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Some of the delegates at the 8th Conference of Indo Pacific Academy of Forensic Nursing Science at Colombo, Sri Lanka

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Aims and Scope

This journal is published to expand the academic activities and spread the knowledge, ideas and latest research in the field of ethics, trauma, and victimology. This journal publishes original research papers, review articles, case reports, letters to the editor and review of books on ethics, trauma, and victimology. This journal is supported by the Society for Prevention of Injuries and Corporal Punishment (SPIC) and Indo Pacific Academy of Forensic Nursing Science (INPAFNUS). This journal is supporting the aims of the SPIC and the INPAFNUS. This journal also highlights the achievements of the SPIC, INPAFNUS and their members.

This journal covers the various aspects of ethics, evidence-based medical ethics, ethical dilemmas and various dynamic issues related to ethics. It also covers the ethical issues related to Forensic Nursing Science, Forensic Odontology, and Forensic Psychiatry. It also covers the ethical aspects of Toxicology including Environmental Pollution. It covers issues related to all sorts of corporal punishment and their prevention, particularly in schools. It covers physical as well as psychological aspects of trauma and clinical forensic medicine related to all types of injuries and prevention of injuries. It covers all aspects of victimology including etiology, crime scene investigation, and prosecution.

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Founder Editor in chief

Dr. R K Gorea
Email: editoretv@gmail.com

Founder Associate Editors

Dr. A. D. Aggarwal
Dr. Anil Garg

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Dr. R. K. Gorea
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India 140901
Phone number: +919872020840
Email:gorea_r@yahoo.com

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Dr. R. K. Gorea
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PO. Mullanpur Garibdas, Distt. SAS Nagar, Punjab, India
140901

Online Submission at

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Department of Forensic Medicine and Toxicology
Gian Sagar Medical College
Ram Nagar, Rajpura, Patiala, Punjab 140601 India

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From the Editor's Desk

Dear Readers

I am thankful to all the readers, contributors, reviewers and editorial board members for their continuous support to bring this issue to the International Journal of Ethics, Trauma & Victimology in time.

I hope this platform is serving its cause to fulfil the aims and objectives of the IJETV as well as the aims and objectives of the society for the prevention of Injuries and Corporal Punishment [SPIC] and Indo-Pacific Academy of Forensic Nursing Science [INPAFNUS].

I convey my thanks to all the members of INPAFNUS and SPIC for their overwhelming moral, academic and financial support due to which this journal is progressing well. I also convey my thanks to MRI Publishers for their hard work and continuous support in bringing out the online version of this journal.

Dr Rakesh K Gorea

International Journal of Ethics, Trauma & Victimology

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EDITORIAL

IJETV Vol. 8, Issue 2, 2022 Print ISSN: 2394–6822 Online ISSN: 2395–4272

The Role of the Generalist Forensic Nurse and Advanced Forensic Nurse

Rakesh K Gorea

SJJT University, Rajasthan, India
Eternal University, HP, India
Faculty member, National Forensic Science University, Gujarat, India
Forensic Medicine, Gian Sagar Medical College, Ram Nagar, Rajpura, Patiala, India

Abstract

At the beginning of the first decade of the 21st century in India, there was little awareness of forensic nursing science. The first decade of the present century saw an increase in awareness, leading to the initiation of postgraduate diploma programs in the second decade. Further increase in awareness about forensic nursing science led to the introduction of forensic nursing science in the undergraduate nursing programs throughout India in the third decade of the present century and this decade also witnessed the initiation of degree programs in forensic nursing. Now we will have future nurses who all will know forensic nursing science and we will have some nurses who will become forensic nurses by choice. India has a future where advanced forensic nurses will be available. This will change the scenario of dealing with medicolegal cases efficiently and will improve the outcome of successful prosecution of criminal cases in India and other countries that will adopt forensic nursing science.

Keywords: Generalist forensic nurse, Specialist forensic nurse, Forensic nursing science, The role of forensic nurse.

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Introduction

General Nurse with knowledge of forensic nursing science

General nurses usually had no exposure to the medicolegal cases in their curriculum during their diploma and degree courses all over the world. Gradually with the development of forensic nursing science in developed countries and some literature becoming available on the net some nurses had exposure to the works done by forensic nurses in developed countries. In India and other developing countries, some academics started discussing forensic nursing in 2002 and publishing on it.[1,2]

Gradually awareness was raised amongst the nurses and other stakeholders through various platforms and ultimately, Indo Pacific Academy of Forensic Nursing Science [INPAFNUS] came into existence, members of which further worked to increase awareness in India and other countries. With these efforts, India became the first country in the world to have an assessed Forensic Nursing Science teaching module incorporated in the fifth semester of the undergraduate course by the Indian Nursing Council.

They will understand the importance of working as a team member of the investigative team and they will be able to deal in a better way with the victims, survivors and their family members.

Nurses with exposure to forensic nursing science will know about forensic science and forensic science laboratories and the utility of these labs, especially in different types of violence and scenarios of violence.

Corresponding Author: Rakesh K Gorea, Forensic Medicine, Gian Sagar Medical College, Ram Nagar, Rajpura, Patiala, India, e-mail: rakeshgorea@gmail.com

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They will be aware of the fundamental rights of the patients as well as will be aware of other rights of the patients who are the victim of violence, abuse and neglect. They will be aware that in case of violation of these rights, victims can go to the Human Rights Commission which acts as a watchdog to protect the rights of all human beings.

Nurses will know the law of their countries which can apply to them and their dealings with patients. Now the nurses will have an idea of the Indian Penal code, Criminal Procedure Code and Indian Evidence Act, along with other important Acts while dealing with the human body. They will understand that if they are dealing with children, how they have to protect the children from Sexual offenses and how to report such cases Under the POCSO Act.

They will also become aware of the legal issues in mental health, understand the rights of mentally ill persons, and respect these rights. They will also become aware of handling narcotic and psychotropic substances. They will be better equipped with the knowledge of admitting and discharging such patients so that proper precautions can be taken at their

level and they will better understand their role in dealing with such patients.

With the help of this awareness, nurses will be able to identify and preserve the evidence in medicolegal cases and there will be fewer chances of valuable evidence being destroyed while treating such patients. They will understand the importance of maintaining the chain of custody of the shreds of evidence. They will become aware of the value of documentation of such cases.

They will understand the ethics of working in such an environment and the importance of ethics in dealing with violent situations and circumstances. They will be able to take care of the physical, psychological, legal, cultural and spiritual aspects of dealing with medicolegal cases. They will become aware of the intricacies of precautions needed while admitting and discharging such patients.

General Forensic Nurse

The general forensic nurse usually is a nurse who has the knowledge and skills to deal with all the cases involving forensic science which may be civil, criminal or to protect public health.[3]

After graduation, general nurses can do diploma or postgraduate degree to get the knowledge and skills to deal with all medicolegal cases. These courses were available in advanced countries but now these courses have started In India and National Forensic Science University has become the first institution in India to start such courses.

General forensic nurses can work in the emergency wing of hospitals, wards of hospitals, jails and prisons, psychiatric wards and mental health facilities and institutions, NGOs dealing with sexual assaults, and in the USA in the offices of coroners and medical examiners.[3] In India they can work in the mortuaries too where medicolegal post-mortem examinations are being conducted.[4] They can also work for the victims of child abuse and neglect.[5]

They have multiple avenues where the services of forensic nurses will improve the medicolegal system. There is an urgent need to create jobs in these areas so that the momentum of the expansion of forensic nursing is not jeopardized in India.

Advanced Forensic Nurse

Advanced practice forensic nurse

Advanced Forensic Nurse (AFN) is another certification in this direction which is awarded by the International Association of Forensic Nurses. These nurses have caregiving roles as well as expert witness roles.[3]

Such courses are also offered where the person becomes competent to practice keeping in mind the culture of the community, they are taught evidenced based practice to deal with different age groups of adults, old persons and children. Such nurses provide holistic care to the victims of any type of violence. Training is provided to investigate such cases throughout their life.[6] Advanced training is given to investigate paediatric and adult cases and nurses get SANE-A and SANE-P certifications.

There are various online advanced forensic nursing courses in different countries depending upon the needs of that particular country.[7,8] Sexual Assault Nurse Examiner is a course where specialized training is given for the examination of cases related to sexual assault.[9] There are micro-credential courses too.[10]

Sexual Assault Nurse Examiner

In such courses care of the sexual assault victims is taught for their injuries and pharmacological care is also taught to such practitioners. How the comorbidities of sexual assault are handled is also taught in such courses. Support for the victims of sexual assault is also taught.[9]

Social, historical and political context needs to be understood in any country regarding various crimes in all age groups.

Competencies need to be developed by SANEs for the holistic care of survivors of sexual assault in such a way that they are patient-centered. These include the assessment and treatment of the survivors. Stabilization and referral of survivors of sexual assault is an important area not to be neglected. Collection of evidence and preservation of evidence is a very important aspect for nurses and should be learned. Sealing all the samples and maintaining the chain of custody of evidence is a vital aspect

Collaborative interventions should be done. It should be in collaboration with the Sexual Assault Response Teams (SART). It should be based on research-related best practices. Everything should be done ethically. Comprehensive lifespan care for survivors of sexual assault should be provided by SANE.[6]

Presenting the documents and testimony should be comprehensive and per the case's facts and not based on sympathy with the victims or survivors.

Requirements in the USA are as follows:

- BSc Degree in Nursing
- Two or more years as RN
- 40 hours of classroom training
- SANE clinical preceptorship
- 300 hours of SANE practice within the last 3 years with set numbers of hours for:
- Observing court cases
- Riding with local law enforcement
- Patient care of survivors of violence
- In addition to this Master's Degrees and Doctorate degrees can also be joined.[3]

Advanced Practice forensic nurses will ultimately develop in the areas of psychiatric forensic nursing, custodial forensic nurse, death investigator, legal nurse consultant, clinical forensic nurse and Nursing Jurisprudence, forensic Nursing Scientist and forensic nursing educator.

After some time, it is envisaged that forensic nurses will also evolve as forensic toxicology nurses dealing with poisons and environmental pollution patients.

But for all these specialities to develop their responsibilities and functions must be demarcated and their competencies and skills must be defined. For all these specialities to be developed proper initial patient assessment, diagnosis, planning, intervention, and evaluation must be carried out for dealing with all these victims of different types.

Discussion

With the introduction of forensic nursing in the curriculum of the general nursing course, there will be a big change in the outlook of forensic nursing in India. Now all the nurses being trained in India will have exposure to the forensic aspect of the nursing practice. Now there will be better identification, preservation, and transport of the forensic pieces of evidence along with the documentation of these aspects which ultimately will help in the successful prosecution of the cases.

There will be an expansion in the postgraduate forensic nursing courses in various parts of India and more forensic nurses will come into the field to work. This will further improve the outcomes of medicolegal cases in future when forensic nurses will be available to teach and practice forensic nursing science to the new entrants in this field.

Advanced forensic nurses will be required in each country, depending upon the needs of each country. Initially, in India, there will be a requirement for academic forensic nurses who should be able to teach and guide those who are in this field. Gradually more disciplines will evolve depending on the needs of the countries.

This movement is catching up in other countries and various stakeholders have been made aware in Saudi Arabia, Sri Lanka and Pakistan too and it is expected that these countries will follow suit and develop forensic nursing according to their needs.

Conclusion

India has taken the lead in introducing forensic nursing science at the undergraduate level throughout the whole world. This will motivate other countries to introduce forensic nursing in undergraduate courses. With the initiation of postgraduate degree and diploma programs in the universities, the ground is ripe for the future development of forensic nursing science in India.

In the coming decades, a need will arise for the development of advanced forensic nursing programs to specialize in various disciplines of forensic nursing science in India and the Indo pacific Region.

Conflict of Interest

None

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RESEARCH ARTICLE

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Cross-sectional, Observational Survey Research regarding General Health Status among Adults Residing in Punjab

Anupama K.[1*], Priyanka Chaudhary[2], Jaswinder Kaur[3], Agnus[4], Baby R. G[5], Jupneet Singh[6]

[1-4]Agnus Nursing Tutor Akal College of Nursing, Eternal University, Baru Sahib, Himachal Pradesh, India

[5]Sapthagiri college of nursing, Rajiv Gandhi University of Health Sciences, Bangalore, Karnataka, India

[6]Massachusetts Institute of Technology, Cambridge, Massachusetts, United States

Abstract

General health indicators can be used to estimate the likely demand for health care and services at the population level, offering a method for monitoring population health and estimating the likely demand for health care and services. The goal of this study was to gather data to aid in the design of surveys and the interpretation of survey results on the general health of India's population.

A free health camp was held in April 2022, with 50 adults participating in the health service and assessing blood pressure, pulse, weight, and other adult health issues. Under the guidance of the Akal deaddiction centre Cheema, formal approval was gained with the support of local primary health centre healthcare practitioners. For the assessment, experts created and confirmed a basic data profile. With the participants' consent, free iron and calcium supplements, as well as a health talk, was given to all of the participants The average age (SD) was 2.54 (1.215). The average weight was 2.8 (1.21) kg. The mean hypertension score, which represents the average, was 2.6 (0.83), pulse 2.64 (0.66), and pain 2.22 (1.35).

The survey's findings show that, despite their widespread impact, many people suffering from pain and other health problems have never sought medical advice and are unaware of potential complications and preventive measures. These findings point to a significant unmet need for health care among people of average health in the general population.

Keywords: Health status, Survey, Adults

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Introduction

Due to the obvious high costs and difficulty of assessing a population's health, researchers are constantly looking for indicators of health status that can be easily collected from large groups of people with little commitment to resources, money, training, or logistics. Measuring health can be challenging in terms of interviewer time and competence, respondent comprehension, and logistic and analytic complexity. Basic self-reported and objective indicators are very easy and affordable to gather, as opposed to the possibly greater costs and returns of physical health tests or the collection of biomarkers. If these low-cost measures are valid, they could be useful in measuring the total burden of disease and the performance of healthcare systems in the country.[1]

General health measures can be used to determine prevalence at the population level, providing a technique for monitoring population health and estimating the likely demand for health care and services. The purpose of this survey was to provide information to aid in the design of surveys and the interpretation of survey results on India's population's general health.[2]

When reporting their general health, individuals take into account a variety of behaviors, including lifestyle choices,[3] and earlier studies discovered that drinking alcohol and smoking cigarettes were linked to poorer physical and mental health.[4] Additionally, it has been discovered that obesity is a predictor of self-rated health. Additionally, it has been discovered that levels of physical exercise are positively correlated with experiences of general health. One study that found a variety of lifestyle characteristics revealed a link between an unhealthy lifestyle and poor mental and physical health. (Another study looked at whether various risk factors affected self-reported health when the impact of various health issues was also taken into account).[5] The authors of this study investigated how risk factors, including diet, practice, exercise, smoking, alcohol intake, body mass index (BMI), and self-reported health. When these connections were taken into account for health issues, the investigators discovered that they were either diminished or not significant at all. However, these health problem variables were made up of both objective medical diagnoses and subjective

Corresponding Author: Anupama K, Agnus Nursing Tutor Akal College of Nursing, Eternal University, Baru Sahib, Himachal Pradesh, India, e-mail: Anupama20dayanand@gmail.com

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Table 1: General health status of the adults

Variables	*Components*	*F*	*%*
	35–45	13	26
	46–56	11	22
Age	57–66	15	30
	67–76	8	16
	77–86	3	6
	43–53	8	16
	54–63	10	20
Weight in kg	64–73	19	38
	74–83	10	20
	84–94	3	6
	148–90	8	16
	164–97	7	14
BP	133–74	32	64
	195–100	3	6
	59–69	5	10
Pulse	70–79	8	16
	80–99	37	74
Health status	Knee pain body pain, joint pain	25	50
	Anxiety,	5	10
	gastritis,	4	8
	hypertension	16	32
Total		50	100

phenomena, such as symptoms and functional issues, which may overlap the idea of self-reported health. Therefore, the precise relevance of the disorders remained unknown.[6] The current study's objective was to investigate relationships between various lifestyle characteristics and self-reported health as well as the mediating role of disease.[7]

Material and Methods

In April 2022, a free health camp was held, with 50 adults participating in the health service and assessing blood pressure, pulse, weight, and other health issues among adults. Formal permission was obtained with the help of local Primary health centre health experts under the direction of the Akal deaddiction centre Cheema. Experts prepared and validated a basic data profile for the assessment. The participants' consent was obtained, free iron and calcium supplements were supplied, and a health talk to all participants.

Results

The average age of the adults was 57–66 (30.0) years, and their general health condition was 57–66 (30.0) years (Table 1). Adults' weight ranged from 64 to 74 kg (38.0%), blood pressure was 64.0%, and pulse was 74.0%. Additional comorbidities reported by adults included anxiety (10%), gastritis (8%), and hypertension (08 %) (32%), respectively.

Table 2: Mean health status among adults

	Age	*Weight*	*BP*	*Pulse*	*Pain*
Mean	2.54	2.8	2.6	2.64	2.22
S D	1.215713	1.124858	0.832993	0.662709	1.359622

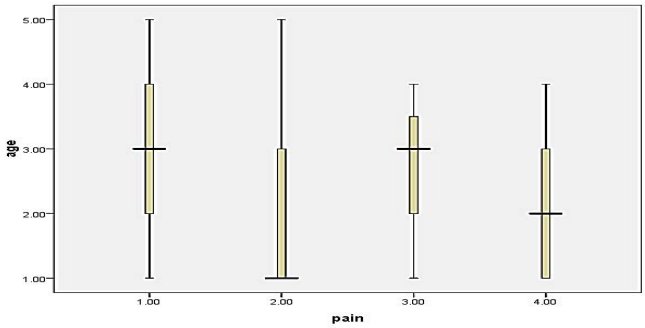

Figure 1: Pain variation according to age

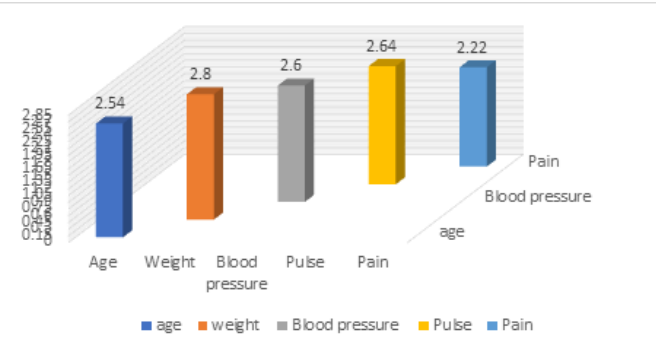

Figure 2: Health status among adults

Pain Variation According to Age

Adults between the ages of 46 and 66 were reported to suffer from a variety of pains, as shown in Figure 1. Pain variation according to age 35–45 years anxiety, gastritis, and HT-related pain Head, knee, and body joints 46–56 years and 77–86 years. anxiety, gastritis, 57–66 anxiety, gastritis.

The average age (SD) was 2.54 (1.215) (Table 2). The average weight was 2.8 (1.21) kg. The mean hypertension score, which represents the average, was 2.6 (0.83), pulse 2.64 (0.66), and pain 2.22 (1.35).

Discussion

The adults ranged in age from 57 to 66 (30.0) years and were in generally good health (Table 1). Blood pressure was 64.0%, pulse was 74.0%, and adult weight varied from 64 to 74 kgs (38.0%). In addition to these comorbidities, anxiety (10%), gastritis (8%), and hypertension (8%) were also mentioned by adults (32%), respectively. Figure 2 displays the range of pains that were reported in adults between the ages of 46 and 66. 35–45 years = discomfort from HT, gastritis, and anxiety knee, body, and head joints equal 46–56 and 77–86 years, respectively. 57–66 = anxiety, gastritis, and anxiety. The median age was 2.54 (SD) (1.215) (Table 2). There were 2.8 (1.21) kg on average. Indicated by the mean hypertension

score, which is the average, were 2.6 (0.83), 2.64 (0.66), and 2.22 for discomfort (1.35). The results of the poll revealed that, despite their broad effects, many people who experience pain and other health issues have never sought medical counsel and are unaware of potential side effects and preventive measures. These data suggest that the general community's average-health population has a substantial unmet need for healthcare.

Randi Jepsen *et al.* identified the importance of self-reported health information for healthcare practitioners and used a cross-sectional epidemiological design to explore relationships between lifestyle characteristics and self-reported health. A physical examination included measurements of height and weight. A self-administered questionnaire was used to gather data on socio-demographic parameters, self-reported health, disease (heart attack, apoplexy, angina pectoris, and diabetes), and lifestyle factors. An unrestricted question was used to gauge self-reported health. Multiple logistic regression models with adjustments for disease and sociodemographic factors were used to derive odds ratios for fair or poor self-reported health. Respondents who reported unhealthy lifestyle choices, such as excessive alcohol consumption (or 3.3, p 0.001), smoking (or 1.2), obesity (or 1.7, p 0.001) or excessive intake of alcohol (or 3.3, $p < 0.001$)) showed an increased risk of poor self-reported health. Furthermore, a moderate intake of wine (or 0.6, $p < 0.001$) or strenuous physical activity (or 0.5, $p < 0.001$) decreased the risk of poor health. The disease did not mediate the effect.[8]

Conclusions

The survey's findings show that, despite their widespread impact, many people suffering from pain and other health problems have never sought medical advice and are unaware of potential complications and preventive measures. These findings point to a significant unmet need for health care among people of average health in the general population.

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RESEARCH ARTICLE

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Menstruation and Menstrual Hygiene – Descriptive Cross-sectional Study among Adolescent Girls of a Selected School of District, Punjab

Anupama K.[1*], Priyanka Chaudhary[1], Jaswinder Kaur[1], Agnus[1], baby Rani G[2] Jupneet Singh3

[1]Agnus Nursing Tutor Akal College of Nursing, Eternal University, Baru Sahib, Himachal Pradesh, India
[2]Sapthagiri college of nursing, Rajiv Gandhi University of Health Sciences, Bangalore, Karnataka, India
[3]Massachusetts Institute of Technology, Cambridge, Massachusetts, United States

Abstract

Inadequate self-care and poor menstrual hygiene are major determinants of morbidity and other issues in adolescent age groups. Urinary tract infections, scabies in the vaginal area, irregular abdomen pain, and absence from school are just a few of the issues. Many young girls lack proper information on menstrual hygiene as a result of the silence all around the topic of menstruation and related difficulties in developing countries. Learning about menstrual hygiene is an important aspect of adolescent girls' health education so they can continue working and maintaining hygienic habits as adults.

A descriptive cross-sectional study with a non-experimental research approach was undertaken in selected schools in Punjab. Ethical approval was granted to conduct research was obtained from the Institute Ethics Committee and the school principal. Parents' written informed permission was obtained after a full parent information sheet was provided to them. The information was gathered utilizing a self-structured questionnaire that nine experts in the same field validated.

The majority of the students' mean knowledge (31.61) and SD (2.586) indicated that knowledge levels were dispersed more or less evenly.

The present study aimed to assess the knowledge regarding menstruation and menstrual hygiene among the school adolescents at selected Girls Senior Secondary School Cheema Sahib in Punjab. The basis of the total mean score of the finding revealed the mean knowledge (31.61) and SD (2.586) indicated that knowledge levels were dispersed more or less evenly.

Keywords: Cross-sectional study, Menstruation, Menstrual Hygiene, Urinary tract infections

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Introduction

The word "adolescent" comes from the Latin word "adolescence," which means "mature growth." Adolescence is a transitional period between childhood and adulthood. These are the years of formative growth when the most physical and psychological changes occur. When the hypothalamus releases a hormone called gonadotropin-releasing hormone, puberty begins. The pituitary gland is urged to release two hormones by the gonadotropin-releasing hormone, i.e., follicle-stimulating hormone and luteinizing hormone. In both males and girls, these hormones indicate the onset of sexual development. Hormones affect the ovaries in females. The ovaries are two tiny glands in the pelvis that have two main functions: producing specific hormones like estrogen and progesterone and releasing eggs essential for fertilization. For reproduction. Ovulation is controlled by many hormones [1]

For females, the menstrual cycle is a one-of-a-kind natural event. It occurs every month in a consistent rhythm. It begins throughout puberty and lasts till menopause. The menstrual cycle is caused by the rise and fall of certain bodily hormones throughout the month. 98% of females have menarche by the age of 15 years. Menstrual hygiene has long been a source of worry, particularly in developing countries. Adjustment to menstrual hygiene is influenced by social, cultural, and religious variables. Menstrual blood and cleanliness are the subjects of many myths, misconceptions, superstitions, and cultural and/or religious taboos. For example, menstruating women and everything they touch are considered impure in Jewish culture. Menstruation is regarded as filthy by Hindus, and menstrual restrictions are associated with it to auspiciousness and positivity.[2,3]

Menstruating women in some Nigerian tribes are required to segregate themselves in menstruation huts because they believe menstrual blood pollutes the home.[4] Women's thinking,

Corresponding Author: Anupama K, Agnus Nursing Tutor Akal College of Nursing, Eternal University, Baru Sahib, Himachal Pradesh, India, e-mail: anupama20dayanand@gmail.com

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Table 1: Findings related to the association between the knowledge regarding menstruation and the menstrual cycle among the adolescent at Girls Senior Secondary School in Punjab, with their selected demographic variables

	N	*Mean*	*Std. Deviation*	*F*	*DF*	
					Between Groups	*Within Groups*
Age						
10–13 yrs	175	31.38	2.53	6.148	1	224
14–16 yrs	51	32.36	2.66			
Socioeconomic status						
Middle class	138	31.33	2.70	2.039	df1	df2
Upper middle class	82	32.02	2.37		3	222
Upper class	4	31.5	1.29			
Lower class	2	34.5	2.13			
Education of the mother						
Higher secondary	57	31.68	1.74			
Llltrate	20	31.65	2.61		df	
Middle class	61		3.01	3.922	5	220
Secondary	37	32.48	2.45			
Primary	42	30.26	2.77			
Graduate and above	9	33	1.42			
Type of family						
Joint	145	31.71	2.62		df	
Nuclear	80	31.42	2.55	0.623	1	223
Total	225		2.59			
Age of menarche						
10–13 Years	180	31.49	2.62	1.789	df1	df2
14–16 Years	46	32.06	2.40		1	224
Duration of blood flow						
2 Days	175	31.66	2.53	0.167	df1	df2
3-4 Days	50	31.5	2.71		1	223
Menstrual cycle pattern						
Regular	201	31.66	2.62	1.283	df1	df2
Irregular	24	31.04	2.13		1	223
Length of cycle						
					df1	df2
Less than 28 days	187	31.50	2.56		2	223
28-32 Days	8	32.5	2.77	1.047		
More than 32 days	31	32.03	2.65			
Pain during menstruation						
1	77	31.33	2.58		df1	df2
2	149	31.75	2.58	1.302	1	224

lifestyle, emotional condition, and, most importantly, health is all affected by such taboos.[5] Socioeconomic position, environmental limits, shame and stress, lack of information, lack of amenities such as water, menstruation stigma, gender norms, restroom and privacy are all factors that influence menstrual hygiene.[6,7] According to one Saudi study, girls receive minimal education from their mothers, sisters, and religious books. According to a survey, 71% of Indian females have never heard of menstruation before their first period.[8] In 2015-16 National Family Health Survey estimates Only 36%

Table 2: Descriptive statistics of the knowledge regarding menstruation and menstrual hygiene among the adolescents at Girls Senior Secondary School Cheema sahib at Punjab. N=226

Knowledge frequency	*Mean*	*Sd*
What is menstruation	1.03	0.20
Are monthly menses shameful according to you	1.03	0.19
Do you follow seclusion during menses	1.05	0.22
Do you cook food during menses	1.96	0.37
When should a girl learn about menses	1.23	0.19
can a girl come to school during menses	1.98	0.13
if the cloth is reused when do you dry the washed clothes	1.07	0.16
where do you dry the washed clothes	1.59	0.53
during menses, do you hide your clothes so that your father and brother never get a chance to see them	1.92	0.48
how many times do you change the pad or cloth in a 1	1.63	0.70
do you carry pads or cloth to school	1.88	0.13
what do you do with used napkins	1.14	0.36
do the following persons know menses	1.64	0.49
from what sources or whom did you find out about menses	1.59	1.07
do you talk to someone without hesitation regarding menses and related issues	1.67	0.23
if 2, with whom are you comfortable talking about menses and related issues	1.41	1.08
do you have many medical complaints during menses	1.92	0.35
do you or your family give special attention to your diet during menses	1.57	0.32
should schoolboys be given information related to menses	1.07	0.47
would you ask your brother to buy sanitary napkins from the store	1.75	0.49
would you request your father to buy sanitary napkins from the store	1.78	0.46
Total	38	31.610619

of women use sanitary napkins, according to the study. Many girls wear unclean, unwashed rags and garments.

Infections of the reproductive and urinary tract are caused by poor menstrual hygiene.[9-11] Despite efforts by WHO, UNICEF, and national governments such as the Kishori Shakti Yojana (KSY) to address menstruation and menstrual hygiene issues, it continues to be a factor that negatively impacts the health of adolescent girls. Poor menstrual hygiene has been one of the under-recognized issues in Haryana, India. Because there was no information available on these topics, the current study was undertaken to analyse adolescent girls' knowledge and habits about menstruation and menstrual hygiene.[12]

Aims

To assess the knowledge related to menstruation and menstrual hygiene among adolescent girls of selected schools of district Punjab. The objectives of this study were (1) to assess the knowledge of students about menstruation and menstrual hygiene among adolescent girls and (2) to associate the knowledge score with selected demographic variables

Materials and Methods

To assess the knowledge related to menstruation and menstrual hygiene among adolescent girls, a descriptive cross-sectional study with a non-experimental research approach was undertaken in selected schools in Punjab. Ethical approval was granted to conduct research was obtained from the Institute Ethics Committee and the school principal. Parents' written informed permission was obtained after a full parent information sheet was provided to them. The information was gathered utilizing a self-structured questionnaire that nine experts in the same field validated. For validation, the tool was presented to nine professionals in the field of nursing. The CVI (Content Validity Index) was calculated to be 0.87. The questionnaire included a socio-demographic profile, adolescent girls' awareness of menstrual hygiene, and menstrual hygiene habits**.** 224 adolescent girls from selected schools' classes 9th to 12th were enrolled using the total enumeration sampling technique (Table 1). Girls who were willing to participate and might communicate in Hindi, English, or Punjabi were selected. Girls who had not reached menarche or had been experiencing amenorrhoea for more than three months were excluded from the study. Participants were seated in a separate area to ensure they were comfortable and their privacy was protected. The questionnaires were issued, and participants had 45 minutes to complete them. After all of the participants' questions were answered, the data gathering was completed. The data were coded and analyzed using descriptive and inferential statistics in SPSS-16

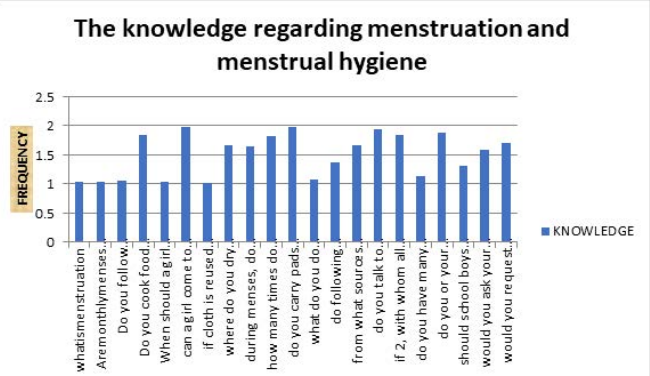

Figure 1: The knowledge regarding menstruation and menstrual hygiene

Results

Table 1 shows that the majority of the adolescents (175) were between the ages of 10 and 13, followed by 51 between the ages of 14 and 16 and all of the adolescents were females (100%). The majority of adolescent mothers had a middle-class education and 57 had a higher secondary education, with 20 being illiterate, 42 having a secondary education, and 9 having a graduate education. The majority of the adolescents had a socioeconomic status of the middle class, with 138 belonging to the middle class and 82 to the upper middle class, respectively, followed by 4 and 2 belonging to the upper and lower classes, respectively, with 145 belonging to a joint family and 80 belonging to a nuclear family. 180 of the menarche-age adolescents were between the ages of 10 and 13., Then there were 46 people in the 14–16-year-old age range, and then there was the duration of blood flow. 175 adolescents had blood flow and menstrual cycle patterns that were regular in 201 adolescents and erratic in 24 adolescents, followed by a cycle duration of fewer than 28 days in 50 adolescents. There were 187 adolescents with 28-32 days and 8 with more than 32 days. Thirty-one adolescents said they had pain during menstruation, 77 and the remaining 149 did not.

Table 1 demonstrates a strong relationship between adolescent age, socioeconomic status, mother's education, age of menarche, menstrual cycle pattern, and knowledge of menstruation and menstrual hygiene among adolescents at a Punjab Girls Senior Secondary School. At 0.05% level of significance, the estimated value of Anova is (6.148,2.039, 3.922.1.789,1.283,1.047), which is higher than the tabulated value within the groups (224df) and between the groups. (1 df) As a result, we may assume that the age of teenagers and their understanding of menstruation and the menstrual cycle among adolescents at a selected Girl's Senior Secondary School in Cheema, Punjab, are similar.

However, among the adolescents at a selected Girls Senior Secondary School Cheema sahib in Punjab, there is no significant relationship between kind of family, duration of blood flow, and knowledge of menstruation and menstrual cycle (Figure 1). At 0.05% level of significance, the estimated value of ANOVA value is (0.167 and 0.623), which is smaller than the tabulated value within the groups (223 df) and between the groups (223 df) (1df). As a result, we can conclude that the kind of family and duration of blood flow of adolescents, as well as knowledge of menstruation and the menstrual cycle among adolescents at a Cheema Sahib, Punjab Girls Senior Secondary School, are not significantly related. other (Table 2).

Table 3: Descriptive statistics of the knowledge regarding menstruation and menstrual hygiene among the adolescents at Girls Senior Secondary School Cheema sahib at Punjab. N=226

Knowledge score	*N*	*Mean*	*SD*
	226	31.6106195	2.586
Maximum score: 44 Minimum score =22			

DISCUSSION

The goal of this study was to determine how well people understood menstruation and menstrual hygiene. The majority of the students' mean knowledge (31.61) and SD (2.586) indicated that knowledge levels were dispersed more or less evenly (Table 3).

Using a multistage random sample technique, a similar study was carried out in Puducherry with 242 teenage schoolgirls between the ages of 12 and 18 years. The average age at menarche was 12.99 ± 0.9 years; 51.7% of respondents were unaware of menstruation before reaching menarche; 71.5 and 61.2% of participants did not know the cause or source of menstrual bleeding; approximately 88.4% of participants reported having any reproductive morbidity; only 37.4% sought medical attention from a facility. Highlighted how important it is for adolescent females to have complete and accurate information about menstruation before menarche. Girls and women can avoid these problems if they are taught proper menstrual hygiene practices through timely interventions in early life.[13]

Conclusion

The present study aimed to assess the knowledge regarding menstruation and menstrual hygiene among the school adolescents at selected Girls Senior Secondary School Cheema Sahib in Punjab. The basis of the total mean score of the finding revealed the mean knowledge (31.61) and SD (2.586) indicated that knowledge levels were dispersed more or less evenly.

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ORIGINAL PAPER

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Skull Replication using Silicon Impression Material for Forensic Facial Reconstruction Procedure

Arjun Kundu[1*], Astha Pandey[2], Mohak A. Thakor[3]

[1]School of Doctoral Studies and Research, National Forensic Sciences University, Gandhinagar, Gujarat, India.
[2]School of Forensic Science, National Forensic Sciences University, Gandhinagar, Gujarat, India.
[3]Dr. M K Shah Medical College, Chandkheda, Ahmedabad, Gujarat, India.

Abstract

Skull replication or obtaining a skull replica is an important step during forensic facial reconstruction or any other investigative procedure. When working on the original skull, there is a possibility of fracture of the delicate bones or damage to other structures. Replicating a skull allows us to preserve the original, study the skull during the entire investigative procedure, and leave a record of the specimen. The duplication of the skull can be done with impression materials like alginate, silicon and molding with gypsum or plaster of Paris. With the advancement of technology, CT scan, CBCT, 3D scanning, and 3D printing can aid in a better and more accurate replica of the skull and also without touching or tampering with the skull. But in cases where such a facility is not available, replication is made manually with impression materials. In this study, the skull duplication process is systematically prepared in a few phases using silicon impression material.

Keywords: Skull duplication, Skull replica, Three-dimensional reconstruction, Forensic facial reconstruction, Forensic science.

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Introduction

Facial reconstruction is used as an important forensic tool that may help in refabricating the appearance of the skull that best resembles the original face of the deceased for personal identification.[1,2] When working on the original skull, there is a possibility of fracture of the delicate bones or damage to other structures. Replicating a skull before starting a facial reconstruction process or any other investigative procedure offers important advantages. Replicating a skull allows us to preserve the original, study the skull during the entire investigative procedure, and leave a record of the specimen. Usually, the bones of the skull are fragile, most of the time they are damaged or missing, leading to difficulty in processing and preserving while working on it. The duplication of a skull is a complicated and time-consuming practice. However, it requires training and experience to duplicate the skull without damaging it.[3] With the advancement of technology, easy skull replication methods are introduced. 3D scanning and 3D printing can aid in a better and more accurate replica of the skull and also without touching or tampering with the skull.[4] But in cases where such a facility is not available, replication is made manually with silicon or alginate impression materials. In this study, the process of duplicating the skull is systematically prepared in a few phases. Each phase has been explained in detail and supported with illustrations to make it easier to understand.

Materials and Method

The skull and mandible used for duplication in this study are obtained from the archives of the Laboratory of Forensic Odontology, National Forensic Sciences University, Gandhinagar. The silicon impression material used in this study is "SILOCZEST". Other tools used are a mixing spatula, masking tape, scissors, BP blade, rubber bowl, cotton, oil-based clay, plaster of Paris, and dental stone.

Corresponding Author: Arjun Kundu, School of Doctoral Studies and Research, National Forensic Sciences University, Gandhinagar, Gujarat, India, e-mail: arjun.kundu77@gmail.com

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Skull Handling

Careful handling of the skull should be done. Stabilizing the skull should be done with clay, cork ring, or a sandbag. Avoid picking up the skull with your fingers in the orbit, or nasal aperture; instead, both hands should be used to handle the skull, or a thumb should be placed in the foramen magnum with the palm of your hand supporting the base of the skull.[3,5,6]

Skull Preparation

The first step is to prepare the skull for duplication. The openings, foramina, and gaps should be masked so that they are not filled and damaged by the silicon impression material. Openings of more than 2 to 3 millimeters should be masked

Figure 1: Masking of foramen and cavities

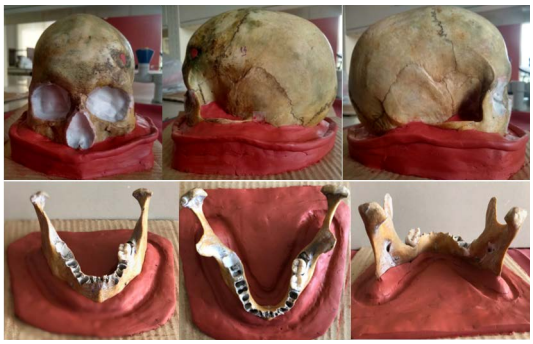

Figure 2: Forming the base for the maxilla and mandible

with tape. Larger foramen like foremen magnum is also masked with tape (Figure 1). Keep the vomer bone and nasal spine fully exposed, as these landmarks are important to determine the structure of the nose. Keep a small amount of cotton or gauge inside the nasal aperture and seal it with tape. Fill the orbit partially with cotton, and then mask it with a small piece of tape, or a light application of clay. Be careful during handling the delicate bones inside the nasal aperture and eye socket.[3,5-7]

Mold Preparation

The skull morphology consists of multiple irregularities, foramina, concavities, and convexities. Care should be taken so that the silicon impression material won't stuck under the concavities and break the skull bones. The silicon mold is to be formed in two parts for duplication of the skull. A line is drawn along the lower border of the zygomatic bone, going through the superior margin of the teeth and extending up to the superior border of the external auditory meatus. The space between the zygomatic bone and the temporal bone should be filled. The mold should also be formed in two halves for the mandible, placing the line between the mental foramen and the inferior margin of the teeth going completely around the mandible.[6,8] The base is made along these lines with clay (Figure 2).

The mold consists of two parts- the flexible one and the hard supporting mold. The flexible mold is formed by silicon

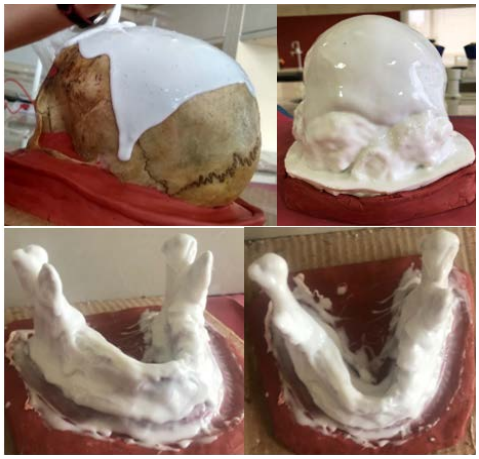

Figure 3: Silicone pouring layer by layer on the skull and mandible

and the supporting mold can be made from plaster of Paris or dental stone.

Silicon Impression Material and Material Handling

Silicon impression materials are dimensionally stable, have suitable working time and setting time, and will not leave a residue or harm the bone. Silicon impression material used in the procedure, "SILOCZEST", consists of two parts, resin, and catalyst. It is milky white, fast curing, cures at room temperature within 1–3 hours, operating time 5–15 minute at 25°C, and mixing ratio 100: 3–5. Alginate could be used in the same way, although the mold will not be permanent. Measure the materials using a volume or weight standard per the manufacturer's directions. You will have about 5 to 10 minutes before the silicon gets too stiff to use, so mixing is to be done in small batches so that it is easy to use. It is convenient and time-saving to pre-measure several batches before beginning the process. Sulfur is a common element in latex gloves and a few oil-based clays. Avoid wearing latex gloves or use sulfur clay as the silicon will not be set up if in contact with sulfur.[6]

Applying the Silicon

Start pouring the silicon over the cranium; care should be taken to keep the thickness of the silicon as uniform as possible (Figure 3). Care should be taken while working around the orbits and nasal aperture. To fill in the orbits and nasal aperture, you should tilt the skull accordingly. Apply the silicon layer by layer. Don't apply a new layer until the previous one has been set up. This will result in damage to the surface of the silicon underneath. Fill up any leftover spaces in the silicon from previous layers using multiple coats over the entire skull. For the openings in the orbits, small bits of cotton are placed inside. These are placed only after the first layers of silicon have been set. The cotton collapse when the mold is removed, keeping intact the delicate bones of the orbits. Make sure to keep an adequate thickness of material at the top of the cranium to maintain structural rigidity. Any excess silicon around the cranium and the mandible is trimmed.

Figure 4: Forming the hard supporting mold for the skull and mandible

Figure 5: Opening the molds of the skull and mandible

Figure 6: Replica of cranium and mandible

Hard Supporting Mold

We have to make a hard shell to support the flexible mold, or else the rubber will not be able to hold its shape during pouring. This can be made from a variety of materials, such as plaster of Paris or dental stone. The cranium is round, and there will be a natural undercut on both sides, so it is better to make the mold in two halves. After the first side is completed, apply petroleum jelly on the edges, so the second side does not bond with the first. The hard supporting mold for the mandible is made by the same procedure. (Figure 4)

Opening the Molds

The molds are ready to be opened when the plaster has been set up and is hard. Insert a small wax knife into the separating line and twist slowly and gently to move the pieces apart. It is better to remove the mother mold or rigid portion first and then peel the silicon away slowly, so the bones don't get damaged. Clean up any debris or bits of clay. (Figure 5)

Cleaning up the skull

The skull is cleaned and restored to its original condition. Any little bits of silicon that are stuck in the tooth sockets or any foramina can be pulled out with the help of tweezers.

Assemble and Pour the Skull

First, fill the molds with a small amount of material and rotate the mold to evenly coat the insides. Pouring should be done in several layers. You may pour the skull solid, but this will result in a heavy skull and also may cause some shrinkage in the casting. To overcome this problem, you can add light sponge material during poring the cranial cavity. After the material is set, remove the rigid mold and then peel the silicon away slowly.

Thus, the replica of cranium and mandible is ready. (Figure 6)

Conclusion

This study describes the manual method of duplication of the skull and mandible. This results in an exact copy of the skull and mandible in the laboratory environment which will be helpful in forensic facial reconstruction cases as well as for other anthropological studies. The replication of the skull and mandible is a complicated and time-consuming practice and it requires training and experience to duplicate without damage. Further studies are required for measuring the accuracy of the replica against the original one.

Declaration of Conflicting Interest

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REVIEW ARTICLE

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Surrogacy in India – Recent Advances

Jaspinder P. Singh[1], Ashok Chanana[2], Neha Chaudhary[1*]

[1]Department of Forensic Medicine and Toxicology, Government Medical College, Amritsar, Punjab, India.
[2]Dept of Forensic Medicine & Toxicology, Chintpurni Medical College, Bungal Pathankot, Punjab, India.

Abstract

Surrogacy arrangement comes into play when pregnancy is impossible or when it includes risks for the mother, which can threaten the life of the intended mother or in the case of a single male or a male couple who desires to have a child. The surrogacy market of India became well known among intending couples in developed nations because of the comparatively cost-effective process and easy access provided by Indian surrogacy agencies. This created a need for legislation that pertains to the smooth flow of the whole process of surrogacy. The bill was introduced and passed by the Lok Sabha and Rajya Sabha in 2019 and 2021, respectively. Then it got the assent of the President of India on December 25, 2021, and was published in the official Gazette of India. The legislation was constituted to form the National and State Assisted Reproductive Technology and Surrogacy Board as well as National Assisted Reproductive Technology and Surrogacy Registry and Appropriate Assisted Reproductive Technology and Surrogacy Authority

Keywords: Surrogacy; Surrogate mother; Surrogacy procedure.

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Introduction

It is an arrangement where a surrogate bears a child for another couple or person and delivers the child for another couple or person who will become the child's parent(s) after birth.[1] People may seek a surrogacy arrangement when pregnancy risks are dangerous to the life of the mother or when pregnancy is medically impossible. Involvement of monetary compensation may or may not be there in surrogacy. The cost and legality of surrogacy vary widely between interstate surrogacy arrangements or jurisdictions, sometimes resulting in problematic international issues.[2] Couples usually travel to the state of jurisdiction, which permits them to seek surrogacy treatment in a country where it is banned. In some countries, surrogacy is legal only because money does not exchange hands, making it a commercial process. In states where commercial surrogacy is legal, couples may use third-party agencies to assist surrogacy by finding an appropriate surrogate and arranging a surrogacy contract with her.[3]

Surrogacy in India

Indian surrogates, because of their relatively low cost and easy access, became increasingly popular amongst intended parents in industrialized nations, which agencies of Indian surrogacy offer. According to a report, a cost of around $10,000 to $28,000 was charged for the whole process of surrogacy, including fertilization to the delivery of the baby, along with the fee given to the surrogate mother.[3] The government of India approved Supervision, Regulation, and National Guidelines for the Accreditation of ART Clinics in India in 2005. In 2012, a study by the United Nations claimed that the surrogacy business yielded more than $400 million a year from around 3,000 fertility clinics in India. Surrogacy by foreign homosexual couples and from single parents was banned in India in 2013.[4] In 2015, the government banned commercial surrogacy in India and permitted the entry of embryos only for research purposes. The surrogacy (Regulation) bill was introduced in India in 2016 and was passed by the Lok Sabha. This bill proposed surrogacy for only heterosexual Indian couples who were married for five years with the inability to conceive and banned commercial surrogacy altogether. The 2016 bill lapsed owing to the adjournment of the parliament session.[5] The bill was reintroduced and passed by the Lok Sabha and Rajya Sabha in 2019 and 2021, respectively.[6] Then it got the assent of the President of India on December 25, 2021, and was published in the official Gazette of India

The Act defined a "Surrogate mother" as a woman who agrees to bear a child, the child being genetically related to the intending couple or intending woman through surrogacy by implantation of the embryo in her womb. The definition of "Commercial surrogacy" is given as the commercialization of surrogacy services or procedures that includes selling or buying of human embryos, human gametes or trading the services of surrogate motherhood by giving monetary benefits to the surrogate mother or her dependents or representative except for the insurance coverage for surrogate mother.

Corresponding Author: Neha Chaudhary, Department of Forensic Medicine and Toxicology, Government Medical College, Amritsar, Punjab, India, e-mail: chaudharyneha197@gmail.com

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The legislation was constituted to form the National and State Assisted Reproductive Technology and Surrogacy Board as well as National Assisted Reproductive Technology and Surrogacy Registry and Appropriate Assisted Reproductive Technology and Surrogacy Authority

Regulation of Surrogacy Clinics and Surrogacy Procedures

- Registration of clinics
- Commercial Surrogacy is prohibited.
- Not to employ unqualified personnel.
- Not to conduct MTP in surrogate without her consent and authorization of appropriate authority.
- Only Altruistic surrogacy is allowed.
- Not to produce children for prostitution, sale, or any other form of exploitation.

Appropriate Authority – Functions

- To grant, suspend or cancel the registration of a surrogacy clinic.
- To enforce the minimum standards for surrogacy clinics.
- The complaints of breach of the provisions of this Act are investigated, and take legal action as per the provision.
- Supervised the implementation of the provisions of the Act.
- After a proper investigation regarding the complaints against the surrogacy clinics, take required action.

Medical certificate in favour of either or both intending members that necessitates surrogacy from a District Medical Board which consists of 1) Chairperson: Chief Medical Officer or Joint Director of Health Services or Chief Civil Surgeon of the district 2) At least another two specialists, namely, the chief gynecologist or obstetrician and chief pediatrician of the district.

Intending couple shall fulfill the following criteria

- They should be married and be Indian citizens.
- Wife's age 23–50 years and husband's age 26–55 years.
- No surviving child (biological/adoption/surrogacy)
- If a child is disabled or suffering from a fatal illness, certified by the medical board and approved by the authority.

The surrogate mother should fulfill the following criteria

- A married woman who has a child of her own.
- Age of 25–35 years
- surrogate mother cannot use her gametes and be a surrogate simultaneously.
- Only a once-in-a-lifetime attempt for a surrogacy procedure on a surrogate mother is allowed.
- Medical and psychological fitness certificate.

Written informed consent of the surrogate mother must be taken only after explaining all known side effects and after-effects of such procedures to the surrogate mother concerned in a language she understands, and the surrogate mother shall have the option, before the implantation into her womb, to withdraw her consent for surrogacy.

Rights of Surrogate Child

A child who is born out of surrogacy shall be considered to be the biological child of the intending woman or intending couple, and a child shall be entitled to all the privileges and rights available to the natural child under any law. The intending woman or intending couple shall not abandon the child who is born out of surrogacy, whether within India or outside the country, for any reason. No one Shall advertise to induce, seek, or aim a woman to act as a surrogate mother or promote commercial surrogacy in electronic media, print, or any other form.

For the custody and parentage of the child who is born through surrogacy, an order has been passed by the court of Magistrate of the first class or above. The application is moved by the intending woman or the couple and surrogate mother, and it will be considered a *birth affidavit* after the surrogate child is born. Regarding the insurance coverage, it will be in favor of the surrogate mother for 36 months.

The National ART and Surrogacy Board

- To advise the Central Govt. on policy matters relating to surrogacy.
- Implement the Act, rules, and regulations.
- To lay down the code of conduct of persons working in these clinics.
- The minimum standards of the laboratory, physical infrastructure, expert manpower to be employed, and diagnostic equipment are to be set up
- Supervised the functioning of State Assisted Reproductive Technology and Surrogacy Boards.

The State ART and Surrogacy Board

- The activities of the appropriate authority which are functioning in the state or Union Territory are reviewed
- Monitoring of the implementation of all the provisions, rules, and regulations of the Act.
- To send such consolidated reports to Central Govt.

National Registry of Surrogacy Clinics

- Registration of surrogacy clinics under this Act, the National Assisted Reproductive Technology and Surrogacy Registry has been established

Offenses and Penalties

Every offense under this Act is cognizable, non-compoundable, and nonbailable. The court shall presume that the surrogate mother or the woman was compelled by the intending couple, any relative, or her husband to donate gametes or to render the surrogacy services. There is imprisonment for five years and ten lakhs fine in case any person contravenes any of the provisions of this Act. In case someone does not follow altruistic surrogacy, the person is punished with five years imprisonment with 5 lakh rupees fine, while in subsequent offenses, the punishment is ten years imprisonment with 10 lakh rupees fine.

There are ten years imprisonment and a fine upto rs ten lakhs in case of

- Commercial surrogacy in any form
- Selling human embryos or gametes
- Advertisement
- Abandoning the child
- Exploiting the surrogate mother
- Importing ovum, embryo, or gamete
- Conducting sex selection

Maintenance of Records

The surrogacy clinic shall maintain all records and shall be preserved for 25 years. In case of any court proceedings, the records must be preserved until the final disposal of those court proceedings.[7]

Lacunae in the surrogacy (regulation) Act, 2021

- The Act is restricted to only two categories of people, i.e., the intending couple who are legally married and, according to the laws of India, and that has a certificate of infertility can use this facility.
- The couple needs to be between the age of 23 to 50 for the females and 26 to 55 years for the males. The other category is the intended woman who is either a widow or a divorcee between the ages of 35–45 and can opt for this treatment. This eliminates a segment of the population, such as unmarried women who want to be mothers but are unable to conceive.
- Though modernity is being embraced, legislation against childbirth without marriage still maintains the conventional taboo. The definition of a couple does not cover the live-in relationship as well as the partner, or both of them suffer from a chronic or genetic disease, and chances are there for them to transfer to offspring.
- Surrogacy is allowed only in circumstances when the NARTAB identifies a condition or disease under which it is permissible to be subjected as per the board's view.
- Only allowed legally married couples in India. The non-binary, as well as homosexual couples, are not able to enjoy parenthood even if they wish .[8]

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REVIEW ARTICLE

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Understanding Mixed Methodology in Research

Anupama K*, Priyanka Chaudhary

Agnus Nursing Tutor Akal College of Nursing, Eternal University, Baru Sahib, Himachal Pradesh, India.

Abstract

Mixed methods research involves both collecting and analyzing quantitative and qualitative data. Quantitative data includes closed-ended information such as that found on attitude, behavior, and performance instruments. Qualitative data consist of open-ended information that the researcher gathers information through interviews with participants. Mixed method research is a research design with philosophical assumptions as well as a method of inquiry. Quantitative researchers believe that quantitative data can play an important role in quantitative research. Qualitative researchers realize that reporting only qualitative participants' views of a few individuals may not permit generalizing the findings. In recent years many authors have begun to advocate for mixed methods research as a separate methodology or design

Keywords: Triangulation, Methodology, Embedded, Exploratory, Design

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Introduction

What is a mixed methodology?

Some mixed methodology writers consider this form of research a methodology and focus on the philosophical assumption. Unquestionably, all research approaches have underlying philosophical assumptions that guide the inquirer. To call mixed methods research "a clean and concise method resonates with many researchers. Mixed method research is a research design with philosophical assumptions as well as a method of inquiry. As a methodology, it involves the philosophical assumption that guides the direction of the collection and analysis of data and the mixture of qualitative and quantitative approaches in many phases in the research process."[1]

Based on the above definition the major elements of this definition are as shown in Figure 1.

The Name: During the last 50 years writers have used different names that might relate to mixed-method research. It has been called multi-trait or multimethod research, which recognizes the collection of several quantitative methods in a single investigation integrated or combined.[2] In the sense that two forms of data blended, that is a qualitative and quantitative method. Which acknowledges that the approach is a combination of methods? It has been called methodological triangulation. Today the most frequently used name is mixed method research.[3]

Quantitative and Qualitative data: mixed methods research involves both collecting and analyzing Quantitative and Qualitative data. Quantitative data includes closed-ended information such as that found on attitude, behavior, and performance instruments. The analysis consists of statistically analyzing scores collected on instruments, checklists or public documents to answer the research question to test the hypothesis. In contrast, qualitative data consist of open-ended information that the researcher gathers information through interviews with participants. Also, qualitative data may be collected by observing participants or sites of research and gathering documents from a public or private source.[4]

Figure 1: Major elements based on mixed methodology

Mixing the data: the mixing of the data is a unique aspect by mixing the datasets, the researcher provides a better understanding of the problem. There are 3 ways in which mixing occurs,

Merging the two datasets by actually *bribing* them together

Connecting the two datasets by having one build on the other

Embedding one dataset within the other.[5]

Single or Multiple studies: this element of the definition also suggests that mixed studies methods may involve collecting and analyzing quantitative and qualitative data in the first phase, qualitative data in the second phase, and quantitative data in the third phase. Finally, each project is reported separately as a distinct study but overall, the research inquiry can be called mixed method research.[6]

The central premise of the definition is that the combination of quantitative and qualitative approaches provides a better understanding of the problems than either approach alone.[7]

Corresponding Author: Anupama K, Agnus Nursing Tutor Akal College of Nursing, Eternal University, Baru Sahib, Himachal Pradesh, India, e-mail: anupama20dayanand@gmail.com

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Importance of Mixed Methodology

Several factors have contributed to the evolution of mixed methods research

- The complexity of the research problem answered
- A combination of both forms of data can provide the most complete analysis of a problem
- Researchers can situate numbers in the contexts and words of participants
- The researcher can frame the words of participants with numbers, trends and statistical results
- Quantitative researchers believe that quantitative data can play an important role in quantitative research[8]
- Qualitative researchers in turn realize that reporting only qualitative participants' views of a few individuals may not permit generalizing the findings
- In recent years many authors have begun to advocate for mixed methods research as a separate methodology or design
- Authors Tashakkori and Teddlie called mixed methods to research the third methodological movement[9]

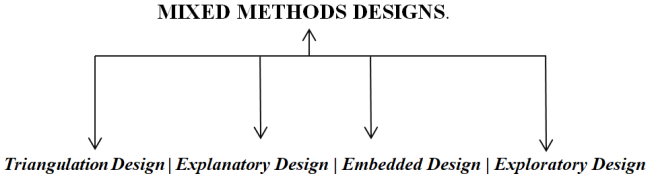
A brief history – development of mixed methods research

a sketch of the history of mixed methods research can be found in Tashakkori and Teddlie (1998). This history organize into 4 often overlapping periods they are

- Formative period. Begun in the 1950s and continued up until the 1980s. This period saw the initial interest in a study [10]
- Paradigm debate period: during the 1970s and 1980s the paradigm debate was whether or not qualitative and quantitative data could be combined[11]
- Procedural development: paradigms provide a foundation for mixed methods research during 1980 began to shift towards the methods or procedures for designing a mixed methods study.
- Advocacy: advocating for mixed methods research as a separate design in its own right.[12]

Choosing a mixed methods design

Once a researcher has selected a mixed methods approach for a study, the next step is to decide on the specific design that best addresses the research problem. Mixed methods researchers need to be acquainted with the major types of mixed methods design and the common designs know the intent, the procedures and the strengths and challenges associated with each design.



Flow chart 1: Mixed design methods

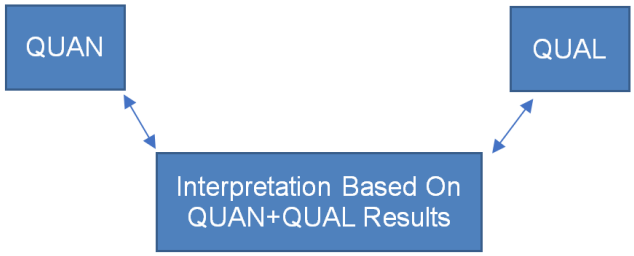


Figure 2: Triangulation design

The 4 major types of mixed methods designs are as shown in flow chart 1.[5]

Triangulation Design:

The most common and well-known approach to mixing methods is the triangulation design (Figure 2). The purpose of this design is to obtain different but complementary data on the same topic to best understand the research problem. The intent is using this design is to bring together the different strengths and non-overlapping weaknesses of quantitative methods with those qualitative methods. This design is used when a researcher wants to directly compare and contrast quantitative statistical results with qualitative findings or to validate or expand quantitative results with qualitative data.[13]

Embedded Design

Is a mixed methods design in which one data set provides a supportive, secondary role in a study based on a single data set is not sufficient that different questions need to be answered and that each type of question requires a different type of data (Figure 3). Researcher uses this design when they need to include qualitative or quantitative study. This design is particularly useful when a researcher needs to embed a qualitative component within a quantitative design as in the case of an experimental or correlational design.[5]

Explanatory Design

Is a two-phase design, the overall purpose of this design is that qualitative data helps to explain or build upon initial quantitative results (Figure 4). This design is well suited to a study where a researcher needs qualitative data to explain significant, Outliers, or surprising results. This design can also be used when a researcher wants to form a group based on quantitative results and follow up with the group through subsequent qualitative research.[3]

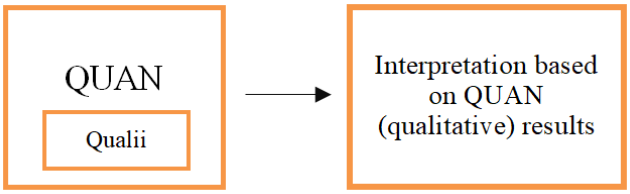


Figure 3: Embedded design

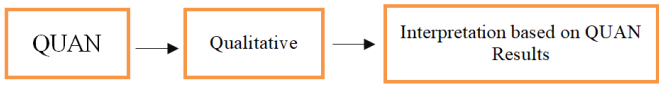


Figure 4: Explanatory design

Exploratory Design

As with the explanatory design, the 2 phases of exploratory design intend that the results of the first method (qualitative) can help develop or inform the second method (quantitative). This design is based on the premise that an explanation is needed for one of several reasons (Figure 5).

This design is particularly useful when a researcher needs to develop and test an instrument because one is not available or identify important variables to study quantitatively when the variables are unknown it is also appropriate when a researcher wants to generalize results to different groups to test aspects of an emergent theory or classification to explore a phenomenon in depth and measure its prevalence.[12]

Selecting a Type of Mixed Methods Design

The key factors the researcher should consider when choosing a mixed methods design for their studies and researcher wanting to use more than one of the four major designs in a study or to blend different that of designs together here, the researcher carefully selects a single design that best matches the research problem. Following factors to be considered,

- The design should match the research problem.
- They should evaluate their expertise and consider the quantitative and qualitative skills that they process.
- They should consider working in a team
- The available resources such as the length of time available to complete the study funding resource for work in a team.
- The choice of a research design relates to these 3 decisions

The timing decision: the timing of the use of collected data, when selecting a mixed methods approach researcher must answer the question. Timing refers to the temporal relationship between the quantitative and qualitative components within a study; however, most importantly, it describes the order in which the researcher uses the data within a study timing is often discussed concerning the time the data sets are collected. Timing within a mixed methods design is classified in one of two ways.[14]

Concurrent timing occurs when the researcher implements both quantitative and qualitative methods. During a single phase of the research study, this means that the quantitative and qualitative data are collected, analyzed and interpreted at the same time.

Sequential timing: occurs when the researcher implements the methods in 2 distinct phases, quantitative first, and a researcher may choose to start by collecting and analyzing quantitative data and may then subsequently collect and analyze qualitative data. The reverse is also possible qualitative data are collected and analyzed first, then quantitative data are collected and analyzed.[5]

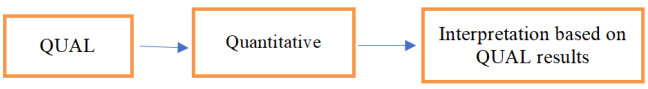


Figure 5: Exploratory design

The weighing decision: the relative weight of the quantitative and qualitative approach, the researcher also needs to consider the relative weighting (emphasis) of the 2 approaches in the study.

Weighting refers to the relative importance or priority of the quantitative and qualitative methods in answering the study's questions. These are two possible weighting options for a mixed plan an important role in addressing the research problem.

The mixing decision: here, how the quantitative and qualitative methods will be mixed. Mixing is the explicit relating of the two data sets. A study that includes both quantitative and qualitative without explicitly mixing the data divide from each is simply a collection of multiple methods. Conceptually, there are 3 overall strategies for mixing quantitative and qualitative data. The data type can be merged, one can be embedded within the other or they can be connected.[5]

Merging data sets: the data are merged when the researcher takes the 2 sets of data and explicitly brings them together or integrates them. The researcher can merge the2 data sets during the interpretation i.e. by analysing them separately in a results section and then merging the 2 sets of results during the interpretation or discussion phase.[5]

Embedding data at the design level: the researcher could decide to embed data of one type within the design of the other type. Connecting from data analysis to data collection: a researcher could choose to connect the 2 data types connecting the data occurs when analysing one type of data leads to the need for the other type of data.[5]

Discussion

As a methodology, it involves theoretical acceptance that guides the direction of the collection and analysis of data and the mixture of qualitative and quantitative approaches in many phases of the research process. To call mixed methods research "a clean and concise method resonates with many researchers. Mixed method research is a research design with philosophical assumptions as well as a method of enquiry.[1]

Summary

Mixed method research is a research design with a methodology and methods. As a methodology, it involves collecting, analyzing and mixing qualitative and quantitative approaches at many phases in the research processes from the initial philosophical assumptions to the drawing of conclusions. As a method, it focuses on collecting, analyzing and mixing quantitative and qualitative approaches in combination, providing a better understanding of research problems than either approach alone

Conclusion

Mixed methods puffers strengths that offset the weaknesses of separately applied quantitative and qualitative research methods. It also encourages the collection of more comprehensive evidence for study problems and helps answer questions

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REVIEW ARTICLE

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Ethics in Oral and Maxillofacial Pathology

Parul Khare[1*], Rakesh K. Gorea[2]

[1*]Department of Oral and maxillofacial pathology and oral microbiology, School of Dental Sciences, Sharda University, Greater Noida, Uttar Pradesh, India.

[2]Department of Forensic Medicine, Gian Sagar Medical College, Jhansla, Punjab, India.

Abstract

Ethics are valued for centuries. Every professional gets respect if he follows the ethical guidelines set by their professional body. Dentistry is no exception to this. The Dental Council of India has set guidelines for dental practitioners in India. Ethics are more important for the maxillofacial pathologist as it involves the diagnosis of grave situations e.g., oral cancer which has a drastic effect on the future life of the patients so all the professional guidelines must be followed and the privacy of the patients must be maintained, especially in the era of social media. The rights of patients over the submitted tissue must be respected.

Keywords: Ethics; Oral & Maxillofacial pathologist, The privacy of a patient.

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Introduction

Ethics comes from the Greek word Ēthika and derives from ēthos, the Greek word meaning character. Aristotle believed character is of central importance to ethics, and one cannot have a good character without having formed good ethoi or habits. So, ethics is Greek for customs, and morality comes from "mores", which is Latin for customs.[1]

Ethics or moral behavior is the ground on which humanity stands for companionable survival. To sustain an ethical life and discriminate right from wrong are common issues that must be determined and applied. Different people have different understandings of the term' ethics' as it is based on moral, philosophic and religious principles of the society in which it is practiced.[2]

The Hippocratic Oath has been used most widely from the Greek medical texts. It requires a new physician to swear upon some healing gods that he will uphold several professional, ethical standards.[3]

Personal prejudice has no place in a doctor's life. For instance, the doctor should treat his patient suffering from alcoholic cirrhosis or chronic bronchitis, even though it is the patient's habit of consuming alcohol or smoking. The doctor cannot deny treatment and should treat him with sympathy. If the physician withholds his service, it is considered as shedding blood.[4]

According to FDI International's "Principles of Ethics for the Dental Profession that the dentist should act in a manner that will enhance the prestige and reputation of the profession".[5]

Dentists in India are regulated by the Dental Council of India (DCI) and it is financed by the Ministry of Health and Family Welfare, Government of India. DCI is a statutory body incorporated under an act of parliament, viz., the Dentists Act, 1948 (XVI of 1948). While DCI mainly deals with dental education in India, the state dental councils, constituted under section 21 of the Dentists Act, 1948, including a Joint State Council constituted under an agreement under section 22, register, regulate, and monitor the dental practice in the respective states.[6]

Codes of Ethics in dentistry have been described by Indian Dental Association (IDA). The practice of Dentistry, being a part of healthcare, requires dentists to have compassion, competence and autonomy.[7]

Her dentist safeguards the patient's best interests by choosing the right diagnostic tests and treatment plans that seem best for the individual's needs. Oral pathology (oral and maxillofacial pathology/head and neck pathology) is a specialized field of pathology dealing with the diseases of the oral cavity and its associated structures (i.e., teeth, tongue; bony tissue [maxilla and mandible]; joint [temporomandibular joint]; lymph nodes; nerves; structures in neck and blood vessels of the ear, nose and throat [pharynx and larynx]). The qualified doctors in this domain are called oral and maxillofacial pathologists. The branch of oral pathology was on track in India way back in the 1950s, with postgraduation initiated in the 1960s.

Corresponding Author: Parul Khare, Department of Oral and maxillofacial pathology and oral microbiology, School of Dental Sciences, Sharda University, Greater Noida, Uttar Pradesh, India, e-mail: parulsinha02@gmail.com

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Oral and Maxillofacial Pathology and Mmicrobiology

Of all the dental specialties, oral pathology is the foundation subject on which the science of dentistry stands, and this branch is exceptional in many aspects. It is the only branch of dentistry representing the confluence of basic sciences and clinical dentistry, covering the subjects of hematology, biochemistry, immunology, serology, microbiology, oncology, histopathology and cytopathology.[8]

Following Ethics in this branch of dentistry by oral pathologists is extremely important as they are dealing with a diagnosis of oral cancer. India has the highest number of oral cancers and other head and neck pathologies, making this specialty unique. Oral cancer is the third most common cancer and accounts for 30% of all malignancies in India. Head and neck pathologies constitute 30–40% of all the cases arising from cytopathology and histopathology in any diagnostic laboratory on a routine basis in various forms.[8,9]

Oral and Maxillofacial Pathologist and Patient Relation

Ethics must be followed at every stage, commencement with the relationship between the patient and oral and maxillofacial pathologist. There is not much face-to-face interaction between patient and oral pathologists as the latter's responsibilities mostly include interpreting a biopsy specimen, surgical resection, or cytology fluid sample; reviewing a peripheral blood smear or cytology, and maintaining chemistry, microbiology, haematology, or molecular laboratory. But this relationship can be made unique, as this branch is a bridge between dentistry and medicine. An ethical oral pathologist is obliged to protect patients' privacy, ensure that a specimen remains uniquely identified with a specific patient and treat patients' specimens, parts, and bodies with respect.[10]

Accurate as well as the in-time histopathological diagnosis is a vital link in patient management. The largest number of treatment failures is related to either wrong or delayed diagnosis. A considerable diagnostic error rate published in surgical pathology and cytopathology literature ranges from 0.25 to 6%.[11,12]

So, it becomes morally and ethically important for an oral pathologist to share a preliminary diagnosis with a patient who desires that information. In a dental setup, the patient is informed about the lesion or future of diagnosed disease through the clinician, as there is direct communication between the oral pathologist and his or her clinical colleagues. This honesty and openness should also be applied to the patient-oral pathologist relationship.

Ethics to be followed by Oral and Maxillofacial Pathologists

Careful attention must be given by oral & maxillofacial pathologists on diagnosis making, as the matter of subjectivity is involved. Oral pathologists should discuss this among themselves before giving a final diagnosis to avoid misdiagnosis. Also, maxillofacial pathologist needs to discuss and correlate the case with the referring physician as they have direct contact with the patient and know more about their clinical history.[13] Moreover, certain guidelines have been suggested in the earlier literature for maintaining quality and ethical practice in histopathology, including a random review of reported events, blind review, intra and inter-departmental audit, expert consultation, and telepathology.[14-17]

In the histopathological report, it is recommended that we write the sentence "clinical correlation is recommended." This means that mere examination of the pathologic material (like histology, immunohistochemistry results, etc) alone may not suffice. It must be correlated with the patient's clinical findings, chief complaint and presentation, relevant physical examination, and other relevant additional tests such as biochemistry results, and imaging studies (like CT scan, MRI, etc.) under the context of a "multidisciplinary team (MDT") approach in the evaluation and management of patients. All this in combination leads to a much better understanding of the disease, its conclusive diagnosis, and most significantly, correct management and treatment can be achieved.[18]

Patient Protection and Right to Privacy from Social Media

Few guidelines have been issued by American Medical Association (AMA) protecting patient privacy for clinicians using social media.[19] But there are no such guidelines given for dentists in India. Although, it is unethical to share any patient-related information on social media, authors still, find few dentist-sharing posts. It is recommended not to share details of patients, radiographs, histopathology slide images and case-related information on any social media where patient identity is compromised.

Histopathological Tissue and Research Ethics

The oral pathologist should be aware of the fact that the patient has the right to the tissue and the information based on their testing. The pathology department or lab is considered the legal caretaker of the tissue. The pathologist cannot deny a patient the right to tissues as he or she has the right to a second opinion and is the owner of the tissue and tissue block. Furthermore, oral pathologists are ethically obliged to take permission from the patient for using tissues for research purposes. [14,17]

Conclusion

Most practicing dentists are not aware of all the ethical guidelines given by the Dental Council of India and the Indian Dental Association. Therefore, as an additional topic, dental ethics should be part of the curriculum and guidelines should be taught in one of the final year semesters. This way, students who are going to be dentists will be well-versed in ethics, morals and their duties. Senior faculties of universities and colleges can take the initiative to teach about ethics by conducting a "continuing dental education" CDE program. All oral and maxillofacial pathologists must know, understand and follow the ethical guidelines.

Conflict of interest

None

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CASE REPORT

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A Missed Case of Trauma- The Radiologists Perspective

Shweta Vilvadrinath*, Sonali Kadam, Prachi Mathe

Department of Oral Medicine and Radiology, Government Dental College and Hospital, Mumbai, Maharastra, India.

Abstract

Every person subject to the ordinary risks of everyday life is a potential candidate for trauma to the body. In some instances, these traumatic injuries or their manifestations may go unnoticed and become evident later on in life. Dealing with maxillofacial trauma is, however different from dealing with similar trauma in other parts of the body. The major concern about the trauma of the body such as the limbs, abdomen, thorax etc. is related to the restoration of function. In facial trauma, on the other hand, restoration of aesthetics along with the function is of primary concern; otherwise, a minor facial injury if not treated adequately, can lead to a serious problem owing to the psychological impact. It is also essential to realize that properly executed initial repair of the facial injury often gives better results than multiple secondary procedures. Inadequate primary treatment may result in several deformities, which may be difficult to treat later on without good results. This paper highlights one such case wherein the trauma to the maxillofacial skeleton was undiagnosed and eventually led to aesthetic and functional concerns for the patient. It further also underlines the important role of the oral and maxillofacial radiologist in identifying and differentiating various bony pathologies with the aid of appropriate radiographic techniques.

Keywords: Case Report, Trauma, Fracture, Condyle, Malunion.

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INTRODUCTION

Many authors state fractures of the mandibular condyle to be the commonest type of fracture of the mandible.[1] The majority of them are not caused by direct trauma but are the result of indirect forces transmitted to the condyle from a blow elsewhere. Consequently, these are the fractures which are most commonly missed.[2] On various occasions, a hit to chin may lead to fracture of condyle due to the morphology of neck of the condyle. This is due to the protective anatomy of the stomatognathic system. Poorly managed condylar fractures can result in numerous chronic problems for the patient. These include occlusion derangements and deviation of the jaw. Ankylosis and pain in the temporomandibular joint can develop and diminished mouth opening can persist. Muscle spasms, facial asymmetry and osteonecrosis, have also been reported.[3] Therefore, timely and suitable treatment of mandibular condylar fractures is indispensable for better results.

Common causes of mandibular fractures include assault, motor vehicle accidents or falls, especially onto the chin which can lead to condylar fractures of the neck region.[4]

With this paper, we aim to report one such case in which the results of trauma were evident several years after the injury. We present this case from a radiologist's perspective and highlight the importance of appropriate investigations in trauma cases.

Case Report

A 22-year-old female patient reported to the Department of Oral Medicine and Radiology with the chief complaint of facial asymmetry and shift of the jaws during mouth opening.

The patient was relatively asymptomatic before 5 years after which she experienced a gradual increase in the fullness over the left side of her face leading to facial asymmetry. She then experienced a gradually increasing shift of the mandible towards the left on the mouth opening.

A detailed history of the patient provided us with the knowledge of a previous history of trauma after a minor fall from a two-wheeler 10-12 years following which the patient had only received primary medical care and no other investigations or treatments were deemed necessary.

The patient was well-built and well-nourished. On extraoral examination, the facial asymmetry with increase in fullness of face on the left side was noticed, extending superior-inferiorly from the infraorbital margin to the inferior border of the mandible and anterior-posteriorly from near the corner of the mouth to the pre-tragus region (Figure 1-3).

Deflection of the mandible to the left was noticed on mouth opening (Figure 4).

Angle's class I malocclusion noted (Figure 5).

The radiographic investigation of OPG revealed a deranged morphology of the condyle on the left side. An area of increased radiopacity was noted along the mandibular left condylar region. Reduction in the neck of the condyle on the left side

Corresponding Author: Shweta Vilvadrinath, Department of Oral Medicine and Radiology, Government Dental College and Hospital, Mumbai, Maharastra, India. e-mail: drshwetavilvadrinath@gmail.com

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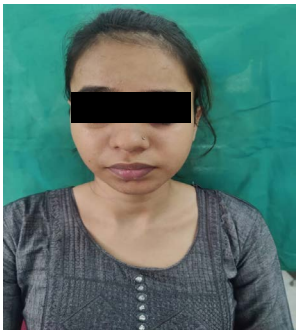

Figure 1: Extraoral Examination

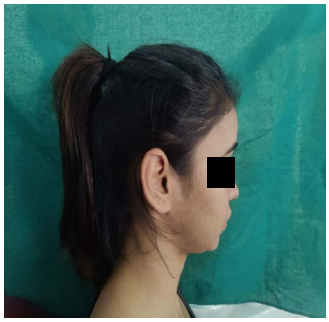

Figure 2: Right lateral view

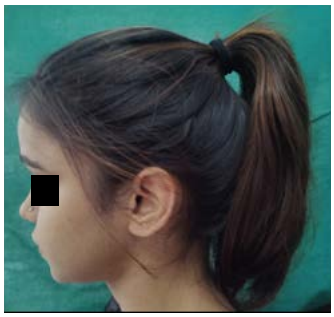

Figure 3: Left lateral view

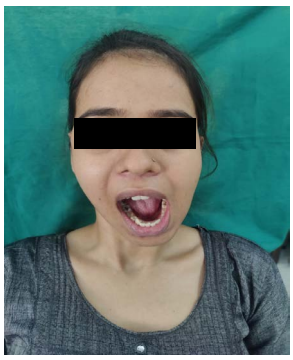

Figure 4: Deflection of mandible

compared to the right side was noticed with subsequent reduction in the ramal height. A deep antegonial notch is noted along the left side (Figure 6).

The transorbital view showed two globular protuberances- one within the glenoid fossa and one right below the level of the articular eminence with a deep notch between the two protuberances. These findings can be suggestive of a bifid condyle which is an anatomical variation. However, when considering a bifid condyle, both heads should be placed

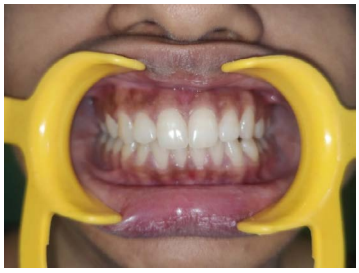

Figure 5: Occlusion

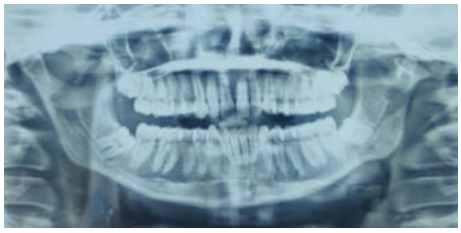

Figure 6: Panoramic radiograph

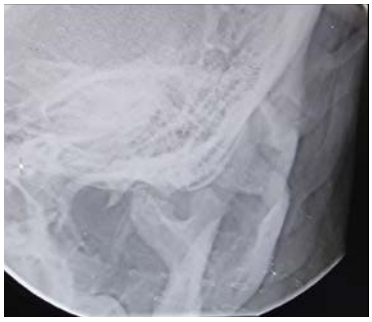

Figure 7: Transorbital view

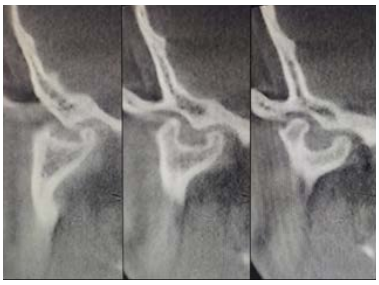

Figure 8: CBCT

The patient has advised a transorbital view.

within the glenoid fossa. Whereas, in this case, the medial head is placed well outside the mandibular fossa and hence the possibility of a bifid condyle is ruled out (Figure 7).

To further confirm the findings of 2-D radiographic techniques and to study the joint space and the morphology of the condyle, a CBCT scan was advised.

CBCT of the patient depicted an altered morphology of the condylar head with two protuberances, one of which is located within the glenoid fossa and the medial head located outside it (Figure 8,9).

Considering the clinical and radiographical findings, a diagnosis of malunion of fractured condyle has been made.

The patient was further referred to the Department of Oral and Maxillofacial Surgery where further treatment of the patient will be planned.

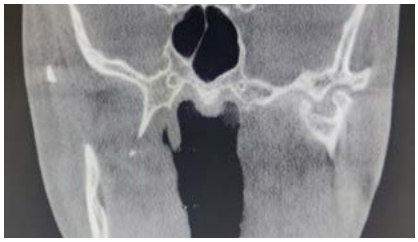

Figure 9: CBCT

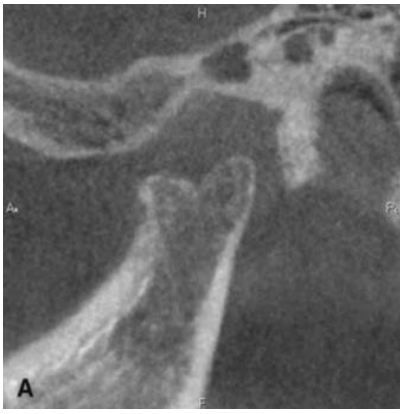

Figure 10: Bifid condyle

Discussion

Fractures of the mandibular condyle are frequently encountered in dental practice. It had a multifactorial aetiology and more often than not caused by indirect trauma to the region.[5] This is one of the major reasons that it often remains undiagnosed. It is hence imperative to treat all patients with trauma- however minor, with utmost care and concern. The role of the oral radiologist in diagnosing fractures and differentiating them from other pathologies of the maxillofacial skeleton has been highlighted in this very case. The radiological findings, in this case, were indicative of a bifid condyle if not looked at with a keen eye. However, a bifid condyle will give a typical heart-shaped outline and the mandibular fossa remodels to accommodate the altered condylar morphology (Figure 10).[6]

However, the present case shows a distinct radiopacity in the condylar region on the OPG and the CBCT of the patient depicts that the two heads are not within the glenoid fossa, thereby enabling the Oral radiologist to deduce the diagnosis.

A case report by Cowan and Ferguson described an incidental finding of a bifid condyle wherein the left condyle had a notch anteriorly, giving it a dumbbell shape, whilst its maximum transverse dimension was similar to the normal right side.[7]

A review conducted by Fun Chee Loh, and Jinn Fei Yeo wherein they assessed a total of 15 cases of the bifid condyle, showed that bifidity of the condyle is an incidental finding with over 67% of patients being asymptomatic. Very frequently, the glenoid fossa remodels to accommodate the two condylar heads. Among the 15 cases reviewed, only one presented a history of trauma on the affected side.[8]

Another case report by Ramos *et al* presented a patient with a bifid condyle without a history of trauma or fracture to the mandible at any point in time.[9]

However, a few authors believe that the aetiology of bifid condyle can be either due to the persistence of septa during the developmental stages or less commonly also due to trauma during childhood.

The present case, however, does not show any arthritic changes or remodeling of the glenoid fossa. The patient also presented with gradually progressing symptoms, which led us to our final diagnosis.

It is also important to note that untreated condylar fractures tend to manifest in the later stages of life. It is here when the patients tend to notice changes in their appearances and report to the specialist for the same.

The present case also highlights negligence on the parent's part wherein they sought a doctor's counsel only when a change in appearance was appreciated. It shows how, as a society, we focus more on external beauty than an individual's overall health.

It is the moral responsibility of the medical professional to deal with all cases of trauma efficiently and thoroughly. The referral to an oral and maxillofacial diagnostician should be a mandate to rule out any injury- major or minor.

Conflict of interest

None

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CASE REPORT

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Souvenir Bullet: A Case Report of a Rare Case with Bullet Lodged in Prostate

Gagandeep, Akash D. Aggarwal, Didar S. Walia, Abhijeet Sehrawat, Preetinder S. Chahal*

Department of Forensic Medicine and Toxicology, Govt Medical College, Patiala, Punjab, India.

Abstract

The risk of a retained bullet may involve a fatal consequence or potential immediate or early complication which may require surgical intervention. The bullet that remains entrenched inside a body for a long time without causing life-threatening complications like infections or toxicity is loosely called a Souvenir Bullet. To the best of our knowledge, there is a paucity of reports handling retained foreign bodies in various well-protected cavities like the skull and pelvis. Herein, we describe a rare case of retained foreign body (bullet) in the prostate.

Medico-legal consultation was sought in a case of alleged firearm injury over the left thigh. Who was brought to the emergency of Rajindra hospital, Patiala. A hard nodule was felt at the lateral to lower prostatic margin at the 4 o'clock position on clinical examination. Multiple opinions were sought from specialist doctors from different hospitals regarding the removal of the bullet. All of them agreed that the bullet should not be removed for now.

The majority of civilian gunshot wounds are of low energy, however, and the management of retained bullets in these injuries depends primarily on the location of the missile. Few cases have been reported showing a bullet impacted the prostate. There is a need for a global consensus about the management of retained foreign bodies, especially prostate.

Keywords: Gunshot, Projectile, Prostate, Retained Bullet, Ricochet.

Int J Eth Trauma Victimology (2022). DOI: 10.18099/ijetv.v8i02.09

Introduction

Gunshot injuries are always known to cause severe morbidity and mortality. They vary in morbidity and significance, forming a spectrum from trivial to life-threatening conditions which can occur in both military and civilian surroundings.[1] The risk of a retained bullet may involve a fatal consequence or potential immediate or early complication which may require surgical intervention. The bullet that remains entrenched inside a body for a long time without causing life-threatening complications like infections or toxicity is loosely called a Souvenir Bullet.[2]

A large proportion of individuals with gunshot injuries have retained bullet fragments (RBF). There are no standard medical guidelines regarding bullet removal and the full extent of the consequences of RBF remains unknown.[3] To the best of our knowledge, there is a paucity of reports handling retained foreign bodies in various well-protected cavities like the skull and pelvis. Herein, we describe a rare case of retained foreign body (bullet) in the prostate.

Clinical History

Medico-legal consultation was sought in a case of alleged firearm injury over the left thigh. who was brought to the emergency of Rajindra Hospital Patiala. The patient was conscious, well oriented to time place and person, with a complaint of pain in the left thigh. On local examination, there was a firearm entry wound in the form of a punctured lacerated wound measuring 0.6cm x 0.5cm with an abrasion collar present on the lateral aspect of the left thigh, in its upper third, 7 cm below the anterior superior iliac spine and 36 cm above left knee joint, active bleeding was present (Figure 1).

A hard nodule was felt at the lateral to lower prostatic margin at the 4 o'clock position on clinical examination. The NCCT pelvis depicted a metallic density object measuring 1.9 cm x 1 cm in mean axial dimension, giving marked streak artefact in the pelvis adjacent to the left Levator ani muscle at the apex of the prostate. Skin defect suggestive of an entry wound was present on the lateral aspect of the left upper thigh. Air loculi suggestive of emphysema and subcutaneous tissue fat stranding are seen in the lateral compartment of the left thigh. No fracture was seen. (Figure 2). Ultrasound micturating urethrogram and retrograde urethrogram showed metallic density radio-opaque object simulating a bullet, inferior to the bladder on the left side, away from the course of the urethra, in the pelvic region.

As per the urologist's opinion, no urological intervention was required at the prostate regarding bullet injury. Another

Corresponding Author: Preetinder S. Chahal, Department of Forensic Medicine and Toxicology, Govt Medical College, Patiala, Punjab, India, e-mail: preetinder1chahal@gmail.com

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Figure 1: Showing entry wound

team of specialists from a second institute observed that the patient was self-voiding; passing flatus normally, with digital rectal examination showing normal peri-anal skin, normal tone of sphincters, and foreign body felt in the left anterolateral anal canal, just above the prostate apex, no signs of peritonitis, and anorectal mucosa intact; whereupon they advised that there was no indication for surgical intervention. A third opinion sought privately by the patient also concurred with these opinions.

Discussion

Gunshot wounds contaminate the tissue and site involved, which needs exploration and debridement. The majority of civilian gunshot wounds are of low energy, however, and the management of retained bullets in these injuries depends primarily on the location of the missile. Lead toxicity from retained bullet fragments although rare may manifest as microcytic hypochromic anaemia, chronic renal failure, abdominal pain, anorexia, neuropathy, lethargy, encephalopathy or even systemic toxicity as a result of synovial fluid dissolving lead present in the articular capsule.[5,6] Lead toxicity is difficult to both predict and diagnose, but it is important to treat early, given the potential severity of the disease.[7,8]

Few cases have been reported, showing a bullet impacted the prostate.[4] Retained bullet in the prostate can cause lower urinary tract symptoms like bothersome urinary urgency and frequency,[9] and urethral obstruction.[10] Sometimes, foreign bodies are left inside the body of the victim since manipulating them could exacerbate vascular or neurological complications, sometimes even death. With time these foreign bodies cause less threat and remain isolated following encapsulation of dense and fibrous granulation tissue.[6,11,12]

Although a large number of factors influence the missile in flight; after penetration of the body, the most important factor is the amount of energy transmitted to the tissue.[13] It is very important to know the speed of the projectile to know the severity of the injury. In this case, the fact that there is no exit hole and the bullet has likely bounced off the bone indicates that it is a low-velocity projectile. There is no doubt that if the attack had been carried out with a high-velocity weapon, there would have been a large exit hole. Ricocheted bullets have a reduced capability for tissue penetration.[14]

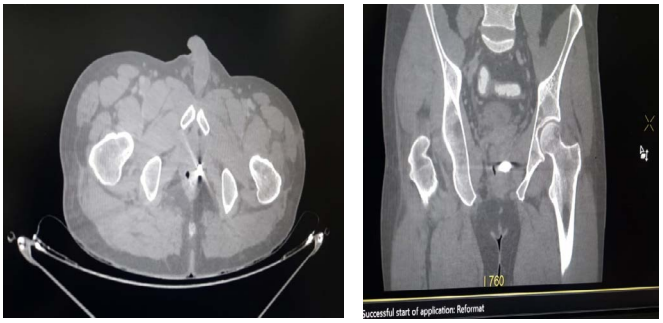

Figure 2: Showing radiological image of bullet retained in prostate

Retained bullets are associated with adverse psychological consequences after firearm injury. To improve recovery and aid in clinical management decisions, clinicians should consider both the psychological and physical effects of retained bullets in survivors of firearm injury.[15]

Conclusion

There is a need for a global consensus about the management of retained foreign bodies, especially prostate. Also, the long-term consequences in cases with retained foreign bodies managed conservatively should be collected and correlated with the original foreign body location. There will also be an issue in the medicolegal consequence wherein the opinion regarding the nature of the injury as well as the cross-matching of the bullet will need to be addressed.

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LETTER TO EDITOR

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Respected Sir,

To
The Editor In chief
International Journal of Ethics, Trauma & Victimology

The International Journal of Ethics Trauma and Victimology can serve as a platform for discussion and sharing of ethical and regulatory guidelines for traditional medicine.

Ethical and regulatory aspects of traditional medicine are a major concern for international acceptance of "complementary and alternative medicine"(CAM).

Interestingly the so-called "Alternative or complementary medicine" is used by 80% of the global population.

During and after covid-19, the use of "traditional" medicine has recorded a staggering increase in demand for CAM across all regions of the world.

The Global herbal medicine market size was valued at 151.91 billion in 2021 and is projected to grow to 347.5 billion by 2029.

World Health Assembly resolution (WHA A5 6.3 1) requested to provide technical support to develop a methodology to monitor or ensure parameters for quality assessment and safety of traditional medicine products.

With the advent of Evidence-Based Medicine(EBM) in allopathic practice, there have been concerns about applying the same principle of EBM to traditional and complementary medicine.

The lack of strong evidence of EBM restricts the expansion of traditional and complementary medicine. Although there is debate on the validity and feasibility of applying the EBM model to the use of traditional medical systems.

Standardization of medicinal plant products used in traditional medicine is important. There are differences in biologically active ingredients in different parts of a plant; plants are harvested at different times of the year and also in different geographical regions where the plant has been grown.

There are differences between naturally occurring and commercially grown medicinal plants. Therefore, guidelines for standard cropping and collection practices of medicinal plants have been developed by WHO. Based on these, different countries are in the process or have made such regulations.

Similarly, there is a need for quality control of manufacturing and laboratory practices (GMP, GLP). Guidelines are required for conducting clinical trials and approval for marketing of these products. National regulations and ethics of clinical and preclinical research conduct are yet in infancy and development.

There is a need for pooling together technological know-how and human resources to help respective nations develop these regulations. Because of social acceptance, economic and environmental viability, long history of use of traditional medicine, it will go a long way in helping obtain the objective of providing good quality traditional medicine in these countries.

We have authors, editorial board members and advisors from all regions of the World Health Organisation in our journal. (African, American, Eastern Mediterranean, European, South-East Asia and Western Pacific region). We can combine our knowledge and resources to make uniform guidelines for alternative medicinal products. For this, we can share our regulations of the animal as well as the human ethics committee, preclinical and clinical guidelines, quality assurance of Ayurveda, Siddha, Unani, homeopathic guidelines and similar Indigenous treatment modalities of our countries. Similarly, we can share post-marketing safety procedures and pool experience of regulatory steps for pharmacovigilance and adverse drug reaction monitoring. We can bring a special issue dedicated to regulatory aspects of traditional medicines in our countries.

Dr. PP Khosla,
MD, DM, DNB (Clinical Pharmacology and Therapeutics)
Prof & Head
Department of Pharmacology
Gian Sagar Medical College, Punjab
khoslapp@gmail.com

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The IJETV is the publication supported by SPIC & INPAFNUS, published since 2015.

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- Commentary: Intended for Reviews, Case Reports, Preliminary Report, and Scientific Correspondences.

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Designed to be an avenue for dialogue between the authors of the papers published in the journal and the readers restricted to the options expressing reviews, criticisms etc. It could also publish letters on behalf of the current affairs in the field of Ethics, Trauma & Victimology

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The text of observational and experimental articles is usually (but not necessarily) divided into the following sections: Introduction, Methods, Results, and Discussion.

This so-called "IMRAD" structure is not an arbitrary publication format but rather a direct reflection of the process of scientific discovery. Long articles may need subheadings within some sections (especially Results and Discussion) to clarify their content. Other types of articles, such as case reports, reviews, and editorials, probably need to be formatted differently. Electronic formats have created opportunities for adding details or whole sections, layering information, cross-linking or extracting portions of articles, and the like only in the electronic version. Double spacing all portions of the manuscript— including the title page, abstract, text, acknowledgments, references, individual tables, and legends—and generous margins make it possible for editors and reviewers to edit the text line by line and add comments and queries directly on the paper copy. If manuscripts are submitted electronically, the files should be double-spaced to facilitate printing for reviewing and editing. Authors should number all of the pages of the manuscript consecutively, beginning with the title page, to facilitate the editorial process.

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206	Gulshanbeer Kaur	250	Jeyadeepa
207	Manpreet Kaur	251	Deepti Shukla
208	Amritpal Kaur	252	Somya Suny
209	Sandeep Kaur	253	Pooja Devi
210	Jahanvi Sharma	254	Pinky Devi
211	Sidaveerappa Balappa Tuppad		
212	G. Elango		

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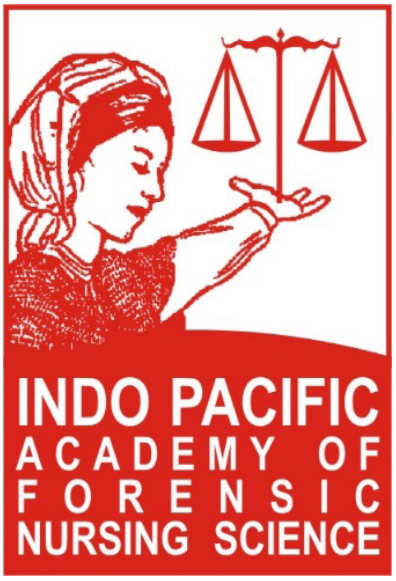

Founder Team

SOCIETY FOR PREVENTION OF INJURIES AND CORPORAL PUNISHMENT

A TASK FORCE TO PREVENT CORPORAL PUNISHMENT AND RAGGING IN INSTITUIONS

Application form for membership

Membership: Institutional pledge member Patron member
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Father's Name/Husband Name ..... Paste passport

Age ..... size photograph

Sex .....

Qualifications .....

Designation .....

Number of Publications.....

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Phone number .....Mobile number .....

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Signature

Place

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INDO PACIFIC ACADEMY OF FORENSIC NURSING SCIENCE

Application form for membership

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Name .....

Father's Name/Husband Name ..... Paste passport

Age ..... size photograph

Sex .....

Qualifications .....

Official designation .....

Number of Publications in journals .....

Office Address .....

Phone number .....

Residential Address .....

Phone number .....

Mobile number .....

Email address .....

Signature of applicant

Place

Date

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Release of the International Journal of Ethics, Trauma & Victimology at the 6th Conference of Society for Prevention of Injuries & Corporal Punishment at Pt JLN Medical College, Chamba

Lamp Lighting Ceremony at the 6th Conference of Society for Prevention of Injuries & Corporal Punishment at Pt JLN Medical College, Chamba

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