance of medical ethics which has been never taught to them at undergraduate level. The study was an attempt to introduce and evaluate the medical ethics to first year MBBS students in anatomy. This study aimed to introduce and evaluate medical ethics module in 1st year MBBS students. To make them aware about ethical issue in relations to cadavers i.e. respect for human body after life. 50 1st year MBBS students were enrolled for study. A pretest was taken before the session of medical ethics. These students were introduced to concept of medical ethics in 3 hour session which included lecture, videos on showing respect to the cadavers and role play. At the end of session cadaveric oath was administrated. After the session, post test was conducted and a feedback Performa on a 3 point likert scale was given to know students perspective regarding the session. Participants showed significant improvement in post session score. On statistical analysis the p value<.0001 of each item analysis shows significant improvement. There was lack of awareness about medical ethics in 1st year MBBS students. A well organized session can improve knowledge and attitude towards education.

Key words: Medical ethics, medical students, cadaver, anatomy.

INTRODUCTION

Medical education had ignored medical and bioethics for a long time. The medical professional is confronted with ethical issues, whether it is in medical practice or human experimentation. The advances in medical science and technologies have left the doctor perplexed [1]. The Edinburgh Declaration of Medical Education approved in1988 requires that a future physician be trained as an attentive listener, a sensitive communicator, a careful observer and an effective clinician [2].
The practice of medicine is intrinsically an ethical enterprise because patients are vulnerable and suffering. Medical treatments are not merely technical; they often invade patients' bodies and engage their consciences [3]. Pellegrino argues that the ethical decisions are an integral and essential part of being a good physician. Better the students' prior ethical education the better they can appreciate nuances and complexities of medical ethical choices. The less that prior education, the more the student needs instruction in ethics in the medical schools [4]. From the developing world, countries such as India, Sri Lanka, Pakistan and Saudi Arabia have been slow to respond to this universal need [5-7]. Within the health sector, questions are being asked about the possible threats to the accepted principles of equity and social justice in the delivery of care. Violence against doctors is common phenomena, every day we hear news that doctors are beaten up by the

attendant of patient. In most of these cases doctor are usually involved at junior level (Medical students, Interns, Resident and Senior Resident). One of the reasons for this maltreatment could be ignorance of medical ethics which has been never taught to them at undergraduate level. Students have started photography and videotaping cadavers and posting the images on Face book and You Tube. There is a need to `humanizing` the cadaver with respect as first patient or as a first teacher.

Cadaveric dissection has been the paradigm of anatomy teaching since the Renaissance, and defining experience of medical teaching since 16th and 17th centuries [8,9]. In addition, the practice of cadaveric dissection helps students to grasp the 3 dimension anatomy and concept of innumerable variations [10]. The main ethical concern of cadaver dissection lies in respect to human life. Any disrespect for the cadaver will be a disgraceful act as a human being [11]. Medical ethics should be a necessary component of medical curriculum. It should be taught from day one of medical college because mainstreaming and formalising ethics education in the medical school curriculum will increase knowledge and confidence and create positive attitude towards ethics education

METHODOLOGY

To study awareness and preliminary knowledge of 1st year MBBS students about medical ethics, 50 students out of 100 showed willingness to be a part of the study. MCQ questionnaire was designed based on history, current guidelines, principals and professionalism. The questionnaire was circulated to participant students after taking consent from them. The permission for the same was taken from the Institutional Ethics Committee (DMC/R&D/2017/620). Medical ethics modules for teaching were prepared with inputs from faculty of department of anatomy. A lot of brainstorming and peer validation was done for appropriate teaching learning method to be adopted.

After validation of modules and post teaching session feedback Performa, pre test MCQ questionnaire was given to solve. Subsequently these students were introduced to concept of medical ethics in 3 hourr session which included lecture on medical ethics, videos on showing respect to the cadavers and role play. At the end of session cadaveric oath was administrated. After the session, post test on MCQ questionnaire was conducted and a feedback Performa on a 3 point likert scale was given to know students perspective regarding the session.

Responses were tabulated, summarized and evaluated. Opinions and suggestions in response to open- ended questions were documented. The data was compiled in a Microsoft excel sheet. The responses were calculated as percentage and analyzed student wise. The analysis was classified into various categories - 0-25% is Zero, 26% -50% is Average; 51-75% is good and 76-100% is excellent [12]. To compare the pre test and post test scores, paired t test was used. Significance level of p value is <0.05 and extremely significant p value is $<.0001$. These values were calculated and recorded. Pre and Post scores were compared and tabulated.

RESULTS

50 first year MBBS students participated in pre and post test session. In question wise analysis, mean pre to post scores improved significantly p value $<.0001$ (Table 1).

Quantitative Analysis

Item wise analysis

a. History of medical ethics

There were two questions testing the awareness about the history of medical ethics. 24% students showed improvement in score from zero to excellent and 44% improved from average to excellent (Table 2). The improvement showed extremely significant statistical difference (Table 1).

b. Current guidelines of medical ethics

Three questions tested the knowledge about current guidelines of medical ethics. 24% students showed improvement from zero to excellent and 30% students' shows improvement in their scores from average to excellent (Table 2). The improvement found to be statically significant (Table 1).

c. Principle of bioethics

The four principle of bioethics was discussed in detail during the session. Three questions were given on this topic. 22% students improved their score from zero to excellent. 18% showed improvement from average to excellent (Table2). The mean pre test and post test score analysis pertaining to these items recorded and it shows extremely significant improvement (Table 1)

d. Professionalism

There were two items testing the facts about medical professionalism. 34% students were improved in their scores from zero to excellent and 26% from average to excellent (Table 2). Mean scores of pre and post test showed extremely significant value (Table 1).

Table 1: Mean Pre and Post score analysis of medical ethics components

Parameters		Mean	SD	Paired t- value	p-value
History of medical ethics (2 Questions)	Pre test Post test	0.54 1.64	0.542 0.598	12.02	0.0001
Current Guidelines (3 Questions)	Pre test Post test	0.68 2.48	0.653 0.707	12.60	0.0001
Principle of bioethics (3 Questions)	Pre test Post test	0.44 2.26	0.501 0.694	15.14	0.0001
Professionalism (2 Questions)	Pre test Post test	0.56 1.54	0.577 0.646	7.57	0.0001

$p < 0.0001$ extremely significant

Table 2, Analysis of graded improvement in pre and post scores of various components of medical ethics (n-50)

Pre Test Grade	Post Test Grade	History of medical ethics (Item 1,2) No of students	Current Guidelines (Item3,4,5) No of students	Principal of bioethics (Item6,7,8) No of Students	Professionalism (Item 9,10) No of students
Zero	Zero	2 (4%)	-	-	2(4%)
	Average	10 (20%)	-	4 (8%)	5 (10%)
	Good	-	9 (18%)	13 (26%)	-
	Excellent	12 (24%)	12 (24%)	11 (22%)	17 (34%)
Average	Zero	1(2%)	1 (2%)	-	2 (4%)
	Average	2(4%)	3 (6%)	3 (6%)	9 (18%)
	Good	-	5 (10%)	10 (20%)	-
	Excellent	22 (44%)	15 (30%)	9 (18%)	13 (26%)
Good	Good	-	3 (6%)	-	-
	Excellent	-	2 (04%)	-	-
Excellent	Excellent	1 (2%)	-	-	1 (2%)

Quantitative Analysis

Table3: The feedback from students participant in the study was collected in paper format. The response to qualitative questionnaire were tabulated (n=50)

S. No	Questionnaire Item	Not Likely	May be	Definitely
1.	What is the likelihood that you might consult the ethical literature in future?	10%	4%	86%
2.	Do you think medical ethics should be part of 1st year medical curriculum	4%	16%	80%
3.	Do you think knowledge of medical ethics enhances your ability to make moral decision	14%	10%	76%
4.	Does this program enhance the ability to identify ethical issue	8%	10%	82%
5.	Do you think with your knowledge in medical ethics, in future you will be able to treat patients more emphatically	12%	20%	68%
6.	Do you think in future when you do research; you will keep in mind ethical issue related to it	4%	12%	84%
7.	Do you think knowledge of ethics helps in doctor patient relationship	8%	10%	82%
8.	Do you think after the session respect towards cadaver increased	4%	4%	92%
9.	Do you there is any need of Institutional ethics committee in your college	10%	20%	70%
10.	Do you think proper disposal of biomedical waste is need of the hour	6%	12%	82%
11.	Do you think session on medical ethics using video, lecture, group discussion and role play should be part of first year curriculum	3%	5%	92%

Feedback in Likert scale format was encouraging as the participant was impressed with the session and expressed their willingness to imbibe medical ethics in their life. Respect towards cadaver is increased after the session.

- 92% students think the session like this should be part of first year curriculum
- 92% students say respect towards cadaver is increased after the session
- 84% students think they will keep ethical issue in mind when they do the research.
- 82% students think it will help them in doctor patient relationship.

Some of the responses of students in open ended questions are reproduced here is their own language

- This session make me feel like doctor and being a doctor I have huge responsibility toward society.
- Make me realized the cadaver is my first patient.
- Medical ethics should be part of each professional
- Professionalism is very important

DISCUSSION

Ethics play a viral and essential role in medicine. Since medicine deals with life, the property and honor of human beings, the people in society need its achievements and services. The ones who

are practicing this profession must observe special ethical principles called "medical ethics" [13]. The main aim of a medical curriculum is to generate clinically competent doctors with an ethical code of conduct to the society" Teaching bioethics to 1st year MBBS students has been focused to develop a higher degree of ethical reflection on the part of students, making them capable of evaluating ethically difficult situations and deciding what would be the morally best choice of action. Bioethics teaching requires pedagogies that engage students in participatory and emergent activities to develop multiple dimensions knowledge. These dimensions include the Scientific, personal, social and emotional aspects associated with bioethical issues.

Medical ethics as a subject hardly taught in any of the professional MBBS year. At present, the Medical Council of India curriculum does not have 'Medical Ethics' as a separate subject in any of its course [14]. In the curriculum, the students learn about principles of medical ethics and legal aspect in short that is educated in 2 to 3hrs under the subject of Forensics medicine. A study conducted by Brogen and others [15] observed inadequacy or knowledge regarding code of ethics and its curriculum during undergraduate medical teaching. They also emphasized need of addition of ethics in the medical curriculum through lecture, seminar, workshop or continuing medical education. The article also stressed the ignorance about Institutional ethics committee (IEC). The mean pretest score in present study also shows lack of awareness regarding code of medical ethics (table1). A similar study performed by Chatterjee [16] found only 10.9% of the students to be aware of existence of IEC and didn't know its specific function. This highlights the need for the IEC of teaching hospitals to make them know in various health related activities at regular intervals for the benefit of trainees. In present duty after the session, 70% of students think there is need of Institutional ethics committee in the college (Table 3). Medical humanities module titled "Sparshanam" had been conducted for 1st Year medical students, using literature through small group activities, role plays, debates, etc., with encouraging results [17]. In present study too, the student's feedback was encouraging (Table3).

Ethical constraints in relation to a cadaver do not cross the mind of medical professionals. As it may seem strange to devote attention to ethical values to cadaver. After all, it appears that there are few ethical issues surrounding dead bodies in comparison with living bodies [18]. Anatomical dissection is a time honored part of medical education. However, like use of human tissue for research purposes, use of human cadavers for teaching and training purpose is surrounded by ethical uncertainties. The main ethical concern of cadaver dissection lies in respect to human life. Recently there was news where students had put photos and videos of cadavers online [19]. Stony Brook University Medical Center in Long Island announced that it was developing a revised ethics policy, after a student posted a photo on facebook of a classmate posing the thumbs up next to a cadaver. The State University of New York Upstate Medical University in Syracuse also is updating its ethics curriculum after a former resident posted a snapshot of an exposed brain on Facebook [19]. Cadaver is the first teacher of every student the basics of medicine. The cadaver belongs to a person who decided to donate his body to make a contribution to society. Students must recognize the generosity of these donors on bequeathing their bodies as silent mentors for medical education. Thus, to appreciate this altruistic behavior of cadaveric donor, taking a cadaveric oath becomes an essential part of Bioethics [20]. Keeping that in mind cadaveric oath was administrated during the session.

CADAVERIC OATH

I do solemnly pledge that
I will always respect the cadaver.
I will always treat cadaver with dignity
I will be compassionate towards the cadavers
I will respect the privacy and confidentiality of the cadavers
I will be grateful to the cadaver and/or their family for the gift of knowledge
I will be altruistic and use my knowledge for the service of society

While conducting a session on medical ethics. We realized that students lacked knowledge and attitude towards ethics. Our study finding showed significant improvement in the mean score after the session (Table 1). Even the item wise analysis showed marked improvement in response (Table 2) the participant appreciated the group discussion and interactive sessions and felt that this method of facilitating learning would help the students to gain confidence and mould them into professionals. After the session, many of the students were eager to propagate their knowledge to other students who could not participate in current session. Hence the basics of bioethics is been introduced in the medical curriculum by which best professional values can be imbibed in the students.

CONCLUSION

A good physician is one who is not only technically sound, but also ethically well-grounded. Most of the medical institutes in India neglect the ethical component in their curriculum. Given the challenging environment of developing countries, it is imperative that structured education in bioethics with a proper evaluation and feedback system need m be developed. There was lack of awareness about medical ethics in 1st year MBBS students and a well organized session can improve knowledge and attitude towards subject. Training in bioethics may result in greater understanding of bioethics principles. Hence, teaching should introduce in medical curriculum from the very beginning and should continue throughout the undergraduate medical teaching.

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Ethical Viewpoint Paper

Queer Children as Survivors of Child Sexual Abuse

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Sexual violence is a pervasive phenomenon, affecting every culture and society, across demographics. Sexual violence may take various forms and encompasses sexual abuse, sexual assault, rape and other sexual crimes. Apart from the gruesome nature of assault, it is disappointing to note that the society's stigmatised approach to assault further only disempowers the victim. The victim is not just subject to the assault but is also discriminated and blamed for having '*called upon'* the nature of act. What is to be remembered is that irrespective, it is ***never*** the victim's fault.

Under sexual violence and sexual crimes, childhood sexual abuse (CSA) is treated as one of today's most serious public health problems. The prevalence of CSA among lesbian, gay, bisexual and transgender (LGBT) individuals is noted to be substantially higher than it is in heterosexual populations. Children of sexual minority are on an average 4 times more likely to experience sexual abuse than heterosexual children. There are several reasons to this consequence and can be enlisted as:

- Prevalence of homophobia that regards these individuals (and the community) as an outcast and therefore they are deferred from just treatment in all spheres of life which increases the risk of sexual assault and violence
- The LGBTQ+ community is a minority one, faces higher rates of poverty and is stigmatised- these factors put the community at a greater risk for abuse and assault.
- Culturally, it is believed that having the LGBT youth subject to rape or forced sexual engagement with the opposite will help '*transform'* them to becoming straight which is nothing but ridiculous.
- Among the community, transgender and bisexual women are further more prone to experience sexual violence and assault- as many as half of them do face sexual assault at some point in their lifetime.
- Non-acceptance by family and family members predisposes to the child for greater homelessness and this further increases the risk for sexual violence being experienced. It is a known fact that many children identifying their gender identity and / or sexual orientation as LGBTQ+ have either been outcast from the home or the home environment has led them to run away from their homes
- For various transgender persons, prostitution is a means of living and the nature of profession (*along with lack of awareness and resources for better health care*) increases the risk for sexual violence for them.
- The way society hypersexualizes LGBTQ people and stigmatizes our relationships can lead to unstable and unhealthy interpersonal relationships. Often, it also leads to intimate partner violence which stems from internalized homophobia and shame.

When we speak of sexual violence among queer children, two important points that need addressal are:

1. In most instances (90%-95%), children are abused by someone they know and trust, typically a male who may either be heterosexual or gay man. The perception that most perpetrators are gay men is a myth and harmful stereotype.

2. Often children develop the belief that their homosexual identity and /or orientation is a consequence of the sexual abuse by the opposite gender which makes them feel sexually revulsed. However, this is not true. There may be fear, anger or disgust to the gender that were the perpetrator; it may cause confusion about the identification with gender but abuse does nothing to transform heterosexual orientation to a homosexual one.

It is a well-documented fact that CSA has wide-ranging and long-lasting negative impact on victims' physical health as well as mental health. to understand this impact better- CSA can lead to children and adolescents have an increased rate of risky sexual behaviours, increased risk for HIV and other sexually transmitted infections, depression, suicidal ideation, post-traumatic stress disorder and substance abuse. These children are at an increased risk for future victimization, impaired adult functioning and altered attitudes about self, others and the world. Developmentally, the incidence of child sexual abuse translates to trauma in adulthood which may further predisposes them to severe mental illnesses. The burden of mental health needs greater attention because individuals tend to seek immediate help or physical health problems but mental health issues are often delayed or ignored yet because of the stigma attached.

Another observation that possibly contributes to mental health issues among LGBTQ+ persons is the disclosure of the age of coming out. Notedly, the age of coming out has decreased over years. In the 1970s and 1980s, the age of coming out was a mean of 22 years old and that after 2015 has come down to 14 years (on an average). Despite the recent celebrated fact of decriminalisation of their identities of being LGBTQ+ in India which fosters for the freedom of expression and despite the dramatic changes in increased support towards the community, mental health problems continue to be a rising concern. The explanation to this briefly is that younger children (14 years) have fewer cognitive resources to deal with the stigmatisation and discrimination they face from society as compared to the elder ones (22 years).

The layers of stigma are multiple when it comes to understanding the mental health impact of queer children and who have faced sexual violence. Here are some interventions to address the same:

1. To begin with, addressing homophobia and talking about the awareness of the LGBTQ+ spectrum is the first layer of stigma that needs attention so that the child can be accepted for who he or she is. This fosters better interpersonal relationships and fulfils the need for security for the growing child.
2. An emotionally secure relationship between the parent and the child creates the space for trust where the child can come and share whatever he or she wants to. It is important for a child to develop secure relationships with the parents as they are the backbone of social support for the child.
3. Parents should help the child figure out events that he/she can control from those that are uncontrollable. Additionally, parents can encourage their child to talk positively about themselves. It is essential to reward you child as much as is to correct them for mistakes.
4. Don't hesitate to take your child to a mental health professional- it is good not to avoid the consequences and take immediate help to prevent further suffering.
5. Use a kind but firm approach to let your child know if their behaviour is unacceptable. Let your child know that their emotions are normal, but encourage your child to express his or her anger in appropriate ways.
6. School-based educational programs about CSA concepts, self-protection, and directions to tell a trusted adult if approached or abused have been effective in increasing children's knowledge about CSA and about self-protection. Research has found reduced propensity of risk to sexual abuse when females were educated about sexual abuse at schools
7. Home visiting programs and family services that strengthen and support mothers have the potential to reduce all forms of child maltreatment, including CSA
8. Arrange for positive and engaging activities for the child so they may have something more productive to focus their energies on.

9. Parental monitoring of Internet website access by children and adolescents has now become an essential part of CSA prevention
10. Preventing sexual violence and taking care of a child's mental health requires a joint effort at interpersonal, societal and governmental level. In addition, important to let children have their own identities in terms of gender identity or sexual orientation. It is a part of normal development and important for their well-being, self-esteem and self-confidence. Let's do our own bits to allow our children to believe in, grow in healthier and happier spaces.

Apart from this, what mental health professionals must keep in mind:

1. Sometimes the therapist may not be comfortable dealing with cases of sexual abuse (including CSA), in that case it is best to refer to trauma therapists or those professionals who are comfortable dealing with such cases. At times, the surprise or shock emotion can disturb the patient (they may also feel judged or further victimised or as if it were their fault) which the therapist may not be aware of.
2. Maintaining confidentiality is extremely important as the patient may not be ready to disclose the information. Sometimes, adults may not want to report it or let their parents / family know then, professionals must respect that and work with the patient's needs at that moment.
3. In case of children, it is a must that therapists must be aware of POCSO and take the necessary action of reporting.
4. Therapists may have to be extra sensitive to the need of the patient who report sexual abuse and cater to what is most important to the patient in that period of time.
5. There are several therapeutic modalities that can be used with children/ adults with complaints of sexual abuse, one must be appropriately trained in them in order to practice as dealing with such sensitive cases requires for the therapist to know when to and how to deal with the trauma.
6. Sometimes children may not feel comfortable talking about the traumatic incident, it is important to maintain a patient stance and not force them to talk.
7. Very important is that children be conveyed that it was not their fault and they must not feel guilty for the act of abuse.
8. Many a times, adults come to therapy and talk about their experience of child sexual abuse which went unaddressed, it is very important for therapists to address it with equal sensitivity and care. Experience of trauma whether old or new, takes a great toll on an individual's mental health and must be addressed appropriately.
9. The care for children who identify as queer is double fold since the stigma also is double fold due to the homophobic nature of the society.
10. Therapists not comfortable with the LGBTQ+ population may refer to gender-affirmative therapists. and the ones unaware must educate themselves about their issues.
11. Queer children may feel more affected by trauma and often confuse their orientation as a result of the trauma experienced. Therapists must help them understand and believe in the reality of difference.
12. Therapists must also use their potency to understand how and when to speak about the queer child's identity to his / her parents / family.

Remember: It is not the child's fault. Do not react in anger towards the child if they report about their incident of abuse. Do not blame them or make them feel guilty about it. It is NEVER their fault. Let children know that many emotions like sadness, guilt, loneliness, fear, pain and isolation- are normal responses to traumatic experiences.

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Ethical Viewpoint Paper

Gene Editing: Boon or Bane

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INTRODUCTION

"China's gene- edited babies may be smarter". Dr. He Jiankui and his team allegedly deleted a gene from a number of human embryos before implanting them in their mother's, a move greeted with horror by the global scientific community [1].
Gene editing is a process by which a segment of DNA is removed, modified or replaced in the genome of a living cell by the means of biotechnology. Gene editing started as the addition of new elements in the genetic material of bacteria in a random nature. The biggest setback of the technology has been its randomness and uncontrollability which could alter or impair the genes within the organism. Although the methods have improved with time and now these are quite targeted to insert the gene at specific sites as well as reduced off-target effects. Through this targeted manipulation, gene editing could be an answer to various genetic diseases. Scientists around the globe have published eight studies, where they edited human embryos for the purpose of studying the intricacies of this technique [2].
However, "With Great Power Comes the Great Responsibility". There is a lot of debate on the right/wrong use of gene editing and concern lies in human germ-line editing [3].

BASIC CONCEPT

The whole idea of gene editing relies on the concept of DNA double-stranded break (DSB) repair mechanics. The DSB can be repaired by two mechanisms:

- Non-homologous end joining (NHEJ) which joins two DNA strands randomly
- Homology-Directed Repair (HDR) which uses the homologous sequence as a template for regeneration of missing DNA segment at a breakpoint.

HDR is more accurate and can be used for gene editing for creating a vector which contains the desired genetic material within a sequence. The crucial step in gene editing is to create a DSB at a specific point within a genome. To create specific DSB specially engineered nucleases are used nowadays. Clustered regularly interspaced short palindromic repeats (CRISPR) are one of these. CRISPR has been proved to the quickest and cheapest method for gene editing [4].

GENE EDITING: BOON

Today we know numerous diseases which are caused by the mutation of a single gene. There are diseases by a mutation in multiple genes also. All these diseases caused us the loss of precious human life. With the help of gene editing, these genes may be repaired or altered and save many lives. Nowadays a lot of research work is going on a number of genetic diseases through gene editing such as β-thalassemia, cystic fibrosis, glycogen storage diseases hemophilia A & B etc. Gene editing can be used to eradicate vector-borne and communicable diseases as well. The genes associated with sterility in A Gambie, a vector of malaria is being modified by researchers through CRISR- CAS9 gene drive [5].
The area of synthetic biology, which aims to engineer cells and organisms to perform certain functions, can use the engineered nucleases to insert or delete elements and create desired systems.

The families, who have a long history of genetic diseases passed from one generation to the next, can be helped through gene editing, to stop the transfer of such genes.
The diseases like obesity, diabetes, mental illness, cancer etc. which are growing rapidly in the world and have some association with genetics can find a solution through gene editing. All these accomplishments and promises in the area of gene editing lead to the concept of 'designer babies' that can be genetically engineered in-vitro for specially selected characteristics ranging from the lowered risk of certain diseases to gender selection, appearance and personality [6].

GENE EDITING: A BANE

The ability of CRISPER-Cas9 to edit genetic cells other than somatic cells can be manipulated to dictate the genetic traits of population and becomes controversial. Although, researches in the area of gene editing seem to be very promising and help to create designer babies, who would be free from all the genetic diseases and have the desired characteristics. It is a very risky procedure as there are always chances of off-target gene targeting that can lead to potentially dangerous consequences at genetic and organism level. With latest advancements, gene editing is getting cheaper day by day which will allow bio-hackers to perform their own experiments and create genetically modified bugs, on the other hand, it is still an expensive technology that can cost in thousands of dollars for fixing a gene mutation. This can also increase economic inequality and will give a class of population an unfair advantage in the economic competition against the other classes [7].

CONCLUSION

Gene editing is a powerful tool for humanity. Many aspects need to be considered and regulated in using this tool. The researchers should just be focused on making engineered nucleases absolutely safe and specific. Gene editing shall be used for fixing serious genetic conditions rather than creating designer babies. Designer babies seem to be an unethical and inhumane idea and should not be pursued further. The National Academies of Sciences, Engineering, and Medicine (NASEM) launched an initiative in December 2015 to facilitate decision making for the responsible use of human gene-editing research. A global consensus should be made on rules and regulations of using gene editing and a global authority should have a stringent oversight on gene editing experiment. If it is used responsibly, gene editing can prove to be a boon to the humankind [8].

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Ethical Viewpoint Paper

Professional Boundaries in Psychotherapy – an Indian perspective

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INTRODUCTION

Psychotherapy has been defined as a form of psychological treatment where a trained therapist enters into a professional relationship with the patient, with the aim of reducing certain symptoms, removing certain symptoms and bringing about overall growth and development of the personality of the patient [1]. Psychotherapy is a professional relationship that helps patients in solving their own problems with their own efforts as well as that of the therapist. Psychotherapy treatments occur within a construct that has been termed as the therapeutic frame. A simple definition of professional boundaries is that they are the parameters defining the limits of a relationship in which one person (a patient or client) entrusts his or her welfare to another (a psychotherapist), and where fees or payments are made for the provision of a therapeutic service [2]. These boundaries suggest professional distance and respect which is a prerequisite of ethical professional behavior.

India has seen in the last decade a renewed interest in psychotherapy. A larger number of psychiatric patients seek psychological interventions rather than medication as a cure for their problems. Hence psychotherapy today has found a permanent place in all treatment programs of psychiatric disorders.

Professional boundaries is a concept in psychotherapy which is essential, largely out of concern for the growing number of cases of sexual misconduct by therapists, which led to malpractice litigation and severe damage to the reputation of mental health professionals [3]. There is a growing amount of cases of sexual misconduct being reported year after year where unqualified and untrained psychotherapists engage in both sexual and non-sexual boundary violations with their clients or patients [4]. This is relevant more so in India where patients listen whole heartedly to the therapist thinking him or her to be knowledgeable and responsible for providing a cure for their problems. Therapists in some quarters are known to take advantage of such vulnerable patients.

The Concept of Boundary Violation in Psychotherapy

There are namely two types of boundary violations noted in psychotherapy viz. the non-sexual boundary violations which milder and the graver sexual boundary violations. Boundary crossings are benign phenomena that do not occur repetitively and are discussable between the therapist and the patient, while being non exploitative. Psychotherapy is a process where both the patent and therapist observe each other and share emotions. In Indian culture, the psychotherapist or doctor is often viewed as a demi-god who will cure the patient. In such cases it is not unusual for patients to talk and enquire about the therapist's likes and dislikes or ask certain questions that may be personal during the course of therapy. Falling at the feet or touching the feet or sometimes kissing the hand of a doctor (who is perceived to be a healer) or therapist is common in our culture and cannot be viewed as a personal boundary crossing [5]. Many patients in therapy often enquire about the therapist, his native place, his family, what they do and whether he has children and how old they are. This is normal social enquiry that is rampant in our culture and must not be viewed as with a boundary crossing mindset.

It is normally seen that rigidity with respect to boundary crossings does no good for therapy. A good psychotherapist adjusts the treatment to the patient rather than expecting the patient to adjust to the treatment. Novice psychotherapists are trained and taught so much about boundaries in courses, that they show great concern about maintaining proper boundaries thereby becoming cold, rigid, formal and inapproachable in their way of dealing with the patient or client. Some patients reject such therapists who behave more professional than human and do not generally follow up for therapy. Rigidity about boundaries serves as hindrance in developing a good rapport with the patient in therapy [6]. This is a common reason why novice therapists complain of a lack of follow up amongst their patients. Patients in India want a therapist who is friendly, homely and yet a guide and an advisor. In such cases the therapist has greater responsibility bestowed on him where he serves as an elder, friend, philosopher and guide for his patient. He may be looked upon in this role not only by the patient but also by the entire family of the patient. Rigidity and unfriendliness by the therapist in such cases will result in the patient seeking therapy elsewhere where he finds a therapist with the qualities he desires.

In psychotherapy, the beginning phase involves a period of adjustment where a sensitive psychotherapist needs to develop a comfort level of closeness or distance so that an appropriate therapeutic frame and environment conducive for therapy is created. This phase needs joint efforts by both the patient and the therapist. Some patients need a more talkative therapist, whereas others prefer a quiet and good listener. Some patients may appreciate the use of laughter, jokes and metaphors while some may feel ridiculed by the therapist when this is done. Good psychotherapists need an individualized approach with each patient throughout therapy. They vary their therapeutic style depending on the particular patient's need [7]. Indian patients may be shy and reserved when it comes to opening up and discussing intense emotional issues with a new member in their circle i.e. the therapist. In such cases a slow, friendly and steady approach by the therapist shall boost the confidence of the patient in the therapist and shall improve their relationship in therapy. A therapist who shall hurry his patients to open up shall end up losing such a patient who may feel that the therapist does not understand the gravity and nature of the problem.

Many life events that occur with patient may need professional as well as a personal outlook. Sometimes there may be death of a figure to who the patient was extremely attached and the patient may expect a little extra sympathy or a patient listening from the therapist. Lack of sensitivity at such points of time may destroy any rapport that has been established and affect therapy as well. Sometimes therapy may seem to be going nowhere and therapists may get bored of their patients. At such times it may be seen that the therapist may seem disinterested in sessions and may look forward to hurry up sessions or prolong the time between consecutive appointments. All these phenomena may affect the patient who too observes therapist behavior just as the therapist observes patient behavior [8]. Many of our patients in India need someone who would listen to them so that they may express their emotions. Female patients coming from conservative and orthodox backgrounds often have problems expressing delicate issues and need a patient listening. At such times attitude like those mentioned above may be detrimental to the patient.

Boundary violations on the other hand, represent events or phenomena that are usually repetitive, harmful to the patient, and exploitative of the patient's dependent position in therapy. Sexual activity with the patient or engaging in a sexual relationship with a patient would be the gravest example. Other examples would be exploiting the patient financially or emotionally [9]. The psychotherapeutic relationship is by definition a relationship where there must be equal power with both the therapist and patient [10]. The psychotherapist is trained and paid to deliver a service based on skills acquired by specialized training. The patient may assume that whatever the therapist says or does is designed to help the patient. As a result, many patients innocently succumb to boundary violations under the feeling that it is for their own good [11]. A boundary transgression is used as an umbrella term that encompasses both boundary crossings and boundary violations [12]. Another term of note is boundary blurring which is used to describe instances in which the boundaries are confused but not enacted in the form of a boundary violation [13].

The Setting of Psychotherapy

In any consideration of psychotherapeutic boundaries, one must take into account the setting in which therapy takes place. Therapy usually takes place in an office, clinic or hospital that is sufficiently private so that the patient feels comfortable disclosing embarrassing, sexual and shameful content [14]. Some patients prefer to sit on a comfortable chair or couch and talk while some prefer to walk while talking. Water, tea or coffee may be offered to the patient in the therapy room. A medically or terminally ill patient in a general hospital may require therapy at the bedside. The psychotherapy setting may change if some form of behavior therapy such as an exposure therapy is being applied in case of phobias and panic attacks. This may be the case in animal phobia, bus phobia or fear of the dark [15]. The setting may also change in case of a behavior therapy termed flooding used in obsessive compulsive disorder where dirt may be used. In India, the doctor or therapist visiting the home of the patient is a common occurrence. The therapist as far as possible must conduct psychotherapy sessions in a clinic setting and must avoid visiting the house of the patient too often as chances of boundary violations occur. It happens many a time that a visit to the patient's house results in the therapist being offered lunch or dinner and a session that should last 30-45 mins may extend to a few hours building the chances for boundary violations and relationships other than that in a therapeutic frame. The therapist should refrain from becoming associated with various family members and relatives of the patient and must focus on the patient concerned. Even getting a rakhi tied by the patient though sacred as a relationship must be avoided as the therapist must maintain his frame of reference. Even travelling on a vacation with the patient and his or her family for counseling sessions there must be avoided.

The Issue of Confidentiality in Psychotherapy

The fundamental principle in psychotherapy is one of confidentiality regarding what is spoken to the therapist. Patients may speak out content that they may associate with shame, guilt, remorse, self-loathing, fears of disapproval, and a host of other anxieties. The confidentiality reassurance allows them to open up in a manner that they probably would not even to their family members. Hence, confidentiality is regarded as the most important professional boundary [16]. The principle of confidentiality extends beyond not repeating what the patient says. Numerous cases exist in which a third party realized that the only source of specific information could have been form the patient, and there were justifiable feelings of violation or breach of privacy. A breach of confidentiality can make one vulnerable to litigation or to action from professional bodies that govern therapists [17]. Sometimes in order to protect confidentiality, the therapist may have to lie to others outside the consulting room. He may have to pretend that he does not know information which has learned of solely through a patient. Over time, psychotherapists develop the capacity to compartmentalize certain information so as to keep it sequestered in a private sector of the psyche belonging to information heard in psychotherapy [18]. Confidentiality is not an absolute boundary. One is required to break confidentiality to report child abuse or any form of sexual abuse. A threat of imminent violence or suicide to an individual requires a 'duty to warn' exception to confidentiality [19].

Psychotherapists may meet and speak about a patient when there is a secret pleasure of treating a celebrity or a public figure. However, the notion of confidentiality should be construed as meaning that one cannot even reveal whether a specific patient is in treatment or not. However, when one presents a psychotherapy case for educational purpose or research and publication, one must be careful to disguise the identity of the patient. Moreover, even if consent is offered by the patient, identifying features must still be disguised so that an audience or reader does not recognize the patient [20]. In India, confidentiality becomes a difficult issue because there are relatives and family members who often believe that nothing should be hidden from them and thus want to know whatever the patient has mentioned in therapy. Sometimes in cases of children and adolescents, the parents feel they have brought the child for therapy and actually pay the therapist his fees, hence they have a right to know what their child has disclosed. The same may be the case with the husband wife relationship in India. The therapist is sometimes in a quandary in such situations whether he must answer or not. The therapist must at such times not hurt anyone and

keep in mind the sensitivity of both the patient and the relatives. The patient however must be asked before disclosing anything to the relatives or family members.

Therapist Self –Disclosure in Psychotherapy

Therapists cannot be anonymous to the patient, no matter how hard they may try. The way they dress, the way they decorate their clinics, their facial expressions and the issues they choose to address when they speak all reveal a great deal about the therapist. The issue for the psychotherapist is not whether to self-disclose. The actual boundary concern is how much should one self-disclose. Feelings that the therapist may experience provides useful feedback for the patient. It would be far better to be a honest therapist that expresses what he feels than to be deliberately deceptive. Therapists often communicate feelings so that the patient may know what the therapist feels before the patient asks him or her [21]. One way of implementing a boundary on self-disclosure is to deliberately avoid sharing with the patient any details about one's personal life or family. Superficial elements like views on a political issue, a sport, a cricket match or studies may be needed at times. This may help in the rapport building process.

Self-disclosures about personal problems must be avoided. Some personal disclosures may be initially received well by the patient and therefore may mislead the therapist into thinking that such information is productive and useful. Small personal disclosures may often lead to greater intimacy and lead to the patient and therapist getting involved with each other either emotionally or sexually [22]. In India, the therapist is viewed as a learned person and hence certain insights from the personal life of the therapist may actually give strength and confidence in certain areas to the patients. Thus, therapist disclosure may be beneficial and must be used judiciously by the therapist.

The Professional Attitude and Psychotherapy

The concept of being a professional is fundamental to boundaries. The therapist is not a mother, father, priest, brother, son, lover or friend. In the first session and initial therapist-patient meetings, it is prudent to clarify what therapy is and what therapy is not. The therapist's professional role does not require that the therapist be excessively formal or inordinately depriving. The most important aspect is that psychotherapy is a scientific form of psychological treatment and this entails the professional aspect of the therapist, though in doing so therapy must not lose its humane touch [23]. Another limit imposed on the professional therapist-patient relationship involves the duration of sessions. The time of the session is often 45-50 minutes but can be as brief as 15 minutes or as long as 90 minutes. In any case, the time parameters must be clear to the patient, and it is useful for the patient to understand from the beginning of the therapy that time constraints will always apply. Patients generally understand if the therapist explains that the session cannot be extended because there are other patients waiting to be seen. Sometimes one cannot be totally rigid, however, and occasionally may need to extend the time of sessions if the patient has just started to open out towards the end of a session or express an important facet of his or her problem or to accommodate an emotional reaction by a patient [24].

One must always have office assistants around when the patient is called as calling patients at odd hours may communicate to the patient that there is a potential for something other than a professional relationship. One must avoid scheduling sessions on holidays or late at night and unless and emergent problems demands the same. Therapy is hard work, and the therapist deserves to be paid. Fees are another aspect that conveys the professional aspect of therapy. The fact of being paid further differentiates the therapist from parent, lover, friend, and so on. In any case, therapists should carefully monitor their attitude about the patient's payment and the fee they are charging as a way of examining countertransference wishes to give the patient something for nothing. Novice or beginner therapists are typically conflicted about deserving a fee or how much to charge and this may be resolved after consulting a senior colleague [25].

Gifts and Tokens of Appreciation given by the patient

Grateful patients may wish to express their appreciation by bringing gifts to their therapists. This may happen after they have had success at work which may be attributed to the therapy, found a new job or just returned from a vacation. Some wealthy patients may wish to make a donation to

the institution where a therapist works. Patients may consciously or unconsciously feel that they are entitled to special dispensation because they have given money or other material gifts to a therapist. There are concerns about the potential of gifts to corrupt the therapeutic process and it is advisable to refuse all gifts. When a patient brings something handmade, a recommended book, a pen or a small memento, many therapists simply thank the patient for the gift and talk about the particular meaning or symbolism of gift. Patients who may not be able to afford a gift or feel that gifts are inappropriate will sometimes offer to provide service for the therapist like painting the clinic, bringing something from a shop the patient owns or some other service. In general, services from patients blend into the area of business transactions and dual relationships, which are almost always problematic in psychotherapy [26].

The Use of Appropriate Dressing and Language

Both dressing sense and language are aspects of the psychotherapist role that are often not studied as part of professional boundaries. Dressing in a professional manner conveys that the therapist is a professional. Patients sometimes quit after an initial session of a therapist as he does not appear like a seasoned professional therapist to them. Informal or crude language can also work against professionalism. The use of slangs may be problematic for some patients and one must exercise caution when using the same [27].

Physical Contact Issues in Psychotherapy

In general, psychotherapy avoids physical contact. There is generally a handshake when a therapist and patient first meet. There are exceptions, of course, often based on cultural practices, so that some patients will initiate a handshake at the beginning and end of each session. Psychotherapists can return the handshake without concern about boundaries in most cases. Some therapists argue that a hug is sometimes needed by a patient, but people's capacity for self-deception is extraordinary. What a therapist may think is best for the patient may actually be a way of fulfilling the therapist's own needs [28]. The concept of a non- sexual hug is usually in the mind of the therapist but not necessarily in the mind of the patient.

Professional Boundaries after the Termination of Psychotherapy

Although there is a broad consensus that sexual contact between the psychotherapist and a patient is always unethical, the idea of post termination sexual relations has been somewhat more controversial [29]. The American Psychiatric Association determined in 1993 that any sexual relationship between a psychiatrist and former patient is unethical [30]. The American Psychological Association, on the other hand, allows for the possibility of a 2 year cooling-off period, after which it probably might be ethical for a therapist and patient to begin a romantic or sexual relationship. Psychotherapy may often be terminated for the specific purpose of embarking on a romantic relationship [31].

Transference and Counter-transference

Transference involves the re-experiencing of the therapist and attributing emotions to the therapist as was for a powerful and authoritative figure from the past [32]. Neurobiological studies demonstrate that representation of parents are laid down in neural networks that represent self and other from early in childhood, and then activated again and again by specific characteristics of current figures in one's life [33]. Transference may persist for a long time after therapy has been terminated [34]. In other words, the patient's dependency and vulnerability to exploitation does not disappear at termination of therapy. As all experienced therapists know, patients who terminate psychotherapy frequently return for further therapeutic work in the midst of a life crisis or a struggle with a new developmental phase that must be mastered. Hence, an argument for an absolute prohibition against romantic involvement following termination is that the therapist may be needed again in the professional role of psychotherapist rather than as a friend, business partner, or lover. There may be areas of common interest that bring them together periodically as well. For example, patients and mental health professionals may serve on committees together or be involved in organizing a conference or with social causes or non governmental organizations [35].

Prevention and Education regarding Boundary Violations

Education about professional boundaries is essential in the training of psychotherapists. By its very, nature, psychotherapy involves a radical form of privacy. Two people are meeting each other regularly behind closed doors, and one of them is confessing his or her darkest and most shameful secrets to the other. The atmosphere of emotional confession and acceptance fosters a rate kind of intimacy not often available outside of therapy. Boundaries cannot be taught simply as a list of rules. They need to be taught as part of clinical wisdom, integrating boundary notions into discussions of technique and the choices a therapist must make. This can be done by an effective mentor or trainer who is there to guide and support the therapist. In any case, prevention depends to a large extent on what the therapist does in pivotal moments. In the final analysis, therapists must be their own watchdogs to avoid professional boundary violations [36].

In this paper, professional boundaries in psychotherapy have been dissected as issues that every psychotherapist must be aware of. Different forms of psychotherapy are going to require different emphases on the way that the boundaries are implemented. Within different techniques, whether one uses gestalt therapy or cognitive therapy or psychodynamic methods coupled with behavior therapy, one adjusts the boundaries to make the patient more capable of collaborating with the therapist. One of the most difficult aspects of psychotherapeutic practice is our incapacity to know the ultimate impact of departing from boundaries. Nevertheless, whenever boundary issues thwart psychotherapeutic practice they must be addressed.

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